

# Associations, federations, societies: National Academy of Sciences (1949-2001). 1949/2001

[Madison, Wisconsin]: [s.n.], 1949/2001

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### FOR IMMEDIATE RELEASE 05/01/01

CONTACT: Larry L. Bumpass (608) 262-2182, bumpass@ssc.wisc.edu; Stephen R. Carpenter (608) 262-8690, srcarpen@facstaff.wisc.edu; F. Fleming Crim (608) 263-7364, fcrim@chem.wisc.edu

NATIONAL ACADEMY ELECTS THREE FROM UW-MADISON

MADISON - Three members of the University of Wisconsin-Madison faculty - Larry L. Bumpass, Stephen R. Carpenter and F. Fleming Crim - were elected this morning, May 1, to the National Academy of Sciences (NAS).

Election to the academy is among the most coveted and prestigious honors in all of science, outshining all other forms of professional recognition save the Nobel Prize.

Bumpass, emeritus professor of sociology and director of the National Survey of Families and Households, is a well-known demographer whose studies of marriage and the family have helped portray key trends in American life. From studies of fertility and cohabitation to the changing structure of the American family, Bumpass has helped chronicle societal trends that are among the most important and personal for millions of Americans. Bumpass has been on the UW-Madison faculty since 1970.

Carpenter, the Halverson Professor of Limnology and a professor of zoology, joined the UW-Madison faculty in 1989. Carpenter is an ecosystem ecologist known for his work on large-scale experiments and adaptive ecosystem management. He has studied food chains and several factors which affect production and nutrient cycling, contaminant cycles, freshwater fisheries, eutrophication, non-point pollution, and ecological economics of freshwater. He is currently president of the 7,600-member Ecological Society of America.

The J.E. Willard and Hilldale Professor of Chemistry, Crim is an authority on chemical reactions at the molecular level. He is also known internationally for developing techniques in spectroscopy for controlling chemical reactions with light.

Crim joined the UW-Madison faculty in 1977.

Crim, Carpenter and Bumpass join 48 other current or emeritus members of the UW-Madison faculty who have been honored with election to NAS. They were elected this morning at the 138th annual meeting of the academy. There are currently 1,874 active members of NAS.

The National Academy of Science is a private organization of scientists and engineers dedicated to the furtherance of science and its use for the general welfare. Established in 1863 by an act of Congress, NAS is charged with advising the federal government, upon request, in any matter of science or technology. # # #

-- Terry Devitt (608) 262-8282, trdevitt@facstaff.wisc.edu

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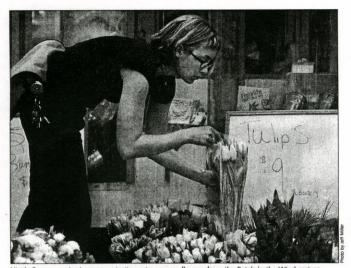
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Nicole Rogers, senior in communication arts, peruses flowers from the Petals in the Wind cart on Library Mall. Only a few centuries ago, the bulbs that produce these colorful flowers were luxuries that only the rich could afford. At the height of the brief, speculative "tulip mania" in 1636-37, rare tulip bulbs could fetch the equivalent of the price of an Amsterdam townhouse, or about 60-80 times the annual wage of a manual worker of the era. Today you can persuade a campus-area vendor to part with a too-line tulip with less money than it takes to plug a parking meter for the morning.

has been very busy," Prisekina says. "I've had to cover a number of areas."

Law librarians will visit FESU as well during the first two years of the partnership to help the university further develop its law library. In addition, three FESU faculty members will participate in the Law School's summer program in U.S. Law and Legal Institutions, held in Madison.

### Changes considered in release of student disciplinary records

A university committee is considering possible changes to university rules governing the release of student disciplinary records.

The Student Policies and Non-Academic Program Committee held a public hearing on the matter last week. The group is seeking student, faculty and staff views on limited release of some student records to parents and release of information on campus violent crimes and some sexual offenses. After receiving comments, the group will make a recommendation to the chancellor.

The review results from recent action by Congress that amends the Family Educational Rights and Privacy Act of 1974, a federal law that restricts the release of student educational records. Two amendments permit, but do not require, institutions to release student records that previously have been confidential:

- The university would have the option of making public the final results of student disciplinary proceedings when the institution has concluded that a student violated its rules and his/her conduct would constitute a "crime of violence" or a "nonforcible sex offense."
- The university also would have the option of disclosing to parents or legal guardians any student violation of federal, state, or local law or institutional rules governing the use or possession of alcohol or controlled substances if the student is under 21 and the possession constitutes a disciplinary violation.

The committee, chaired by Hardin Coleman, an associate professor in the School of Education, so far has met with housing and health staff who generally support keeping current confidentiality rules. Notifying parents of student disciplinary action conflicts with the campus's fundamental philosophy of treating students as adults, some staff say.

Campus community members can also register their views in writing. Comments should be directed to: The Student Policies and Non-Academic Program Committee, c/o Dean of Students Office, attn: Assistant Dean Janice Sheppard, 75 Bascom Hall; or e-mailed to: conduct@mail.bascom.wisc.edu.

### Tech training program for students launched

The Division of Information Technology plans to train up to 85 undergraduates in a unique program this summer.

The Summer Student Technical Training Program is part of a System-wide effort designed to prepare more than 800 students to fill a shortage of technical helpers on UW campuses.

SSTT includes two weeks of paid, intensive training and will assist students in finding parttime tech employment when their training is completed. Participants will be trained in desktop installation of software and installation of modems, monitors and printers; basic clientserver concepts and networking; and advanced network concepts. Information: 262-0596.

### ON CAMPUS

### Climate change symposium warms up geology celebration

Global warming and sustainable development, two of the most pressing environmental issues of our day, will be the topic of a public symposium Saturday, May 8, as the Department of Geology and Geophysics celebrates 150 years of Wisconsin earth science.

The symposium, to be held in AB20 Weeks Hall, will feature three authorities on issues of climate change and sustainable development: Richard Alley, a Penn State professor of geosciences and a leading climate change detective whose work deciphering ice cores from the Antarctic and Greenland has rewritten our understanding of rapid climate change; John Wise, a charter member of the Environmental Protection Agency and director of the agency's Office of Strategic Planning in San Francisco; and George Nicolaides, vice president of the BP-Amoco Oil Technology Group and a director of technology resources for the company's world-wide refining system.

The climate symposium begins at 2 p.m. In the morning, five current and emeritus UW-Madison geology and geophysics faculty will discuss their work beginning at 8:30 a.m. The morning symposium will span a range of topics from new developments in geomicrobiology and seismic sensing of deep-earth structures to historic contributions made by Wisconsin geology faculty and glaciology in Patagonia.

### Madison to host black grad student meeting

The university will host the 12th Annual Black Graduate Student Conference March 29-April 2 next year. From 400 to 600 African-American students — undergraduate, graduate and postdoctoral are expected to attend, representing a variety of disciplines and universities nationwide. The conference will include a career fair, graduate school recruiting fair, paper presentations and professional development seminars.

The theme will be "Facing the Challenge: Black Leadership 2000 and Beyond." Sponsors are the Black Graduate and Professional Student Organization, the Graduate School, and the Equity and Diversity Resource Center.

### NOTABLE

### Mathematician elected to NAS

The National Academy of Sciences has elected mathematics professor Richard A. Askey to membership in the prestigious organization.

Sixty U.S. scientists and 15 foreign associates were elected to membership Tuesday, April 27, during the business session of the 136th annual meeting of the academy, a private organization of scientists established by congressional act of incorporation in 1863. Election to membership is considered one of the highest honors that can be accorded a U.S. scientist or engineer.

Askey is the Gabor Szego Professor of Mathematics. His areas of interest include harmonic analysis and special function. He is also known as an inspiring teacher and an ardent proponent of mathematics education, as well as a student of the history of mathematics.

Askey joined the UW-Madison faculty in 1963. He has written more than 150 papers and several books. Askey's honors include fellowships in the American Association for the Advancement of Science and the American Academy of Arts and Sciences. He also is an honorary member of the Indian Academy of Sciences.

### **Economy triples Vilas Trust funds**

Due to the healthy economy and a one-time capital gains increase, Vilas Trust money available for spending in 1999-2000 will be about three times larger than usual.

Annual income from the trust – established in the will of UW alumnus William F. Vilas – usually totals \$7 million each year. But the onetime infusion in the trust from its investment gains has made possible this year's plan to spend just over \$20 million.

Under the rules of the trust, money not spent this year, would be returned to the endowment and could not be spent.

"This extra income allows us to expand some of the ongoing fellowship, scholarship and research support programs specified in the trust," says John Torphy, vice chancellor for administration. "It also provides us with some one-time, private-sector support, which we will use to match funding that we hope to receive in the state budget."

"I want to make clear that none of this onetime funding replaces state monies, and it's only available for one year," Torphy adds.

Vilas, a former U.S. senator and presidential cabinet member, died in 1908 and bequeathed his estate to the university.

The UW System Board of Regents is expected to act on the plan at a May 6-7 meeting.

As permitted by the trust, the university plans to allocate \$11.45 million to help pay for the \$52 million Engineering Centers project. Another \$1 million will be used to provide promised private-sector support consistent with the Madison Initiative that is part of the state budget plan. Of that \$1 million, \$750,000 will be used to create 10 Vilas young investigator awards for newly hired assistant professors. Another \$247,175 will fund the creation of 12 additional Vilas Associates, which target untenured faculty and those conducting interdisciplinary research.

Other one-time spending includes \$2.55 million to create 170 research investigator awards for graduate students and \$1.275 million to create 4,250 scholarships for undergraduates eligible for need-based financial aid related to the Madison Initiative. ■



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CAN A VIRUS MAKE YOU FAT? Although the idea sounds more like the premise of a B-movie than scientific theory, two campus scientists believe they've found a virus that causes some people to get fat, reports the Ottawa Citizen (Sunday, April 18).

Citizen (Sunday, April 18). Nikhil Dhurandhar and Richard Atkinson say that when they injected a virus known as AD36 into mice and chickens, the animals' body fat increased. Then the scientists decided to test for the presence of antibodies to the virus in humans. Of 154 people tested, about 15 per cent of those who were obese had the antibodies. None of the lean people did.

However, the findings don't necessarily prove that the virus caused obesity in the test group: Obese people may simply be more susceptible to such a virus. Still, in recent years, researchers have been surprised to find that viruses can be linked to so many diseases that had been thought to have other origins. For example, viruses are now implicated in several types of cancer, hardening of the arteries, and even mental disorders such as depression. In addition, five viruses besides AD36 have already been shown to cause obesity in animals. The good news is that the same methods that produce flu shots each year could ultimately be used to make an anti-obesity injection.

### STEM CELLS STILL EXCITE

Researcher James Thomson's advances in embryonic stem cell research continue to reverberate throughout science, ethics and politics, says the Star Tribune of Minneapolis (Sunday, April 11).

Thomson now has held a culture of cells in an embryonic state for more than a year by dividing them and nurturing them in a carefully concocted culture. If, as Thomson expects, they prove to be immortal, a small collection of the cells could be multiplied to commercial-scale production. And a few cells also could serve as the beginnings of any part of a person's body, a octential boon for research on axing.

potential boon for research on aging. The cells also are expected to shed light on abnormal growth and thus help prevent and treat birth defects and cancer. And they could speed up the development of drugs while cutting down on the numbers of animal studies and human clinical trials.

"There is almost no realm of medicine that might not be touched by [Thomson's] innovation," says Harold Varmus, director of the National Institutes of Health.

#### SMART SCALPELS

New surgical instruments developed on campus give new meaning to the term "cutting edge," says Business Week (Monday, April 19). Engineering assistant professor Amit Lal has devised a way to carve tiny blades from silicon using microlithography, the technique that etches computer chips. Lal figures that the knives, which can be 10 times sharper than metal tools, will quickly find use in delicate procedures, such as neurosurgery or cataract surgery.

Moreover, because the blades are made of silicon, they can be equipped with computer circuits — for example, built-in sensors that detect whether the tissue being cut is healthy or diseased, and relay this to the surgeon.

Becton Dickinson & Co., a medicalsupply company in Franklin Lakes, N.J., hopes to use the technology to make painless needles for syringes. Thanks to their ultrasonic action, such needles would require almost no pressure to puncture the skin — banishing the "ouch" from injections.

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### FOR IMMEDIATE RELEASE 4/27/99 CONTACT: Terry Devitt (608) 262-8282, trdevitt@facstaff.wisc.edu

### MATHEMATICIAN ELECTED TO NATIONAL ACADEMY OF SCIENCES

MADISON - The National Academy of Sciences today (April 27) announced the election of University of Wisconsin-Madison mathematics professor Richard A. Askey to membership in the prestigious organization.

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Askey is the Gabor Szego Professor of Mathematics at UW-Madison. His areas of interest include harmonic analysis and special function. He is also known as an inspiring teacher and an ardent proponent of mathematics education as well as a student of the history of mathematics.

Askey joined the UW-Madison faculty in 1963. He is the author of more than 150 papers and several books. Askey's past honors include fellowships in the American Association for the Advancement of Science and the American Academy of Arts and Sciences. He is also an honorary member of the Indian Academy of Sciences.

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# National Academy of Sciences

The National Academy of Sciences announced that five UW-Madison faculty were among those elected to membership in the prestigious organization.

Sixty U.S. scientists and 15 foreign associates were elected to membership, including UW-Madison's William A. Brock, Elizabeth A. Craig, William F. Dove, Perry A. Frey and Paul H. Rabinowitz. Their election brings the number of current active NAS members on the UW-Madison faculty to 61.

Among universities, only Harvard had more faculty elected than UW-Madison with seven gaining NAS membership this year. The five elected from UW-Madison are the only new members from Wisconsin.

Membership in NAS, a private organization founded in 1863, is considered one of the highest honors that can be accorded a U.S. scientist or engineer. Members are elected on the basis of distinguished and continuing achievements in original research.

Brock is the Vilas Research Professor and the F.P. Ramsey Professor of economics. He joined the faculty in 1975 and is internationally recognized for the development of statistical tests that can detect patterns in seemingly random data, and for his theoretical work on economic stability, optimal planning and inflationary bubbles. Craig joined the faculty of the Medical School in 1979. She is the Elizabeth Caveat Miller Professor and the Steenbock Professor of microbiological sciences. Craig studies proteins; in particular, she is known for her work on heat shock proteins and the proteins responsible for folding and assembling other proteins in cells.

Dove is a professor of oncology and medical genetics at the McArdle Laboratory for Cancer Research. He joined the faculty here in 1965 and holds the George Streisinger Professorship of Experimental Biology. He is an authority on the genetics of cancer, the genetics of the biological clock and has developed powerful animal models for cancer research.

Frey is the Robert H. Abeles Professor of biochemistry and co-director of the UW-Madison Institute for Enzyme Research. He joined the faculty here in 1981 and is known internationally for pioneering the stereochemical analysis of enzymatic reactions essential to metabolism and biological energy transduction.

Rabinowitz is the Edward Burr Van Vleck Professor of mathematics. He joined the faculty here in 1969 and has been widely recognized for his deep influence on the field of nonlinear analysis and his work in ordinary and partial differential equations.

Wisconsin Week April 29, 1998



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Wiscensin Week April 29, 1998



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- National Academy of Sciences

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FOR IMMEDIATE RELEASE

4/29/97

CONTACT: Carl de Boor, (608) 263-7308

### UW-MADISON MATHEMATICIAN ELECTED TO NATIONAL ACADEMY

MADISON — Carl de Boor, a University of Wisconsin-Madison professor of mathematics and computer sciences, is one of 60 U.S. scholars elected to membership in the National Academy of Sciences (NAS) this morning.

Membership in NAS is among the highest honors that can be bestowed on an American scientist or engineer. De Boor was the only Wisconsin scholar elected today.

The Chebyshev Professor of Mathematics and Computer Sciences and Steenbock Professor of Mathematical Sciences, de Boor is well known for his contributions to numerical analysis and methods, especially numerical tools used in computer-aided geometric design.

A specialty of de Boor's is the study of splines, mathematical constructs of use in representing curves and surfaces originally developed by I.J. Schoenberg, a long-time faculty member at University of Wisconsin-Madison. Splines are essential to a computer's ability to draw a smooth curve, handle complex graphic designs, or even describe the shape of the letters used in computer typesetting.

De Boor has helped to develop simpler and better methods for calculating with splines.

De Boor joined the UW-Madison faculty in 1972. His election today during the business session of the Academy's 134th annual meeting brings total UW-Madison membership to 46.

The National Academy of Sciences is a private organization of scientists and engineers dedicated to advancing science and its use for the general welfare. Established in 1863 by a congressional act of incorporation, signed by Abraham Lincoln, the Academy acts as an official advisor to the federal government, upon request, in any matter of science or technology.

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Terry Devitt (608) 262-8282, trdevitt@facstaff.wisc.edu

#### Δ R D S

#### A B DS National Academy of Sciences

Two members of the faculty have been elected to membership in the National Academy of Sciences, one of the highest distinctions bestowed on scientists.

Sixty U.S. scientists and 15 foreign asso-ciates were elected to membership, includ-ing James E. Dahlberg, professor of biomolecular chemistry; and John W. Suttie, professor of biochemistry and nutritional sciences.

Membership in NAS, a private organiza-tion founded in 1863, is considered one of the highest honors that can be accorded a U.S. scientist or engineer.

Suttie and Dahlberg were the only new members from Wisconsin.

Dahlberg joined the faculty in 1969. His research interests lie in the area of RNA synthesis, transport and function. Suttie, a member of the faculty since 1961,

is an authority on vitamin K, a substance re-quired for the synthesis of important bloodclotting proteins.

- Terry Devitt

### WARDS Δ **Shaw Scientists**

Two new faculty in the departments of pharmacology and medical genetics have been named 1996 Shaw Scientists by the Milwaukee Foundation

Winners are pharmacologist Emery Bresnick and medical geneticist John Petrini, both on the faculty since 1994. The foundation chooses two outstanding Wisconsin researchers each year to receive the \$175,000 awards, which are distributed in \$35,000 annual grants over five years to sup-port faculty research. The program is made possible by a bequest from the late Dorothy Shaw, a Milwaukee resident with a lifelong interest in science. Bresnick and his graduate students will

use the grant to perform further research on locus control regions (LCRs), which are genetic functions which help ensure that genes will be active in the appropriate cells. The regulation conferred by LCRs to associated genes is important in defining how cells differ from each other and perform unique func-tions. Using synthetic LCRs to efficiently "turn on" genes in specialized cells can im-prove biotechnology and human gene

therapy. Bresnick is also a member of the Comprehensive Cancer Center and a trainer in the Cell and Molecular Biology program. He received the 1994 Faculty Development Award from the Pharmaceutical Manufacturer's Foundation for pharmacology and toxicology. Petrini and his graduate students in ge-

Petrini and his graduate students in ge-netics have identified and cloned two genes involved in helping repair damaged strands of DNA in a cell. This type of repair takes place routinely in the body. But Petrini's group believes that when these DNA repair genes are defective in some way, the risk of cancer will be sharply increased. The Shaw Scientist erant will be how due downlow Scientist grant will help fund the develop-ment of a model system in mice for testing

the impact of reduced DNA repair. In addition to being a trainer in the Laboratory of Genetics, Petrini is a member of the Comprehensive Cancer Center and a trainer in the cell and molecular biology program. He is a special fellow of the Leukemia Society of America and has a variety of grant support, including a Howard Hughes Medical Institute fellowship.

Created in 1982, the Shaw Scientists awards support the work of outstanding young scientists from the state's two principal research universities, UW-Madison and UW-Milwaukee. - Brian Mattmille

### ARDS w A **Phi Beta** Kappa

Nineteen juniors and 93 seniors were intiated to Phi Beta Kappa for 1996.

To be initiated to the UW-Madison chapter, seniors must have a 3.75 grade point average and have completed 86 credits. Juniors must have a 3.90 grade point average and have completed 74 credits. Students must be enrolled in the College of Letters and Sciences and have taken a variety of courses outside

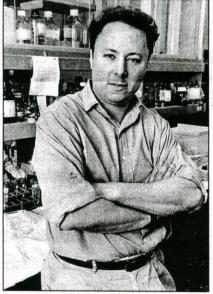
Sciences and have taken a variety of courses outside their major fields. Elected as juniors: Lyssa N. Bierig, Molecular Biology; Guy Brenner, Political Science & History; Jessica M. Czerwinski, Zooarcheology; Alison A. Dieterichs, Interna-tional Relations & Spanish Andrew J. Fitch, African American Studies; Jeremy S. Forster, Biochemistry; Noah M. Horwitz, English; Julie C. Johnson, Geology; Ryan James Kehoe, Zoology; Stephen F. Le Compte, Chinese; Gerald R. Nachtwey, English; John R. Pesch, Physics; Harsha S. Reddy, Psychology; Benjamin Joseph Sousa, Classics & Anthropology; Ben-jamin J. Swartzendruber, Po-jamin J. Swartzendruber, Po-nifer L. Tate, Physics; Steven G. VanLanen, Molecular Biol-ogy; Timothy K. Weston, Eco-nomics & International Rela-tions. Elected as seniors: Sarah E. tions.

Elected as seniors: Sarah E.

tions. Elected as seniors: Sarah E. Anderson, English; Jason O. Anderson, Sociology; Lori Applebaum, English; Julie A. Arendt, Psychology & Chemis-try; Craig M. Barbee, History & Classical Humanities; Christo-pher M. Barnum, Philosophy; Allison J. Bloodworth, French & International Relations; Ja-son Andrew Buskel, Cerman & French; Lawrence K. Y. Chan, Chemistry; Lori Anne Chozen, Journalism & Spanish; Damon A. Fairfield, Zoology; Aryn E. Faur, Political Science; Alexandra M. Botany and Zoology; Cortland K. Griswold, Botany and Zoology; Cortlastine A. Harmann, Molecular Biology; Elaine M. Hayes; Zoology & Music History; Douglas, S. Haynes; English; Ryan J. Herring, Molecular Biology & Biologi cal Aspects of Conversation; Wellington K. Hsu, Music Performance: Timothy A. Hudoon, History n K. Hsu Music Performance; Timothy A. Hudson, History

Kai Aspects of Conversation; Weilington K. Hsu, Music Performance; Timothy A. Hudson, History of Political Science; Julie L. Isaacson, Journalism; Paul R. Jacquart, Sociology; Sarah K. Johnson, French, Political Sci-ence & Journalism; Jenny E. Kaminer, Russian; Marjorie L. Kaukl, English; John T. Kelly, Bio-chemistry; Amy Lee Klemm, Psychology & Zool-ogy; Christine Rebecca Korger, French & Zool-ogy; Christine Rebecca Korger, French & Zool-ogy; Christine Rebecca Korger, French & Zool-ogy; Christen Langhlin, International Reclations; Col-leen M. Laus, Molecular Biology; Steven L. Leh, Bacteriology; Rachel C. Lehman, English; MenChing E. Leung, Communication Arts and Economics; Jennifer K. Lien, Psychology; Daniel L. Lindner, Botany; Gregory Michael Matzke, Molecular Biology; Sara M. Mayer, English & Art





History: Patrick D. McMahon, Psychology: Katie L. Minten, Sociology: Rajal K. Mody, Molecular Biology: Natalie Danielle Monarch, Psychology; Laura Jeanne Murray, Journalism & French, Steve J. Nachtwey, Political Science; Michael D. Nerdahl, Classics, Megan F. Neuman, History of Science; Benjamin P. Nickels, History & French, Eric J. Nilles, History of Science; Margaret K. O'Callaghan, History & Spanish; Nicholas Clay Orum, Economics; David E. Osswald, Political Sciace, and International Relations; Stace Palcza, Anthropology: Nehal A. Patel.

Oruin, Economics; David E. Osswald, Political Science and International Relations; Stacey Palcza, Anthropology; Nehal A. Patel, Sociology and Zoology; Carrie L. Pauly, Spanish, International Relations and Business; Daniel M. Perry, Political Science & History; James Jacob Peterman, Molecular Biology; Juliette E. Petersen, Zoology; Jill K. Peterson, Classics; Shelley J. Pomplin, Communicative Disorders; Mary E. Putman, Astronomy & Physics; Anna S. Rabin, Women's Studies & History; Matthew M. Rosnow, Psychology; Irene E. Sadowski, English; Benjamin J. Schulenburg, Anthropology & His-tory; Lauri Ann Schumcher, Journalism; Chris-tine Keala Schwab, Music; Michelle Lee Seifert, Zoology & Anthropoly; Alexander J. Shackman, Psychology; Krystin M. Sielaff, Communication Arts; David Andrew Six, Chemistry; Abraham E. Smith, Anthropology; Katrina A. Sopkovich, In-ternational Relations; Aimee L. Soucy, Psychol-

Shaw Scientists: Above, John Petrini, of medical genetics, assists graduate student Deb Bresan with lab work. Left, Emery Bresnick, of nacology.

ogy; Chad E. Sprecher, Chinese; Doran R. Steele, History: Rebecca Helen Steinbach, Anthropol-ogy; Michael P. Sullivan, Zoology; Scott A. Sussman, Political Science & International Rela-tions; Leah Elizabeth Sutton, Anthropology; Sarah L. Terry, Psychology; Rene Rebecca Trilling, English & German; Danielle A. Trussoni; English & History; Emily F. Tymus, English, Alexei Viazmenski, Microbiology & Immunol-ogy; Joanna A. Weinstein, Biochemistry; Stacey Winograd, Political Science; Christopher J. Witke, Zoology; Thomas M. Woods, Political Science & History.

### AWARDS Woodrow Wilson **Dissertation Grant**

Juliana Barr originally from Lubbock, a Ph.D. candidate, has recently been awarded a 1996 Woodrow Wilson Dissertation Grant in Women's Studies from the Woodrow Wil-

son National Fellowship Foundation. Barr is studying American women in U.S. history. In her dissertation, titled "The Seduc-tions of Texas," she will focus on the politics of gender, sexuality and race in the conquests of Texas from 1690 to 1848.

She is among the 15 winners of the grant chosen from 259 applicants at 95 universities throughout the country. Each winner will receive a grant of \$1,500.

These awards were made possible by grants from the Ford Foundation, the Philip Morris Companies and individual gifts. Gina Johnson

### ARDS w Holstrom **Environmental Scholars**

Holstrom Environmental Scholarship winners, with department and faculty advi-sor, are: Douglas Haynes, English, Institute for Environmental Studies (Nancy Langston) and Ryan Herringa, German and molecular biology, entomology (Richard Lindroth).

May 15, 1996, WISCONSIN WEEK = 5

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### HILLDALE AWARDS Honoring achievements in teaching, research and service

There's a powerful impression you might get when reading about this year's recipients of the Hilldale Awards, which honor faculty members for major achievements in teaching, research and service.

The impression is this: The world has beat a path to each of their doors, and that path has been blazed by the sheer brilliance of their work. All these Hilldale recipients — a historian, a physicist, a psychologist and a surgeon - have galvanized global attention among their peers. The Hilldale Awards, developed in

1987 for former Chancellor Irving Shain, are given to a top professor in four divi-sions of the university: physical sciences, biological sciences, social studies and humanities. Recipients are nominated by their peers and selected by the executive committee in their faculty division. Winners receive a stipend of \$7,500 from the Hilldale Fund, which receives

income from the operation of the Hilldale Shopping Center.

### William J. Courtenay

C.H. Haskins Professor of History "Bill Courtenay is one of the most highly esteemed scholars of medieval European thought in the world," said Kenneth Sacks, chair of the department of history. That opinion is widely shared on *both* sides of the Atlantic.

Stateside, Courtenay became, in 1979, the youngest scholar ever elected a fellow of the Medieval Academy of America. He also has received fellow ships from the Guggenheim Foundation and the Institute for Advanced Study at Princeton. In 1988 he served as president of the American Society of Church His-

tory during the society's centennial year. At the same time, Courtenay has won over a tough audience of European scholars. He is a commission member of the Bavarian Academy of Sciences and a 1990 recipient of the Humboldt Prize, one of Europe's highest academic honors.

Courtenay is a world leader in reassessing the significance of medieval thought and relating it to theological and sociological currents. His major project for the past six years has been a socio-logical study of the University of Paris

in the 14th century. Courtenay has opened up the medi-eval world to his students. He has devel-oped several courses for the Medieval Studies Program and has taught for Inte-grated Liberal Studies. Courtenay often participates in the honors program and has had three students work with him in the Hilldale Undergraduate Research Program.

Raised in Neenah, Wis., he earned his bachelor of arts at Vanderbilt and doctorate at Harvard.

### Willy Haeberli

### Ray Herb Distinguished Professor of Physics, Steenbock Professor of Natural Sciences A native of Switzerland has helped

put UW-Madison on the map in the minds of physicists worldwide. "Profes-sor [Willy] Haeberli is without a doubt the most outstanding physicist in the field of nuclear polarization," German physicist A. Faessler has said, and

Herman Feshbach of MIT has called Haeberli "a physicist's physicist." For the vast number of people who aren't physicists, it's important to note that nuclear polarization studies are es-sential in understanding nuclear physics And no one has done more to further polarization studies than Haeberli. That's why he received the Tom Bonner Prize of the American Physical Society as well as the Humboldt Senior U.S. Scientist Award, and that's why he is a fellow of the American Academy of Arts and Sciences.

Haeberli's work has rippled through the world of physics. A recent example: A large experiment funded jointly by American and German agencies will use an apparatus of Haeberli's design. Haeberli is "a remarkable example of how a person carrying out innovative work on a small scale can influence and shape ... international research in particle physics," said Wilmer Anderson, physics professor at UW-Madison.

In addition to his research, Haeberli has taught primarily at the undergradu-ate level. In 1991 he was selected by a Wisconsin Student Association poll as one of the top 100 educators at UW-Madison. Among the courses he has developed is Physics in the Arts, a popu-lar offering among students in music and the visual arts.

Born in Zurich, Haeberli received his doctorate at the University of Basel.

### **Richard Davidson**

William James Professor of Psychology and Psychiatry The relation of brain, mind and behavior has been on Richard Davidson's mind for many years, and the results of his reflection have catapulted him into

international prominence. Davidson studies how the brain normally implements emotion and normally implements emotion and emotional control and how these pro-cesses change in psychopathology. Davidson is "the international leader in his specialty research area and one of a handful of the most influential scientists in psychology," said Hill Goldsmith, chair of the department of psychology. With Paul Ekman, the world's fore-ment authority on facil averaging of

most authority on facial expressions of emotion, Davidson established that when people show facial signs of certain posi-tive and negative emotions, there are changes in patterns of brain activity. He also has shown that individual differences in brain activation are stable over time and observable in newborns Davidson has worked with three students awarded Hilldale Undergraduate

Research Awards. Among graduate students and post-doctoral fellows his laboratory has come to be known as the premier training site in the world for research on brain function and emotions in humans. He directs the National Institute of Mental Health (NIMH) Center for Behavioral Sciences Research and this fall will assume directorship of the NIMH Post-doctoral Training Program

in Emotion Research, moving from the University of California-Berkeley. Davidson grew up in Brooklyn and received his bachelor's degree at New York University-Heights and doctorate at Harvard. He is a fellow of the Ameri-can Association for the Advancement of Science

### Folkert Belzer

A.R. Curreri Professor of Surgery The gift of life can now be preserved around the world — literally — because

of Folkert Belzer. Belzer, chair of the department of surgery, developed what now is called the UW Solution. Today it is the state-of-theart method for organ preservation and is used universally for the liver, pancreas and kidney. It is said to have revolution-ized liver and pancreas transplantation. Belzer was honored in 1987 with a Na-tional Institutes of Health Merit Award in recognition of his contributions to basic research in organ preservation.

Under Belzer, the transplant center at the University Hospital and Clinics has grown into one of the five largest trans-plant centers in the nation. A recent government survey reported that UW-Madison ranked first for success in kid-ney transplantation and was in the top ney transplantation and was in the top five for liver and pancreas. The center's record of number of organs retrieved is unsurpassed by any organ retrieval

center in the United States, despite the small population pool available in Wisconsin

As a surgeon himself, Belzer has developed improved techniques in organ transplantation.

Born in Indonesia of Dutch heritage, he earned his bachelor's degree at Colby

College and master's and doctor of medi-cine at Boston University. — Jeff Iseminger

### NATIONAL ACADEMY OF SCIENCES

Two members of the faculty have been elected to the National Academy of Sciences, an honor many scientists rank second only to the Nobel Prize. Elected to membership at the 132nd

annual meeting of the academy were: Judith Kimble, a Howard Hughes Medical Institute investigator and professor of biochemistry, molecular biology and medical genetics; and Edwin N. Lightfoot, professor of chemical

engineering. The election of Lightfoot and Kimble brings to 46 the number of current, emeritus or adjunct UW-Madison professors who are members of the academy. Kimble is a developmental geneticist.

She uses a species of nematode, a simple worm, as a model to study the molecular machinery that guides an animal's devel-opment. Lightfoot is the Hilldale professor of chemical engineering and is an expert in transport phenomena. He has also pioneered ways of utilizing agricul-

also pioneered ways or utilizing agricul-tural waste products such as whey. Of the 60 new members chosen, Lightfoot and Kimble were the only ones from Wisconsin. - Terry Devitt

### **BARTELL AWARD**

The creator of several arts outreach programs has won the 1995 Gerald A. Bartell Award.

Leslee Nelson, a faculty member in the department of continuing education in the arts, has served since 1982 as In the arts, has served since 1962 as director of the Wisconsin Regional Arts Program, which sponsors statewide workshops and conventions at which nonprofessional artists are honored.

The Bartell Award is given annually to a member of the UW-Madison faculty or staff whose career and activities further, in the words of the late Gerald Bartell, "support and enjoyment of the arts

Nelson also is a member of the Women's Caucus for the Arts national board of directors, and is active in No Limits for Women in the Arts. In September, Nelson will speak at the United Na-tions Conference for Women in Beijing. In the UW-Madison department of art, Nelson has developed such innova-

tive for-credit courses as Crossing Bor-ders: Contemporary Art in Multicultural America, International Artists and Influ-ences and Women Artists: 1960s-1990s. In addition, about 1,000 Wisconsin resi-dents take one or more of the more than 100 noncredit classes Nelson organizes

each year. One of Nelson's most profound contributions has been her work with the Expanding Visions in the Arts program, in which she links the university and the broader community by establishing self-sustaining arts programs in neigh-borhood centers, hospitals, shelters and other community venues. Further afield, she has begun a two-

year collaboration with Seniwati Sanggar Gallery in Bali. An accomplished sculptor, Nelson has exhibited pieces in Bali,

Canada, Scotland, Spain and Paris, as well as the United States.

Associations sciences, National Azademy & Wisconsin Week, May 3, 1995/II

Weil as the United States. An low antive, Nelson earned her B.F.A. from California College of Arts and Crafts. She received her M.S. and M.F.A. from the UW-Madison. — Barbara Wolff

### LILLY TEACHING **FELLOWSHIPS**

Six assistant professors in the College of Letters and Science have been name Lilly Teaching Fellows for 1995-96.

The fellowships are awarded to promising, untenured faculty members, who receive release from teaching one course during the year in order to design a new undergraduate course or redesign an existing one. They receive \$1,000 each to purchase course materials.

Lilly Fellows are paired with tenured faculty members, who serve as mentors. They also attend a series of pedagogical workshops on campus and two national

Lilly Fellows conferences. This marks the third year of the Lilly program, funded by Lilly Endowment Inc. to promote innovative teaching in undergraduate education. Faculty members were nominated by 11 departments within L&S.

The 1995-96 Lilly Teaching Fellows and their projects are: • Brian Edmiston, theatre and

drama. Edmiston will redesign the introductory Drama in Education course to include recent developments and course materials. The course, required certification, teaches teachers-to-be how to be creative and collaborative in the classroom

• Jacqueline Hichton, journalism and mass communication. Hichton will create a new capstone course on the collapse of traditional barriers among media, the integration of media (multimedia) and media's increased dependence on technology.

 Paul Hutchcroft, political science. • Paul Hutchcroft, political science. Hutchcroft will redesign the large intro-ductory Comparative Politics course in response to changing political structures and economic challenges in the post-Cold War world.

• Ruben Medina, Chicano studies and Spanish and Portuguese. Medina will develop a new course, Chicano and Chicana Autobiographies. It will focus on literature since the mid-19th century and how it contributes to the construction and expression of Chicano and Chicana identity in response to tension between two different national experiences

• Eric Schatzberg, history of science. Schatzberg will create a new course on the history of technology, examining how the social, cultural and ethical issues involved in the development of engineering and the physical sciences can be identified and analyzed through a humanistic perspective.

 John Shea, economics. Shea will design a new course, Introduction to Empirical Research in Economics, to bring students the latest examples of research in empirical economics and prepare them for the tasks and challenges that economists face in the real world of their professions. Robert Skloot, professor of theatre

and drama, is the director of the Lilly program at UW-Madison for 1994-95 Lynn Keller, a professor of English, will be director for 1995-96.

— Steve Schumacher



Sciences, National Academy of



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### FOR IMMEDIATE RELEASE

4/25/95

CONTACT: Judith Kimble, (608) 262-6188; Edwin Lightfoot, (608) 262-6934

### TWO FROM UW ELECTED TO NATIONAL ACADEMY OF SCIENCES

MADISON — Two members of the University of Wisconsin-Madison faculty have been elected to the National Academy of Sciences, an honor many scientists rank second only to the Nobel Prize.

Elected to membership today at the 132nd annual meeting of the Academy were: Judith Kimble, a Howard Hughes Medical Institute investigator and a UW-Madison professor of biochemistry, molecular biology and medical genetics; and Edwin N. Lightfoot, a UW-Madison professor of chemical engineering.

The election of Lightfoot and Kimble brings to 46 the number of current, emeritus or adjunct UW-Madison professors who are members of the academy.

Kimble is a developmental geneticist. She uses a species of nematode, a simple worm, as a model to study the molecular machinery that guides an animal's development. Lightfoot is the Hilldale professor of chemical engineering and is an expert in transport phenomena. He has also pioneered ways of utilizing agricultural waste products such as whey.

Election of new members to the Academy was held during a closed session this morning. Of the 60 new members chosen, Lightfoot and Kimble were the only ones from Wisconsin.

- Terry Devitt, (608) 262-8282

National Academy of Science Members on UW-Madison Faculty (Past and Present)

Missing from 1992 list: Joseph Hirschfelder Arthur Kelman Donald Kerst Champ Tanner John Walker

### <u>1993</u> Paul Ahlquist Charles Casey Jack Gorski

Companion to 1992 list

<u>1994</u> No one

<u>1995</u> Judith Kimble Edwin Lightfoot

<u>1996</u> James Dahlberg John Suttie

<u>1997</u> Carl de Boor

<u>1998</u>

William Brock Elizabeth Craig William Dove Perry Frey Paul Rabinowitz

Knobil, Ernst Margrave, John L. Pike, Kenneth L. Smalley, Richard E. Summers, Max D. Uhr, Jonathan W. Weinberg, Steven

Capecchi, Mario R. Velick, Sidney F.

Gibson, Eleanor Jack

Barton, Paul B., Jr. Gilruth, Robert R. Kellermann, K. I. Nolan, Thomas B.

Beeson, Paul B.
Davie, Earl W.
Edmondson, W. T.
Garcia, John
Glomset, John A.
Hartwell, Leland H.
James, Harold L.
Leopold, Estella Bergere
Orians, Gordon H.
Reed, Richard J.
Schairer, George S.
Weintraub, Harold

Adler, Julius Beinert, Helmut Brill, Winston J. Code, Arthur D. Dahl, Lawrence F. First, Neal L. Hauser, Robert M. Kaesberg, Paul J. Kraushaar, William L. Morgan, W. W. Peloquin, S. J. Rose, Jerzy E. Skoog, Folke K. Woolsey, Clinton N.

### GEOGRAPHICAL LISTING

Kochi, Jay K. McCann, S. M. Reed, Lester J. Snell, Esmond E. Tate, John T. Unger, Roger H. Wendorf, D. Fred

Utah 4 Goodman, Louis S.

Vermont 2 Hoagland, Mahlon

Virginia 12 Berne, Robert M. Hammond, George S. Marshak, Robert E. Roberts, Morton S.

### Washington 34 Benditt, Earl P. Dehmelt, Hans \* Finch, Clement A. Gartler, Stanley M. Halver, John E. Henley, Ernest M. Klebanoff, Seymour J. Motulsky, Arno G. Paine, Robert T. Rhines, Peter B. Thomas, E. Donnall

Wisconsin # 42 Barschall, H. H. Bird, R. Byron Burris, R. H. Cohen, Philip P. DeLuca, H. F. Goldberger, Arthur 5. Herb, R. G. Kirk, T. Kent Lardy, Henry A. Nelson, Oliver E., Jr. Potter, Van R. Sequeira, Luis Temin, Howard M. Zimmerman, Howard E. Kusch, P. Myers, Jack Sclater, John G. Starr, Richard C. Uhlenbeck, Karen K. Wakil, Salih J. Wilson, Jean D.

Roth, John R.

Cairns, John, Jr. Heeschen, D. S. Miller, Oscar L., Jr. Wallace, Bruce

Catterall, William A. Dunne, Thomas Fischer, Edmond H. Giblett, Eloise R. Hannay, N. Bruce Hille, Bertil Krebs, Edwin G. Neurath, Hans Palmiter, Richard D. Ryan, Clarence A., Jr. Todaro, George J.

Beck, Stanley D. Bogue, Allan G. Cleland, W. Wallace Crow, James F. Ferry, John D. Hasler, Arthur D. Jackson, Marion L. Kleene, Stephen C. Miller, James A. Newcomb, Eldon H. Ris, Hans Sewell, William H. Walker, Duard L.



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### FOR IMMEDIATE RELEASE

4/27/93

CONTACT: Paul G. Ahlquist, (608) 263-5916; Charles P. Casey, (608) 262-0584; Jack Gorski, (608) 263-4441

### THREE FROM UW ELECTED TO NATIONAL ACADEMY OF SCIENCES

MADISON — Three members of the University of Wisconsin-Madison faculty were elected today (April 27) to membership in the National Academy of Sciences (NAS), the nation's preeminent honor society for scientists.

Elected to NAS membership were: Paul G. Ahlquist, a professor in the Institute for Molecular Virology and the department of plant pathology; Charles P. Casey, a professor of chemistry; and Jack Gorski, a professor of biochemistry, meat and animal science and dairy science.

The elections of Ahlquist, Casey and Gorski brings to 47 the number of current or emeritus UW-Madison faculty who are members of the academy.

Membership in NAS, a private organization founded in 1863, is one of the highest honors that can be accorded a U.S. scientist or engineer. It confers a prestige considered by many scientists to be second in stature only to the Nobel Prize.

Election of new members was held during a closed session at the group's 130th annual meeting in Washington, D.C. Of the 60 new members chosen, Ahlquist, Casey and Gorski were the only ones from Wisconsin.

Ahlquist, who joined the UW-Madison faculty in 1984, studies gene expression and replication in viruses, and the use of viruses for the genetic engineering of higher organisms.

-more-

### NAS election -- Add 1

He is a former National Science Foundation Presidential Young Investigator and a Shaw Scholar, a prestigious scholarship awarded by the Milwaukee Foundation and intended to advance research in the biological sciences, biochemistry and cancer research.

Casey is a leader in the field of organometallic chemistry. He joined the UW-Madison chemistry faculty in 1968 and has published scores of papers on the synthesis of new organometallic compounds, organometallic reactions, and detailed investigations of organometallic mechanisms. In addition, Casey has distinguished himself as a teacher at both the graduate and undergraduate level, involving many students in various aspects of his research.

Gorski has earned an international reputation as an expert on steroid hormones, especially estrogen. He joined the UW-Madison faculty in 1973 and his work, which focuses on the location and physical characteristics of estrogen receptors, is among the most cited in the world. A prodigious teacher, Gorski has trained more than 90 doctoral and post-doctoral students in his laboratory over the years. A native of Green Bay, Gorski received his undergraduate degree from UW-Madison.

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— Terry Devitt, (608) 262-8282

# NATIONAL ACADEMY OF SCIENCES Academy of

NATIONAL ACADEMY OF ENGINEERING NATIONAL RESEARCH COUNCIL INSTITUTE OF MEDICINE Office of News and Public Information • 2101 Constitution Avenue, N.W., Washington, D.C. 20418 • (202) 334-2138

> Date: April 27, 1993 Contact: Office of News and Public Information (202) 334-2138

Associations

FOR IMMEDIATE RELEASE

60 NEW MEMBERS CHOSEN BY NATIONAL ACADEMY OF SCIENCES

WASHINGTON -- The National Academy of Sciences today announced the election of 60 new members and 15 foreign associates from 11 countries in recognition of their distinguished and continuing achievements in original research.

The election was held this morning during the business session of the 130th annual meeting of the Academy. Election to membership in the Academy is considered one of the highest honors that can be accorded a U.S. scientist or engineer. Those elected today bring the total number of current active members to 1,683.

Foreign associates are non-voting members of the Academy with citizenship outside the United States. Today's election brings the total number of foreign associates to 298.

The National Academy of Sciences is a private organization of scientists and engineers dedicated to the furtherance of science and its use for the general welfare. The Academy was established in 1863 by a congressional act of incorporation, signed by Abraham Lincoln, that calls upon the Academy to act as an official adviser to the federal government, upon request, in any matter of science or technology.

Newly elected members and their affiliations at the time of the election are:

- AHARONOV, Yakir; professor of physics, Tel Aviv University, Israel; and University of South Carolina, Columbia
- AHLQUIST, Paul G.; professor, Institute for Molecular Virology and department of plant pathology, University of Wisconsin, Madison
  - ATAL, Bishnu S.; head, speech research department, AT&T Bell Laboratories, Murray Hill, N.J.
  - BAKER, Bruce S.; professor of biological sciences, Stanford University, Stanford, Calif.
  - BALDWIN, Ransom Lee, Jr.; professor of animal science, University of California, Davis
  - BAYLOR, Denis; professor and chair of neurobiology, Stanford University
  - BEASLEY, Malcolm R.; professor of applied physics and electrical engineering, Stanford University
  - BIEMANN, Klaus; professor of chemistry, Massachusetts Institute of Technology, Cambridge
  - CANIZARES, Claude R.; professor of physics, head of the astrophysics division, and director of the Center for Space Research, Massachusetts Institute of Technology
- X CASEY, Charles P.; Helfaer Professor of Chemistry, University of Wisconsin
  - CASKEY, C. Thomas; chief of medical genetics; professor of medicine and biochemistry; director, Institute of Molecular Genetics; Henry and Emma Meyer Chair in Molecular Genetics; and investigator, Howard Hughes Medical Institute, Baylor College of Medicine, Houston, Texas
  - CHIPMAN, John S.; Regents' Professor of Economics, University of Minnesota, Minneapolis; and Ständiger Gastprofessor, University of Konstanz, West Germany
  - CHU, Steven; professor of physics and applied physics; Theodore and Frances Geballe Professor of Humanities and Sciences; and chair of physics, Stanford University
  - COCKE, John; research staff member, computer sciences department; and IBM Fellow, Thomas J. Watson Research Center, Austin, Texas
  - COLLINS, Francis S.; professor of internal medicine and human genetics; and investigator, Howard Hughes Medical Institute, University of Michigan Medical School, Ann Arbor
  - COOK, R. James; research leader, root disease and biocontrol research unit, U.S. Department of Agriculture, Agricultural Research Service, Washington State University, Pullman

- CRANDALL, Stephen; Ford Professor of Engineering, Massachusetts Institute of Technology
- DALRYMPLE, Brent; geologist, U.S. Geological Survey, Menlo Park, Calif.
- DAVIS, Mark M.; professor of microbiology and immunology; faculty coordinator; and investigator, Howard Hughes Medical Institute, Stanford University
- DePAOLO, Donald J.; professor of geochemistry, University of California, Berkeley
- FRIEDMAN, Avner; professor and director, Institute of Mathematics and Its Applications, University of Minnesota
- GARBERS, David L.; professor of pharmacology and investigator, Howard Hughes Medical Institute, University of Texas Southwestern Medical Center, Dallas
- GOLLUB, Jerry P.; professor and chair of physics and Kenan Professor of Physics, Haverford College, Haverford, Pa.; and adjunct professor of physics, University of Pennsylvania, Philadelphia

GOLUB, Gene H.; professor of computer science, Stanford University

- X GORSKI, Jack; Paul H. Phillips Distinguished Professor of Biochemistry; and professor of dairy science and of meat and animal sciences, University of Wisconsin
  - GUTHRIE, Christine; professor of biochemistry, department of biochemistry and biophysics, University of California, San Francisco
  - HARLOW, Edward E., Jr.; professor of genetics, Harvard Medical School, Cambridge, Mass.; and molecular biologist, Massachusetts General Hospital Cancer Center, Charlestown
  - HENDRICKSON, Wayne A.; professor of biochemistry and molecular biophysics; and investigator, Howard Hughes Medical Institute, Columbia University, New York City
  - HOWLEY, Peter M.; chief, Laboratory of Tumor Virus Biology, National Cancer Institute, National Institutes of Health, Bethesda, Md.
  - HUCHRA, John P.; senior scientist, Smithsonian Institution; and professor of astronomy, Harvard University, Cambridge, Mass.
  - INOUÉ, Shinya; professor, University of Pennsylvania; and Distinguished Scientist, Woods Hole Marine Biological Laboratory, Woods Hole, Mass.
  - KLAUSNER, Richard D.; assistant clinical professor of medicine, Uniformed Services University of the Health Sciences, Bethesda, Md.; and chief, cell biology and metabolism branch, National Institute of Child Health and Human Development, National Institutes of Health
  - KLECKNER, Nancy E.; professor of biochemistry and molecular biology, Harvard University
  - KORNBERG, Roger D.; chair and professor of cell biology, School of Medicine, Stanford University

- KUSTU, Sydney; professor of plant pathology and molecular and cellular biology, University of California, Berkeley
- LABOV, William; professor of linguistics and psychology; and director, Linguistics Laboratory, University of Pennsylvania
- LANGLANDS, Robert; professor of mathematics, Institute for Advanced Study, Princeton, N.J.
- LONG, Sharon R.; professor of biological sciences, Stanford University
- MACCOBY, Eleanor E.; Barbara Kimball Browning Professor of Psychology Emerita, Stanford University
- MAO, Ho-kwang (David); staff member, Geophysical Laboratory, Carnegie Institution of Washington (D.C.)
- MARKS, Tobin J.; professor of chemistry, Northwestern University, Evanston, Ill.
- McKELVEY, Richard D.; professor of social science, California Institute of Technology, Pasadena
- MERTON, Robert C.; George F. Baker Professor of Business Administration, Graduate School of Business Administration, Harvard University
- MODRICH, Paul L.; James B. Duke Professor of Biochemistry, Duke University, Durham, N.C.
- MOLINA, Mario J.; professor of atmospheric chemistry, Massachusetts Institute of Technology
- MURRAY, Joseph E.; professor of surgery emeritus, Harvard Medical School
- NAVROTSKY, Alexandra; professor of geological and geophysical sciences; and Albert G. Blanke Jr. Professor of Geological and Geophysical Sciences, Princeton University, Princeton, N.J.
- NETTING, Robert M.; Regents' Professor of Anthropology, University of Arizona, Tucson
- RATNER, Marina; professor of mathematics, University of California, Berkeley
- RICE, T. Maurice; professor of theoretical physics, Institute for Theoretical Physics, Eth-Honggerberg, Zurich, Switzerland
- ROTHMAN, James E.; Paul A. Marks Chair; and chairman, program in cellular biochemistry and biophysics, Sloan-Kettering Institute, New York City
- SCHULTZ, Peter G.; professor of chemistry, University of California, Berkeley
- SMELSER, Neil J.; University Professor of Sociology, University of California, Berkeley
- SQUIRE, Larry R.; professor of psychiatry; and member, neuroscience group, University of California, San Diego; research career scientist, Veterans Affairs Medical Center, San Diego

STONE, Charles J.; professor of statistics, University of California, Berkeley

TIGNER, Maury; professor, department of physics, Cornell University, Ithaca, N.Y.

- UHLENBECK, Olke C.; professor of chemistry and biochemistry; and director, biochemistry program, University of Colorado, Boulder
- VANDE WOUDE, George F.; director, ABL-basic research program, National Cancer Institute, Frederick Cancer Research and Development Center, Frederick, Md.
- WILLIAMS, George C.; professor emeritus, department of ecology and evolution, State University of New York at Stony Brook

YAU, S.T.; professor of mathematics, Harvard University

Newly elected foreign associates and their affiliations at the time of election are:

- BARTLETT, Maurice S.; professor of biomathematics emeritus, University of Oxford (England)
- BLACKBURN, Elizabeth H.; professor of microbiology and immunology, and of biochemstry and biophysics, University of California, San Francisco (Australia)
- BUSSE, Friedrich H.; professor of geophysics, University of Bayreuth (Germany)

CLARKE, Adrienne E.; professor of botany, University of Melbourne (Australia)

- DOBRUSHIN, Roland L.; professor and head of laboratory, Institute for Problems of Information Transmission, Russian Academy of Sciences, Moscow (Russia)
- DRÈZE, Jacques H.; Professeur Ordinaire, retired, Université Catholique de Louvain (Belgium)
- FERSHT, Alan R.; Herschel Smith Professor of Organic Chemistry; director, Cambridge Centre for Protein Engineering; director, MRC Unit for Protein Function and Design, University of Cambridge; and professorial fellow, Gonville and Caius College, Cambridge (England)

FRIESEN, Henry G.; director, Medical Research Council of Canada (Canada)

- SAKMANN, Bert; professor, medical faculty, University of Göttingen; director and professor of cell physiology, Max Planck Institute for Medical Research, Göttingen (Germany)
- SARUKHÁN, José; rector, Universidad Nacional Autónoma de México; coordinador general de la Comisión Nacional para el Conocimiento Y Uso de la Biodiversidad; professor and researcher, Centro de Ecología, UNAM, Mexico City (Mexico)
- SATO, Mikio; director, Research Institute for Mathematical Sciences, Kyoto University (Japan)
- SOBOLEV, Nikolai V.; deputy director, Institute of Geology and Geophysics, Siberian branch, Russian Academy of Sciences, Novosibirsk (Russia)

TAYLOR, Richard E.; professor of physics, Stanford University (Canada)

- VALYASEVI, Aree; professor of pediatrics and institute consultant, Institute of Nutrition, Mahidol University, Bangkok (Thailand)
- VAN ROOD, Johannes J.; head of immunohematology; professor of internal medicine; and co-founder and chair, Leiden Institute for Immunology (Netherlands)

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Associations ... Sciences, National Academy of

UNIVERSITY OF WISCONSIN–MADISON

Phone: 608/262-3571 Fax: 608/262-2331

News & Information Service 19 Bascom Hall • 500 Lincoln Drive Madison, Wisconsin 53706-1380

### FOR IMMEDIATE RELEASE

04/29/92

CONTACT: Carol A. Gross (608) 262-8840

### UW-MADISON'S GROSS ELECTED TO NATIONAL ACADEMY OF SCIENCES

MADISON — Carol A. Gross, a University of Wisconsin-Madison professor of bacteriology and a leading expert on gene expression, was elected Tuesday (April 28) to membership in the National Academy of Sciences (NAS), the nation's preeminent honor society for scientists.

The election of Gross brings to 42 the number of current or emeritus UW-Madison faculty who are members of the Academy.

She is the first woman from UW-Madison to be elected to the Academy, a private organization founded in 1863. Membership in NAS confers a prestige considered by many scientists to be second in stature only to the Nobel Prize.

Election of new members was held during a closed session at the group's 129th annual meeting in Washington, D.C. Of the 59 new members chosen, Gross was the only one from Wisconsin.

A graduate of Cornell University and the University of Oregon at Eugene, Gross joined the UW-Madison faculty in 1981 after working as an associate scientist here. She is currently the E.B. Fred-Bascom professor of bacteriology.

Gross is known for her studies of how gene expression is regulated in the bacterium Escherichia coli, a species of bacteria widely used in biological research. She has also conducted important studies of heat shock protein expression in E. coli. Such proteins play a central role in cell physiology and in a cell's response to stress.

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- Terry Devitt, (608) 262-8282

## news from the NATIONAL ACADEMY OF SCIENCES

The National Academy of Sciences is an organization of distinguished scientists and engineers concerned with the furtherance of science and its use for human welfare. Although the Academy is not a government agency, it is called upon by its Congressional charter of 1863 to serve as an official adviser to the Federal Government in matters of science and technology.

2101 CONSTITUTION AVENUE, N.W., WASHINGTON, D.C. 20418

AREA CODE 202 334-2000

Date: April 30, 1991 Contact: Office of News and Public Information (202) 334-2138

FOR IMMEDIATE RELEASE

### 60 NEW MEMBERS CHOSEN BY ACADEMY

WASHINGTON -- The National Academy of Sciences today announced the election of 60 new members and 15 foreign associates from nine countries in recognition of their distinguished and continuing achievements in original research.

The election was held this morning during the business session of the 128th annual meeting of the Academy. Election to membership in the Academy is considered one of the highest honors that can be accorded a U.S. scientist or engineer. Those elected today bring the total number of current members to 1626.

Foreign associates are non-voting members of the Academy with citizenship outside the United States. Today's election brings the total number of foreign associates to 277.

The National Academy of Sciences is a private organization of scientists and engineers dedicated to the furtherance of science and its use for the general welfare. The Academy was established in 1863 by a congressional act of incorporation, signed by Abraham Lincoln, that calls upon the Academy to act as an official adviser to the federal government, upon request, in any matter of science or technology.

Newly elected members and their affiliations at the time of election are:

ACRIVOS, Andreas; Albert Einstein Professor, City College of the City University of New York, New York City.

ALLINGER, Norman L.; research professor, University of Georgia, Athens.

- ALPERN, Mathew; professor of physiological optics, physiology, and psychology, University of Michigan, Ann Arbor.
- ALVAREZ, Walter; professor, department of geology and geophysics, University of California, Berkeley.
- AUSTON, David H.; Morris and Alma Shapiro Professor and chair, department of electrical engineering, applied physics, and nuclear engineering, Columbia University, New York City.
- AVISE, John C.; research professor of genetics, University of Georgia.
- BRICKER, Victoria R.; professor of anthropology, Tulane University, New Orleans, La.
- BURG, Maurice B.; chief, Laboratory of Kidney and Electrolyte Metabolism, National Heart, Lung, and Blood Institute, National Institutes of Health, Bethesda, Md.
- CAFFARELLI, Luis A.; professor, Institute for Advanced Study, Princeton, N.J.
- CAIRNS, John, Jr.; University Distinguished Professor, Virginia Polytechnic Institute and State University, Blacksburg.
- CAPECCHI, Mario R.; professor of human genetics, University of Utah School of Medicine, Salt Lake City.
- CASIDA, John E.; professor of entomology and director, Pesticide Chemistry and Toxicology Laboratory, University of California, Berkeley.
  - CERAMI, Anthony; professor and head, Laboratory of Medical Biochemistry, Rockefeller University, New York City.
  - CHORIN, Alexandre J.; professor of mathematics, University of California, Berkeley.
  - COLLIER, R. John; Maude and Lillian Professor of Microbiology and Molecular Genetics, and chair, division of medical sciences, Harvard Medical School, Boston, Mass.
  - DAVIS, Marc; professor of astronomy and physics, and chair, department of astronomy, University of California, Berkeley.

DiSALVO, Francis J.; professor of chemistry, Cornell University, Ithaca, N.Y.

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- ECHOLS, Harrison; professor, department of molecular biology, University of California, Berkeley.
  - EDMONDS, Mary; professor, department of biological sciences, University of Pittsburgh, Pittsburgh, Pa.
  - GAILLARD, Mary Katherine; professor of physics, University of California, Berkeley.
  - HARRISON, Stephen C.; professor and chair, department of biochemistry and molecular biology, Harvard University.
  - HARTLE, James B.; professor of physics, University of California, Santa Barbara.
  - K HASELKORN, Robert; F.L. Pritzker Distinguished Service Professor of Molecular Genetics and Cell Biology, Biochemistry and Molecular Biology, and Chemistry, University of Chicago, Chicago, Ill.
    - HOLDREN, John P.; professor of energy and resources, University of California, Berkeley.
    - HORVITZ, H. Robert; professor of biology, Massachusetts Institute of Technology.
    - HUDSPETH, Albert J.; professor and chair, department of cell biology and neuroscience, University of Texas Southwestern Medical Center, Dallas.
    - JOHNSON, D. Gale; Eliakim Hastings Moore Distinguished Service Professor Emeritus, University of Chicago.
    - JOSEPH, Daniel D.; professor, aerospace engineering and mechanics, University of Minnesota, Minneapolis,
  - KAESBERG, Paul J.; Beaman Professor of Biophysics and Biochemistry, University of Wisconsin.

KENNEL, Charles F.; professor, University of California, Los Angeles.

KINOSHITA, Toichiro; professor of theoretical physics, Cornell University.

KINSEY, James L.; R.D. Bullard-Welch Foundation Professor of Science, Rice University, Houston, Texas.

felany X KNOLL, Andrew H.; professor of biology, Harvard University.

LAUDISE, Robert A.; director, Materials Chemistry Research Laboratory, AT&T Bell Laboratories, Murray Hill, N.J. LEE, David M.; professor of physics, Cornell University.

LEE, Patrick A.; professor of physics, Massachusetts Institute of Technology.

- LEEMAN, Susan E.; director, interdepartment neuroscience program and professor, department of physiology, University of Massachusetts Medical School, Worcester.
- LERNER, Richard A.; professor, department of chemistry, and director, Research Institute of Scripps Clinic, La Jolla, Calif.
- LEVINE, Arnold J.; Harry C. Wiess Professor of Molecular Biology and chair, department of biology, Princeton University, Princeton, N.J.
- MECHANIC, David; Rene Dubos Professor of Behavioral Science, and director, Institute for Health, Health Care Policy, and Aging Research, Rutgers University, New Brunswick, N.J.
- MERMIN, N. David; professor of physics and director, Laboratory of Atomic and Solid State Physics, Cornell University.
- MOON, Harley W.; director, National Animal Disease Center, Ames, Iowa.
- MURRAY, Royce W.; Kenan Professor of Chemistry, University of North Carolina, Chapel Hill.
- OLDENDORF, William H.; senior medical investigator, Veterans Administration Medical Center, Los Angeles, Calif.
- ORKIN, Stuart H.; Leland Fikes Professor of Pediatric Medicine, Harvard Medical School.
- PACE, Norman R.; professor of biology, Indiana University, Bloomington.
- PHILLIPS, Ronald L.; professor of genetics, department of agronomy and plant genetics, University of Minnesota, St. Paul.
- PROCKOP, Darwin J.; professor and chair, department of biochemistry and molecular biology, Thomas Jefferson University, Philadelphia, Pa.
- RICHARDSON, Jane S.; medical research associate professor, department of biochemistry, Duke University, Durham, N.C.
- RUMELHART, David E.; professor of psychology, Stanford University, Stanford, Calif.
- SAHLINS, Marshall D.; Charles F. Grey Distinguished Service Professor, University of Chicago.

- SCALAPINO, Douglas J.; professor of physics, University of California, Santa Barbara.
- SCHOEN, Richard M.; professor of mathematics, Stanford University.
- SPUDICH, James A.; professor, department of cell biology, Stanford University School of Medicine.
- TJIAN, Robert T.N.; professor of biochemistry, University of California, Berkeley.
- WILEY, Don C.; professor of biochemistry and biophysics, Harvard University.
- WILSON, William J.; Lucy Flower University of Professor of Sociology and Public Policy, University of Chicago.
- WOLYNES, Peter G.; professor of chemistry, University of Illinois, Urbana.
- WOOD, John A.; associate director, Smithsonian Astrophysical Observatory, Harvard-Smithsonian Center for Astrophysics, Cambridge, Mass.
- YARIV, Amnon; Thomas G. Myers Professor of Electrical Engineering and Applied Physics, California Institute of Technology, Pasadena, Calif.
- Newly elected foreign associates and their affiliations at the time of election:
- BLACK, Sir James; emeritus professor, analytical pharmacology, Rayne Institute. (England)
- BORST, Piet; research director, Netherlands Cancer Institute. (The Netherlands)
- BREKHOVSKIKH, Leonid M.; academician, department of oceanology, U.S.S.R. Academy of Sciences. (U.S.S.R.)
- DALITZ, Richard H.; Royal Society Professor, Oxford University. (England)
- ELIASSEN, Arnt; professor, University of Oslo, Institute for Geophysics. (Norway)
- ERNST, Richard R.; professor of physical chemistry, Eidgenossische Technische Hochschule Zurich. (Switzerland)
- GADGIL, Madhav; professor and chairman, Centre for Ecological Sciences, Indian Institute of Science. (India)
- HIGUCHI, Takayoshi; professor and director, Wood Research Institute, Kyoto University. (Japan)

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- KERR, Allen; Personal Chair in Plant Pathology, University of Adelaide. (Australia)
- KISHIMOTI, Tadamitsu; professor, Institute for Molecular and Cellular Biology, Osaka University. (Japan)
- MACMILLAN, Jake; Alfred Capper Pass Professor of Organic Chemistry, University of Bristol. (England)
  - NOZIERES, Philippe; professor of statistical physics, College de France: Institut Laue-Langevin. (France)
  - NUMA, Shosaku; professor, departments of medical chemistry and molecular genetics, Kyoto University. (Japan)
  - SUNYAEV, Rashid A.; head, department of high energy astrophysics, Space Research Institute of U.S.S.R. Academy of Sciences. (U.S.S.R.)

WOLLMAN, Elie; emeritus deputy director, Institut Pasteur. (France)

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From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

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05/01/91

CONTACT: Paul J. Kaesberg (608) 262-2205

Associations

UW'S KAESBERG ELECTED TO NATIONAL ACADEMY OF SCIENCES

MADISON--Paul J. Kaesberg, a University of Wisconsin-Madison emeritus professor and one of the world's leading plant virologists, was elected Tuesday (April 30) to membership in the National Academy of Sciences, the nation's preeminent honor society for scientists.

The election of Kaesberg, the William W. Beeman Professor of Molecular Virology and Biochemistry, brings to 43 the number of current or emeritus UW-Madison faculty elected to the Academy.

Election to the Academy, a private organization founded in 1863, confers a prestige considered by many scientists to be second in stature only to the Nobel Prize.

Election of new members was held during a closed session at the group's 128th annual meeting in Washington, D.C. Of the 60 new members chosen, Kaesberg was the only one from Wisconsin.

A native of Germany, Kaesberg joined the UW-Madison faculty in 1949. In 1961, he co-founded the University's Institute for Molecular Virology.

Kaesberg is noted for his studies of the structure and synthesis of viruses. He was the first to show that viruses have a well-defined structure in which the genetic material of a virus is surrounded by a protective protein coat.

He also discovered that some viruses have segmented genetic material, a trait that can make related viruses -- those able to exchange genetic material -- especially virulent.

# uw news

Amiations

From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571 Release: Immediately 4/25/90

CONTACT: Duard L. Walker (608) 262-1474

UW-MADISON'S DUARD WALKER ELECTED TO NATIONAL ACADEMY OF SCIENCES

MADISCN--Duard L. Walker, a University of Wisconsin-Madison medical

microbiologist, was elected Tuesday (April 24) to membership in the National

Academy of Sciences, the nation's leading honor society for scientists.

The election of Walker brings to 42 the number of current UW-Madison faculty elected to the Academy.

Election to the Academy, a private organization founded in 1863, confers a prestige considered by most scientists to be second in stature only to the Nobel Prize.

Election of new members was held during a closed session at the group's 127th annual meeting in Washington, D.C. Of the 60 new members chosen, Walker was the only one from Wisconsin.

Walker, an emeritus professor of medical microbiology, joined the UW-Madison faculty in 1952. He retired in 1988.

Walker is best known for his work on JC virus, an opportunistic virus that infects many people, but becomes active only when the immune system is depleted. The virus can cause a serious infection of the brain that often proves fatal.

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-- Terry Devitt (608) 262-8282 #29651



From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release:

Immediately

4/25/89

CONTACT: R. Byron Bird (608) 262-5920, Winston J. Brill (608) 836-7300, Neal First (608) 263-4307

### THREE FROM UW-MADISON ELECTED TO NATIONAL ACADEMY OF SCIENCES

MADISON--Three members of the University of Wisconsin-Madison faculty were elected Tuesday (April 25) to membership in the National Academy of Sciences, the nation's leading honor society for scientists.

The election of R. Byron Bird, Winston J. Brill and Neal First brings to 42 the number of current UW-Madison faculty elected to the Academy.

Election to the Academy, a private organization founded in 1863, confers a prestige considered by most scientists to be second only to the Nobel Prize.

Election of new members was held during a closed session at the group's 126th annual meeting in Washington, D.C. Of the 60 new members chosen, Bird, Brill and First were the only ones from Wisconsin.

Bird, a professor of chemical engineering, is the recipient of numerous honors and awards, among them the National Medal of Science. He is best known for his research and writings on kinetic theory, transport phenomena, the behavior of polymeric fluids and foreign language study for engineers.

Brill is vice president of research and development at Agracetus and an adjunct professor of bacteriology at UW-Madison. He is well known for his studies of nitrogen fixation in plants and as an outspoken advocate of biotechnology.

First, a professor of meat and animal science, is a pioneer in the study of techniques for cloning cattle and was among the first to employ cloning techniques for the production of superior cattle. Among his awards are two University of Wisconsin-Madison Outstanding Teacher Awards.

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May, 1989

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BARSCHALL Henry H. Professor of Nuclear Engineering Professor of Physics Tel. 608-262-9569

BECK, Stanley D. Professor of Entomology Tel. 608-262-6902

BEINERT, Helmut Professor Emeritus Biochemistry Professor Emeritus Enzyme Research Tel. 608-262-3362

BIRD, R. Byron Professor of Chemical Engineering Tel. 608-262-5920

BOGUE, Allan G. Professor of History Tel. 608-262-3026

BRILL, Winston J. Adjunct Professor of Bacteriology Tel. 608-836-7300

BURRIS, Robert H. Professor Emeritus Biochemistry Tel. 608-262-3042

CLELAND, W. Wallace Professor of Biochemistry Tel. 608-256-3876 CODE, Arthur. D. Professor of Astronomy Tel. 608-262-9564

COHEN, Philip P. Professor Emeritus Physiological Chemistry Tel. 608-262-0299

CROW, James F. Professor Emeritus Genetics Professor Emeritus Zoology Professor Emeritus Medical Genetics Tel. 608-263-4438

DAHL, Lawrence F. Professor of Chemistry Tel. 608-262-5859

DeLUCA, Hector Professor of Biochemistry Tel. 608-263-1839

FERRY, John D. Professor Emeritus Chemistry Tel. 608-262-1485

FIRST, Neal Professor of Meat & Animal Science Tel. 608-263-4307

GOLDBERGER, Arthur Professor of Economics Tel. 608-262-3876 Add one--National Academy of Science members/University of Wisconsin-Madison

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HERB, Raymond G. Professor Emeritus Physics Tel. 608-836-6091



HIRSCHFELDER, Joseph Professor Emeritus Chemistry Tel. 608-262-0258

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KLEENE, Stephen C. Professor Emeritus Mathematics Tel. 608-263-7901

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LARDY, Henry A. Professor of Biochemistry Professor, Enzyme Institute Tel. 608-262-3372 MILLER, James A. Professor Emeritus Oncology Tel. 608-262-1258

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ROSE, Jerzy E. Professor Emeritus Neurophysiology Tel. 608-262-2694

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Add two--National Academy of Sciences members/University of Wisconsin-Madison

SKOOG, Folke Professor Emeritus Botany Tel. 608-262-2790

TANNER, Champ B. Professor of Soil Science Tel. 608-263-5691

TEMIN, Howard M. Professor of Oncology Tel. 608-262-1209

WALKER, John C. Professor Emeritus Plant Pathology Tel. 602-977-3788

WOOLSEY, Clinton N. Professor Emeritus Neurophysiology Tel. 608-263-5929

ZIMMERMAN, Howard E. Professor of Chemistry Tel. 608-262-1502

TOTAL: 42

Anard L. walker Emeritas prot. of medical microbiology Tel. 262-1474 NATIONAL ACADEMY OF SCIENCES

University of Wisconsin-Madison

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ROSE, Jerzy E. Professor Emeritus Neurophysiology Tel. 608-262-2694

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SEWELL, William H. Professor Emeritus Sociology Tel. 608-262-2859

-more-

Add two--National Academy of Sciences members/University of Wisconsin-Madison

SKOOG, Folke Professor Emeritus Botany Tel. 608-262-2790

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WOOLSEY, Clinton N. Professor Emeritus Neurophysiology Tel. 608-263-5929

ZIMMERMAN, Howard E. Professor of Chemistry Tel. 608-262-1502

TOTAL: 39



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CONTACT: R. Byron Bird (608) 262-5920, Winston J. Brill (608) 836-7300, Neal First (608) 263-4307

THREE FROM UW-MADISON ELECTED TO NATIONAL ACADEMY OF SCIENCES

MADISON--Three members of the University of Wisconsin-Madison faculty were elected Tuesday (April 25) to membership in the National Academy of Sciences, the nation's leading honor society for scientists.

The election of K. Byron Bird, Winston J. Brill and Neal First brings to 42 the number of current UW-Madison faculty elected to the Academy.

Election to the Academy, a private organization founded in 1863, confers a prestige considered by most scientists to be second only to the Nobel Prize.

Election of new members was held during a closed session at the group's 126th annual meeting in Washington, D.C. Of the 60 new members chosen, Bird, Brill and First were the only ones from Wisconsin.

Bird, a professor of chemical engineering, is the recipient of numerous honors and awards, among them the National Medal of Science. He is best known for his research and writings on kinetic theory, transport phenomena, the behavior of polymeric fluids and foreign language study for engineers.

Brill is vice president of research and development at Agracetus and an adjunct professor of bacteriology at UW-Madison. He is well known for his studies of nitrogen fixation in plants and as an outspoken advocate of biotechnology.

First, a professor of meat and animal science, is a pioneer in the study of techniques for cloning cattle and was among the first to employ cloning techniques for the production of superior cattle. Among his awards are two University of Wisconsin-Madison Outstanding Teacher Awards.

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-- Terry Devitt (608) 262-8282

February, 1990

## NATIONAL ACADEMY OF SCIENCES

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-more-

SKOOG, Folke Professor Emeritus Botany Tel. 608-262-2790

TANNER, Champ B. Professor Emeritus of Soil Science Tel. 608-263-5691

TEMIN, Howard M. Professor of Oncology Tel. 608-262-1209

WALKER, John C. Professor Emeritus Plant Pathology Tel. 602-977-3788

DUARD, Walker L. Emeritus Prof. of Medical Microbiology Tel. 262-1474

WOOLSEY, Clinton N. Professor Emeritus Neurophysiology Tel. 608-263-5929

ZIMMERMAN, Howard E. Professor of Chemistry Tel. 608-262-1502

TOTAL: 43



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From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571 Release: Immediately 4/30/86

CONTACT: Marion Jackson (608) 262-0562, Arthur Goldberger (608) 263-3876

TWO AT UW-MADISON ELECTED TO NATIONAL ACADEMY OF SCIENCES

MADISON--University of Wisconsin-Madison professors Arthur S. Goldberger and Marion L. Jackson were elected Tuesday (April 29) to membership in the prestigious National Academy of Sciences.

Their election brings to 43 the number of current UW-Madison faculty members elected to the academy.

Election of new academy members was held during the group's annual meeting in Washington, D.C. Of the 59 chosen, Goldberger and Jackson were the only two from Wisconsin institutions.

Goldberger, Vilas Professor of Economics, has been a member of the UW-Madison faculty since 1960. He is the author of several books and numerous articles, and is considered to be an expert in econometric model construction and statistical methodology.

A native of New York City, Goldberger received his doctorate from the University of Michigan in 1958. In 1984 he was awarded a Guggenheim Fellowship for research. He also is a former Fulbright Fellow.

Jackson, a professor of soil science, joined the UW-Madison faculty in 1942. He is noted for his work in the area of soil chemical analysis and has produced numerous articles and two books on the subject. He is considered an expert in the area of soil mineral colloids, their transformation through weathering processes and their role in retaining and supplying essential nutrients to crops.

A native of Reynolds, Neb., Jackson is past president of the Soil Science Society of America.



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From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release:

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4/26/88

CONTACT: Stanley D. Beck (608) 262-6902, Lawrence F. Dahl (608) 262-5859, T. Kent Kirk (608) 264-5887, Eldon H. Newcomb (608) 262-2643

FOUR FROM UW-MADISON ELECTED TO NATIONAL ACADEMY OF SCIENCES

MADISON--Four members of the University of Wisconsin-Madison faculty were elected Tuesday (April 26) to membership in the National Academy of Sciences, the nation's leading honor society for scientists.

The election of Stanley D. Beck, Lawrence F. Dahl, T. Kent Kirk and Eldon H. Newcomb brings to 44 the number of current UW-Madison faculty elected to the Academy.

Election to the Academy, a private organization founded in 1863, confers a prestige considered by most scientists to be second only to the Nobel Prize.

Election of new members was held during a closed session at the group's 125th annual meeting in Washington, D.C. Of the 61 new members chosen, Beck, Dahl, Kirk and Newcomb were the only ones from Wisconsin.

Beck is a widely recognized authority on insect physiology, plant resistance and nutritional requirements. He graduated from UW-Madison and has been a member of the faculty here since 1948. In 1969 he was named the W.A. Henry Distinguished Professor of entomology.

Dahl is the Robert E. Rundle Professor of chemistry. A graduate of Iowa State University, he has been a member of the UW-Madison faculty since 1957. He has earned an international reputation in the field of transition metal clusters.

Kirk is director of the Institute of Microbial and Biochemical Technology

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Add 1--National Academy

at the U.S. Forest Products Laboratory in Madison and is a UW-Madison professor of bacteriology. He is widely known for his studies of the enzymes that break down lignin, the biological glue that holds wood together.

Newcomb is the Folke Skoog professor of botany and is currently the chair of the botany department. He received his doctorate from UW-Madison in 1949, the same year he joined the UW-Madison faculty. He is considered a pioneer in plant cell biology.

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-- Terry Devitt (608) 262-8282

## news from the NATIONAL ACADEMY OF SCIENCES

The National Academy of Sciences is an organization of distinguished scientists and engineers concerned with the furtherance of science and its use for human welfare. Although the Academy is not a government agency, it is called upon by its Congressional charter of 1863 to serve as an official adviser to the Federal Government in matters of science and technology.

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Date: April 29, 1986 Contact: (202) 334-2138

59 NEW MEMBERS CHOSEN BY ACADEMY

#### FOR IMMEDIATE RELEASE

WASHINGTON - The National Academy of Sciences today announced the election of 59 new members in recognition of their distinguished and continuing achievements in original research.

The election was held this morning (Tuesday, April 29) during the business session of the 123rd annual meeting of the Academy. Election to membership in the Academy is considered to be one of the highest honors that can be accorded an American scientist or engineer. Those elected today bring the total to 1,477.

The National Academy of Sciences is a private organization of scientists and engineers dedicated to the furtherance of science and its use for the general welfare. The Academy was established in 1863 by a Congressional Act of Incorporation, signed by Abraham Lincoln, that calls upon the Academy to act as an official adviser to the federal government, upon request, in any matter of science or technology. This provision accounts for the close ties that have always existed between the Academy and the government, although the Academy is not a government agency.

(OVER)

Newly elected members (with affiliations at the time of their nominations) are:

- Gerald D. Aurbach, chief, metabolic diseases branch, National Institute of Arthritis, Diabetes, Digestive, and Kidney Diseases, National Institutes - of Health, Bethesda, Md.
- Robert Axelrod, professor of political science and public policy, University of Michigan, and the Institute of Public Policy Studies, Ann Arbor.
- Peter J. Bickel, dean of the physical sciences, University of California, Berkeley.
- Emilio Bizzi, Eugene McDermott Professor in Brain Sciences and Human Behavior, Massachusetts Institute of Technology, Cambridge.
- Walter Lyons Brown, head, department of radiation physics research, AT&T Bell Laboratories, Murray Hill, N.J.
- John Carbon, professor of biochemistry, department of biological science, University of California, Santa Barbara.
- Michael J. Chamberlin, professor of biochemistry, University of California, Berkeley.
- Michael D. Coe, professor of anthropology, Yale University, and curator of anthropology, Peabody Museum of Natural History, New Haven, Ct.

Samuel Danishefsky, professor of chemistry, Yale University.

- William H. Daughaday, professor of medicine, Washington University School of Medicine, St. Louis, Mo.
- Gerard H. deVaucouleurs, professor of astronomy, University of Texas, Austin.
- Peter B. Dervan, professor of chemistry, California Institute of Technology, Pasadena.
- Peter H. Duesberg, professor, department of molecular biology, University of California, Berkeley.
- Bradley Efron, professor, department of statistics, Stanford University, Stanford, Calif.
- Gert Ehrlich, professor of metallurgy and research professor, Coordinated Science Laboratory, University of Illinois, Urbana.
- Ellis Englesberg, professor of microbiology, University of California, Santa Barbara

Charles O. Frake, professor, department of anthropology, Stanford University.

Martin F. Gellert, chief, section on metabolic enzymes, laboratory of molecular biology, National Institute of Arthritis, Diabetes, Digestive, and Kidney Diseases, National Institutes of Health. Arthur S. Goldberger, professor of economics, University of Wisconsin, Madison.

- Major M. Goodman, professor, crop science, statistics, genetics and botany, North Carolina State University, Raleigh.
- David J. Gross, professor of physics, Princeton University, Princeton, N.J.
- Robert W. Hellwarth, George Pfleger Professor of Electrical Engineering and professor of physics, University of Southern California, Los Angeles.
- Ira Herskowitz, professor and vice-chairman, department of biochemistry and biophysics, School of Medicine, University of California, San Francisco.
- Bertil Hille, professor of physiology and biophysics, School of Medicine, University of Washington, Seattle.
- Marion L. Jackson, Franklin Hiram King Professor of Soil Science, University of Wisconsin, Madison.
- Yuet Wai Kan, professor, departments of medicine, laboratory medicine and biochemistry and biophysics, University of California, San Francisco.
- Seymour Kaufman, chief, laboratory of neurochemistry, National Institute of Mental Health, Bethesda, Md.
- Susan W. Kieffer, geologist, U.S. Geological Survey, Flagstaff, Ariz.
- Daniel Kleppner, professor of physics, Massachusetts Institute of Technology.
- Ernst Knobil, H. Wayne Hightower Professor of the Medical Sciences and director, laboratory for neuroendocrinology, University of Texas Medical School, Houston.
- Leonard S. Lerman, director of diagnostics, Genetics Institute, Cambridge, Mass.
- Robert L. Letsinger, professor of chemistry, Northwestern University, Evanston, Ill.
- Rodolfo Llinas, professor and chairman, department of physiology and biophysics, New York University School of Medicine, New York City.
- Philip W. Majerus, professor of medicine and biochemistry, Washington University, School of Medicine.
- Brian W. Matthews, professor of physics, University of Oregon, Eugene.
- Frank B. McDonald, chief scientist, NASA Headquarters, Washington, D.C.
- Josef Michl, professor of chemistry, University of Utah, Salt Lake City.
- John L. Moll, director of integrated circuit structures research, Hewlett-Packard Corp., Palo Alto, Calif.

(OVER)

C. Bradley Moore, professor of chemistry, University of California, Berkeley.

- Richard A. Musgrave, adjunct professor of economics, University of California, Santa Cruz.
- William L. Ogren, research leader, photosynthesis research unit, University of Illinois, Urbana.
- Robert T. Paine, professor of zoology, University of Washington, Seattle.

Sheldon Penman, professor of biology, Massachusetts Institute of Technology.

Robert C. Richardson, professor of physics, Cornell University, Ithaca, N.Y.

Liane B. Russell, section head, mammalian genetics and teratology, biology division, Oak Ridge National Laboratory, Oak Ridge, Tenn.

Clarence A. Ryan Jr., professor of chemistry, Washington State University, Pullman.

David N. Schramm, professor, astronomy and astrophysics center, University of Chicago.

H. Bolton Seed, professor of civil engineering, University of California, Berkeley.

Charles G. Sibley, William Robertson Coe Professor of Ornithology, Yale University.

- Joseph V. Smith, Louis Block Professor of Physical Sciences, University of Chicago.
- Robert M. Solovay, professor, department of mathematics, University of California, Berkeley.
- Shlomo Z. Sternberg, professor, department of mathematics, Harvard University.

George J. Todaro, scientific director, Oncogen, Seattle, Wash.

Donald L. Turcotte, department of geological sciences, Cornell University.

Karen K. Uhlenbeck, professor, department of mathematics, University of Chicago.

- Roger H. Unger, professor of internal medicine, University of Texas Southwestern Medical School, Dallas.
- Hans Wallach, professor emeritus of psychology, Swarthmore College, Swarthmore, Penn.
- James C. Wang, professor, department of biochemistry and microbiology, Harvard University.

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Harold M. Weintraub, member, department of genetics, Fred Hutchinson Cancer Research Center, Seattle, Wash.

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From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release:

#### Immediately

10/16/85

(EDITORS/NEWS DIRECTORS: A copy of the letter and the complete list of signees is included at the end of the story.)

CONTACT: James F. Crow (608) 263-1993, James A. Miller/Elizabeth C. Miller (608) 262-1258

TOP FACULTY EXPRESS OPPOSITION TO TA BARGAINING BILL

MADISON--Twenty-seven of University of Wisconsin-Madison's most distinguished faculty members have sent a letter to Wisconsin State Senators urging a "no" vote on a bill that would give collective bargaining rights to graduate student assistants.

The 27, all members of the prestigious National Academy of Sciences, said in the letter, sent Wednesday (Oct. 15), that they "witnessed 11 years of dissension as a result of TA [teaching assistant] collective bargaining, 11 years during which teaching and research programs were adversely affected by the strained relationships between faculty and graduate students."

The bill covers all graduate assistants, including research, project and teaching assistants. Those students work closely with faculty members, aiding in research and classroom instruction. TAs had a collective bargaining arrangement at UW-Madison from 1969 until 1980 that involved two TA strikes.

The faculty members said they feared that disruption would return to campus if the bill is passed.

Membership in the National Academy of Science is considered the nation's top academic honor for scientists. Those endorsing the letter included James F. Crow, Hector DeLuca, Arthur Code, Julius Adler, Robert Burris, Joseph Hirshfelder, Henry A. Lardy, Oliver Smithies, Barry Trost and Howard Zimmerman.

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-- Steve Schumacher (608) 262-8289

#### UNIVERSITY OF WISCONSIN-MADISON 500 LINCOLN DRIVE MADISON, WISCONSIN 53706

SECRETARY OF THE FACULTY 134 BASCOM HALL

- 4

October 15, 1985

To the Members of the Senate of the State of Wisconsin:

Subject: AB 55 - Collective Bargaining for Graduate Assistants

We, the undersigned members of the National Academy of Sciences of the United States, have observed the work of many graduate students at the University of Wisconsin, including especially Research Assistants and Project Assistants, but also Teaching Assistants, Fellows, Trainees, and others, Collaboration between graduate students and faculty members in teaching or research is invigorated by feelings of collegiality and friendship. Here in Madison, we witnessed 11 years of dissension as a result of TA collective bargaining, 11 years during which teaching and research programs were adversely affected by the strained relationships between faculty and graduate students. We are concerned that disruption will return to our campus if the Legislature restores collective bargaining for graduate assistants. We urge you to vote no on AB55/SB50.

Yours sincerely,

Elizabeth C. muller

Elizabeth Miller Professor of Oncology Associate Director Mcardle Lab for Cancer Research

James a. milles.

James A. Miller Professor of Oncology Mcardle Lab for Cancer Research

The following list of members of the National Academy of Sciences have stated that they are in agreement with the contents of this letter.

 Julius Adler, E. B. Hart and Steenbock Professor of Microbiology, Biochemistry and Genetics
 Helmut Beinert, Perry W. Wilson Emeritus Professor of Biochemistry and Emeritus Professor of Enzyme Research
 Robert Burris, W. H. Peterson and Hilldale Emeritus Professor of Biochemistry
 W. Wallace Cleland, M. J. Johnson Professor of Biochemistry and Steenbock Professor of Chemical Science
 Arthur Code, Hilldale Professor of Astronomy
 Philip P. Cohen, Harold C. Bradley Professor of Physiological Chemistry
 James F. Crow, Senior Distinguished Research Professor of Genetics
 Hector DeLuca, Chairman of Biochemistry Department, Harry Steenbock Research Professor of Biochemistry
 John D. Ferry, Farrington Daniels Emeritus Professor of Chemistry
 Robert P. Hanson, Samuel H. McNut Professor of Veterinary Science Page 2 Members of the Senate October 15, 1985

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11. Robert Mason Hauser, Hilldale Professor of Sociology 12. Joseph Hirshfelder, Homer Atkins Emeritus Professor of Chemistry 13. Arthur Kelman, WARF Senior Research Professor of Bacteriology and Plant Pathology 14. William Kraushaar, Max Mason Professor of Physics 15. Henry A. Lardy, Vilas Research Professor of Biochemistry and Professor of Enzyme Research 16. Oliver E. Nelson, Brink Professor of Genetics 17. Stanley J. Peloquin, Campbell Bascom Professor of Genetics and Horticulture 18. Van R. Potter, Emeritus Professor of Oncology and Environmental Studies Instructional Program 19. Jerzy Rose, Emeritus Professor of Neurophysiology 20. Luis Sequeira, Professor of Bacteriology and Plant Pathology 21. Folke Skoog, C. Leonard Huskins Emeritus Professor of Botany 22. Oliver Smithies, Hilldale Professor of Genetics and Medical Genetics 23. Champ B. Tanner, Chairman of Soil Science Department, Professor of Soil Science and Meterology 24. Barry Trost, Vilas Research and Evan P. and Marion Helfaer Professor of Chemistry

25. Howard Zimmerman, Arthur C. Cope Professor of Chemistry



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From the University of Wisconsin–Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571 Release: 4/24/85

CONTACT: Allan G. Bogue (608) 263-1839, W. Wallace Cleland (608) 262-1373

#### TWO FROM UW-MADISON ELECTED TO NATIONAL ACADEMY OF SCIENCES

MADISON--University of Wisconsin-Madison professors Allan G. Bogue, history, and W. Wallace Cleland, biochemistry, were elected Tuesday (April 23) to membership in the prestigious National Academy of Sciences.

Election of new academy members was held at a closed business session during the group's annual meeting in Washington, D.C. Bogue and Cleland's election brings to 46 the number of UW-Madison faculty elected to the academy.

Bogue received his doctorate from Cornell University in 1951 and joined the UW-Madison faculty in 1964. A former Guggenheim scholar, Bogue is considered a pioneer in the application of social science techniques to political history. He has also specialized in the history of U.S. Midwest agricultural settlement.

A native of Canada, Bogue is the author or editor of 14 books. In 1968 the University of Wisconsin Board of Regents elevated Bogue to the Frederick Jackson Turner professorship in history and in 1982 he served as president of the Organization of American Historians.

Cleland received his doctorate from UW-Madison in 1955 and joined the biochemistry department here in 1959. The M. J. Johnson Professor of Biochemistry and the Steenbock Professor of Chemical Science, Cleland is considered to be a world authority in the field of enzyme kinetics.

Cleland's research has yielded over 100 papers on enzyme mechanisms, which have provided the foundation for the discussion of enzyme kinetics in every modern textbook of biochemistry. He is a native of Baltimore, Md.

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Jose Junes

### National Academy of Sciences listing

1984

#### Wisconsin - 40 members

Adler, Julius Barschall, H. H. Beinert, Helmut Brink, R. Alexander Burris, R. H. Code, Arthur D. Cohen, Philip P. Crow, James F. DeLuca, H. F. Ferry, John D. Hanson, Robert P. Hasler, Arthur D. Herb, R. G. Hirschfelder, Joseph O. Irwin, M. R. Kelman, Arthur Kerst, Donald W. Kleene, Stephen C. Kraushaar, William L. Lardy, Henry A. Miller, Elizabeth C. Miller, James A. Morgan, W. W. Nelson, Oliver E., Jr. Nomura, Masayasu Potter, Van R. Raper, Kenneth B. Ris, Hans Rose, Jerzy E. Sequeira, Luis Sewell, William H. Skoog, Folke Smithies, Oliver Tanner, Champ B. Temin, Howard M. Trost, Barry M.

Williams, J. W. Woolsey, Clinton N. Wright, Sewall Zimmerman, Howard E. SIPI Media Resource Service List/ University of Wisconsin-Madison NATIONAL ACADEMY OF SCIENCES MEMBERS (1986)

ADLER, Julius BARSCHALL, H.H. BEINERT, Helmut BOGUE, Allan G. BURRIS, R.H. CLELAND, W. Wallace CODE, Arthur D. COHEN, Philip P. CROW, James F. DeLUCA, H.F. FERRY, John D. GOLDBERGER, Arthur S. HANSON, Robert P. HASLER, Arthur D. HAUSER, Robert Mason HERB, R.G. HIRSCHFELDER, Joseph O. IRWIN, M.R. JACKSON, Marion L. KELMAN, Arthur KERST, Donald W. KLEENE, Stephen C. KRAUSHAAR, William L. LARDY, Henry A. MILLER, Elizabeth C. MILLER, James A. MORGAN NELSON, OLIVER E., Jr. PELOQUIN, S.J. POTTER, Van R. RAPER, Kenneth B. RIS, Hans ROSE, Jerzy E. SEQUEIRIA, Luis SEWELL, William H. SKOOG, Folke SMITHIES, Oliver TANNER, Champ B. TEMIN, Howard M. TROST, Barry M. WILLIAMS, J.W. WOOLSEY, Clinton N. ZIMMERMAN, Howard E.

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From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706 / Telephone: 608/262-3571

Release:

Immediately

5/2/84

## HAUSER ELECTED TO NATIONAL ACADEMY OF SCIENCES

MADISON--University of Wisconsin-Madison sociology Professor Robert M. Hauser was elected Tuesday (May 1) to the National Academy of Sciences.

Membership in the Academy is considered to be one of the highest honors offered to an American scientist or engineer. Hauser joins 41 other UW-Madison professors who are members of the NAS. The Academy, headquartered in Washington, D.C., has more than 1,300 members, including the 60 new members elected Tuesday.

A UW-Madison faculty member since 1969, Hauser is known internationally for his work in social stratification and mobility, sociology of education and sociological methodology. He holds Samuel A. Stouffer and Hilldale professorships.

Hauser is currently a visiting professor at the University of Bergen in Norway.

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Joel McNair (608) 262-2650

# news from the NATIONAL ACADEMY OF SCIENCES

The National Academy of Sciences is an organization of distinguished scientists and engineers concerned with the furtherance of science and its use for human welfare. Although the Academy is not a government agency, it is called upon by its Congressional charter of 1863 to serve as an official adviser to the Federal Government in matters of science and technology.

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Date: May 1, 1984 Contact: (202) 334-2138

Mary for fulles both note peloquer de 60 NEW MEMBERS CHOSEN BY ACADEMY

#### FOR IMMEDIATE RELEASE

WASHINGTON - The National Academy of Sciences today announced the election of 60 new members in recognition of their distinguished and continuing achievements in original research.

The election was held this morning (Tuesday, May 1) during the business session of the 121st annual meeting of the Academy. Election to membership in the Academy is considered to be one of the highest honors that can be accorded an American scientist or engineer. Those elected today bring the total to 1,428.

The National Academy of Sciences is a private organization of scientists and engineers dedicated to the furtherance of science and its use for the general welfare. The Academy was established in 1863 by a Congressional Act of Incorporation, signed by Abraham Lincoln, that calls upon the Academy to act as an official adviser to the federal government, upon request, in any matter of science or technology. This provision accounts for the close ties that have always existed between the Academy and the government, although the Academy is not a government agency.

(OVER)

Newly elected members (with affiliations at the time of their nominations) are:

Giuseppe M. Attardi, professor, department of biology, California Institute of Technology.

Jonathan R. Beckwith, professor, department of microbiology, Harvard Medical School.

Howard C. Berg, professor of biology, California Institute of Technology.

Robert G. Bergman, professor of chemistry, University of California, Berkeley.

Ira B. Bernstein, professor of applied science, Yale University.

John McC. Bremner, Custiss Distinguished Professor in Agriculture, Iowa State University.

William F. Brinkman, director, physical research laboratory, AT&T Bell Laboratories, Murray Hill, N.J.

Marshall H. Cohen, professor of astronomy, California Institute of Technology.

Stirling Colgate, senior fellow, Los Alamos National Laboratory, Los Alamos, N.M.

Joseph M. Daly, C. Petrus Peterson Professor of Agricultural Biochemistry, University of Nebraska, Lincoln.

Roger F. Dashen, professor of physics, The Institute for Advanced Study, Princeton, N.J.

Peter A. Diamond, professor of economics, Massachusetts Institute of Technology.

Russell F. Doolittle, professor, department of chemistry, University of California, San Diego.

David A. Evans, professor of chemistry, Harvard University.

- Stanley Falkow, chairman and professor, department of medical microbiology, Stanford University School of Medicine.
- Marilyn G. Farquhar, professor of cell biology and pathology, Yale University School of Medicine.
- Gerald D. Fischbach, Edison Professor of Neurobiology, Washington University School of Medicine.

Michael H. Freedman, professor of mathematics, University of California, San Diego.

Gerhard Giebisch, Sterling Professor of Medicine, Yale University School of Medicine.

James G. Glimm, professor of mathematics, Courant Institute of Mathematical Sciences, New York University.

(MORE)

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- William A. Goddard III, professor of chemistry and applied physics, California Institute of Technology.
- Roger C. Green, head and professor, department of anthropology, University of New Zealand, Auckland.
- John L. Hall, senior physicist, Joint Institute for Laboratory Astrophyics, National Bureau of Standards and University of Colorado, Boulder.

Robert M. Hauser, Samuel A. Stouffer Professor of Sociology, University of Wisconsin, Madison.

Elizabeth D. Hay, chairman and professor, department of anatomy, Harvard Medical School.

Mahlon B. Hoagland, president and scientific director, Worcester Foundation for Experimental Biology, Shrewsbury, Mass.

Nick Holonyak Jr., professor of electrical engineering, University of Illinois, Urbana.

James A. Ibers, professor of chemistry, Northwestern University.

Mary Ellen Jones, chairman and professor, department of biochemistry and nutrition, School of Medicine, University of North Carolina, Chapel Hill.

Edward A. Kravitz, professor of neurobiology, Harvard Medical School.

Elliott H. Lieb, professor of mathematics and physics, Princeton University.

David J. L. Luck, professor, cell biology, Rockefeller University.

Mortimer Mishkin, chief, section cerebral mechanisms, laboratory of neuropsychology, National Institute of Mental Health, Bethesda, Md.

William W. Mullins, professor of applied sciences, Carnegie-Mellon University.

Jacob Nachmias, professor, department of psychology, University of Pennsylvania.

Alfred Nisonoff, professor of biology, Rosentiel Research Center, Brandeis University.

Jack E. Oliver, Irving Porter Church Professor of Geology, Cornell University.

- George W. Parshall, director, chemical sciences, central research and development department, E.I. du Pont de Nemours & Co., Wilmington, Del.
- Stanley J. Peloquin, Campbell-Bascom Distinguished Professor of Genetics and Horticulture, University of Wisconsin, Madison.
- Leopold J. Pospisil, professor and curator of anthropology, Peabody Museum, Yale University.
- Murray Rosenblatt, professor, department of mathematics, University of California, San Diego.

Michael G. Rossman, Hanley Professor of Biological Sciences, Purdue University.

- Janet D. Rowley, professor of medicine, University of Chicago.
- William J. Rutter, Hertzstein Professor and chairman, School of Medicine, University of California, San Francisco.
- Gordon H. Sato, director, W. Alton Jones Cell Science Center, Lake Placid, N.Y.
- Thomas C. Schelling, professor of economics, John F. Kennedy School of Government, Harvard University.
- Thomas W. Schoener, professor of zoology and environmental studies, University of California, Davis.
- Edward M. Scolnick, vice president, virus and cell biology research, Merck Sharp and Dohme Research Laboratories, West Point, Penn.
- Charles V. Shank, head, quantum physics and electronics research department, AT&T Bell Laboratories, Holmdel, N.J.
- James M. Sprague, Joseph Liedy Professor of Anatomy, University of Pennsylvania School of Medicine.
- Frank H. Stillinger Jr., member, technical staff, AT&T Bell Laboratories, Murray Hill, N.J.
- Edward C. Stone Jr., professor of physics and chemistry, California Institute of Technology.
- Lubert Stryer, professor, department of structural biology, Stanford University.
- Nathan E. Tolbert, professor of biochemistry, Michigan State University.

Karl K. Turekian, Henry B. Davis Professor of Geology and Geophysics, Yale University.

- Jonathan W. Uhr, chairman and professor, department of microbiology, University of Texas Southwestern Medical School.
- James W. Valentine, professor of geology and evolutionary biology, University of California, Santa Barbara.
- Harold E. Varmus, professor, department of microbiology and immunology, University of California, San Francisco.
- Joseph E. Varner, professor of biology, Washington University.
- Ray J. Weymann, professor of astronomy, Steward Observatory, University of Arizona.

## NATIONAL ACACDEMY OF SCIENCES

The Academcy of Sciences is a private organization of scientists and engineers dedicated to the furtherance of science and its use for the general welfare. The Academy was established in 1863 by a Congressional Act of Incorporation signed by Abraham Lincoln which calls upon the Academy to act as official adviser to the federal government, upon request, in any matter of science or technology. This provision accounts for the close ties that have always existed between the Academy and the government, although the Academy is not a government agency.

As of 1979 the membership in the Academy is at 1,284. Listed below are the following active members from UW-Madison.

NAME

RANK

DEPARTMENT

Julius Adler H. H. Barschall Helmut Beinert R. Alexander Brink Robert H. Burris Arthur D. Code Philip P. Cohen James F. Crow Hector F. DeLuca John D. Ferry Robert P. Hanson A. D. Hasler Raymond G. Herb Joseph O. Hirschfelder Malcolm R. Irwin Arthur Kelman Donald W. Kerst Stephen C. Kleene W. L. Kraushaar Henry A. Lardy Elizabeth C. Miller James A. Miller Oliver E. Nelson Masavasu Nomura Van R. Potter Kenneth B. Raper Hans Ris Jerzy P. Rose Luis Sequeira William H. Sewell Folke K. Skoog Oliver Smithies Champ B. Tanner Howard M. Temin Barry Trost John C. Walker John W. Williams Clinton N. Woolsey Sewall G. Wright Howard E. Zimmerman ROBERT M, HAUSER

Professor Professor Professor Emer Professor Professor Professor Emer Professor Professor Professor Emer Professor Professor Emer Professor Emer Professor Emer Professor Emer Professor Professor Emer Professor Emer Professor Emer Dean Professor Professor Professor Professor Professor Professor Emer Professor Emer Professor Professor Emer Professor Professor Emer Professor Emer Professor Professor Professor Professor Professor Emer Professor Emer Professor Emer Professor Emer Professor Professor PROFESSOR

Biochemistry/Genetics Nuclear Engineering/Physics Biochemistry/Enzyme Institute Genetics Biochemistry Astronomy Physiological Chemistry Zoology/Medical Genetics Biochemistry Chemistry Bacteriology Zoology Physics Chemistry Genetics Plant Pathology/Bacteriology Phsvcis Mathematics College of Letters&Science Physics Biochemistry Oncology Oncology Genetics Genetics Oncology Bacteriology Zoology Neurophysiology Bacteriology/Plant Pathology Sociology Botany Genetics Soil Science/Meteorology Oncology Chemistry Plant Pathology Chemistry Neurophysiology Genetics Chemistry SOCIOLOGY



From: University of Wisconsin-Madison / University News Service, 19 Bascom Hall, 500 Lincoln Drive, Madison, Wisconsin 53706 Telephone: 608/262-3571

\$26/83

The National Academy of Sciences is preparing a new listing and sending it to uns. It sh ould be finished by Nov., 1983

11/14/80

Prof. Julius Adler, Biochemistry/Genetics - 1234 Wellesley Rd., Madison (05) Emer. Prof. R. Alexander Brink, Genetics - 4237 Manitou Way, Madison (11) Prof. Robert H. Burris, Biochemistry - 1015 University Bay Drive, Madison (05) Prof. Arthur D. Code, Astronomy - 2813 Mason St., Madison (05) Prof. Philip P. Cohen, Physiological Chemistry - 1117 Oak Way, Madison (05) Prof. James A. Crow, Zoology/Medical Genetics - 24 Glenway, Madison (05) Prof. Hector F. DeLuca, Biochemistry - 5130 Minocqua Crescent, Madison (05) Prof. John D. Ferry, Chemistry - 137 N. Prospect Ave., Madison (05) Emer. Pres. Prof. E. B. Fred, Bacteriology - 3425 Crestwood Drive, Madison (05) Prof. David E. Green, Enzyme Research - 1525 Sumac Drive, Madison (05) Prof. Robert P. Hanson, Bacteriology - 5730 Dogwood Place, Madison (05) Ener, Prof. Harry F. Harlow, Rsychology - 672 Roller Coaster Rd., Tueson, AZ 85704 Emer. Prof. A. D. Hasler, Zoology - 205 Lathrop, Madison (05) Emer. Prof. Raymond G. Herb, Physics - Box 117, Middleton, WI (53562) Prof. J. C. Hirschfelder, Chemistry - Thorstrand Rd., Madison (05) Emer. Prof. Malcolm R. Irwin, Genetics - 4720 Regent St., Madison (05) Prof. Arthur Kelman, Plant Pathology/Bacteriology - 234 Carillon Dr., Madison (05) Prof. Donald W. Kerst, Physics - 1506 Wood Lane, Madison (05) Emer. Prof. S. C. Kleene, Mathematics - 1514 Wood Lane, Madison (05) Prof. W. L. Kraushaar, Physics - 183 S. Yellowstone #3, Madison (05) Prof. Henry A. Lardy, Biochemistry - 1829 Thorstrand Rd., Madison (05) Prof. Elizabeth C. Miller, Oncology - 5517 Hammersley Rd., Madison (11) Prof. James A. Miller, Oncology - 5517 Hammersley Rd., Madison (11) Prof. Oliver E. Nelson, Genetics - 4197 Barlow Rd., Cross Plains, WI (53528) Pfof. Masayasy Nomura, Genetics - 6429 Maywood Ave., Middleton, WI (53562) Prof. Van R. Potter, Oncology - 163 N. Prospect Ave., Madison (05) Prof. Kenneth B. Raper, Bacteriology - 4110 Chippewa Dr., Madison (11) Emer. Prof. Albert J. Riker, Plant Pathology - 2760 E. Eighth, Tucson, AZ 85716 Prof. Hans Ris, Zoology - 5117 Minocqua Crescent, Madison (05) Prof. Jerzy P. Rose, Neurophysiology - 4169 Cherokee Dr., Madison (11) Prof. Luis Sequeira, Bacteriology/Plant Pathology - 10 Appomattox Ct., Madison (05)

UW-Madison Faculty Membership in the National Academy of Sciences

Prof. William H. Sewell, Sociology - 1005 Merrill Springs Rd., Madison (05)
Prof. Folke K. Skoog, Botany - 2134 Chamberlain Ave., Madison (05)
Prof. Oliver Smithies, Genetics - 6824 Schroeder Rd., Madison (11)
Prof. Howard M. Temin, Oncology - 3401 Lake Mendota Dr., Madison (05)
Prof. Barry Trost, Chemistry - 209 N. Whitney Way, Madison (05)
Emer. Prof. John C. Walker, Plant Pathology - 14016 N. Newcastle Dr., Sun City, AZ (85351)
Emer. Prof. John W. Williams, Chemistry - 620 Babcock Dr., Madison (06)
Emer. Prof. Perry W. Wilson, Bacteriology - 6 Whitcomb Circle, Apt. 9, Madison (11)
Emer. Prof. Clinton N. Woolsey, Neurophysiology - 106 Virginia Terr., Madison (05)
Emer. Prof. Sewall G. Wright, Genetics - 3905 Council Crest, Madison (11)
Prof. Howard E. Zimmerman, Chemistry - 1 Oconto Ct., Madison (05)

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From the University of Wisconsin-Madison / News Service, Bascom Hall, 500 Lincoln Drive, Madison 53706

Release: Immediately

4/28/81

### CHAMP TANNER ELECTED TO NATIONAL ACADEMY OF SCIENCES

MADISON--Champ B. Tanner, professor of soil science and meteorology at University of Wisconsin-Madison, was elected Tuesday (April 28) to membership in the prestigious National Academy of Sciences, the academy announced.

Election of new academy members was held at a closed business session during the group's 118th annual meeting in Washington, D.C.

Tanner, 60, is an Idaho Falls, Idaho, native who received his doctorate from UW-Madison in 1950 and joined the faculty here a year later. His research has centered around soil physics, micrometeorology and plant environment, with a major interest in crop water use and plant water relations. He also developed measurements needed in soil-plant-atmosphere studies.

A full professor since 1960, he was named two years ago as the Emil Truog Professor of Soil Science, a lifetime research appointment made by the UW System Board of Regents. The professorship is funded by the Graduate School in honor of a former chairman of the soil science department.

Tanner, 6404 Cooper Court, Middleton, also has been a Fulbright lecturer to two Australian universities and, during the 1960s, helped administer a program training graduate specialists in biometeorology, the study of weather's effects on animals and plants.

## news from the NATIONAL ACADEMY OF SCIENCES

FILE

The National Academy of Sciences is an organization of distinguished scientists and engineers concerned with the furtherance of science and its use for human welfare. Although the Academy is not a government agency, it is called upon by its Congressional charter of 1863 to serve as an official adviser to the Federal Government in matters of science and technology.

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60 NEW MEMBERS CHOSEN BY ACADEMY

FOR IMMEDIATE RELEASE (Mailed 4/24/79)

WASHINGTON--The National Academy of Sciences today announced the election of 60 new members in recognition of their distinguished and continuing achievements in original research.

The election was held this morning (Tuesday, April 24) during the business session of the 116th annual meeting of the Academy. The meeting opened with the dedication of the Albert Einstein Memorial on Sunday, featured an address to Academy members by President Jimmy Carter on Monday, and will conclude with scientific sessions on Wednesday.

Election to membership in the Academy is considered to be one of the highest honors that can be accorded an American scientist or engineer. Those elected today bring the total to 1,284.

The National Academy of Sciences is a private organization of scientists and engineers dedicated to the furtherance of science and its use for the general welfare. The Academy was established in 1863 by a Congressional Act of Incorporation signed by Abraham Lincoln which calls upon the Academy to act as an official adviser to the federal government, upon request, in any matter of science or technology. This provision accounts for the close ties that have always existed between the Academy and the government, although the Academy is not a government agency. -2-

Newly elected members (with affiliations at the time of their nominations) are:

Perry L. Adkisson, vice president for agricultural sciences, Texas A & M University.

- Harold M. Agnew, director, Los Alamos Scientific Laboratory, Los Alamos, New Mexico.
- Keiiti Aki, professor of geophysics, Massachusetts Institute of Technology.
- George G. Ashwell, chief, laboratory of biochemistry and metabolism, National Institute of Arthritis, Metabolism and Digestive Diseases, National Institutes of Health.
- Robert Austrian, professor and chairman, department of research medicine, University of Pennsylvania School of Medicine.
- Valentine Bargmann, professor of mathematics and physics, Princeton University.
- Frederic C. Bartter, chief, hypertension endocrinology branch, National Heart, Lung and Blood Institute, National Institutes of Health.
- Fred Basolo, professor of chemistry, Northwestern University.
- Joseph Berkson, professor of biometry, University of Minnesota, Minneapolis.
- Karl H. Beyer, Jr., professor of pharmacology, Milton S. Hershey Medical Center, Pennsylvania State University, Hershey.
- Olle Björkman, faculty member and senior scientist, Carnegie Institution of Washington, Stanford, California.
- Edward Boyse, head, field of cell surfaces and professor of biology, Memorial Sloan-Kettering Cancer Center, New York City.
- Elias Burstein, professor of physics, University of Pennsylvania.
- Kwang-Chih Chang, professor of anthropology, Harvard University.
- Ray W. Clough, professor of civil engineering, University of California, Berkeley.
- Stanley N. Cohen, professor of medicine and genetics, Stanford University.
- Harmon Craig, professor of geochemistry, Scripps Institution of Oceanography, University of California, San Diego.
- Hector F. DeLuca, Harry Steenbock professor of biochemistry, University of Wisconsin, Madison.
- Jared M. Diamond, professor of physiology, University of California, Los Angeles.
- Ronald W. Estabrook, Virginia Lasenby O'Hara professor of biochemistry, University of Texas Health Center, Dallas.

Charles L. Fefferman, professor of mathematics, Princeton University.

Edward C. Franklin, professor of medicine, New York University.

- Salome Gluecksohn-Waelsch, professor of genetics, Albert Einstein College of Medicine, Yeshiva University, New York City.
- Philip A. Griffiths, professor of mathematics, Harvard University.
- William A. Hagins, chief, section on membrane biophysics, National Institute of Arthritis, Metabolism and Digestive Diseases, National Institutes of Health.
- Robert P. Hanson, S.H. McNutt Distinguished professor of veterinary science, University of Wisconsin, Madison.
- Gertrude Henle, professor of pediatrics, University of Pennsylvania, Children's Hospital of Philadelphia.
- Ernest M. Henley, professor of physics, University of Washington, Seattle.
- Ira J. Hirsh, professor of psychology, director of research, Central Institute for the Deaf, Washington University, St. Louis.
- Gerhard P. Hochschild, professor of mathematics, University of California, Berkeley.
- Heinrich D. Holland, professor of geology, Harvard University.
- Harvey A. Itano, professor of pathology, University of California, San Diego.
- Thomas S. Kuhn, M. Taylor Pyne professor of the history of science, Princeton University.
- Philip Leder, chief, laboratory of molecular genetics, National Institute of Child Health and Human Development, National Institutes of Health.
- Yuan T. Lee, professor of chemistry, University of California, Berkeley.
- Paul C. Martin, professor of physics, Harvard University.
- Manfred M. Mayer, professor of microbiology, The Johns Hopkins University.
- John W. Miles, professor of applied mechanics and engineering sciences, University of California, San Diego.
- Daniel Nathans, professor of microbiology, The Johns Hopkins University.
- Marc Nerlove, professor of economics, University of Chicago.
- Norman D. Newell, chairman and curator, American Museum of Natural History, New York City.

Douglas L. Oliver, professor of anthropology, University of Hawaii.

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Gordon H. Pettengill, professor of planetary physics, Massachusetts Institute of Technology.

Mark Ptashne, professor of biochemistry and molecular biology, Harvard University.

- Norman C. Rasmussen, professor and head, department of nuclear engineering, Massachusetts Institute of Technology.
- David M. Raup, chairman, department of geology, Field Museum of Natural History, and adjunct professor, University of Chicago.
- Alfred G. Redfield, professor of physics and biochemistry, Brandeis University.

Bernard Roizman, professor of microbiology, University of Chicago.

Irwin A. Rose, associate director, Institute for Cancer Research, Philadelphia.

Mark R. Rosenzweig, professor of psychology, University of California, Berkeley.

Lloyd S. Shapley, Rand Corporation, Santa Monica, California.

- Richard L. Sidman, Bullard professor of neuropathology, Harvard Medical School.
- John H. Sinfelt, scientific advisor, Corporate Research Laboratories, Exxon Research and Engineering Company, Linden, New Jersey.
- Maxine F. Singer, head, section of nucleic acid enzymology, National Cancer Institute, National Institutes of Health.
- Gabor A. Somorjai, professor of chemistry, University of California, Berkeley.

Eli Sternberg, professor of mechanics, California Institute of Technology.

Evon Z. Vogt, professor of anthropology, Harvard University.

Sidney Weinhouse, director, Fels Research Institute, Temple University.

Robert W. Wilson, head, radio physics division, Bell Telephone Laboratories, Inc., Holmdel, New Jersey.

George A. Zentmeyer, professor of plant pathology, University of California, Riverside.

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CONTACT: Helmut Beinert (608) 262-3740 Luis Sequeira (608) 262-3171 Barry M. Trost (608) 262-0362 Howard E. Zimmerman (608) 262-1502

#### NATIONAL ACADEMY OF SCIENCES HONORS FOUR UW-MADISON PROFESSORS

MADISON--Four University of Wisconsin-Madison professors were among 59 new members elected Tuesday (April 22) to the prestigious National Academy of Sciences.

Selected at the academy's 117th annual meeting in Washington, D.C., were Professors Helmut Beinert, biochemistry and Enzyme Institute; Luis Sequeira, bacteriology and plant pathology; and Barry M. Trost and Howard E. Zimmerman, both chemistry.

Election to the academy has been called "second only to the Nobel Prize in the esteem accorded to it by most of the American scientific community" by Science magazine. Tuesday's election brings to 41 the number of UW-Madison faculty members in the academy.

Beinert, 66, was recognized for contributions to the study of structural and mechanistic details of enzymes. He received his doctorate from the University of Leipzig in 1943, has been on the UW-Madison faculty since 1950, and is a 1962 recipient of the National Institute of Health Research Career Award.

Sequeira, 52, is considered a world-wide authority on the physiological mechanisms of pathogenicity and host resistance. Most of his research has been on plant diseases caused by bacteria, and he has developed widely used control methods for a destructive banana disease, root rots of lettuce and bacterial wilt of potatoes. He received his doctorate from Harvard in 1952 and joined the UW-Madison faculty in 1961. At 38 years of age, Trost is considered a leader in several branches of organic chemistry. His greatest contributions have been in the development of new synthetic methods. In 1965 Trost received his Ph.D. from the Massachusetts Institute of Technology and joined the UW-Madison faculty that same year. He has been an Evan P. and Marion Helfaer Professor since 1976 and received the American Chemical Society Award in Pure Chemistry in 1977.

Zimmerman, 53, is one of the two or three persons whose work triggered the explosive development of the photochemistry of organic molecules during the 1960s. He received his doctorate from Yale University in 1953 and in 1960 joined the faculty at UW-Madison, where he has been an Arthur C. Cope Professor since 1976. He received the first A.C.S. Northeastern Section Award for Photochemistry and in 1976 received the James Flack Norris Award in Physical Organic Chemistry.

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April, 1979

University of Wisconsin-Madison Faculty Membership in the National Academy ciences of

Prof. Julius Adler, Biochemistry/Genetics Emer. Prof. R. Alexander Brink, Genetics Prof. Robert H. Burris, Biochemistry Prof. Arthur D. Code, Astronomy Prof. Philip P. Cohen, Physiological Chemistry Prof. James A. Crow, Zoology/Medical Genetics Prof. Hector F. Deluca, Biochemistry Prof. John D. Ferry, Chemistry Emer. Pres. Prof. E.B. Fred, Bacteriology Prof. David E. Green, Enzyme Research Prof. Robert P. Hanson, Bacteriology Emer. Prof. Harry F. Harlow, Psychology Emer. Prof. Raymond G. Herb, Physics Prof. J.C. Hirschfelder, Chemistry Emer. Prof. Malcolm R. Irwin, Genetics Prof. Arthur Kelman, Plant Pathology/Bacteriology Prof. Donald W. Kerst, Physics Prof. Henry A. Lardy, Biochemistry Prof. Elizabeth C. Miller, Oncology Prof. James A. Miller, Oncology Prof. Oliver E. Nelson, Genetics Prof. Masayasu Nomura, Genetics Prof. Van.R. Potter, Oncology Prof. Kenneth B. Raper, Bacteriology Emer. Prof. Albert J. Riker, Plant Pathology Prof. Hans Ris, Zoology Prof. Jerzy P. Rose, Neurophysiology

#### Add one--NAS Membership/UW-Madison

Prof. William H. Sewell, Sociology
Prof. Folke K. Skoog, Botany
Prof. Oliver Smithies, Genetics
Prof. Howard M. Temin, Oncology
Emer. Prof. John C. Walker, Plant Pathology
Prof. Robert C. West, Chemistry
Emer.Prof. John W. Williams, Chemistry
Emer. Prof. Perry W. Wilson, Bacteriology
Emer. Prof. Clinton N. Woolsey, Neurophysiology
Emer. Prof. Sewall G. Wright, Genetics

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NATIONAL ACADEMY OF SCIENCES HONORS FOUR PROFESSORS

MADISON--Four University of Wisconsin-Madison professors, including a husband and wife team, have been elected to the prestigious National Academy of Sciences.

Biochemistry and genetics Profs. Julius Adler and Masayasu Nomura were named Tuesday along with oncology Profs. James and Elizabeth Miller, who are both graduates of the biochemistry department.

"By most accounts, election to the academy is second only to the Nobel Prize in the esteem accorded to it by most of the American scientific community," said Science magazine last year. Through the years, a total of 45 academy members have been chosen from UW-Madison.

Adler, 47, studies how bacteria are attracted to or repelled by various chemicals. He uses his findings as a model to investigate neurobiological functions. Adler received his doctorate from UW-Madison in 1957 and has been on the faculty since 1960. He has held the Edwin Bret Hart Professorship since 1972.

Nomura is an expert on ribosomes, which are sites of protein production inside cells. He demonstrated the self-assembly of ribosomes from isolated ribonucleic acid and proteins. Nomura, 50, has received the U.S. Steel Foundation Award in Molecular Biology and the Japan Award. He has been on the UW-Madison faculty since 1963, serving as Elvehjem Professor since 1966. The Millers are best known for their work on the metabolic activation of chemicals which can cause cancer. They have suggested that all chemical compounds with a high affinity for electrons are in some degree cancer causing. The Millers have won many awards together, including the Wisconsin National Divisional Award of the American Cancer Society.

James Miller, 62, received his doctorate from UW-Madison in 1943 and joined the faculty in 1946. Elizabeth Miller, 57, received her doctorate in 1945 and joined the faculty in 1949. She is a past president of the American Association for Cancer Research.

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University of Wisconsin-Madison Faculty Membership in the National Academy of Sciences

Julius Adler Prof. Henry E. Barschall, Physics Prof. Richard B. Bernstein, Chemistry Prof. R.H. Bing, Mathematics Emer. Prof. R. Alexander Brink, Genetics Prof. Robert H. Burris, Biochemistry Prof. Arthur D. Code, Astronomy Prof. Philip P. Cohen, Physiological Chemistry Prof. James A. Crow, Zoology-Medical Genetics Emer. Prof. Farrington Daniels, Chemistry Prof. John 🕅 Ferry, Chemistry Emer. Pres. Prof. E.B. Fred, Bacteriology Prof. David E. Green, Enzyme Research Emer. Prof. Harry F. Harlow, Psychology Emerof. Raymond G. Herb, Physics Prof. J. W. Hirschfelder, Chemistry Emer. Prof. Malcolm R. Irwin, Genetics Arthur Kelman Prof. Donald W. Kerst, Physics Prof. Henry A. Lardy, Biochemistry Emer. Prof. Karl Paul Link, Biochemistry Prof. ELizabethMiller Emer. Prof. Samuel M. McElvain, Chemistry Prof James M. Nev Prof. Oliver E. Nelson, Genetics Masa yas Nomura Prof. Donald E. Osterbrock, Astronomy Van R Votte V. Oncology Prof. Kenneth B. Raper, Bacteriology Emer. Prof. Albert J. Riker, Plant Pathology Hans Ris, Zoology

Prof. Jerzy P. Rose, Neurophysiology William H. Sewell, Sociology Prof. Folke K. Skoog, Botany Prof. Oliver Smithies, Genetics Howard M. Temiin Emer. Prof. John C. Walker, Horticulture-Plant Pathology Prof. Robert C. West, Chemistry Emer. Prof. John W. Williams, Chemistry Emer Prof. Perry W. Wilson, Bacteriology Prof. Clinton N. Woolsey, Neurophysiology

Emer. Prof. Sewall G. Wright, Genetics

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MADISON--Three members of the faculty at the University of Wisconsin-Madison were among 75 new members elected to the National Academy of Sciences Tuesday.

They are Prof. Henry H. Barschall, physics; Prof. Oliver E. Nelson, genetics; and Prof. Jerzy E. Rose, neurophysiology. They bring to 33 the number of UW members in the prestigious academy.

A specialist in nuclear physics, Prof. Barschall won the coveted Bonner Prize of the American Physical Society in 1965 for his contributions to the field. In 1968 he was named chairman of the society's new division of nuclear physics and visiting scientist for the society and the American Association of Physics Teachers. A native of Germany, he holds the master's and Ph.D. degrees of Princeton University. He came to Wisconsin in 1946 and currently is on leave at the Lawrence Livermore Laboratory, Livermore, Cal.

Prof. Nelson is a leader in the field of plant genetics who came to Wisconsin from Purdue in 1968. He is widely noted as discoverer of the germ plasm in corn which promises to increase the protein food resources of the world. A graduate of Colgate University, he holds the M.S. and Ph.D. of Yale. His experience includes a period as plant breeder with the Robson Seed Co., New York, and as geneticist with the Agricultural Experiment Station at Purdue.

Prof. Rose came to Wisconsin from Johns Hopkins University in 1960 with an established reputation as one of the world's leading research scientists in neuroanatomy and neurophysiology. He is a native of Poland who earned the M.D. degree at Jagiellon University in Cracow. He became a U.S. citizen in 1943 and from 1943 to 1946 he served in the U.S. Medical Corps in the Pacific Theater.

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UW-MADISON NEWS BRIEFS

CONTACT: Prof. Dale W. Gilbert (608) 263-1900 LOWER CAMPUS DESIGN MEETING OPEN TO PUBLIC

A major drive to draw ideas and involvement in the design of UW-Madison's "Lower Campus" will open Thursday, May 4, with a description of the "Oregon Experiment" by Robert S. Harris, dean of the School of Architecture and Allied Arts at the University of Oregon.

The 8 p.m. session will be held in the Wisconsin Center Auditorium, 702 Langdon St., under the sponsorship of the University's lower campus design subcommittee. The meeting is open to the public and aimed at users of the area.

The subcommittee was created to make recommendations on developing the area bounded east-west by Park and Lake streets and north-south by Lake Mendota and Dayton Street. Chairman Dale W. Gilbert, a professor of music, said the group wants the participation of the University community to help establish which direction the development should take and said it wants to involve the users of the area in its design.

The Oregon Experiment, which became the guide for that campus's growth and environment, stresses user participation and involvement along with humanistic design principles. Harris was instrumental in the experiment as a member of the Oregon faculty since 1967 and dean since 1971.

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CONTACT: Susan Disch or Nancy Gebert (608) 262-2116 SUMMER VISITING FACULTY TO COME FROM EUROPE AND JAPAN

Descended broken

Sixty-four members of the 1978 Summer Sessions faculty at UW-Madison, or nearly 8 percent of the 816 total, will be visitors from outside the campus.

Ten of the visitors will come from Canada, England, Holland, Japan, Sweden and Yugoslavia. Thirteen will be from elsewhere in Wisconsin, and the remaining 41 from a total of 19 states.

More than 1,300 courses will be offered in 45 different sessions. A complete bulletin of summer information is available at the Summer Sessions Office, 433 N. Murray St., Madison, WI 53706, telephone (608) 262-2116. The summer timetable of courses will be available May 17.

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FORMER UW-MADISON PROFESSOR NAMED TO NATIONAL ACADEMY OF SCIENCE

Former UW-Madison Prof. Charles Heidelberger has been elected to the National Academy of Science, the academy has announced.

Heidelberger worked at McArdle Cancer Laboratory from 1948 to 1976 and gained fame as an expert on chemical compounds used in cancer therapy.

Current UW-Madison faculty members also named to the academy and announced earlier this week are oncology Profs. Elizabeth and James Miller and biochemistry and genetics Profs. Julius Adler and Masayasu Nomura.

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CONTACT: Barbara Arnold (608) 263-4740/262-9990 LIBRARY SCHOOL ALUMNI ASSOCIATION SLATES REUNION, CONFERENCE

The "basics" of periodical publishing will be explored by members of the UW-Madison Library School Alumni Association May 11-12, during the group's spring reunion.

Lectures, discussions, and workshops on periodical publishing will be featured both days in the State Historical Society Building. A tour of the Library School will begin at 4 p.m. May 11. The business meeting of the association is slated for 12:30 p.m. May 12 in the Memorial Union.

Registration deadline for the event is Monday (May 1).

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THREE FROM UW-MADISON ELECTED TO INSTITUTE OF MEDICINE MEMBERSHIP

MADISON--Three members of the University of Wisconsin-Madison academic community have been elected to membership in the prestigious Institute of Medicine of the National Academy of Sciences.

8/12/76

Robert E. Cooke, M.D., vice chancellor for health sciences and professor of pediatrics, and David Mechanic, John Bascom professor of sociology were reelected to one year terms.

Among new members chosen for major contributions to health and medicine is Burton A. Weisbrod, professor of economics.

Cooke was named vice chancellor for health sciences here in 1973 after serving as pediatrician-in-chief of Johns Hopkins Hospital, Baltimore, Md., for 17 years. He serves on several national health advisory committees including the National Commission for the Protection of Human Subjects of Biomedical and Behavioral Research.

Mechanic heads the UW-Madison's Center for Medical Sociology and Health Sciences Research and his academic work centers on health delivery systems, mental health, and stress and coping. He has authored a new book, "The Growth of Bureaucratic Medicine," which agrues the growing medical care bureaucracy often interferes with humane treatment of patients. He joined the faculty here in 1960.

Weisbrod served on the staff of the President's Council of Economic Advisors in 1963-64. He is currently a fellow with the UW-Madison Institute for Research on Poverty. Weisbrod has just completed a benefit-cost analysis of alternative methods for the treatment of mental patients. He joined the faculty in 1964.

Membership in the Institute of Medicine is both an honor and a working assignment with members making a commitment to devote a significant amount of time to health policy studies work.

Current activities include studies of alternatives to the existing medical malpractice system, and of the functions of primary health care and who should perform them.



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115 Science Hall

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#### SOCIOLOGIST SEWELL ELECTED TO NATIONAL ACADEMY OF SCIENCES

MADISON--The University of Wisconsin-Madison's Vilas Professor of Sociology, William H. Sewell, has been elected to the National Academy of Sciences.

During the past two decades, he has been researching how socio-economic origins affect people's aspirations and achievements in educational, occupational, and economic areas. He has published three books and monographs and more than 40 articles on the subject.

Prof. Sewell received the 1975 American Educational Research Association-American College Testing Program Award "in recognition of his significant contributions to sociological and educational research."

A member of the faculty since 1946, he has served the University in a variety of offices, from chancellor of the Madison campus to chairman of the departments of sociology and rural sociology. He was named Vilas Professor in 1964.

Sewell has served as president of the American Sociological Association, the Sociological Research Association, Rural Sociological Society, Southwest Sociological Society, and Midwest Sociological Society.

His election brought to 38 the number of UW-Madison faculty members in the academy.

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TEMPORARY NEWS SERVICE LOCATION: 115 Science Hall

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KELMAN RECEIVES HIGH SCIENCE HONOR, ELECTION TO NATIONAL ACADEMY

MADISON--Arthur Kelman, the University of Wisconsin-Madison's L. R. Jones Distinguished Professor of Plant Pathology, has been elected to the National Academy of Sciences.

A former chairman of the plant pathology department, Kelman has been a member of the Madison campus faculty since 1965. His major research contributions have come in the areas of bacterial wilt disease in tomato, potato, tobacco, banana, and peanut crops.

The academy is a private organization of scientists and engineers dedicated to the furtherance of science and its use for the general welfare. It was established in 1863 by a Congressional act signed by Pres. Abraham Lincoln.

Kelman's election brought to 37 the number of UW-Madison faculty members in the academy.

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From the University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone: 698/262-3571 Release: Immediately 4/23/75 jb

MADISON--Dr. Van R. Potter, prominent University of Wisconsin-Madison cancer researcher, was elected to the National Academy of Sciences Wednesday.

A past president of the American Association for Cancer Research, Dr. Potter, serving the University as a Leonardo Scholar, is a former assistant director of McArdle Laboratory on the Madison campus.

His election to the academy was based on his contributions to original research. His major efforts have been directed to the mechanisms by which the chemical activities of cells are regulated, ranging from early studies on enzymes to more recent work on the metabolism and function of nucleic acids.

Dr. Potter, 63, a professor of oncology, was the first biochemist to win the Bertner Foundation Award for fundamental research and is one of the few Americans named an honorary member of the Japanese Biochemical Society.

Howard M. Temin, Wisconsin Alumni Research Foundation Professor of Cancer Research, and Hans Ris, professor of zoology, were elected to the academy in 1974.





From the University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone: 608/262-357 Release: Immediately 5/2/74 jb

MADISON--Two members of the University of Wisconsin-Madison faculty have been elected to the National Academy of Sciences "in recognition of their distinguished and continuing achievements in original research."

Howard M. Temin, Wisconsin Alumni Research Foundation Professor of Cancer Research, and Hans Ris, professor of zoology, were chosen at the 111th annual meeting of the academy. Their election brought to 35 the number of UW members in the academy.

Election to membership is considered one of the highest honors that can be accorded to an American scientist or engineer. The academy is a private organization dedicated to the furtherance of science and its use for the general welfare.

Prof. Temin was a nominee for the Nobel Prize in medicine in 1971. A noted oncologist, he joined the Wisconsin staff in 1960.

Director of the high voltage electron microscope laboratory, Dr. Ris is internationally known for his studies of the structure of chromosomes. A cytologist, he is an authority on cells.

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1849–1974: 125 Years of Searching, Teaching, and Serving at the University of Wisconsin–Madison

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Release:

MADISON--University of Wisconsin Madison Profs. William H. Sewell, sociology and Howard Temin, oncology, were among 99 outstanding Americans elected to the American Academy of Arts and Sciences at the 193rd annual meeting in Boston Wednesday.

The Academy was founded in 1780 under the leadership of John Adams to select "men of genius and learning to cultivate and diffuse the arts and sciences." Current membership includes 2,300 representatives from the mathematical, physical, and biological sciences as well as law, administration, public affairs, theology, fine arts, and the humanities.

Prof. Sewell has been a member of the Wisconsin faculty since 1946. During those 27 years he has occupied a variety of posts, from chancellor of the Madison campus to chairman of the departments of sociology and rural sociology. Named Vilas Research Professor of Socioloby in 1964, he was awarded the honorary doctor of laws degree at Michigan State University in March. He has been elected president of five professional societies during the course of his academic life.

Prof. Temin was among outstanding scientists considered for the Nobel prize in medicine in 1971. He has since been voted the \$5,000 Steel Foundation Award in Molecular Biology from the National Academy of Science. A Ph.D. of the California Institute of Technology, Dr. Temin joined the Wisconsin staff in 1960, is now Wisconsin Alumni Research Foundation Professor of Cancer Research.

30 ih 1971 * left UW	L ACADEMY OF SCIENCES
1971	1972
Prof. Arthur D. Code, astronomy Prof. Philip I. Cohen, physiological chemistry Ørof. Oliver Smithies. genetics	Prof. Henry H. Barschall, physics Prof. Oliver E. Nelson, genetics Prof. Jerzy E. Rose, neurophysiology

1968

Prof. Richard B. Bernstein, chemistry

1966

Prof. H. Gobind Khorana, biochemistry\* Prof. Donald E. Osterbrock, astronomy

1965

Prof. R.H. Bing, mathematics Prof. Robert A. Alberty, physical chemistry \*

AND

Emer. Prof. R.A. Brink, genetics

Prof. K.B. Raper, botany bacter. Prof. R.H. Burris, biochemistry Emer. Prof. A.J. Riker, plant path. Prof. James F. Crow, genetics Prof. Folke Skoog, botany Ener. Prof. Farrington Daniels, chemistry Emer. Prof. J.C. Walker, plant path. Prof. John D. Ferry, chemistry Emer. Prof. J.W. Williams, chem. Emer. Prof. E.B. Fred, bacteriology Prof. Perry W. Wilson, bacter. Prof/ Bavid E. Green, emzyme institute Prof. C.N. Woolsey, neurophysiology Emer. Prof. Harry F. Harlow, psychology, primate center Emer. Prof. Sewall Wright, genetics Prof. R.G. Herb, physics Prof. Robert C. West, chem. Prof. J.O. Hirschfelder, chemistry Emer. Prof. M.R. Irwin, genetics Prof. Donald W. Kerst, physics Prof. Henry Lardy, biochemistry Emer. Prof. Karl Paul Link, biochemistry

6/7/71 mig

Emer. Prof. S. M. McElvain, chem.

news from the NATIONAL ACADEMY OF SCIENCES

The National Academy of Sciences is an organization of distinguished scientists and engineers concerned with the furtherance of science and its use for human welfage. Although the Academy is not a government agency, it is called upon by its Congressional charter of 1863 to serve as an official adviser to the Federal Government in matters of science and technology.

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75 NEW MEMBERS CHOSEN BY ACADEMY

FOR IMMEDIATE RELEASE (Distributed 4/25/72)

WASHINGTON—The National Academy of Sciences today announced the election of 75 new members in recognition of their distinguished and continuing achievements in original research.

The election took place this morning (Tuesday) during the business session of the 109th Annual Meeting of the Academy at its headquarters in this city. The meeting began Monday and will conclude with scientific sessions on Wednesday.

Election to membership in the NAS is considered to be one of the highest honors that can be accorded to an American scientist or engineer. The Academy in 1971 voted to increase the maximum number to be elected each year from 50 to 75 in 1972, and later up to 100, then decreasing the annual maximum to 60. The chief purpose of the expansion is to permit the election of substantially larger numbers of clinical and medical researchers, and behavioral and social scientists. Those elected today bring the total to 950.

The National Academy of Sciences is a private organization of scientists and engineers dedicated to the furtherance of science and its use for the general welfare. The Academy was established in 1863 by a Congressional Act of Incorporation signed by Abraham Lincoln which calls upon the Academy to act as an official adviser to the federal government, upon request, in any matter of science or technology. This provision accounts for the close ties that have always existed between the Academy and the government, although the Academy is not a governmental agency. Newly elected members, with their affiliations as of December 31, 1971 (the date on which nominations closed), are as follows:

BRUCE NATHAN AMES. Professor of biochemistry, University of California, Berkeley.

HENRY HERMAN BARSCHALL. Professor of physics, University of Wisconsin.

ALEXANDER GORDON BEARN. Professor of medicine and chairman of the department, Cornell University Medical College, and physician-in-chief, New York Hospital.

BARUJ BENACERRAF. Fabyan chair of comparative pathology, and chairman of department of pathology, Harvard Medical School.

KENNETH MERLE BRINKHOUS. Distinguished Alumni professor (pathology), University of North Carolina.

ROY JOHN BRITTEN. Staff member, Department of Terrestrial Magnetism, Carnegie Institution of Washington, and visiting associate, California Institute of Technology.

ROGER WILLIAM BROWN. Professor of social psychology, Harvard University.

AVRAM NOAM CHOMSKY. Ward Professor of modern languages and linguistics, Massachusetts Institute of Technology.

JAMES SAMUEL COLEMAN. Professor of social relations, Johns Hopkins University.

SIDNEY PAUL COLOWICK. Professor of microbiology, and American Cancer Society professor, Vanderbilt University.

RODNEY LEE COOL. Professor of experimental high energy physics, Rockefeller University.

ALBERT VICTOR CREWE. Professor of physics and biophysics, and dean, Physical Sciences Division, University of Chicago.

STANLEY JEROME CRISTOL. Professor of chemistry, University of Colorado.

ROBERT ALAN DAHL. Sterling professor of political science, Yale University.

WILLIAM JEFFERSON DARBY. Professor of biochemistry, assistant professor of medicine, and director of the division of nutrition; chairman, department of biochemistry; professor of nutrition, Vanderbilt University School of Medicine.

VINCENT PAUL DOLE. Professor, Rockefeller University.

-MORE-

RICHARD JAMES DUFFIN. Professor of mathematics, Carnegie-Mellon University.

FRANK DONALD DRAKE. Professor of astronomy, Cornell University; associate director, Center for Radiophysics and Space Research; director, National Astronomy and Ionosphere Center.

POL EDGARD DUWEZ. Professor of materials science, California Institute of Technology.

ERNEST LUDWIG ELIEL. Professor of chemistry, University of Notre Dame.

HANS PETER EUGSTER. Professor of geology, Johns Hopkins University.

HAROLD J. EVANS. Professor of plant physiology, Oregon State University.

DON WAYNE FAWCETT. Hersey professor of anatomy, and head of department, Harvard University.

LEON FESTINGER. Staudinger professor (social psychology), New School for Social Research.

GEORGE BROOKS FIELD. Professor of astronomy, University of California, Berkeley.

MAXWELL FINLAND. Minot professor emeritus, Harvard Medical School.

JOSEPH GRAFTON GALL. Professor of biology, Yale University.

JOHN HEYSHAM GIBBON, JR. Emeritus professor of surgery, Jefferson Medical College.

PETER CARL GOLDMARK. President and director of research, CBS Laboratories (recently retired).

PETER MARTIN GOLDREICH. Professor of planetary science and astronomy, California Institute of Technology.

RALPH EDWARD GOMORY. Director of research, T. J. Watson Research Center, IBM; professor-at-large, Cornell University.

ERWIN LOUIS HAHN. Professor of physics, University of California, Berkeley.

JACK RODNEY HARLAN. Professor of plant genetics, University of Illinois.

ROY HERTZ. Affiliate and associate director, Population Council, New York.

JAMES GERALD HIRSCH. Professor of medicine and microbiology, and senior physician, Rockefeller University.

JAMES LYNN HOARD. Professor of chemistry, Cornell University.

-3-

-MORE-

ROALD HOFFMANN. Professor of chemistry, Cornell University.

GEORGE CASPAR HOMANS. Professor of sociology, Harvard University.

GEORGE WILLIAM HOUSNER. Professor of civil engineering and applied mechanics, California Institute of Technology.

FRANCIS CLARK HOWELL. Professor of anthropology, University of California, Berkeley.

HENRY SEYMOUR KAPLAN. Professor and chairman, department of radiology, Stanford University School of Medicine.

SAMUEL KARLIN. Professor of mathematics, Stanford University; chairman, department of mathematics, Weizmann Institute.

DONALD KENNEDY. Professor of biology and chairman of the department, Stanford University.

GEORGE BRAMPTON KOELLE. Professor and head, department of pharmacology, University of Pennsylvania School of Medicine.

SIMON SMITH KUZNETS. Professor of economics, Harvard University.

HENRY SHERWOOD LAWRENCE. Professor and head, infectious disease and immunology unit, New York University School of Medicine; co-director, New York University-Bellevue Medical Service.

ALEXANDER LEAF. Jackson professor of clinical medicine, Harvard Medical School.

ROBERT DUNCAN LUCE. Member, Institute for Advanced Study (psychophysics).

WILLEM VAN RENSSELAER MALKUS. Professor of applied mathematics, Massachusetts Institute of Technology.

ROBERT BRUCE MERRIFIELD. Professor of biochemistry, Rockefeller University.

KURT MARTIN MISLOW. Taylor professor of chemistry and chairman of department, Princeton University.

VOLIVER EVANS NELSON. Professor of genetics, University of Wisconsin.

ALLEN NEWELL. University professor of systems and communication science, Carnegie-Mellon University.

CHARLES EGERTON OSGOOD. Professor of psychology, University of Illinois.

ROBERT LAMAR PIGFORD. Professor of chemical engineering, University of California, Berkeley.

FREDERICK CHAPMAN ROBBINS. Professor of pediatrics and dean, Case Western Reserve Medical School.

REED CLARK ROLLINS. Asa Gray professor of systematic botany; director, Gray Herbarium; supervisor, Bussey Institution, Harvard University.

FRZY EDWIN ROSE. Professor of neurophysiology, University of Wisconsin.

SAUL ROSEMAN. Professor and chairman of the department of biology, and director, McCollum-Pratt Institute, Johns Hopkins University.

MALVIN AVRAM RUDERMAN. Professor of physics, Columbia University.

ELIZABETH SHULL RUSSELL. Senior staff scientist, Jackson Laboratory.

GERTRUDE SCHARFF-GOLDHABER. Senior physicist, Brookhaven National Laboratory.

ROBERT MERTON SOLOW. Professor of economics, Massachusetts Institute of Technology.

ALEXANDER SPOEHR. Professor of anthropology, University of Pittsburgh.

CHARLES TANFORD. Duke professor of physical biochemistry, Duke University Medical School.

HANS LUKAS TEUBER. Professor of psychology, and head of department, Massachusetts Institute of Technology.

LEWIS THOMAS. Professor and chairman of department of pathology, Yale University.

JAMES TOBIN. Sterling professor (economics), Yale University.

SAM BARD TREIMAN. Professor of physics, Princeton University.

PINDAROS ROY VAGELOS. Professor of biochemistry and head, department of biological chemistry, Washington University School of Medicine.

STEVEN WEINBERG. Professor of physics, Massachusetts Institute of Technology.

JOHN ROY WHINNERY. Professor of electrical engineering, University of California, Berkeley.

GEORGE WILLIAM WHITEHEAD. Professor of mathematics, Massachusetts Institute of Technology.

WILLIAM BARRY WOOD III. Professor of biology, California Institute of Technology.

-MORE -

ROBERT WALTER ZWANZIG. Research professor of physical chemistry, University of Maryland.

The posthumous election of Dr. Solomon Aaron Berson was also announced by the Academy. Dr. Berson was Murray M. Rosenberg professor of medicine and director, department of medicine, Mt. Sinai School of Medicine.

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### UNIVERSITY OF WISCONSIN-MADISON

UNIVERSITY NEWS AND PUBLICATIONS SERVICE 10 Bascom Hall 500 Lincoln Drive Madison, Wisconsin 53706 Telephone: 608/262-3571

Liverane, Cal,

ELECTED TO THE NATIONAL ACADEMY OF SCIENCES TUESDAY: (4/25/72

Prof. Henry H. Barschall, physics (on leave) (Lawrence Livermone Lab. Prof. Oliver E. Nelson, genetics

Prof. Jerzy E. Rose, neurophysiology

Among 75 elected to membership in Academy

## uw news

From The University of Wisconsin News and Publications Service, Bascom Hall, Madison 53706 • Telephone: (608) 262-3571 Release: **Immediately** 8/2/71 rf

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MADISON--Prof. Henry Newhall of the University of Wisconsin-Madison College of Engineering's mechanical engineering department will serve as a consultant to the National Academy of Sciences Committee on Motor Vehicle Emissions,

Prof. Newhall will be on leave from UW for one year on this assignment. The committee will report on technical feasibility of meeting the 1975-76 vehicle emissions standards prescribed by the Environmental Protection Agency.

# # #

**UW Prom The University of Wisconsin-Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone: (608) 262-3571 Release: 1/7/72 wf** 

MADISON--Prof. David Mechanic of the University of Wisconsin-Madison sociology department has been elected to a three-year term on the executive committee of the National Academy of Science's Institute of Medicine.

The 21-member committee is the governing body of the institute which is concerned with the protection and enhancement of the health of the public.

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From The University of Wisconsin News and Publications Service, Bascom Hall, Madison 53706 • Telephone: (608) 262-3571

Release:

Immediately

5/25/71

UIR Science Writing Division (263-2811)

#### By ROBERT HORVAT UW Science Writer

MADISON, Wis.--From the microscopic world of human cells to the vastness of galactic space--such is the span of interests of Wisconsin's latest three additions to the prestigious National Academy of Sciences.

Astronomer Arthur D. Code, geneticist Oliver Smithies and physiological chemist Philip I. Cohen, elected to the academy in the annual May balloting, have swelled the ranks of members at the UW to 30. This puts Wisconsin among the top 10 schools in the country, in NAS memberships.

For the scientists themselves, membership represents an academic seal of approval from fellow scientists, an acknowledgement of responsible teaching and original research.

For the University, currently sailing through rough economic waters, the election of these distinguished faculty members to academy membership affirms its traditionally high scientific reputation.

Academy membership is not easy to attain. Only 50 scientists were elected to the NAS this year, and the long-term annual average of new memberships is closer to 30.

Of 900 current NAS members throughout the country, 12 states have none at all. Even some populous states, such as Ohio, with many public and private universities, can only boast a handful of NAS members.

#### Add one--NAS members

Many nationally-noted scientists are long-time academy members. Nobel Prize winning chemist Linus Pauling and former UW geneticist H. Gobind Khorana, as well as UW retiring biochemist Karl Paul Link and University President Emeritus E.B. Fred are just a few examples.

At Wisconsin, chemistry has the lion's share of academy memberships--six faculty are NAS members. Genetics is a close second with five, and bacteriology and biochemistry each have three.

The newest NAS members include two (Smithies & Cohen) from the basic sciences department of UW's Medical School, bringing the medical roster to four NAS members--a distinction Wisconsin shares with few medical schools in the country.

The latest three UW additions are good examples of the diversity within academic ranks.

Astronomer Arthur Code has spent the last 10 years looking at light which earth-bound humans have never seen before.

Ultraviolet light is absorbed by the thick blanket of air surrounding the earth, making astronomical measurements of this light impossible. Since many young stars and all comets radiate mostly ultraviolet light, a large area was closed to astronomy's earth-based probes.

The NASA-launched Orbiting Astronomical Observatory changed this picture entirely. Orbiting high above the earth's atmosphere, the OAO telescopes easily aim at stars and comets, and really "see" them for the first time.

The successful launch and operation of the Wisconsin instrument package onboard the OAO has been the high point in Code's career so far. The 48-year-old director of UW's Washburn Observatory points out that Wisconsin has quite a distinction: it is the only university now in the business of operating an observatory in space.

"After centuries of sitting here at the bottom of an ocean of air, we've finally escaped the surface to learn more about the universe," Code says.

- more -

While Code and his fellow-astronomers have been looking out into space, the people of Wisconsin have not been overlooked. Of the \$6 million Wisconsin received from NASA for the OAO project during the last 11 years, most of the funds have bouyed up the state's economy, in the form of salaries, student financial aid, and bringing many distinguished teachers to the Madison campus.

And, Code indicates, astronomical research can also bring unexpected benefits. For example, only after astronomers learned that nuclear reactions keep stars burning for millions of years, did scientists develop ways to harness these nuclear reactions as a vast power source here on earth.

Rather than the interior of stars, it is the interior of human cells that fascinates UW geneticist Oliver Smithies. On the Wisconsin faculty since 1960, this British-born researcher has spent the last 17 years piecing together the complex relationship between proteins, one of the body's basic building blocks, and genes, hereditary message-carriers to future generations.

Certain kinds of proteins, called antibodies, protect a person from many infectious illnesses, Smithies explains.

"However, each antibody a person makes is specific. It works only against one disease. What we're interested in finding out, is how these antibodies are related to the specific genes a person has."

This background information is vital to understanding our life processes, Smithies indicates.

The 45-year-old researcher, who has been interested in science from childhood, feels that science in itself cannot be harmful. Science, Smithies maintains, is simply the search for knowledge.

"What may be good or bad, is the way such knowledge is applied, once discovered," he says.

Philip Cohen, long-time chairman of physiological chemistry at UW, has spent his 30 year career trying to decipher the mysteries of the development of embryos into full-blown animals.

- more -

#### Add three--NAS members

Just how does a fertilized egg become an adult animal? What important role do various biological substances play in this vital process? And--most exciting of all--how does this process of increasing organization relate to the unstructured cell growth we call cancer?

These are a few of the current sign-posts along Cohen's research trail.

The 62-year-old scientist has authored more than 175 academic papers over the years, and has also worked with the U.S. State Department and other agencies in helping Latin American nations develop their own biochemical research teams.

In looking back over his decades at the University, the New England-born educator feels that Wisconsin has been a good place to be. Says Cohen:

"It's been very easy to do first-rate work. In fact, with the resources and talent here, there's no excuse for anything less."

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Japanes Louder From The University of Wisconsin News and Publications Service, Bascom Hall, Madison 53706 • Telephone: (608) 262-3571

Release:

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4/28/71 jb

MADISON--Three members of the University of Wisconsin-Madison faculty were elected to the National Academy of Sciences Wednesday.

Profs. Arthur D. Code, astronomy; Philip P. Cohen, physiological chemistry; and Oliver Smithies, medical genetics, were named to receive the highly-sought honor. Officials of the academy said their election was based on "their achievements, distinguished academic record, and original research."

Nationwide, 50 scientists and engineers were elected to membership.

Prof. Code, director of the Washburn Observatory, holds the Joel Stebbins Professorship. A leading pioneer in space astronomy, he and his colleagues developed the equipment used by the National Aeronautics and Space Administration in its successful Orbiting Astronomical Observatory, the most powerful unmanned spacecraft launched to date.

Acting dean of the UW Medical School in 1961-63, Dr. Cohen is a specialist in enzymology, protein fractionation, and intermediary nitrogen metabolism. Harold C. Bradley Professor on the Madison campus, he is a member of the National Advisory Arthritis and Metabolic Diseases Council.

Prof. Smithies, who has investigated the structure and evolution of certain blood proteins, chromosomal rearrangements, and gene action, is a native of England who joined the Wisconsin staff in 1960. He received the American Society of Human Genetics Allen Award in 1964.

The three new academy members brought the number of Wisconsin members to 28, one of the highest totals on any campus in the country.

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The University of Wisconsin Institute for Environmental Studies 1225 West Dayton Street Madison 53706 Telephone: (608) 262-2860

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MADISON, Wis.--Prof. Reid A. Bryson, director of the University of Wisconsin's Institute for Environmental Studies, has been named to the Environmental Studies Board of the National Academy of Sciences and National Academy of Engineering.

The national board will serve the two academies, the government, and the nation in coordinating and advising on programs relating to protection of the environment.

An important function of the Environmental Studies Board will be to promote understanding and cooperation among scientists, engineers, lawyers, statesmen, and laymen concerned with the complex problems of man's environment. The board will provide a means of contact between local agencies and centralized centers of scientific activities, such as the two academies. It will also serve the legislative and executive branches of government on environmental matters.

Dr. Bryson, professor of meteorology and geography, is widely known for his research on world climatology, particularly climatic changes brought about by man's activities.

### uw news

From The University of Wisconsin News and Publications Service, Bascom Hall, Madison 53706 • Telephone: (608) 262-3571

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4/24/68 jb

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MADISON--Dr. Richard B. Bernstein, University of Wisconsin W. W. Daniels Professor of Chemistry, was elected to membership in the National Academy of Sciences Wednesday.

The honor was based on "his distinguished academic record and original research," officials of the academy noted.

A member of the Wisconsin faculty since 1963, Prof. Bernstein teaches classes in chemical kinetics and physical chemistry. His research has centered around molecular beam scattering and intermolecular forces. Earlier his studies concerned molecular spectra, isotope effects in chemical reactions, and isotope separation by chemical and physical methods. Much of his work has been supported by the Atomic Energy Commission.

After earning his B.A. (1943) and Ph.D. (1948) at Columbia University, Prof. Bernstein taught for five years at the Illinois Institute of Technology, Chicago, and the University of Michigan, Ann Arbor. During World War II, he was a research scientist on the Manhattan project at Columbia, later serving on Joint Task Force One at the Bikini atomic bomb tests in the Pacific.

He has published more than 50 scientific articles, most of them in The Journal of Chemical Physics, a periodical which he served for several years as associate editor. He was a National Science Foundation senior postdoctoral fellow in 1960-61, and an Alfred P. Sloan Foundation fellow in 1956-60.

# uw news

From The University of Wisconsin News and Publications Service, Bascom Hall, Madison 53706 • Telephone: (608) 262-3571 Release: Immediately 1/15/68 mcg

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MADISON--An international agreement between the United States, Canada, Denmark, and France will involve scientists at the University of Wisconsin in a far-reaching study of human adaptability to extreme cold.

According to authorities at the National Academy of Sciences who are coordinating the research effort, the agreement grew out of the recent conference on Eskimo peoples held at Point Barrow, Alaska, under the direction of UW anthropologist Frederick Milan.

Dr. Milan has been appointed director of the American study and coordinator of the international effort.

"Through this large-scale cooperative effort under the International Biological Program we hope to provide a portal into the Eskimo world never before available to scientists," Dr. Milan said.

Taking part with fellow scientists from other U.S. universities and the three other countries are Wisconsin Prof. William Laughlin, Prof. Richard Osborne, Prof. Verner Alexandersen, Richard Mazess, Richard Nelson, and Robert J. Meier, all of anthropology; Dr. John R. Cameron, radiology; and Dr. Frank Pauls, preventive medicine. Prof. Laughlin is co-principal investigator.

Research sites have been chosen along the original routes of Eskimo migration to measure how genetically similar groups have adapted to the different environments. U.S. research will be concentrated at Wainwright, Alaska, a village of 300 Eskimos 90 miles from Point Barrow. Canadian scientists will work at Igloolik, a remote settlement in the Northwest Territories. French and Danish researchers will be stationed at Upernavik in northeastern Greenland.

Scholars from various disciplines at the Universities of Chicago, Oregon, and California at Los Angeles, Indiana University, and the State University of New York at Buffalo will join the Wisconsin group at Wainwright.

Major objective of the U.S. investigation is to "determine ways in which the Eskimo community successfully perpetuated itself under severe climatic conditions with relatively meager resources."

"We expect to collect precise information about the biological and social interactions within the Wainwright community and its physical environment," Dr. Milan said. "We also hope to gain insight into the general patterns of human adaptability and evolution since Eskimosillustrate--in the size of their communities, level of economy, and major occupation as hunters--the way in which man, the species, spent 99 per cent of his evolutionary history. Much of the genetic endowment of modern man has been shaped by the mechanisms of natural selection and other evolutionary processes that still seem to affect the Eskimo culture."

All health-related information gathered by the American team will be given to government agencies in Alaska for use in better understanding and treating Eskimo health problems, he added.

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## uw news

From The University of Wisconsin News and Publications Service, Bascom Hall, Madison 53706 • Telephone: (608) 262-3571Release:Immediately6/12/68 jg

By JAN GAMS

MADISON--Alaska is America's newest pioneer country, but it has long been home to a large group of lean, muscular, gun-toting sharpshooters who take to country-and-Western music and elect local marshals to keep the peace.

Today's Eskimo is a direct descendant of Alaska's earliest pioneers who settled the territory about 8,000 years ago after crossing the land bridge then connecting Alaska to Siberia.

While the Eskimo is adjusting to the modern world, this world must adjust its view of the Eskimo, says Dr. William S. Laughlin, anthropologist at the University of Wisconsin.

The old stereotype is out, Dr. Laughlin says. The Eskimo is not fat, does not live in an igloo, rub noses, abandon his old people to die, or offer his wife to a visiting male guest, a former gesture of hospitality.

The truth, Dr. Laughlin says, is that Eskimos are lean, muscular people, and only about 1 in 10 has been inside an igloo, which is normally a temporary shelter.

The custom of rubbing noses has been replaced by the common kiss, and today's oldsters receive social security, making them independent of the younger generation. Add one--Eskimos

The Eskimo probably looks fat because he has a wide face and wears bulky parkas, Dr. Laughlin said. As for his housing, the Alaskan Eskimo lives in a wooden frame house similar to those built by the North American pioneers.

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Dr. Laughlin said these misconceptions about the Eskimos indicate how little is known about them in the first place. Some of the gaps in information will soon be filled as the result of a five-year, \$1 million study, due to begin in July, of three widely separated Eskimo villages.

A major goal of the study is to learn how the resilient Eskimo not only survives, but actually thrives in a climate where temperatures sometimes drop to 50 below zero.

Despite the harsh Arctic environment, the Eskimo population is booming, and the world's total is now over 70,000, with 15,000 in Alaska. Eskimos live on a stretch of Arctic wilderness 8,000 miles long, extending from the Aleutian Islands, west of Alaska, to Greenland's east coast.

Teams of scientists from the United States, France, Denmark and Canada will participate in the study of the Eskimos and their adaptation to extreme cold. The National Academy of Sciences is coordinating the project.

The American team of specialists in genetics, nutrition, dentistry, medicine, psychology and anthropology will be based at Wainwright, Alaska, a village of 300 Eskimos. The Canadians will work at Igloolik, a remote settlement in the Northwest Territories, and the French and Danish will combine to study a community in Greenland. The three teams will compare notes as they go along.

Director of the U.S. study and coordinator of the entire project is another University of Wisconsin anthropologist, Dr. Frederick Milan.

Dr. Milan said the Eskimo is particularly intriguing to scientists because he still seems to be affected by the evolutionary processes such as natural selection that shaped modern man. Eskimos illustrate how man, as a species, spent

- more -

Add two--Eskimos

99 per cent of his evolutionary history when he lived in small communities, had a subsistence economy, and depended upon hunting to live.

Today's Eskimos get about 75 per cent of their food from hunting, and this gives them a diet rich in protein. But today's hunting methods differ greatly from those of the Eskimo's ancestors. Instead of bone implements, today's Eskimo uses steel hooks, harpoons and rifles.

The Eskimos' supply of rifles is related to their large membership in the National Guard, which provides ammunition and free rifles handy for hunting. Eskimos take their Guard work seriously despite these advantages, according to Dr. Laughlin. During a recent Guard maneuver, he said, the zealous Eskimo troops not only managed to capture the opposition general but hid him in a cave for four days.

The snowmobile is another Twentieth Century device appreciated by the Eskimos, but its rather high purchase price and operating costs--gasoline costs a dollar a gallon--preclude its replacing the traditional dog sled for some time to come. Only the more affluent Eskimo owns one.

The crack of the rifle and the roar of the snowmobile are not the only modern sounds piercing the once-silent Arctic wastes.

The transistor radio is just about everywhere. It provides hours of entertainment and information particularly useful to the Eskimo, such as weather reports, dog race results, and stock market reports. Dr. Laughlin says Eskimos are always hoping the market value of furs will rise.

Transistors also fill an educational role, by teaching English to the Eskimos, and, more generally, by teaching them about the rest of the world.

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### uw news

George Port.

From The University of Wisconsin News and Publications Service, Bascom Hall, Madison 53706 • Telephone: (608) 262-3571

Release:

Immediately

5/22/67 jb

MADISON--The new chairman of the division of mathematical sciences, National Academy of Sciences' national research council, is a member of the University of Wisconsin faculty, Prof. R. H. Bing.

Elected to the academy in 1965, Prof. Bing has been a member of the UW staff since 1947. At Madison he has served as department chairman and presently is research professor of mathematics.

The new chairman has served as vice president of the American Association for the Advancement of Science and American Mathematical Society, and president of the Mathematical Association of America.

###

THE UNIVERSITY OF CHICAGO PUBLIC RELATIONS OFFICE 5801 ELLIS AVENUE CHICAGO 37, ILLINOIS

May 6, 1965

TO: Leonard K. Olsen FROM: Carl W. Larsen

RE: The National Academy of Sciences

Richard Kubik, of this office, has reviewed quickly the membership list for the National Academy of Sciences. It shows the following as the ranking of the top 10 among the academic institutions. (Rockefeller Institute, National Institutes of Health, etc., were omitted from the study).

The published list runs through July, 1964. Kubik added the names and institutions of the appointees for 1965 when 35 new members were appointed. The leading institutions follow:

1.	Harvard
2.	California
3.	M.I.T
4.	Chicago
5.	Stanford
6.	Columbia
7.	Wisconsin
8.	Cal. Tech
9.	Princeton
10.	

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**RELEASE:** 

Immediately

FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE. MADISON, WISCONSIN 53706

(EDITORS: This is offered for news or background purposes).

MADISON--The high brain-power contribution of the University of Wisconsin to the nation was revealed today in a University analysis of the exhaustive study of "Doctorate Production in United States Universities 1920-1961" by the National Academy of Sciences-National Research Council.

In the period covered by the study, the University of Wisconsin ranked second in the nation in the production of doctorates, the highest academic degree attainable, and fifth in the award of baccalaureate degrees to students who went on to: receive the doctorate.

Doctorate production is considered by many educators to be a measure of faculty strength, research opportunities, and educational quality at the graduate level; production of baccalaureate students capable of continuing through the doctorate is considered a measure of student quality as well as the quality and scope of the undergraduate instructional program.

In doctorate production over the four decades covered, Columbia University ranked first, Wisconsin second, Harvard third, Chicago fourth, Illinois fifth, and the University of California at Berkeley, sixth.

In production of baccalaureates who went on to receive doctorates, University of California at Berkeley ranked first, City College of New York second, Illinois third, Chicago fourth, Wisconsin fifth, Harvard sixth.

#### Add one--doctorates

The balance of strength Wisconsin has in all major fields was shown by a comparative breakdown of doctorates awarded. Wisconsin ranked first in the nation in the biological sciences, third in the physical sciences, fourth in the social sciences, and fourth in the arts and professions.

In these major categories, Wisconsin was the only institution which ranked among the first four in all four. Columbia was in three; Harvard, Illinois, Chicago, and Berkeley were in two; Cornell was in one.

This is generally taken to mean that Wisconsin has consistently achieved an enviable balance between the various broad fields of study, and generally recognized above-average graduate instruction and research in nearly all of them. However, the survey did reveal some areas of Wisconsin's unchallenged leadership. In fields such as biochemistry, botany-phytopathology, microbiology, and medical science, no other school approaches Wisconsin in the number of students attaining the highest academic degree.

The number of students seeking the doctorate at an institution is generally taken as an indication of the level of instruction and research available because these students intend to make teaching and research a career, and receiving a doctorate from the best available school is the most sought-after credential.

Wisconsin's rating is the various broad fields broken into the various areas of specialization employed in the study follows here:

PHYSICAL SCIENCES: First--Illinois, 2,920; second--California (Berkeley), 2,176; third--Wisconsin, 2,064:

Mathematics: First--Chicago, 333; second--Illinois, 260; third--Harvard, 246; Wisconsin--seventh, 156;

Physics: First--California, 717; second--Harvard, 506; third--Chicago, 458; Wisconsin--eighth, 284;

Chemistry: First--Illinois, 1,564; second--Wisconsin, 1,061; third--Ohio State, 954; Add two--doctorates

Geo-Sciences: First--Columbia, 269; second--Chicago, 263; third--Harvard, 243; fourth--Wisconsin, 186;

Engineering: First--Michigan, 662; second--Illinois, 649; third--Wisconsin, 377;

BIOLOGICAL SCIENCES: First--Wisconsin, 2,729; second--Cornell, 2,255; third--California, 1,515.

Agriculture: First--Cornell, 688; second--Wisconsin, 503; third--Illinois, 343;

Medical: First--Wisconsin, 117; second--Harvard, 71; third--Columbia, 67; Anatomy: First--Chicago, 68; second--Cornell, 56; third--Michigan, 55; Wisconsin--sixth, 20;

Physiology: First--Chicago, 289; second--Cornell, 256; third--California, 228; fourth--Wisconsin, 202;

Biochemistry: First--Wisconsin, 551; second--California, 240; third--Cornell, 145;

Botany-Phytopathology: First--Wisconsin, 537; second--Cornell, 293; third--Chicago, 271;

Microbiology: First--Wisconsin, 256; second--Illinois, 147; third--Cornell, 137;

Zoology-Entomology: First--Cornell, 492; second--Calibraia--457; third--Wisconsin, 359;

Miscellaneous: First--Wisconsin, 184; second--Harvard, 181; third--California, 173;

SOCIAL SCIENCES: First--Columbia, 2,599; second--Harvard, 2,473; third--Chicago, 2,325; fourth--Wisconsin, 1,515.

Psychology: First--Columbia, 632; second--New York, 584; third--Chicago, 575; Wisconsin--tenth, 143;

Anthropology: First--Columbia, 177; second--Harvard, 154; third--Chicago, 133; Wisconsin--ninth, 10;

#### Add three--doctorate

Sociology: First--Chicago, 419; second--Columbia, 247; third--Wisconsin,

177;

Economics: First--Harvard, 728; second--Wisconsin, 576; third--Columbia, 518;

History: First--Harvard, 725; second--Columbia, 694; third--California, 417; fourth--Wisconsin, 405;

Political Science: First--Harvard, 440; second--Chicago, 361; third--Columbia, 242; Wisconsin--fifth, 134;

Miscellaneous: First--Chicago, 146; second--Columbia, 89; third--Michigan, 88; fourth--Wisconsin, 70.

ARTS AND PROFESSIONS: First--Harvard, 2,114; second--Columbia, 2,051; third, Chicago, 1,651; fourth--Wisconsin, 1,033.

English: First--Columbia, 529; second--Harvard, 425; third--Wisconsin, 338;

Foreign Languages: First--Columbia, 669; second--Chicago, 384; third--Harvard, 357; fourth, Wisconsin--318;

Philosophy: First--Columbia, 312; second--Harvard, 287; third--Chicago, 119; Wisconsin--seventh, 37;

Arts, Professions: First--Harvard, 482; second--Wisconsin, 249; third--Michigan, 227;

Business Administration: First--Harvard, 209; second--New York, 200; third--Ohio State, 128; Wisconsin--ninth, 45;

Miscellaneous: First--Chicago, 574; second--Harvard, 354; third--Columbia, 322; Wisconsin--seventh, 46;

EDUCATION: First--Columbia, 5,163; second--New York, 2,275; third--Ohio State, 761; Wisconsin--seventh, 490.

#### Add four--doctorates

The same general proportional relationship between fields holds also in the number of students granted bachelor's degrees who later attained their doctorate. Thus, Wisconsin granted the following number of bachelor's degrees to students who continued for the doctorate: physical sciences--791; biological sciences--856; social sciences, arts, and professions--1,028; education--358.

The National Academy of Sciences--National Research Council study also revealed that there has been an influx to Wisconsin of students who received bachelor's degrees elsewhere, then came to Wisconsin to study for the doctorate.

Most students receiving doctorates at Wisconsin were undergraduates at Wisconsin also, but of those who were not, the largest numbers came from Illinois, Michigan, Cornell, California, respectively, with lesser numbers respectively from Iowa, Chicago, Purdue, Oberlin, City College of New York, Ohio State, and the University of Washington.

During the 1920-59 period, the most rapid growth has taken place in the number of doctorates granted at Wisconsin in the biological sciences, increasing more than fivefold from the 223 granted in 1920-29 to the 1,265 granted in 1950-59. In the physical sciences this increase was about four-fold, from 213 to 882 in those same decades, and in the social sciences, arts, professions, and education the increase was also four-fold, from 310 to 1,353.

Primary sources of those who came to Wisconsin to study the physical sciences were Chicago and Minnesota; those who studied biological sciences came primarily from Minnesota, Illinois, and Chicago; those who studied social sciences were from Illinois, Harvard, and Minnesota; those who studied the arts and professions were from Harvard, Iowa, Columbia, and Northwestern; those who studied education were principally from Columbia.

#### Add five--doctorates

In two five-year periods, 1950-54 and 1955-59, Wisconsin was second in the nation in number of doctoral degrees granted, led only by Columbia University. Ranking with the leaders were Harvard, Illinois, California at Berkeley, Chicago, and New York University. In 1920 Wisconsin ranked fifth, and during the period 1925-49 it ranked fourth excepting for one period, 1940-44, in which it climbed to third.

The nation's 10 leading schools with total doctorate production of each, 1920-61, is as follows: Columbia--12,539; Wisconsin--7,831; Harvard--7,638; Chicago --7,392; Illinois--6,307; California at Berkeley--6,273; Cornell--5,835; New York--5,592; Michigan--5,566; Ohio State--5,405.

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# U.W. NEWS

From The University of Wisconsin News and Publications Service, Bascom Half, Madison 53706 Telephone (Area Code 608) 262-3571 Release:

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MADISON, Wis.--Two members of the University of Wisconsin faculty in Madison, Profs. Donald E. Osterbrock, astronomy, and H. Gobind Khorana, biochemistry, were elected to the National Academy of Sciences Monday.

As a result of the election, Wisconsin now counts 27 faculty members on the rolls of the distinguished body. Approximately 700 U.S. scientists and 70 foreign **as**sociates are members.

One of the nation's foremost astronomers, Dr. Osterbrock holds four degrees from the University of Chicago. In 1948 he received both the Ph.B. and B.S. degrees, in 1949 the M.S., and in 1952 the Ph.D. in astronomy and astrophysics.

He joined the Wisconsin staff in 1958 to participate in an expanded program in astronomy just starting on the Madison campus. Only a few days before his arrival Wisconsin dedicated a new \$200,000 research observatory--the Pine Bluff country station.

His special areas of investigation are comets, extra-galactic nebula, and gaseous nebula. A native of Cincinnati, he taught at the California Institute of Technology before coming to Madison.

Dr. Osterbrock held a Guggenheim Fellowship in 1960-61, working at the Institute for Advance Studies, Princeton, N.J., in the field of magneto-hydrodynamics as applied to astrophysics.

Dr. Khorana is recognized internationally as an authority in the field of nucleic acids, on the genetic code, on the mechanics of genetic factors, and on the control of these factors by artificial means.

#### Add one--national academy

In 1958 he received the Merck Award from the Chemical Institute of Canada for outstanding contributions in organic chemistry and biochemistry.

Chairman of the University's Institute for Enzyme Research, Section III, Dr. Khorana was born in India and was awarded the B.S. and M.S. by Punjab University. In 1946 he received his Ph.D. at the University of Liverpool, England.

Before coming to Madison in 1960, he served the Federal Institute of Technology, Zurich, Switzerland; the University of Cambridge, England, as a Nuffield Fellow; and the British Columbia Research Council as head of its organic chemistry group.

In 1964 he was appointed a Conrad A. Elvehjem Professor in the Life Sciences.

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### uw news

From The University of Wisconsin–Madison / University News and Publications Service, Bascom Hall, Madison 53706 / Telephone: (608) 262-3571
Immediately
5/1/73 rf/jb/jb/mcg

Release:

#### NEWS BRIEFS FROM THE MADISON CAMPUS

MADISON--Two faculty members and 95 students of the University of Wisconsin-Madison will be initiated into Phi Beta Kappa, national honor society.

The 75th annual initiation and dinner of the Alpha chapter of the society will be held Wednesday at 5:30 p.m. in the State Historical Society auditorium, the dinner in Great Hall of the Wisconsin Union will follow.

The main speaker will be Dr. R. Byron Bird, Vilas professor of chemical engineering here, who is also noted for his language studies.

Prof. Bird has chosen as the title of his address: "Japanese in 30 Minutes."

The two faculty members who will be elected to honorary membership in the society are Prof. Bird and Prof. James Watrous, art history.

Prof. Eugene Cameron, geology, will preside at the initiation ceremony.

of MADISON--Dr. Harry F. Wolcott, professor/education and anthropology at the University of Oregon, will speak on the Madison campus of the University of Wisconsin May 15.

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He will speak at 1:30 p.m. in Room 220 Teachers Education Building, 225 N. Mills st., on the topic "Ethnography as a Research Approach in Education."

Prof. Wolcott is president of the Council on Anthropology and Education and research associate in the Center for Advanced Study of Educational Administration.

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#### Add one -- news briefs

MADISON--Prof. William H. Hay of the University of Wisconsin-Madison philosophy faculty has been elected vice president of the western division, American Philosophical Association.

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A former secretary-treasurer of the division, he will move up to its top office next April.

Prof. Hay, who joined the Wisconsin faculty in 1947, also has served as chairman of the Western Conference on the Teaching of Philosophy.

MADISON--Dr. William L. Kraushaar, noted physicist of the University of Wisconsin-Madison, has been elected to the National Academy of Sciences.

- 0 -

His election brings to 34 the number of UW faculty who are members of the academy.

Currently holding a Guggenheim Fellowship for experimental studies in high energy astrophysics, Kraushaar began his career as physicist at the National Bureau of Standards in Washington, D.C. He taught at Massachusetts Institute of Technology and served as consultant to NASA before joining the Wisconsin faculty as professor of physics in 1965.

He is especially noted for his work in cosmic rays and space physics, including experiments on Explorer XI, the Orbiting Solar Observatory, and the Orbiting Astronomical Observatory.

A Ph.D. of Cornell University, Dr. Kraushaar is a Fellow of the American Physical Society and the American Academy of Arts and Sciences, and a member of the International Astronomical Union, the American Astronomical Society, Phi Beta Kappa, Sigma Xi, and Phi Kappa Phi. He was a Fulbright Professor in Japan in 1954-55 and held an earlier Guggenheim Fellowship in 1962-63.

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### NATIONAL ACADEMY OF SCIENCES NATIONAL RESEARCH COUNCIL

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FOR RELEASE: Sunday, December 8

WASHINGTON —A survey of doctorate-degree production in the nation's universities, issued today by the National Academy of Sciences—National Research Council, reports that:

-The U.S. will double its 1962 annual output of 12,000 Ph.D. graduates by 1969 if present trends continue. (page 3)

- Two geographic regions - the East North Central and the Middle Atlantic - produce nearly half the annual total of doctorates, but employ only one third. (pages 3,5)

-Graduate education is systematically spreading wider, with less concentration in the leading schools. (page 4)

-The proportion of doctorates in the physical sciences-about 30 per cent of the total-has <u>not</u> increased over a 40-year period. (page 6)

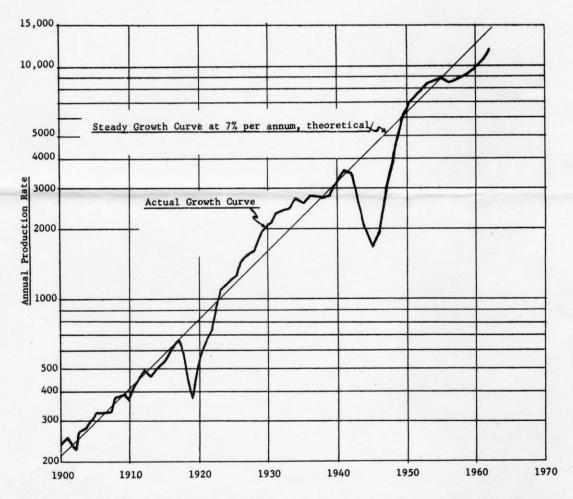
-Women account for only 5 per cent of the doctorates awarded in the natural sciences now, compared to 11 per cent in 1920. (page 7)

The 215-page report\*, <u>Doctorate Production in U. S. Universities 1920-1962</u>, presents data on the more than 183,000 persons who earned third-level research degrees during this period. (The total includes Ph.D., Sc.D., Eng.D., and Ed.D. degrees, but not professional degrees such as the M.D., D.D.S., and D.V.M.)

<sup>\*</sup>Publication 1142. Available from the Printing and Publishing Office, NAS-NRC, 2101 Constitution Ave., N. W., Washington, D. C. 20418. \$3.00

It was prepared by Dr. Lindsey R. Harmon, Director of Research, and Herbert Soldz of the Academy-Research Council's Office of Scientific Personnel, and is based on the doctorate records maintained by the Office, with support from the U.S. Office of Education and the National Science Foundation. The Foundation also sponsored the present compilation.

The report depicts this growth in doctorate output since 1900:



The overall pattern of growth is best described statistically, as shown by the straight line in the figure, as an average annual increase of 7 per cent-or a doubling of the output every 10 years.

Harmon and Soldz point out that the departures from this average closely parallel "the conditions of the times," with abrupt drops during each world war and a leveling off during the period of the depression.

- MORE -

- 2 -

The lag behind the 7 per cent curve beginning in 1955 is a secondary effect of World War II, they explain, due to a delay in first entry into college for many who were in service. The slowdown is reflected in the table below, showing the number of graduates in the major areas of study at five-year intervals since 1952:

Totals	7710	8600	11888
Education	1 3 0 5	1375	1949
Arts - Professions	973	1232	1673
Social Sciences	1570	1824	2325
<b>Biological Sciences</b>	1357	1634	205 1
Physical Sciences	2505	2535	3890
	1952	<u>1957</u>	1962

Against this background, a strong recovery is now in progress (as indicated in the figure on pg. 2). The yearly number of Ph.D. graduates reached 10,000 for the first time in 1960, and increased by 10 per cent from 1961 to 1962.

If the 10-per-cent rate of growth continues, with its associated doubling time of about 7 years, the annual Ph.D. output would approach 24,000 in 1969, based on the 1962 figure of nearly 12,000.

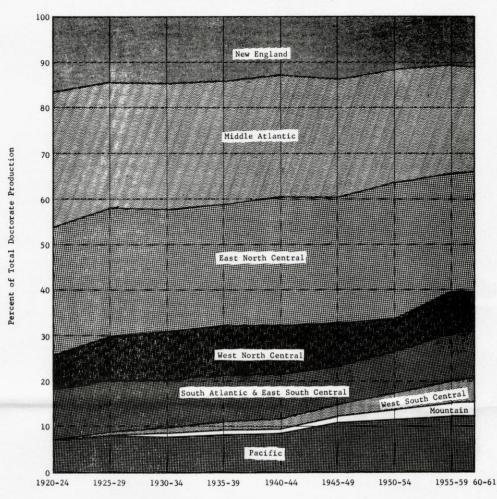
Under these conditions, actual production of doctorates would also catch up with the overall 7-per-cent growth curve in 1969, Harmon and Soldz point out, cautioning that this depends "on social conditions, including principally the support of graduate education, over the intervening years."

#### GEOGRAPHIC PICTURE

Breaking down the doctorate output by geographic regions, Harmon and Soldz report that 26 per cent of the total is centered in the East North Central region, comprising the states of Ohio, Indiana, Michigan, Illinois, and Wisconsin, and 23 per cent in the Middle Atlantic states of New York, New Jersey, and Pennsylvania. The two regions also are the leading undergraduate sources of doctorates, each with about 22 per cent of the total.

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- MORE -



The regional patterns over a 40-year period indicate a decline in the relative contribution of the northeast (New England and Middle Atlantic states) from nearly 46 per cent in 1920 to 34 per cent now; a gain for the South and West from 11 and 7 per cent of the total respectively in 1920 to 16 per cent for each now; and no change in the North Central region (east and west combined), which remains at about 35 per cent of the total.

The broadening base of graduate education is apparent in the fact that Ph.D. production has spread from a group of 26 states in 1920 to 48 states—all but Idaho and Nevada—at present.

A further indication of the trend toward less concentration is this statistic: 10 leading schools produced two thirds of the doctorates in 1920, whereas the top 10 today account for only one third of the total.

- MORE -

RELATIVE DOCTORATE PRODUCTION, BY REGION, 1920-1961

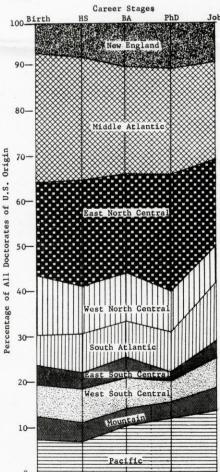
#### LEADING SCHOOLS

The analysis shows that the 20 top-ranking institutions in doctorate production in 1960-61the last years for which complete breakdowns are reported—were Columbia, Illinois, Wisconsin, Harvard, University of California at Berkeley, New York University, Michigan, Ohio State, Cornell, Minnesota, Purdue, Yale, Indiana, Chicago, Stanford, Massachusetts Institute of Technology, Michigan State, Pennsylvania, Pennsylvania State, and University of California at Los Angeles.

The 15 leading undergraduate "sources" of those who go on to receive doctorates, each accounting for more than 1 per cent of the 1960-61 doctorate total, were City College of New York, University of California at Berkeley, Illinois, Harvard, Michigan, Wisconsin, New York University, Minnesota, Brooklyn College, University of California at Los Angeles, Cornell, Columbia, Chicago, Massachusetts Institute of Technology, and Yale.

#### MIGRATION BY CAREER STAGE

The geographic migration of the 1957-61 doctorate population, from birth to first employment, is illustrated in the accompanying chart. Harmon and Soldz point out that the regional variations at various educational levels and in professional employment are superimposed on two general mass movements affecting the whole population, namely, the rural-to-urban shift that tends to drain agricultural areas, and the marked growth in the Pacific Coast population. Both have existed for several decades.



- MORE -

GEOGRAPHIC MIGRATION WITHIN THE USA AT EACH CAREER STAGE, 1957-61 DOCTORATES, ALL FIELDS In the Northeast, there is an increasing immigration to the New England States at each career stage through the doctorate. This is matched, however, by a gradual emigration from the Middle Atlantic region. In both areas, there is a net loss of people after receipt of the doctorate.

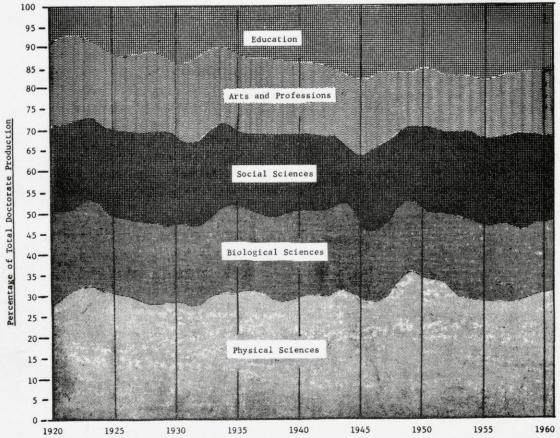
The North Central area (taking east and west together) shows much the same equilibrium of people coming in and going out through the Ph.D. level. But again, as in the Northeast, there is a sharp loss after receipt of the doctorate.

The South (South Atlantic, East South Central, and West South Central regions combined) has a net loss of people at the doctorate level, but more than regains this in postdoctoral employment.

In the West, there is a heavy immigration beginning at the college-degree level, and increasing further at the Ph.D. and first-employment stages.

#### RELATIONS AMONG FIELDS

The rapid growth of graduate education has not brought any radical change in the relative Ph.D. productivity of major fields of study, the analysis shows. In spite of substantial year-toyear variation, the only persistent trend over the 40-year period is the increase in the field of education and a compensating decline in the arts and professions, as illustrated below.



Within the physical sciences (which include engineering and mathematics), the area of special interest in recent scientific manpower studies, engineering replaced chemistry in 1962 as the output leader on the strength of a three-fold increase since 1950 while chemistry was maintain-ing a nearly constant level.

#### OTHER GENERAL TRENDS

The doctorate records show that the average time lapse between baccalaureate and doctorate degrees has increased slightly in the last decade. This is true in spite of the massive growth of Federal fellowship programs which are designed to decrease the time lapse, and which have been found to result in a significant acceleration for those obtaining awards.

The time between the two degrees varies by field: the shortest at present, in the physical sciences, is 7.8 years, with the average ranging upward for the bio-sciences, social sciences, and arts and professions, to a peak of 15.2 years in the field of education.

The median age of doctorate recipients follows the same order, varying from 28.7 years in the physical sciences to 37.6 years in education, based on data for 1961.

The percentage of women doctorate recipients underwent a general decline from 1920 until 1950, to about 3 per cent in the physical sciences, 9 per cent in the biological and social sciences, 15 per cent in the arts and professions, and 17 per cent in education. For the natural sciences, the overall drop was from 11 to 5 per cent; for all fields taken together, there was a decline from 15 to 11 per cent in this period.

Since 1950, the percentage of women receiving doctorates in the social sciences, arts and professions, and education has gradually increased, while the low levels reached in 1950 are continuing in the physical and biological sciences.

In all areas of graduate study, the influx of foreign students is apparent; the percentage of foreign-born doctorates increased slowly until 1950, but jumped from a total of 2,000 in 1940-49 to 8,000 for the period 1950-59. The latter figure compares with an overall output of 83,000 during the decade of the 1950's.

The proportions of foreign-born doctorates are highest at present in the biological sciences, 17.4 per cent, and the physical sciences, 14.7 per cent.

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## **U.W. NEWS**

General mark &

From The University of Wisconsin News and Publications Service, Bascom Hall, Madison 53706 Telephone (Area Code 608) 262-3571 1/21/66 mes PM Wednesday, February 2

By MARLETTE SWENSON

WASHINGTON--(Advance for release P.M. Wednesday, February 2)--The rapid development of high levels of resistance to pesticides has had serious consequences in man's fight to control disease-producing insects and other pests, a University of Wisconsin geneticist said Wednesday.

Furthermore, the widespread use of general and very potent pesticides before testing them for mutagenicity might have the same genetic mutation effects on man as radioactive fallout has, Dr. James W. Crow said at a public symposium on scientific aspects of pest control.

Crow, professor of genetics and zoology at the University of Wisconsin, spoke on "Evolution of resistance in hosts and pests" at the special symposium organized by the National Academy of Sciences in cooperation with the State Departments of Agriculture, Interior, and Health, Education and Welfare. He was one of several outstanding authorities in the fields of agriculture, biology, chemistry, conservation and public health who reviewed recent advances in pest control and in the understanding of its consequences for man and nature.

"The development of resistance to drugs, of which streptomycin-resistant bacteria and DDT-resistant insects are commonly known, is basically an example of Darwinian selection," Prof. Crow said.

This evolutionary process is remarkable for its rapidity, and in some cases--particularly crop plants and their diseases--such evolution has proceeded simultaneously in both the host plant and its parasitic invaders. Add one--Crow and pesticides

Crow listed "at least" three serious consequences of this rapid development of resistance:

-- The control (the pesticide) ceases to be effective.

--Larger and larger concentrations are needed to control the pest, with "correspondingly greater upset of the ecological environment and greater risk to man."

--The short useful life of the pesticide means an increasing need for new compounds, so there is less chance for thorough testing and more chance that the compounds will be toxic to man or upsetting to the ecological community.

Natural selection, which leads to the development of resistance in pests, is such a basic law of nature that man cannot repeal it. "But there are some general principles that can be applied to reduce the rate at which resistance develops," Prof. Crow explained.

Suggestions he made were to apply the chemical pesticide selectively and use it only when really needed; to use other means of control, such as better sanitation, as often as possible; and to minimize the chance for differential mortality of pests in the treated areas.

"The hazards to man and to the balance of nature could be made less if a large variety of more selective pesticides could be found," he said. "The broader the spectrum of the drug, the greater is its risk to other species, including man."

It is widely known that phosphorus compounds found in certain pesticides interfere with nerve functioning. Even antibiotics found in some drugs affect the functioning and replication of the life-governing molecules DNA and RNA.

"The fact that many pesticides and antibiotics interfere with basic cellular processes increases the possibility that they may have long range effects on man's health or may induce genetic mutations which, in turn, affect future generations," Prof. Crow warned. As a precautionary measure he called for testing of any chemicals expected to have widespread use as pesticides for their possible genetic effects on man. 444

## U.W. NEWS

From The University of Wisconsin News and Publications Service, Observatory Hill Office, Madison 53706

Telephone (Area Code 608) 262-3571 4/28/65 mes

Release:

Immediately

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WASHINGTON, D.C.--How does an illegitimate child, raised in an orphanage or foster home, adjust to society?

Such children, who come from breakdowns in family structures which result in more or less complete social isolation, are a problem of vast importance for society today.

What effect does social isolation have on the individual? A world-famed psychologist told members of the National Academy of Sciences Wednesday (April 28) that isolation "injures personal adjustment to society and development of normal sexual behavior patterns."

Dr. Harry F. Harlow, professor of psychology at the University of Wisconsin, Madison, spoke on "The Effects of Total Social Isolation in Monkeys" at the 102nd annual meeting of the academy.

Because it is difficult--if not impossible--to study the impact of social deprivation in humans, researchers have turned to one of man's closest relatives, the monkey. "Monkeys and man are so closely related that the basic biological laws operating for one must operate for the other," Prof. Harlow pointed out.

Prof. Harlow is director of the Wisconsin Regional Primate Center, located on the University of Wisconsin campus in Madison. The center, one of seven primate research facilities set up by the National Institutes of Health across the United States, is recognized as one of the top psychological research centers in the world.

#### Add one--Harlow

For the past 10 years Prof. Harlow and his associates at the center have studied the effects of partial social isolation by raising monkeys from birth in wire cages. These monkeys had no mothering and, even more important, had little or no opportunity to play with and form affectional ties with other infants.

More recently the Wisconsin researchers have studied the effects of total social isolation for periods of three, six, and 12 months after birth. In these experiments the infant monkeys were sentenced to solitary confinement in chambers in which they had no contact with any animal, human or subhuman.

"When first removed from total isolation most monkeys went into a state of emotional shock, characterized by 'day-dreaming' and self-clutching and rocking motions," Prof. Harlow said.

"One of the six monkeys isolated for three months died from the shock, and another would have died had we not resorted to forced feeding." Such extreme shock was not observed in the other monkeys, though.

After recovery from initial shock, the three-month isolates made effective social contacts with each other.

"Results indicate the harmful effects of three months of social isolation are dramatic but reversible, long-term social damage is slight, and there is no intellectual scarring.

"Given the opportunity to later associate with normal monkeys, these shortterm isolates become beautiful, bubbling, bright, and brilliant," the psychologist said.

"In human terms, they are the children salvaged from the orphanage within the first year of life."

Social isolation during the first six months of life, however, imparts deep and lasting damage to the infants. These monkeys failed to adjust in later social situations and play groups.

#### Add two--Harlow

"The effects of six-month total isolation were so devastating that we first assumed that 12 months of isolation would not produce any further damage," Prof. Harlow said. "This assumption proved false, however, for 12 months of isolation apparently resulted in social obliteration."

Whereas the six-month isolates failed to adjust to the level of normal monkeys and were enormously impaired in play with each other, the l2-month isolates failed completely with controls and each other.

Impairment of both six- and 12-month groups in social situations appeared to be permanent, although the "intellectual mind" was not as crippled as the "social mind" by prolonged total social deprivation, he pointed out.

"A striking fact is that all of the socially isolated monkeys learned effectively after being removed from the isolation cages," he said.

Thus one should be cautious in attributing mental deficiencies to social deprivation if adequate schooling--in monkeys or men--has been subsequently provided.

An 18-month follow-up study by the scientists on the social behavior of some of the isolate monkeys showed the effects of prolonged social deprivation continue for long periods of time. Many of the isolates were hostile towards adults and infants--a phenomenon never seen in normal laboratory-raised animals nor reported in the wild.

Months later, these animals continued to show uncoordinated sexual behavior, reduced playful social interaction, a high level of fear, and maladaptive aggression against both large adults and helpless infants.

Prof. Harlow's research on the so-called developmental "critical periods" in monkeys are similar to the "critical periods" that arise during human infant development.

"The overall data from our research indicate there is an early period in infant development when social isolation produces temporary defects which can be overcome by later social interaction," the Wisconsin scientist concluded.

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## U.W. NEWS

From The University of Wisconsin News and Publications Service, Observatory Hill Office, Madison 53706 Telephone (Area Code 608) 262-3571 4/28/65 mcg

assure.

MADISON, Wis.--Dr. Robert A. Alberty, dean of the University of Wisconsin Graduate School, and Dr. R. H. Bing, University professor of mathematics, have been elected to membership in the National Academy of Sciences.

As the result of the election, Wisconsin now counts 26 faculty members on the rolls of the distinguished body. Approximately 700 U.S. scientists and 70 foreign associates are members.

Dean Alberty is an internationally-known authority on the use of physical chemistry techniques for study of life processes. He was a Phi Beta Kappa scholar at the University of Nebraska, where he earned his bachelor's and master's degrees in chemistry in 1943 and 1944. He was a research assistant at Wisconsin working with plasma proteins while earning his 1947 Ph.D. : In 1948 he was named assistant professor, in 1950, associate professor, and in 1956 he was named full professor.

Dr. Alberty was named associate dean of the College of Letters and Science in 1963 and dean of the Graduate School in 1964. His research has included fractionation of plasma proteins, theory and applications of electrophoresis, enzyme catalysis, and the kinetics of very fast reactions.

Dr. Bing was named Wisconsin Research Professor in Mathematics in August of 1964 to honor his wide accomplishments in the field of mathematics. A specialist in mathematical logic and foundations of mathematics, he has served as editor of the Journal of Symbolic Logic and published widely in professional journals. He has been a member of the Wisconsin faculty since 1947, with/leaves to study in the Netherlands in 1950 as a Guggenheim Fellow and in 1957-58 to do special research in point-set topology at the Institute of Advanced Study, Princeton, N.J. Prof. Bing is president of the Mathematical Association of America and former chairman of the University mathematics department.



FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON, WISCONSIN 53706

asan

7/24/64 jb

RELEASE:

Immediately

MADISON, Wis.--Dr. Harold C. Urey, 1934 Nobel Prize winner in chemistry, now at the University of California, will present a lecture on the moon when the fall meeting of the National Academy of Sciences meets on the University of Wisconsin's Madison campus Oct. 12-14.

Dr. Urey is currently investigating the geochemistry of the moon.

The featured speaker at the Academy's banquet session will be Dr. Leland J. Haworth, director of the National Science Foundation. Symposia on high energy physics and hearing will be led by UW Profs. Donald W. Kerst, physics, and Clinton N. Woolsey, neurophysiology.

Most of the meeting sessions will be open to the public. Complete program details will be announced later.

Chairman of the local committee is Dr. Farrington Daniels, emeritus professor of chemistry and head of the solar energy laboratory at Wisconsin. Dr. Perry W. Wilson, bacteriology, is in charge of the program, and Dr. Malcolm R. Irwin, chairman of the genetics department, will handle arrangements for the 150 members and wives expected to attend.

Twenty-four of the UW faculty are Academy members.

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## **U.W. NEWS**

FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON, WISCONSIN 53706

assis

6/19/64 db

RELEASE:

Immediately

MADISON, Wis.--The University of Wisconsin at Madison will host the 1964 fall meeting of the National Academy of Sciences, October 12-14. The UW faculty includes 24 Academy members.

Included in the program will be a popular lecture on the moon by Dr. Harold C. Urey, 1934 Nobel Prize winner in chemistry now at the University of California. Dr. Urey is currently investigating the geochemistry of the moon.

Dr. Leland J. Haworth, director of the National Science Foundation, will be the featured speaker at the banquet session of the Academy meeting.

Also scheduled are a symposia on high energy physics chaired by Dr. Donald W. Kerst, UW professor of physics, and another on hearing chaired by Dr. Clinton N. Woolsey, UW professor of neurophysiology.

Most of the Academy sessions will be open to the public. Further program details will be announced later.

Dr. Farrington Daniels, professor emeritus of chemistry and of the solar energy laboratory at the UW, is chairman of the local arrangments committee. Dr. Perry W. Wilson, professor of bacteriology, is in charge of the program and Dr. Malcolm R. Irwin, chairman of the department of genetics, will handle arrangements for the approximately 150 members and wives expected to attend.

## NIRE NEWS FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON 6, WISCONSIN 3/20/63 jb

**RELEASE:** Immediately

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MADISON, Wis .-- The University of Wisconsin ranks first among Big 10 schools in the number of faculty who hold coveted membership in the National Academy of Sciences, a recent study reveals.

With 23 academy members, Wisconsin leads the Big 10 and ranks ninth among all degree-granting institutions in the country. Illinois is second in the Big 10 with 16.

Nationally, the University of California ranks first, with 76. Harvard follows with 72; Rockefeller Institute third, 33; Massachusetts Institute of Technology fourth, 30; and the California Institute of Technology, fifth, with 28.

The study was undertaken for the University of California by Raymond Birge, emeritus professor of physics.

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FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON, WISCONSIN 53706 Release:

Acience/ Com less

MONTREAL, CANADA--Wisconsin is among the average states in increasing support of higher education, Prof. M.M. Chambers, visiting professor of education at Indiana University reported here this week.

Wisconsin, he said, ranks with Indiana, Nevada, Kansas, Delaware, Georgia, and Mississippi at the average of around 75 per cent growth in state appropriations for higher education operating expenses in the past five years, 1959 to 1964.

Prof. Chambers spoke Sunday at the convention of the American Association for Advancement of Science.

"In the United States," Dr. Chambers said, "support of public higher education from tax funds is not at all a question of resources, but wholly a matter of policy, and in the main it is being wisely decided."

Annual operating expenditures now are close to \$7 billion in the approximately 2,100 institutions of higher education in the United States, Chambers said. Of the total, he said, about  $$2\frac{1}{2}$  billion comes from state appropriations. Of the remainder, federal contributions amount to about \$2 billion, private donors provide \$1 billion, and \$1\frac{1}{2} billion come from student fees.

Comparisons of increases in appropriations among the states are of limited value, Chambers said, unless they include pertinent factors such as per capita personal income, per capita taxation for all state and local purposes, per capita state tax cost of public higher education, extent of reliance on private institutions, and recent population growth.

(more)

Ten of the states have more than doubled their appropriations in five years, Chambers said. Four of these--Arizona, Hawaii, Colorado, and Alaska-are areas with great increases in population during this period, he pointed out.

Of five others--Maine, Massachusetts, Rhode Island, New York, and New Jersey--Chambers said, "awed by the nationwide and international prestige of their great private institutions, most of these states have until recently paid too little heed to the provision of public higher educational facilities for their own citizens, and have become known as 'exporters' of students who travel far to the west and south to gain admission to colleges and universities in other states.

"It must be noted then, that these states started from a low point in 1959; but their doubling of appropriations within five years marks a real revolution in public attitudes."

The 10th state of this group, Kentucky, has nearly tripled appropriations in five years, Chambers pointed out, due partly to the enactment of a three per cent general sales tax in 1960, and establishment of a Class A medical college at the University of Kentucky.

Whereas these 10 states have about one-fifth of the nation's population, another group of 10 states with the slowest growth in appropriations (40 per cent or less in five years) has only about one-twelfth the population, Chambers said. In the latter group are Alabama, Idaho, Iowa, Montana, Nebraska, New Hampshire, North Dakota, Oklahoma, Oregon, and Wyoming.

"No doubt the most pervasive cause of slow gains in all these 10 states is their comparatively sluggish rates of population growth, amounting in some instances to almost a 'stationary' population," Chambers said.

(more)

add two--Chambers

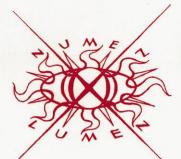
He noted that New Hampshire is the only New England state in the slow group, "in strange contrast to three of her neighbors found in the fastestgaining group."

New Hampshire, he said, "simply has not yet stirred out of the traditional lethargy regarding public higher education."

lowa, Oregon, and North Dakota, Chambers pointed out, "all have superb, long-standing traditions of generous tax support of public universities and colleges--in 1959 they were already at a high point."

States listed by Chambers as near the national average of 75 per cent in increases are Indiana, 76; Nevada, 77; Kansas, 78; Delaware, 74; Georgia, 74; Wisconsin, 73; and Mississippi, 72.

###



### NEWS FROM THE UNIVERSITY OF WISCONSIN

Serving the state through campuses at Madison and Milwaukee, nine University Centers, and a statewide extension system.

10/13/64

Immediate Release

assus

MADISON, Wis.--The discovery of a new constituent of the "nuclear glue" that binds together the most fundamental units of matter was announced here Monday.

Dr. Bogdan C. Maglic reported to the autumn meeting of the National Academy of Sciences, in session on the University of Wisconsin campus, evidence for the existence of the new nuclear fragment which has been designated "epsilon."

The epsilon particle, with a mass approximately four-fifths that of the nuclear building blocks, protons and neutrons, is the sixteenth member of the intermediate family of nuclear particles called mesons to be identified.

It thus takes its place as the newest of the more than 30 known nuclear fragments produced by high-energy bombardment of matter in giant particle accelerators or atom-smashing machines. These particles are classed as leptons, mesons, or baryons, on a scale of increasing mass. Mesons are believed to be the nuclear binding force.

Epsilon was discovered in a two-month series of experiments concluded just last Friday by a 21-member international team of physicists and engineers working at the European Center for Nuclear Research (CERN) in Geneva, Switzerland.

add one--Dr. Maglic

Dr. Maglic, a senior physicist on the staff of the laboratory operated jointly by 14 European countries, heads the team which includes one American, Dr. Richard Blieden, a National Science Foundation fellow. Three members of the group in addition to Drs. Maglic and Blieden received their training in the U.S.

Dr. Maglic's report to the opening session of the Academy's three-day meeting, was based on experiments conducted with the 30 billion electron volt (Bev) proton synchrotron at CERN. This machine is second in size only to the 33 Bev instrument at the Brookhaven National Laboratory, Long Island.

In the CERN investigations that led to the new particle discovery, a highenergy beam of protons was focused on an aluminum target in a particle detector known as an acoustic spark chamber.

This device was developed jointly in 1962 by Dr. Maglic and Dr. Fred Kirsten while the two were colleagues at the Lawrence Radiation Laboratory of the University of California, Berkeley. It makes it possible to "listen" to the products of the collision between the 30 Bev beam of protons and the target material.

The resulting nuclear fragments generate electric sparks in the chamber. The sounds that accompany their passage through the chamber are recorded by finely tuned microphones, then fed directly into an electronic computer for analysis. The scheme eliminates one of the time-consuming elements of this branch of physics research, the individual analysis of hundreds of thousands of photographic records of the nuclear events under study.

From this procedure, termed "missing-mass" spectrum analysis because it is directed at finding the missing elements in nuclear reactions, came the evidence for the existence of epsilon.

The new discovery while adding significantly to the understanding of the interior structure of the atomic nucleus, by no means solves the riddle of the complex forces at work in the heart of matter.

add two--Dr. Maglic

In effect, the discovery establishes the existence of two distinct particles in the growing nuclear population where only one--called rho--had been known before.

Rho was first identified in 1961 by Dr. William D. Walker of the University of Wisconsin physics department. Its existence, while well established by this and subsequent experiments, nevertheless left a mystery as to rho's exact function among the intermediate-size particles believed to constitute the cohesive force in the nucleus. The observed properties of rho did not fit well into any unifying theory of nuclear forces.

Epsilon's discovery clarifies this picture to a degree. Although the result is so new physicists have yet to work out in any detail the implications of the particle's existence, it does mean that the puzzling characteristics of rho can now be explained, in part, by the fact that what was considered to be only one particle--rho--is now found to be two separate entities--rho and the newly identified epsilon.

Their respective masses differ so little, Dr. Maglic said in announcing the discovery, that only the new filmless technique making use of the highest degree of automatic data analysis could separate them.

The discovery of epsilon does not yet provide, it was noted, the same dramatic clarification of the role of mesons in nuclear structure as for example,  $t_h$ e discovery at Brookhaven earlier this year of the omega minus particle gave to the theoretical understanding of the next heavier class of particles, the baryons.

For mesons, which are considered to be the glue of nuclear matter, the underlying common law has not yet been found, Dr. Maglic pointed out.

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### NEWS FROM THE UNIVERSITY OF WISCONSIN

Serving the state through campuses at Madison and Milwaukee, nine University Centers, and a statewide extension system.

10/12/64

Release: 1:45 p.m., Tuesday, Oct. 13

assus

By MARLETTE SWENSON

MADISON, Wis.--Sonar signals from the stomachs of Lake Mendota's white bass are aiding University of Wisconsin limnologists--aquatic biologists--in discovering the migratory patterns of fish.

How fish so unerringly find their way to their home spawning grounds is a mystery that has puzzled scientists for years, Arthur D. Hasler and H. Francis Henderson explained at the National Academy of Sciences meeting October 13.

"Previous efforts to track fish using tagging and recapturing methods have not been very helpful," Hasler said, "because they do not indicate the route a fish takes home, the time it takes to get there, and --most important--how it knows how to get there."

The scientists began experimenting with tiny transmitters a year ago. Henderson and Gerald G. Chipman of the UW Limnology Lab developed a miniature signaling device which could be inserted into the stomachs of the fish.

These tags--smaller than the tip of a pencil--emit ultrasonic signals of 50 kc. which are picked up by an underwater receiver and transducer in a tracking boat.

At the same time a fish's course is charted, orientating enrironmental cues are observed and correlated to the path the fish takes.

The white bass, which spawns in Lake Mendota in late May and early June, was selected as a model for the research because it spawns in the same two areas near the shore, Hasler explained.

Add one--Hasler and Henderson

"With appropriate apparatus we have trained fish to use the sun as a compass for orientation," he said. "However, we do not know yet if it uses this ability in nature.

"These factors can be explored better now that we have a suitable mechanism for tracking the fish."

Because of the high energy requirements for sound communication in water, the principal limiting factors of the ultrasonic tags are power supply and size of the transducer.

"With the present units, the tracking boat can stay within a half-mile of the marked fish and still receive the signal for as long as 15 hours before the power supply of the tag is exhausted," Hasler explained.

"We are now in the process of developing a tracking tag to study the environmental cues used by salmon in finding their home spawning streams from the mid-Pacific and Atlantic oceans."

Eventually this ultrasonic tag may be used to study the migratory patterns of other aquatic animals--especially porpoises and turtles.

A National Science Foundation grant is supporting this research.

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Serving the state through campuses at Madison and Milwaukee, nine University Centers, and a statewide extension system.

10/12/64 jb

#### Immediately

asens

MADISON, Wis.--A public address by Harold C. Urey, University of California Nobel Prize winner, will highlight first-day sessions of the National Academy of Sciences in Madison.

Dr. Urey will speak on "The Moon and the Planets" at the University of Wisconsin Union Theater at 8 p.m. Monday (Oct. 12).

More than 150 of the nation's leading scientists are attending the annual fall meeting of the academy. Two symposia have been scheduled, and more than 40 scientific papers will be presented during the three-day season. The visitors also will tour UW laboratories and scientific installations.

Dr. Urey, a native of Indiana, won the Nobel Prize in chemistry in 1934. He also holds the Davy Medal from the Royal Society of London, the Priestley Award, the Phi Beta Kappa distinguished service award, and the American Chemical Society Willard Gibbs Medal.

He has specialized for years in the structure of atoms and molecules, thermo-dynamic properties of gases, and separation of isotopes, is the discoverer of hydrogen atom of atomic weight two, and did research for the production of heavy water and U235 for the atomic bomb.

Dr. Urey joined the California faculty in 1958, following teaching and research at Yale, University of Nebraska, Columbia University, and the University of Chicago.

The academy is the nation's foremost scientific body, composed of top scientists, all elected to membership. Present membership now includes 700 scientists and some 70 foreign associates. The UW has 23 members, ranking nine in total membership among all degree-granting institutions in the U.S.A.

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Serving the state through campuses at Madison and Milwaukee, nine University Centers, and a statewide extension system.

10/12/64

Release 2:45 PM, Monday, Oct. 12

ison

By MARLETTE SWENSON

Madison, Wis.--Chromosomes of higher organisms contain large numbers of independently replicating units of DNA along their length, two University of Wisconsin scientists reported Monday (Oct. 12).

They differ in this respect from the corresponding structures in bacteria and viruses, in which all of the genetic information appears to be organized into a single DNA molecule.

"Each chromosomal DNA unit replicates at a characteristic time relative to other units and extends for only a short distance along the chromosome," Walter Plaut, associate professor of zoology, and David Nash, post-doctoral research fellow, explained to the National Academy of Sciences meeting on the UW campus.

The two scientists came to this conclusion while working with the salivary gland chromosomes of Drosophila melanogaster.

DNA, or desoxyribonucleic acid, is made up of a long chain of nucleotides, each consisting of phosphoric acid, the pentose (five-carbon) sugar desoxyribose, and one of four nitrogen-containing bases (adenine, thymine, guanine and cytosine). Each DNA molecule contains several thousand such nucleotides.

In the work of Drs. Plaut and Nash, the synthesis and configuration of this molecule are studied through the use of radioactive tracers and ordinary light, as well as fluorescence microscopy.

add one--Plaut

"Salivary gland chromosomes are more favorable for studythan normal chromosomes," Prof. Plaut said, "since each represents a complex of 500 to 1000 identical normal chromosomes. This permits the visualization of metabolic and structural detail which could not be detected in the single units present in nuclei of other cells."

The UW researchers found that at any one time DNA synthesis can occur at a large number of discrete points along the chromosome and that different points show evidence of this replication at different times.

"All of the chromosomal units which are laterally associated to form the complex chromosomes are synchronized, point by point, and the presence or absence of DNA replication at any one point at a particular time is correlated with what is happening at other points," Prof. Plaut said.

"Thus, the replication of the chromosomal DNA molecules appears to be subject to localized control."

It is not yet known whether each controlled point of DNA replication along the chromosome corresponds to a single or a few DNA molecules, or whether it corresponds to one or a few related united of genetic information.

Answers to these unsolved problems, together with the physical nature of the control mechanism, will be sought in the future work of the two scientists.

Their work is supported by the Wisconsin Alumni Research Foundation and the National Institutes of Health.

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Serving the state through campuses at Madison and Milwaukee, nine University Centers, and a statewide extension system.

10/12/64 db

Release: 10 a.m. October 13

By DENNIS BLAKESLEE

MADISON, Wis.--A day will come, perhaps not long from now, when any scientist can buy a genetic codebook for his laboratory.

The date of publication still awaits preparation of the full text, but it is approaching with breathtaking speed.

The newest in a lengthy succession of ever sharpening tools used by scientists to solve the code, the molecular instructions for life, was announced here Tuesday by a University of Wisconsin biochemist.

By combining known biological techniques of making artificial DNA, the molecule that carries hereditary information, with new chemical methods, Dr. H. Gobind Khorana and co-workers have produced long DNA molecules that are biologically active and have a known and repeating sequence of code letters.

In the DNA molecules of living organisms, various combinations of these small chemical code letters, which number only four in kind, compose up the genes that make a man differ from a horse, a tree differ from a rose,

Dr. Khorana, a co-director of the Institute for Enzyme Research at the University, spoke at the annual fall meeting of the National Academy of Sciences.

For several years, scientists have been able to make artificial DNA by placing a short piece of natural DNA into a chemical soup containing the raw materials for making more DNA along with a special chemical starter called an enzyme.

Add one -- DNA

Using the short piece of DNA as a blueprint, or template, the enzyme exactly copies it over and over, running the copies together into a chain thousands of times the length of the blueprint.

The resulting long strand possesses all the properties of natural DNA, even to the point of being able, so long as the enzyme is present, to duplicate itself, the process by which hereditary information is passed from cell to cell, from parent to offspring.

Though the technique is highly valuable, the usefulness of the DNA produced is limited in that there is no way, as yet, of telling what the sequence of code letters was on the blueprint piece.

In the past few months, however, Dr. Khorana and his group have applied the enzyme, called DNA polymerase, to short chemically synthesized blueprints with a known sequences of code letters.

The resulting chain, the biochemist said, is still enormously longer but this time with the known sequence repeated again and again.

The chemical methods for making the known short pieces were perfected by Dr. Khorana and his colleagues last spring. The technique for making long chains by DNA with the enzyme was the work of Dr. Arthur Kornberg, now at Stanford University, for which he was awarded a Nobel Prize.

The availability of the new hand-tailored DNA holds exciting possibilities for biological and biochemical research, Dr. Khorana said.

In a special chemical system, the artificial DNA can be made to turn out bits of protein material. This, he pointed out, would supply clues as to what combinations of code letters spells out what proteins will be made by a cell.

In living organisms, each code sentence--a gene--directs the formation of a certain protein, the structural and functional chemicals of life.

Add two--DNA

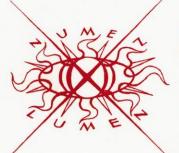
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The formation of the artifical chains also illustrates the incredible accuracy of the enzyme in copying the pieces of blueprint DNA, Dr. Khorana pointed out.

Though the blueprint chains might be but a dozen code letters long, the enzyme makes a chain many thousands of letters long, the same ones in the same order, over and over, without ever making a single mistake, he explained.

This accuracy is absolutely essential in living things, for if DNA were not faithfully copied every time it duplicates itself, which occurs whenever a cell divides, the delicate balance between life and non-life would be quickly and fatally upset.

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10/12/64 cs

Release PMs, Monday, Oct. 12

leans

#### By CYNTHIA SHIREY

MADISON, Wis.--The common fruit fly - Drosophila - may provide important information in relation to studies of viruses, tissue cultures, and the genetics of somatic (body) cells.

In a paper delivered to the fall meeting of the National Academy of Sciences Oct. 12, Dr. Allen S. Fox, professor of genetics, and Dr. Masakatsu Horikawa, postdoctoral fellow, University of Wisconsin, reported that they recently have grown the embryonic cells of Drosophila, isolated from the organism, in tissue culture. Because of the genetic advantages of Drosophila, repeated attempts to accomplish this purpose have been made in past years. Prof. Fox and Dr. Horikawa were successful in finding a solution to the problem.

Prof. Fox is hopeful that the techniques developed in his laboratory will gain wider use. The system has advantages which may make it useful in work which previously involved the growth of cells from mammals.

Dr. Horikawa, who is on leave from Kyoto University in Japan, and Prof. Fox are now trying to see if it is possible to induce differentiation in the embryonic cells. This is the process in which cells develop the difference they exhibit in the adult organism.

Prof. Fox said experiments are being conducted in an attempt to get embryonic cells to make certain proteins not ordinarily made at this stage of development. These attempts were made to learn more of the molecular mechanisms involved in add one--fruit fly

differentiation. Prof. Fox also reported that experiments have been conducted with division rates of cells, changes in cell types, changes in the normal chromosome number of eight, and studies of RNA and DNA synthesis within the cells.

Prof. Fox reported that long-term cell cultures have been maintained for 200 days by transfer to a new medium every 10 days. Growth rate declines after the first few transfers, generation time becoming 48 hours--10 hours longer than the original period.

Cells with an abnormal number of chromosomes, that is more or less than the normal eight, appear after 160 days in the culture medium. Differentiation of cell types is evidenced by the appearance of non-random groups of cells.

Prof. Fox credits Dr. Sei Byung Yoon, project associate, with the solution of an important problem in their research, developing the Ovitron, a unique device that facilitates collection of Drosophila eggs immediately after fertilization. The Ovitron is now being manufactured commercially and is in use at several other laboratories.

Prof. Fox said Sheldon Parzen, a UW graduate student, had purified one of the proteins used in the experiments; another, Franklin Johnson discovered the genetic variation with respect to another of the proteins; and Barbara Wallis and Lillian Ling had worked closely with Dr. Horikawa on the development of his tissue culture.

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Serving the state through campuses at Madison and Milwaukee, nine University Centers, and a statewide extension system.

Release: 2:15 p.m., Monday, Oct. 12

acons

By MARLETTE SWENSON

MADISON, Wis.--Chromosomes may be composed of several parallel DNA strands forming a bundle and tied together with protein molecules, a University of Wisconsin cytologist reported Monday.

Dr. Hans Ris, professor of zoology, told members of the National Academy of Sciences that "chromosomes cannot be thought of as single DNA (desoxyribonucleic acid) threads. Instead, they are made up of several thin fibrils--probably DNA molecules."

Dr. Ris came to this conclusion while studying the structure of chromosomes with the electron microscope.

"It is well known that DNA in chromosomes is always combined with histones (basic proteins), while metabolically active cells also contain non-histone proteins and RNA (ribonucleic acid)," he said.

"Biochemical studies of nuclei have indicated that DNA-dependent RNA synthesis occurs mainly in regions along the chromosome which contain non-histone protein. Regions consisting of DNA-histone, however, are relatively inactive," Dr. Ris explained.

Salamander red blood cells were used in Studying the structure and composition of DNA-histone, because the nuclei of these cells consist mainly of DNA-histone which is easily separated from the rest of the cell.

Add one--Ris

"Electron microscopic investigations show that these nuclei contain mainly threads which are about 200 Angstroms thick and which represent two closelyassociated 100 A. fibrils."

(One Angstrom unit is equal to one 250-millionths of an inch.)

By removing the histone with a dilute hydrochloric acid solution or trypsin, Dr. Ris has found that each 200 A. thread contains several thin fibrils which are digested with deoxyribonuclease and presumbly represent DNA molecules.

"These fibrils tend to fuse after removing the histone," Dr. Ris said, "but by partial digestion it can be seen that four parallel DNA strands and the histones associated with them make up a 200 A. thread."

These threads seem to be a general unit of organization of DNA-histones in chromosomes, as similar threads have been found in nuclei of calf thymus cells and plant cells.

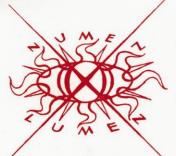
"The number of such DNA-histone threads present in a single chromosome has not yet been established," Dr. Ris said, "but the number may be characteristic for each species."

Dr. Ris pointed out that histones are not present in the simple bacteria and blue-green algae which do not have typical chromosomes.

'Fibrils found in the nuclei of these cells are essentially DNA molecules and are not combined with histones. Thus they are not really chromosomes, those complex multistranded structures found in higher cells."

Prof. Ris is now working on the arrangement of DNA and proteins in the "active areas" of the chromosome--those regions where DNA makes "messenger" RNA.

His work is supported by the National Institutes of Health and the Wisconsin Alumni Research Foundation.



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10/12/64 ns

Release P.M.s, Monday, Oct. 12

assus

Madison, Wis.--Two young scientists have charted in detail the sounds detected by the ear and coded them as a series of electrical impulses in the nerve cells of the brain.

This research was reported Oct. 12 by Jay Goldberg, assistant professor and fellow in the department of physiology at the University of Chicago, and Donald D. Greenwood, assistant professor of otolaryngology at Duke University. They spoke at the three-day National Academy of Sciences symposium hold at the University of Wisconsin in Madison.

An individual nerve cell fires off an impulse, rests, then fires again. This simple on-off mechanism somewhat resembles the binary number system used with digital computers, so the message transmitted by a nerve cell is carried as a sequence of time-intervals between impulses.

To study the characteristics of this time-code, the scientists recorded the impulses from single nerve cells in the cochlear nucleus, the first way-station of the auditory nerve system, in anesthetized cats. They analyzed the resulting mass of records in a digital computer.

Profs. Goldberg and Greenwood were able to describe the nature of the code for individual nerve cells in their response to different sound stimuli such as tones and noise.

Each nerve cell was found to have its own individual pattern of firing, particularly in relation to the regularity of spacing between impulses. The scientists were able to account for these patterns in terms of a mathematical theory based on simple principles which have been known to neurophysiologists for many decades.

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Serving the state through campuses at Madison and Milwaukee, nine University Centers, and a statewide extension system.

10/12/64 ds

For Release: PMs, Monday, Oct. 12

asans

By DOUGLAS SORENSON

MADISON, Wis.--A University of Wisconsin scientist has observed a rare combination of cells in the blood of cattle which may have significance in problems of cancer, organ transplantation, blood typing, and the aging process.

Prof. William H. Stone, UW geneticist, reported his findings Oct. 12 to members of the National Academy of Science at their Fall meeting here. The academy is made up of researchers in every phase of science from around the United States.

Prof. Stone reported to the group that he had recently observed the fusion of cells in the blood of fraternal twin cows. Normally the only cells that combine in this way are the reproductive (germ) cells in the process of fertilization. Fusion of regular (somatic) cells in other parts of the body is almost never seen in mammals.

The studies by the UW scientist are being made on fraternal twin calves which carry each other's blood-forming tissues. These rare individuals are called "chimeric" twins. They contain each other's blood because of some unusual exchange of blood tissues before birth. Very rarely two of the embryonic blood cells will combine or mate to form a new hybrid cell which carries both blood types.

The combination of these blood cells occurred in a twin bull eight years old, which hints that this fusion could be related in some way to aging. Of potential

#### Add-one--Stone

significance is the fact that the hybrid cell type drastically outgrew the parental types from which it was derived. Maybe this explains wild-growing cancers. The observation was made during studies of the blood types of cattle twins, whose blood types are similar to those that occur in humans.

Since animals which receive X-rays or other irradiation show marked changes in their blood-producing machinery, Prof. Stone wanted to know if radioactivity could be the cause of the cell changes he observed. In cooperation with R. G. Cragle at the Oak Ridge, Tenn. Atomic Energy Laboratory, he conducted extensive radiation tests on twin cattle. But these didn't produce any of the rare cell fusions, so the scientists assume that this is a natural phenomenon that may occur rarely in certain individuals.

The finding of fused blood cells in these animals would give scientists a new medium to study many characteristics of the blood.

Prof. Stone told his audience about other significant findings coming out of their research with chimeric twin cattle. A twin may carry his own blood type and that of his co-twin in almost any proportion. This can be 50:50 or 95:5. The proportion of the two types changes as the animal ages, but you can't predict in which direction the proportion will change or how far it will go, he said.

To find out what might induce these changes, the twin calves got gamma irradation which definitely changed the proportion of the blood types.

Irradiation of the calves disproved another theory about chimeric twins. It is generally believed that since chimeric twins have each other's blood types, it should be possible to graft skin from one to the other and make the skin graft "take." In normal relatives or even fraternal twins, one animal usually rejects the transplantation of any organ or skin not its own.

Most of the time skin transplants between chimeric twins are first successful,

(more)

Add two--Stone

but in time, most of them are rejected, Prof. Stone found. Also irradiation of the twin doesn't make it any more tolerant toward a skin graft from its co-twin.

The new knowledge about skin grafting may apply to grafting other organs in higher animals. When the day comes that bones, kidneys, or even hearts are transplanted to keep life going, some of the credit may be given to the studies made on dairy cattle twins.

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University of Wisconsin National Academy of Sciences (Oct. 12-14) Annual Fall Meeting Suice natt

Background Material: SYMPOSIUM ON HEARING

One of two symposia to be presented during the meeting of The National Academy of Sciences at the University of Wisconsin, Oct. 12-14, will deal with the physiology of hearing. Arrangements for this program have been made by Dr. Clinton N. Woolsey, Slichter Professor of Neurophysiology and Director of the Laboratory of Neurophysiology at the University. Participants in the symposium and their collaborators in the work to be presented are: Nobel laureate, Prof. Georg von Bekesy of Harvard University; Dr. Hallowell Davis, Director of Research, Central Institute for the Deaf, St. Louis, Missouri, and Chairman of the Physiology Section of the National Academy of Sciences; Prof. J. E. Desmedt, Professor of Pathophysiolog, of the Nervous System, University of Brussels, Belgium; Dr. W. Grey Walter, Burden Neurological Institute, Bristol, England; Drs. Hugo Adrian and Wiadimiro Lifschitz, Institute of Physiology, University of Chile; Drs. Nelson Kiang and Russell R. Pfeiffer, Massachusetts Institute of Technology, Cambridge, Massachusetts; Dr. D.C. Teas, University of Pittsburg, Dr. J. M. Goldberg, University of Chicago; Dr. Donald D. Greenwood, Duke University; Dr. H. David Potter, Lawrence University, Appleton, Wisconsin; Prof. Nathan Gross, Kresge Hearing Institute, University of Michigan; Nikolai Dubrovsky, Physicist, State University of Moscow, USSR; Dr. S. D. Erulkar, University of Pennsylvania; Drs. J. F. Brugge, C. C. Geisler, J. E. Hind, J. E. Rose and C. N. Woolsey, Laboratory of Neurophysiology, University of Wisconsin.

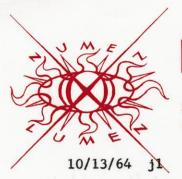
Participants will discuss the most recent electrophysiological findings on the central neural mechanisms of hearing and the application of computer techniques in the analysis of brain activity. On Monday afternoon beginning at 1:30 p.m., Room 210 Wisconsin Center, the first session of the program, under the chairmanship of Prof. Robert Galambos of Yale University, will be devoted to analyses of the physiological activity of single neurons at different levels of the

Add one--Symposium on Hearing

central auditory pathway from lower brain stem to cerebral cortex. This theme, applied to the cerebellum, will be continued at 9:00 a.m. on Tuesday in the first paper of the second session under the chairmanship of Prof. Hallowell Davis. The remaining papers will deal with inhibition as a method of investigating sensory activity of ear, skin and taste nerves, with (2) descending activity in the auditory system, and (3) with brain wave changes produced by auditory stimulation and their use in the study of hearing in man. The symposium will close with a summation by Prof. Davis.

On Wednesday morning Prof. J. E. Hind will give a demonstration in Room 271, Medical Sciences Building, of the use of the LINC computer for data processing in the study of hearing.

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Serving the state through campuses at Madison and Milwaukee, nine University Centers, and a statewide extension system.

Release: PMs, Tuesday, Oct. 13

lessus

By JERRY LUBENOW

MADISON, Wis.--Ten years of research in the Ouachita Mountains of Oklahoma resulted in four new findings, University of Wisconsin Prof. Lewis M. Cline told the National Academy of Sciences Tuesday.

Addressing the annual fall gathering of the academy, the Wisconsin geologist said he and his associates had learned:

1. The fault blocks in the area are mainly in situ--or not far from the area of deposition. Prior studies indicated displacement of 50 to 250 miles, but Prof. Cline is convinced these blocks could not have moved more than 15 miles.

2. The sediments involved were deposited in deep water.

3. Many of the sediments were deposited by turbidity (mud) flows.

4. The direction of transport of the sediments was longitudinally down the trough in which they were deposited.

Involved in Prof. Cline's research was an extremely thick section--22,500 feet or nearly four miles deep--which had been severely faulted.

On the basis of fossil content of the rocks in the mountain area, Prof. Cline concluded that the rocks originated in a deep water setting. One of the characteristic fossils is a sponge spiculite which is located in seas at depths of 1,200 feet.

A second fossil, the radiolarian, also common to deep water environment, was found in the same area.

add one--Prof. Cline

In determining the direction of flow of the sediments, Dr. Cline employed a relatively new tool known as sole marks. These are impressions left in a layer of sediment by the movement of another layer over it.

Compass readings taken on these hydraulic marks allows the geologist to obtain patterns of current direction in the ancient paleozoic seas. The Ouachita region is one of the outstanding areas for studying sole marks.

"These marks," Prof. Cline said, "are a terrific tool that has been pioneered in the Netherlands and Poland."

He said a study of the rock types formed a basis for the conclusions on the magnitude of displacement. In a marine environment, sediments are deposited in a gradational series from sandstones to limestones to shales, with the finer grained sediments farther from the shoreline.

Also, the individual beds become thinner and eventually disappear away from the shore, Prof. Cline contended. Thus, on the basis of the rates of change in the types of rocks involved in the folding and the rate of thinning of the individual beds, it was concluded that the displacement actually was considerably less than first believed.

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10/12/64 ds

Release: AMs, Tuesday, October 13

ypons

By DOUGLAS SORENSON

Madison, Wis.--Yeasts, so familiar to bakers and housewives, may provide important knowledge about how cells divide and multiply in man, animals and higher forms of plant life.

A University of Wisconsin bacteriologist, Prof. Harlyn O. Halvorson, told a National Academy of Science audience Oct. 13 how cell division in yeasts is an orderly process with the timing controlled by the location of genes on the chromosome in the cell nucleus. The session brought top scientists together from around the United States for their three-day fall meeting in Madison.

Prof. Halvorson explained that in yeast specific proteins (enzymes) are produced only at specific times in the cell cycle. Making of a certain enzyme is ordered to take place at a specific time by "messenger RNA", a complex chemical, in the cell nucleus. At other times in the life of the cell, different kinds of messenger RNA are produced in the chromosomes which determine production of a different enzyme.

Cell division or "budding" in yeast is believed to be controlled by the message on one chromosome, but the sequence of it is determined by several genes at specific positions on that chromosome. Location of the gene controls when the process will take place.

Prof. Halvorson tested this theory by studying several enzymes, including beta-glucosidase, in yeast. He found that this enzyme wasn't produced continuously,

#### Add one--Halvorson

but rather in steps. Its production took only about 20 per cent of the time in the cell division cycle. Enzyme production then stopped until the next cell division, when it was produced in the same part of the new cycle.

Then he crossed two strains of yeast, producing a hybrid which introduced a second gene for this enzyme into the chromosomes. The hybrid had two periods of enzyme production, corresponding to the two genes of the hybrid.

If this is what generally happens, Prof. Halvorson reasoned, then genes on one end of a chromosome will produce enzyme early in cell division. A gene on the middle of the chromosome will produce enzyme midway in the process, and a gene at the other end of the chromosome will regulate enzyme formation at the end of the cell division.

It follows, then, that a cell can regulate the timing of division by the position the gene occupies on the chromosome. One gene could move from one position to another on the chromosome and thus change the pattern of development of that particular cell.

It may also explain evolution where relocation of a gene makes a cell better adapted or less adapted to its environment.

Prof. Halvorson used yeasts in his experiments for several reasons:

(1) They are more complex than bacteria and more simple than higher animals. Yeasts contain 15 chromosomes compared with one in bacteria and 46 in man.

(2) You can use the tools of modern genetics on yeasts.

(3) There is a great deal of background knowledge of yeasts which aids the search for new genetic information.

In spite of their simplicity, yeasts are probably fairly close in their behavior to cells of higher animals, Prof. Halvorson said. They are much like mammalian cells, so knowledge of them may apply to mammals.

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# U.W. NEWS

10/8/64 jl

FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON, WISCONSIN 53706 Release:

MADISON, Wis.--The annual fall meeting of the National Academy of Sciences opens Monday with many of the nation's leading scientists coming to the University of Wisconsin campus in Madison to present scientific papers during the three-day session.

Two major symposia are scheduled, one on recent developments in nuclear physics and the second on the neurophysiology of hearing, in addition to more than 40 papers reporting new findings in other scientific fields.

The meetings are to be held in the Wisconsin Center Building on the University campus and are open to the public. The scientific sessions begin Monday afternoon and continue through Tuesday. Wednesday is devoted to tours of Wisconsin laboratories and scientific centers by the visiting scientists.

Monday at 8 p.m. in the Memorial Union Theater, Harold C. Urey, Nobel Prize winner from the University of California, will speak on "The Moon and the Planets." Dr. Urey's lecture is open to the public.

The academy is the nation's most distinguished scientific body, composed of the country's leading scientists, all elected to membership. At the present time, membership includes nearly 700 scientists and some 70 foreign associates.

The University of Wisconsin is presently represented on the membership roll by 23 scientists. Wisconsin ranks ninth in total membership among all degree-granting institutions in the country. add one--National Academy

A study by Emeritus Prof. Raymond Birge of the University of California showed institutional membership in the academy as follows: California, first with 76; Harvard, 72; Rockefeller Institute, 33; Massachusetts Institute of Technology 30; the California Institute of Technology, 28. Wisconsin is first in the Big 10 and Illinois ranks second with 16 members.

Wisconsin membership includes: R. A. Brink; R. H. Burris; J. F. Crow; Farrington Daniels; John D. Ferry; E. B. Fred; D. E. Green; H. F. Harlow; R. G. Herb; J. O. Hirschfelder; M. R. Irwin; D. W. Kerst; Henry Lardy; K. P. Link; S. M. McElvain; K. B. Raper; A. K. Riker; Folke Skoog; J. C. Walker; J. W. Williams; P. W. Wilson; C. N. Woolsey, and Sewall Wright.

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## U.W. NEWS

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FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON, WISCONSIN 53706

10/2/64 db

RELEASE:

Immediately

MADISON, Wis.--A more efficient method for solving differential equations using computers will be discussed in a paper to be presented October 12 at the Wisconsin Center here.

Prof. J. Barkley Rosser, director of the University of Wisconsin Mathematics Research Center, will deliver the paper as part of the three-day National Academy of Sciences meeting on the UW's Madison campus.

The method consists of using a small fraction of all grid points, called filigree points, and determining the solution of the problem first at the filigree points, Prof. Rosser explains in his paper.

This initial solution then can lead the way to the complete solution of the problem at all grid points by handling them in blocks for which the solution can be written down directly in terms of the values at the filigree points.

(A less efficient grid system is the classical procedure for solving such problems on computers.)

The Rosser paper will be presented at 3:15 p.m. in Room 311 of the Center. The session, like most of the Academy's meetings, is open to the public.

Prof. Rosser, an internationally known expert on rocketry and ballistics, has been director of the UW Mathematics Research Center since December, 1963.

He served at the Allegany Ballistics Laboratory, a federal post, from 1944 to 1946 and received the Presidential Certificate of Merit in 1948.

He is co-author of "Mathematical Theory of Rocket Flight," a book published in 1947 and has written many articles on ballistics and mathematical logic. He has held both Guggenheim and Fulbright fellowships.

#### Add one--Rosser

The National Academy of Science meeting will be held at the Wisconsin Center on October 12, 13, and 14. The Academy was established in 1863 under President Lincoln's administration to foster and promote the advancement of science in this country.

Twenty-four UW faculty members are members of the Academy. Approximately 150 Academy members and wives are expected to attend.

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UNIVERSITY NEWS and PUBLICATIONS SERVICE

THE UNIVERSITY OF WISCONSIN

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September 22, 1964

Science Editors:

We recently mailed you a program of the annual fall meeting of the National Academy of Sciences to be held on our campus Oct. 12-14, and we would like to extend an invitation for you to attend and cover the meeting if it is possible for you to do so.

The meeting promises to be an interesting one, and it falls during a usually pleasant time of the year here, so let us encourage you to attend if you can.

So that we have some idea of the number of individuals who might utilize a press room, the Academy has asked that we enclose the card. If you plan to come, please drop it in the mail.

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James A. Larsen Science Editor

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## U.W. NEWS

ROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON, WISCONSIN 53706

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RELEASE:

Immediately

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MADISON, Wis.--Leading scientists from this country and abroad will come to the University of Wisconsin Oct. 12-14 to take part in the annual fall meeting of the National Academy of Sciences, for which the UW this year serves as host.

The scientific program, open to the public, will include two major symposia, one on high-energy physics and the other on the physiology of hearing, and other research papers in fields including molecular biology, genetics, geophysics, geology, chemistry, mathematics, zoology, and cancer research.

The academy is the nation's most distinguished scientific body, composed of the country's leading scientists, all elected to membership. At the present time, membership includes nearly 700 scientists, and additionally some 70 foreign associates. The University of Wisconsin is presently represented on the membership roll by 23 scientists.

Both symposia on the program will continue through two days, Oct. 12-13, with the last day of the meeting to be given over to tours of UW laboratories and visits of Wisconsin scientific centers by the academy members.

A public lecture Oct. 12 will be given by Harold C. Urey, 1934 Nobel Prize winner in chemistry, now at the University of California, whose talk will be on "The Moon and the Planets." Urey is currently investigating the geochemistry of the moon, and his lecture will arouse particular interest in light of his apparent dissent with the early interpretations of the Ranger rocket probe photographs.

The featured speaker at the Academy's banquet session will be Leland J. Haworth, director of the National Science Foundation.

#### Add one--National Academy of Sciences

The scientific sessions will begin at 1:15, Oct. 12, in the Wisconsin Center and Memorial Union buildings on the UW campus. The two symposia and two general scientific sessions will run concurrently. The subject of the first section of the physics symposia will concern "Resonances and Symmetries," with participants Bogdan C. Maglie, CERN, Geneva, Switzerland; Paul T. Matthews, Imperial College, London, England; Nicholas P. Samois, Brookhaven National Laboratory, Upton, Long Island, New York; and William D. Walker, University of Wisconsin, Madison.

The first day's section of the symposium on hearing will concern the nature of the activity of the hearing nerves, and the following scientists will report on their research in this field: Nelson Y-S. Kiang and Russell R. Pfeiffer, Massachusetts Eye and Ear Infirmary, Boston, Mass.; Jay Goldberg, University of Chicago, Chicago, Ill.; Donald D. Greenwood, Duke University, Durham, N.C.; Jerzy E. Rose, University of Wisconsin, Madison; Nathan B. Gross, University of Michigan, Ann Arbor; C. Daniel Geisler and Joseph E. Hind, University of Wisconsin; S. D. Erulkar, University of Pennsylvania, Philadelphia; Hugo Adrian and Wladimiro Lifschitz, University of Chile, Santiago, Chile; John F. Brugge, University of Wisconsin, Madison; Nikolai Dubrovsky, Lomonosov University, Moscow, USSR;

Donald W. Kerst and Clinton Woolsey of the University of Wisconsin will act as convenors for the physics and hearing symposia respectively, and Roger Galambos of Yale will serve as chairman of the latter session.

One scientific session Oct. 12 will have participants Allen S. Fox and Masakatsu Horikawa, University of Wisconsin; Robert DeMars, University of Wisconsin; Helen Gay, University of Michigan, Ann Arbor; Hans Ris, University of Wisconsin; Walter Plaut and David Nash, University of Wisconsin; K. Patau, J. M. Opitz, and W. J. Dewey, University of Wisconsin; W. H. Stone, University of Wisconsin; R. G. Cragle, AEC Agricultural Research Laboratory, Oak Ridge, Tenn.; H. J. Muller and William D. Kaplan, City of Hope Medical Center, Duarte, Calif.

Add two--National Academy of Sciences

The second scientific session Oct. 12 will have L. B. Slichter, G. J. F. MacDonald, M. Caputo, and C. L. Hager, University of California, Los Angeles; John E. Willard, University of Wisconsin; Edwin J. Hart, Argonne National Laboratory, Argonne, Ill.; Robert A. Alberty and Warren Diven, University of Wisconsin; Henry Selig, Raymond D. Peacock, and Irving Sheft, Argonne National Laboratory, Argonne, Ill.; Stephen C. Kleene, University of Wisconsin; J. Barkley Rosser, and R. Byron Bird, University of Wisconsin;

The symposium on physics will continue during the morning Oct. 13, on the general subject of "Weak Interactions," with participants as follows: Helmut Faissner, CERN, Nuclear Physics Division, Geneva, Switzerland; Donald Perkins, The University, Bristol, England; Leon Lederman, Nevis Laboratory, Irvington, N.Y.; and Val. L. Fitch, Princeton University, Palmer Physical Laboratory, Princeton, N.J.

The hearing symposium on Oct. 13 will have papers by Clinton N. Woolsey, UW; Hugo Adrian and Wladimiro Lifschitz, University of Chile; Georg Von Beksey, Harvard University, Cambridge, Mass.; Jean E. Desmedt, University of Brussels, Belgium; Donald C. Teas, University of Pittsburgh, Penn., and Nelson Y.S. Kiang, Massachusetts Eye and Ear Infirmary, Boston, Mass.; W. Grey Walter, Burden Neurological Institute, Bristol, England; and Hallowell Davis, Central Institute for the Deaf, St. Louis, Mo.

The scientific sessions Oct. 13 will have papers by the following scientists: Herman M. Kalakar, C. R. Creveling, R. A. Darrow, K. and E. Randerath, and R. E. Rodstrom, Harvard Medical School and Massachusetts General Hospital, Boston; Philip P. Cohen and Masamiti Tatibana, Charles Heidelberger, Philip Reyes, H. O. Halvorson, C. Byrd, E. Ohtsuka, M. Moon, and H. G. Khorana, all University of Wisconsin; D. I. Arnon, K. Tagawa, B. B. Buchanan, R. Bachofen, H. Y. Tsujimoto, and B. D. McSwain, University of California, Berkeley; J. J. Katz, R. C. Dougherty, and H. H. Strain, Argonne National Laboratory; H. Beinert, R. E. Hansen, Y. I. Shethna, and P. W. Wilson, UW; Conrad S. Yocum, University of Michigan, Ann Arbor; Dirck V. Myers, Suchinta Mehta, and John T. Edsall, Harvard University, Cambridge.

Add three--National Academy of Sciences

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Arthur D. Hasler and H. Francis Henderson, UW; Robert E. Sloan, University of Minnesota, Minneapolis; Howard Rasmussen, Van R. Potter, UW; Curt P. Richter, Johns Hopkins Hospital, Baltimore, Md.; G. H. Wang and H. Ludwig, Amiela Globerson and Robert Auerbach, UW; William A. Taliaferro and Lucy G. Taliaferro, Argonne National Laboratory;

Lewis M. Cline, M. Foster, M. Peters, R. Hartung, R. Matsen, D. Reeder and M. Good, all UW; M. Meer, F. Loefler, and R. MacIlwain, Purdue University, Lafayette, Ind.; C. Kacser, University of Maryland, College Park; Paul Singer and Tran Truong, Columbia University, New York; H. H. Barschall and R. M. Wood, Paul J. Lawrence and Henry Lardy, UW; Joseph Rabani and Max S. Matheson, Argonne National Laboratory; and Farrington Daniels, UW.

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# MADISON NEWS

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FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON 6, WISCONSIN

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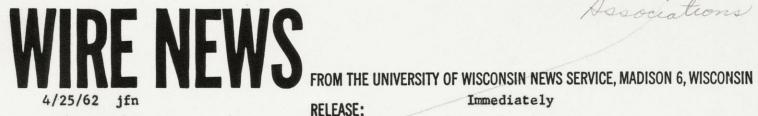
Immediately

MADISON--Prof. William Laughlin of the department of anthropology at the University of Wisconsin has been appointed to an ad hoc U.S. committee for the international biological program of the National Academy of Sciences,

Nominated by the academy and the National Research Council, Prof. Laughlin will join other experts in social science fields to plan a program involving U.S. scientists in international biological research. The National Science Foundation is supporting work of the committee.

Prof. Laughlin is known especially for his research in blood group genetics and racial history of Aleuts, Eskimos, and American Indians. He has done research in areas of the world from Denmark to Alaska, collaborated in the writing of an anthropology textbook, edited the American Journal of Physical Anthropology, and written many articles for scholarly journals.

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**RELEASE:** 

Associations

MADISON, Wis .-- Dr. David E. Green, co-director of the University of Wisconsin's Institute for Enzyme Research, has been elected a member of the National Academy of Sciences, the University was informed Wednesday.

Dr. Green joins the ranks of some two dozen other UW scientists who are members of the National Academy. The election is one of the highest honors an American scientist can receive. It is a recognition reserved for those who have made unusual contributions to knowledge in one of the fields of science.

Dr. Green specializes in the study of organized enzyme systems. In his research he has concentrated on the enzyme systems of the mitochondrion -- a cellular unit responsible for the generation of chemical substances from which living things derive their energy. The head of one of the three research teams at the Enzyme Institute, he has been a director of the institute since it was founded in 1948.

From 1945 to 1948, Dr. Green was director of the Enzyme Chemistry Laboratory at Columbia University. For the four years before that, he was an associate in biochemistry at the College of Physicians and Surgeons at Columbia and was an assistant professor there.

Dr. Green received his B.A. in 1930 from New York University and his master's degree there in 1931. From New York he went to England's Cambridge University, receiving his doctorate in 1934. He was a Beit Memorial Research Fellow from 1934 to 1940 and was a fellow at Harvard University for a year before going to Columbia in 1941.

While at Columbia, in 1946, he received the Paul Lewis Award in Enzyme Chemistry. During World War II he did research for the Quartermaster Corps.

Dr. Green has been a steady contributor to scientific journals, and was elected to the American Academy of Arts and Sciences in 1960.

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U NEWS SERVICE, MADISON 6, WISCONSIN 4/26/61 j1 RELEASE: Immediately

associations

WASHINGTON, D.C.--Two University of Wisconsin scientists were elected members of the National Academy of Science Tuesday and a third was named to the Council of this most select group of American scientists.

Those newly elected to membership were Prof. Robert A. Burris of the UW biochemistry department and Prof. James F. Crow of the departments of zoology and medical genetics.

Elected to the Academy Council was Prof. Kenneth B. Raper of the UW departments of bacteriology and botany.

Burris and Crow join the ranks of some two dozen other University of Wisconsin scientists who are members of the National Academy. Election to the Academy is one of the highest honors an American scientist can receive. It is a recognition reserved for those who have made unusual contributions to knowledge in one of the fields of science.

Burris is well known especially for his research on the biochemistry of nitrogen fixation by the root nodule bacteria of leguminous plants, and Crow is one of the nation's outstanding geneticists, known especially for his work in the field of population genetics and for his views on the gentic effects of fallout.

Burris is a graduate of South Dakota State College and holds both the master's and doctor's degree from Wisconsin. Except for brief leaves of absence he has been a member of the Wisconsin faculty since 1941. He was selected chairman of the biochemistry department to succeed Conrad A. Elvehjem in 1958 when the latter became president of the University.

Crow earned his bachelor's degree from Friends University, Wichita, Kan., and his doctorate from the University of Texas. He was an instructor and assistant professor of zoology at Dartmouth before coming to Wisconsin in 1948.

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## FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON 6, WISCONSIN 4/27/60 jl

RELEASE: Immediately

sociations

WASHINGTON, D.C. -- Dr. Clinton N. Woolsey, Slichter research professor of neurophysiology at the University of Wisconsin Medical School, has been elected to membership in the National Academy of Sciences, it was reported Wednesday.

Election to the academy is one of the highest honors an American scientist can receive. It is a recognition reserved for those who have made unusual research contribucions in a scientific field.

Dr. Woolsey is among 23 University of Wisconsin sciencists, either members or emeritus members of the Wisconsin faculty, who are also members of the National Academy.

Dr. Woolsey is noted for his mapping of areas of the brain responsible for motor and sensory activities, research which has resulted in improved understanding of brain function.

He came to Wisconsin in 1948 from the Johns Hopkins University School of Medicine. A medical graduate of Johns Hopkins in 1933, Dr. Woolsey served there as assistant in physiology, instructor, and assistant and associate professor, leaving for a period to serve as Rockefeller Fellow in medical physics and neurology at the University of Pennsylvania.

While at Wisconsin, Woolsey has made major contributions to his scientific field, has served on a brain research advisory committee for both United States and United Nations scientific groups, and was a member of a team of American brain scientists who visited research centers in Russia two years ago.

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4/29/59 jfn The UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON 6, WISCONSIN Immediately

WASHINGTON, D.C.--John D. Ferry, professor of chemistry at the University of Wisconsin, has been elected to membership in the National Academy of Sciences.

Election to the academy is one of the highest honors an American scientist can receive. It is a recognition reserved for those who have made unusual research contributions in a scientific field.

He is among the 24 University of Wisconsin scientists who are already members of the academy.

Prof. Ferry is on leave for the second semester for research into mechanical properties of polymers at the University of Brussels under a National Science Foundation traveling fellowship.

In 1958 he received a Guggenheim Fellowship for study of viscoelastic properties of macromolecular systems. He received the Eli Lilly award in 1946 for his work in the chemistry of large molecules. He was presented with the 1953 Bingham Award by the Society of Rheology.

Working at Harvard during World War II, he participated in research which developed a plastic substitute for the membrane covering of the brain. He was chairman of the American Chemical Society's Division of Colloid Chemistry for 1955.

A native of Dawson, British Columbia, he holds the B.A. and Ph.D. from Stanford University, and taught at Harvard University before joining the Wisconsin faculty in 1948.

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# MADISON NEWS

FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON 6, WISCONSIN

RELEASE:

10/15/58 vh

Immediately

MADISON, Wis.--Prof. George P. Woollard, head of the University of Wisconsin geophysics section of geology, has been appointed to the Space Board of the National Academy of Science.

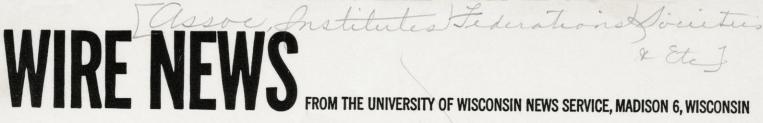
The board, composed of 14 members representing all branches of science, was set up by the National Academy to advise the government on scientific uses of the satellite. Dr. Woollard will represent terrestrial geophysics and geodesy in contrast to space geophysics and will be concerned with questions such as "What can we find out about the earth and its shape from a satellite?"

Duties on the Space Board took the Wisconsin scientist recently to the Redstone Arsenal, U.S. Army rocket center, to learn about the future outlook on satellites. He also attended a conference on world problems in gravity, held at Georgetown University, Washington, D.C.; , and served as chairman for two National Academy panel meetings in Washington--one on the geodetic uses of satellites, and the other on earth crustal studies in polar research.

This week Dr. Woollard and several of his staff and student geophysicists are participating in the annual meeting of the Society of Exploration Geophysicists at San Antonio, Tex. Robert P. Meyer and John S. Steinhart will give a joint paper on crustal studies made during the International Geophysical Year.

Four other Wisconsin geophysicists, each representing Wisconsin studies which he helped to carry out under IGY in Antarctica, will report on glaciology studies based on seismic and gravity investigations. The four reporting are Edward C. Thiel, Wausau, John Behrendt, Stevens Point, Hugh Bennett, and Ned Ostenso, Chippewa Falls.

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FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON 6, WISCONSIN **RELEASE:** Immediately

6/23/58 irb

MADISON, Wis. -- Jacob D. Duerksen, a research assistant in the University of Wisconsin department of bacteriology, is one of 18 young scientists to be awarded a National Research Fellowship in the medical sciences, it was announced today.

The fellowship is granted by the National Academy of Sciences - National Research Council--by funds made available through the Rockefeller Foundation and the John and Mary R. Markle Foundation.

As a National Research Fellow, Duerksen plans to conduct studies on the mechanism of specific enzyme synthesis in bacteria at the Medical Research Council, National Institute for Medical Research, London, England.

A native of Alberta, Canada, Duerksen received his B.S. degree in 1953 and the M.S. in 1955 from the University of British Columbia. At present he is completing his studies toward the Ph.D. at the University of Wisconsin.

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FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON 6, WISCONSIN RELEASE:

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4/29/58 jl

WASHINGTON, D.C.--Henry A. Lardy, professor of biochemistry at the University of Wisconsin and chairman of a division of the UW Enzyme Institute, has been elected to membership in the National Academy of Sciences.

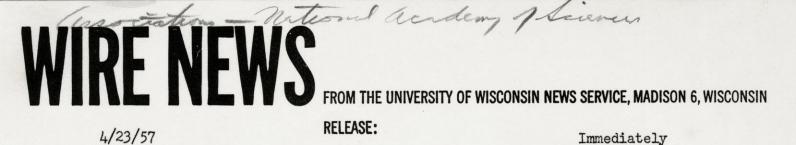
Election to the academy is one of the highest honors an American scientist can receive. It is a recognition reserved for those who have made unusual research contributions in a scientific field.

He is among the 23 University of Wisconsin scientists who are already members of the Academy.

Prof. Lardy is known for his research in the field of enzyme chemistry. A native of South Dakota, he received his B.S. degree from South Dakota State College, then came to Wisconsin and was granted the doctorate in 1943. He studied for a year at the Banting Institute, University of Toronto, under a National Research Council Fellowship and returned to Wisconsin in 1945. He became a member of the Enzyme Institute staff in 1950.

Lardy was granted the Paul-Lewis Laboratories Award in 1949, in recognition for his early work in enzyme chemistry. This award is administered by the American Chemical Society. Lardy was elected chairman of the chemical society's Division of Biological Chemistry last year.

More recently, Lardy conducted research on the mechanism of action of the thyroid hormone, and in 1956 his group announced the isolation of two previously unknown thyroid hormones.



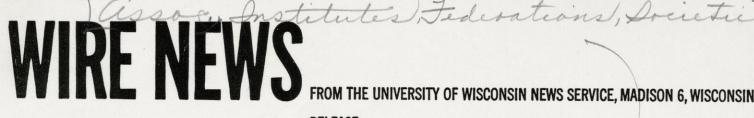
WASHINGTON--Dr. Farrington Daniels, chairman of the University of Wisconsin chemistry department, was elected vice president of the National Academy of Sciences Tuesday.

In another action, Prof. Joshua Lederberg of the University genetics department was elected to membership in the academy, bringing the total of UW faculty memberships to 24. Election to the academy is considered a recognition of unusual ability and is the highest honor an American scientist can receive.

Lederberg and his scientist-wife Esther Lederberg recently were awarded Fulbright grants to lecture at the University of Melbourne, Australia.

Both are well known for their research with bacteria and have contributed considerably to a basic understanding of the nature of certain genetic processes. Last year they were selected to receive jointly the Pasteur Award of the Society of Illinois Bacteriologists.

Prof. Daniels, who was elected to membership in the academy in 1947, is internationally famed for his pioneering work on atomic and solar energy. He was the winner of the 1957 Priestley Medal of the American Chemical Society, of which he also is a past president.



FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON 6, WISCONSIN **RELEASE:** 

4/3/58 vh

Immediately

MADISON, Wis .-- Prof. George P. Woollard, head of the University of Wisconsin's geophysics section, has been invited to serve on a new committee which is being set up by the National Academy of Science.

The committee will formulate research programs for work in Antarctica and the Arctic during the balance of the International Geophysical Year and for continuing studies thereafter.

Dr. Woollard was appointed chairman for the gravity program of the IGY as plans for the huge international cooperative probings of the earth were begun. Included in his duties is direction of teams of Wisconsin-trained geophysicists carrying out IGY research assignments on four global fronts.

On the new committee he will again head the gravity program and also will direct seismic, magnetic, and geological studies related to the earth's crust.

Just returned from delivering a memorial lecture in the South, the Wiscons in scientist talked to his University of Tennessee audience on "Results of the Seismic and Gravity Studies in Antarctica."

On March 18, he delivered another memorial lecture at Bowling Green University, Ohio, on implications of the IGY gravity program.

# MADISON NEWS mail and my first

9/4/57 KG

BELEASE:

Immediately

MADISON, Wis.--An astrolabe--predecessor to the sextant--made in 1325 for some medieval mariner--is one of some 30 ancient instruments of science currently on display at the State Historical Museum.

The exhibition being held in conjunction with the Institute of the History of Science now in progress at the University of Wisconsin was brought to Madison by science historians Robert P. Multhauf and Derek S. Price of the Smithsonian Institution, Washington, D. C.

The history of science conference, which opened Monday (Sept. 1) to run through next Tuesday (Sept. 11), has drawn 74 outstanding historians of scientific progress to discuss their ideas and research.

The science instruments in the display, some dating from the 14th, 15th, and 16th century, give a sampling of the material which will be used in the soonto-be-built U.S. National Museum of History and Technology, Dr. Price said.

Besides the astrolabe the exhibit includes such items as an ancient vacuum pump, a chemical blowpipe assay set, and a series of photographs showing important events in the history of science.

The display is open to the public from 8 a.m. to 10 p.m. daily through next Tuesday.

The institute is being sponsored by the University of Wisconsin, the National Science Foundation, the Social Science Research Council, and the National Academy of Science.

### NIRE NEWS FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON 6, WISCONSIN

4/25/56 1h

**RELEASE:** 

Immediatelv

MADISON--Folke S. Skoog, professor of botany at the University of Wisconsin, has been elected to the National Academy of Sciences.

Election to the academy is a recognition of unusual ability and is the highest honor an American scientist can receive.

Skoog came to the University of Wisconsin in 1948 from a position as research consultant at North Carolina State College of Agriculture. While at Wisconsin he has been conducting studies in plant growth and nutrition.

Early in 1955 he was one of three University scientists to isolate in pure crystalline form a chemical which makes cells divide. It may be one of the most important chemicals responsible for a basic property of life and growth.

The academy serves as scientific adviser to the government on varied subjects. Membership is restricted largely to scientists who have made major contributions to knowledge and are in a position, upon request, to serve the government in the solution of scientific problems.

U.W. NEWS

5/6/55

FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON 6, WISCONSIN RELEASE:

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Immediately

Dr. Harper's appointment is one of nine made by the board this year from funds provided by the Rockefeller Foundation. The awards permit advanced training for young men and women who are entering the field of medical research.

As a National Research Fellow, Dr. Harper plans to study the influence of hormones, particularly the growth hormone of the pituitary gland, and insulin on metabolic processes at Cambridge University, Cambridge, England.

The UW scientist was born in Letheridee, Alta., Canada. He attended the University of Alberta, receiving his B.S. degree in 1945 and his M.S. degree in 1947. His Ph.D. degree was conferred by the University of Wisconsin in 1953.

Dr. Harper, who is married and has one child, lives at 1315 Drake St., Madison.

### WIRE NEWS

FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON 6, WISCONSIN

4/26/55

RELEASE:

Immediately

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WASHINGTON, D. C.--Two University of Wisconsin scientists have been elected to membership in the National Academy of Sciences, the academy announced here Tuesday.

The Wisconsin scientists are Raymond G. Herb, professor of physics, and Perry W. Wilson, professor of bacteriology.

Prof. Herb is noted for his research in the field of nuclear physics, and Prof. Wilson is one of the world's outstanding experts on the biological process of nitrogen fixation.

Election to the National Academy of Sciences is the highest honor to which an American scientist can aspire. Prof. Herb and Prof. Wilson were elected to membership at a meeting of the academy Tuesday.

Prof. Herb was born at Navarino, Wis., and obtained both his bachelor and doctorate degrees from the University of Wisconsin, the latter in 1935. While a student he held a Wisconsin Alumni Research Foundation fellowship. He joined the University faculty in 1936, and became a full professor in 1945.

His research at Wisconsin has been largely aimed toward developing accurate apparatus for measuring the energy of nuclear particles. He developed the Herb pressure electrostatic generator, the first model of which was used at Los Alamos in developing the atomic bomb. A second, more powerful machine, is nearing completion now at Wisconsin.

#### Ad one--National Academy of Sciences

During World War II he worked on the development of radar at the Radiation Laboratory in Cambridge, Mass., and spent 1944-45 working on radar problems in Europe.

Prof. Wilson's research has been primarily directed toward explaining the chemistry of the nitrogen fixation process--one of the real biological miracles by which leguminous plants and root-nodule bacteria take nitrogen from the air and incorporate it into substances that can be used by growing plants.

Nitrogen fixation is the basic process by which the leguminous plants used in crop rotation enrich the soil with nitrogen compounds. Prof. Wilson's work has greatly improved man's understanding of the chemistry of the process and of the enzymes involved.

Prof. Wilson, born in Bonanza, Ark., received all of his academic degrees, as did Prof. Herb, from the University of Wisconsin, the doctorate in 1932. In 1936 he won a Guggenheim Fellowship for study in Europe, and conducted research at Cambridge, England, and at the Biochemical Institut, Helsinki, Finland. During World War II he served as special consultant to the armed forces in the field of biological warfare.

He recently was selected to receive the Pasteur Award of the Illinois Society of Bacteriologists, and will be presented with this award Saturday at the society's annual banquet in Chicago.

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### U.W. NEWS

FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON 6, WISCONSIN

4/26/55

RELEASE:

8 p.m., Saturday, April 30

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CHICAGO, Ill. (April 30)--Scientific progress is the result of long preparation, hard work, and good luck, Prof. Perry Wilson, University of Wisconsin bacteriologist, said Saturday night in accepting the Pasteur Award of the Society of Illinois Bacteriologists.

Prof. Wilson was presented with the award at the society's annual banquet held at the Edgewater Beach Hotel, which members of the north-central branch of the Society of American Bacteriologists also were invited to attend.

Prof. Wilson is the eighth Midwestern bacteriologist to achieve the distinction. He is also one of the American scientists elected this year to the National Academy of Sciences. He is noted for his research on nitrogen fixation, one of nature's miracles by which leguminous plants with root-nodule bacteria take nitrogen from the air and turn it to plant food.

In his address, Prof. Wilson quoted Louis Pasteur's dictum: "Chance favors the prepared mind."

Many of the discoveries made at Wisconsin on nitrogen fixation, Prof. Wilson added, were the result of long, arduous laboratory work, attended by some chance event which suddenly revealed a new and startling fact.

One such event led to the discovery that hydrogen acted as an inhibitor of nitrogen fixation--a fact which had long been an invisible stumbling block to laboratory progress.

Ad one--Prof. Perry Wilson

Previous to this discovery, hydrogen was thought to be a biologically inert gas, and was used as such in the test tubes where various bacteria species were tested for nitrogen-fixing abilities.

One day the researchers ran out of hydrogen and conducted their experiment without it--and the bacteria quickly began fixing nitrogen.

Once the stumbling block was removed, it was eventually revealed that many types of bacteria could fix nitrogen. It was also shown that nitrogen fixation was accomplished through the same chemical process in all of them.

Work at Wisconsin and elsewhere has subsequently shown that many more species of bacteria than hitherto suspected are capable of fixing nitrogen.

"This takes us into the realm of practical interest," Prof. Wilson said. "Losses of nitrogen to the atmosphere by decomposition of organic material -- and by man using explosives--are considerable. Unless such losses were compensated for, none of us would have made it this far to talk about it."

In concluding, Prof. Wilson quoted Ernest H. Volwiler, former president of the American Chemical Society:

"Few men can live on chance alone--to take advantage of chance, hard work must give chance an opportunity to develop. There is no telling where or how we may stumble onto a new idea, but no one stumbles over anything while he is standing still."

Prof. Wilson presented his recipe for scientific progress: "Secure a succession of hard-working, bright young graduate students such as those I have had, take them to the laboratory and start making experiments."

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## FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON 6, WISCONSIN RELEASE:

7/3/52

Immediately

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MADISON, Wis.--Tribute by one of the most distringuished American scientific organizations, the National Academy of Sciences, has been given to the late Homer B. Adkins, professor of chemistry at the University of Wisconsin and world authority on certain phases of organic chemistry, who died in 1949 at the height of his career.

The tribute has been published as a biographical memoir by the academy, and was written by Farrington Daniels, one of Adking! fellow scientists and faculty members.

Adkins was on the faculty of the UW for 30 years, during that time training thousands of students in organic chemistry and serving as teacher and advisor for more than 100 recipients of the Ph.D. degrees who are now in positions of responsibility and leadership in industry and education.

The memoir points out that Adkins' reputation as a research chemist of great ability was richly deserved, and this combined with his capacities as an administrator led the Office of Scientific Research and Development to entrust him and his laboratory with a large number of vital wartime research projects between 1940-46.

"He maintained a close contact with industry and was thereby able to bring to his graduate students, to his classes, and to his research a fresh, practical, and vigorous enthusiasm," the memoir states.

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ad one--Adkins

At the time of Adking death, Pres. E. B. Fred said, "He was recognized as one of the leading chemists that America has produced. He was the kind of man who makes a university distinguished."

During his life, Adkins published many research papers and several volumes on organic chemistry and was the recipient of many honors. He did not, however, lose personal contact with the laboratory.

"Even through his last years," Prof. Daniels points out, "he spent an appreciable amount of his time with his coat off working with his own hands in the laboratory adjacent to his office."

Because of his tremendous influence upon the development of the field of organic chemistry which expanded greatly during the three decades embracing both World Wars, Prof. Daniels affirms that Adkins "belonged to the close-knit group of leaders including Adams, Conant, Gilman, Marvel, Whitmore, and others who did much to influence the course of organic chemistry throughout the second quarter of the 20th century."

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#### U.W. NEWS 5/21/52

#### FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON 6, WISCONSIN

**RELEASE:** 

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MADISON---The appointment of C. K. Leith, University of Wisconsin emeritus professor of geology, to a top advisory board for the U. S. armed forces was announced today by the University.

Leith, for 37 years chairman of the UW geology department and considered by many to be among the world's great economic geologists, was recently appointed to the executive committee of the Metals and Minerals Advisory Board constituted by the National Academy of Sciences and the National Research Council.

The board, made up of experts from all over the country, will, at the request of the armed services, review technological problems including methods of beneficiating (concentrating or otherwise preparing for smelting) low grade ores to increase supply, recovery of minerals from slags and tailing piles, conservation in use, recovery of needed rare elements, substitution for scarce minerals, and improvement in alloys and end products.

Prof. Leith will continue in the position as consultant on raw materials to the Atomic Energy Commission.

The geologist's permanent address is now Washington, D. C., but Leith maintains a summer home at The Highlands in Madison and is accorded the University honor of a permanent office in Science Hall.

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Interviewed today at his old quarters on the campus and asked for comment on the work of the board, Leith said briefly, "It's for a sweeping coverage of technological problems--with full authority."

He spoke more willingly of the UW office he has called his own since the fall of 1892:

"I've sat in this chair for 60 years...worn out several cushions, but it's the same chair. My profession has taken me all over the world, but Science Hall is still headquarters."

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### WIRE NEWS 4/30/52

FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON 6, WISCONSIN

RELEASE:

Immediately

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WASHINGTON, D. C.--Two University of Wisconsin faculty members were elected to membership in the National Academy of Sciences, one of the highest honors the scientific world can bestow on American scientists, at the annual meeting of the academy being held this week in Washington, D. C.

The election of Profs. William S. Johnson and J. W. Williams, both members of the University of Wisconsin chemistry department, to academy member-ship was announced Wednesday.

Prof. Williams is known for his work on the physical chemistry of synthetic polymeric substances and on the chemistry of blood plasma proteins. Prof. Johnson's research into methods for synthesizing certain hormones has gained scientific attention throughout the world.

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## RENEWS FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON 6, WISCONSIN

4/25/51

**RELEASE:** Immediately

Madison, Mis. -- Two University of Wisconsin professors were among 30 scientists of the nation to be elected to full membership in the National Academy of Sciences, meeting in Washington, D. C., Tuesday.

They are Dr. A. J. Riker, plant pathology, and Dr. Harry Harlow, psychology.

Dr. Riker, a 30-year veteran of the University faculty, was born in Uheeling, L. Va. He received his B. A. in botany at Oberlin in 1917, his H. S. in botany at the University of Cincinnati in 1920, and his Ph. D. in plant pathology at the University of Wisconsin in 1922. He specializes in diseases of plants, with emphasis on forest trees, what makes healthy cells start diseased growth, and what keeps them going. He is a member of 13 other scientific societies and is the author or co-author of nearly 100 scientific papers.

Dr. Harlow has gained national recognition for his work in comparative and physiological psychology and is especially noted for his work on the psychology of monkeys and the applications of such knowledge to problems in the human field. Born in Fairfield, Iowa, he was educated at Reed college, 1923-24, and Stanford, 1924-30, receiving the B. A. and Ph.D. degrees. He came to wisconsin in 1939 and has authored more than 60 publications. He was president of the Midwest Psychological association in 1947-48. Currently Dr. Harlow is on leave of absence for work with the Research and Development divison of the army.

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### ENERGY FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON 6, WISCONSIN 4/26/49

**RELEASE:** Immediately

Dr. Samuel M. McElvain, professor of chemistry at the University of Wisconsin, was elected a member of the National Academy of Sciences at a meeting of the academy in Washington Tuesday. Election to the academy is a recognition of unusual ability and carries with it an obligation to the government. Only 30 men may be elected to membership at each annual meeting.

Dr. McElvain came to the University of Wisconsin in 1923 after receiving his Ph.D. at the University of Illinois. His special field is organic chemistry. He is a member of the American Chemical society. the British Chemical society, and Sigma Xi. the foremost general science society.

The University of Wisconsin ranked second among state universities in the number of members in the academy before Tuesday's election. Only nine universities in the country had more members than Wisconsin.

Twelve University of Wisconsin men previously honored by membership are: President Edwin B. Fred; Conrad A. Elvehjem, dean of the Graduate School and chairman of the biochemistry department; Charles E. Allen, emeritus professor of botany; Edwin B. Hart, emeritus professor of biochemistry; Walter J. Meek, emeritus dean of the Medical

school; Joel Stebbins, emeritus professor of astronomy; Charles K. Leith, emeritus professor of geology; Homer Adkins, professor of chemistry; Royal A. Brink, professor of genetics; Farrington Daniels, professor of chemistry; Karl P. Link, professor of biochemistry; and John C. Walker, professor of plant pathology.

The academy serves as scientific adviser to the government on problems of science and appl'ed science. From it any department may seek unbiased, expert aid. As a result, membership is restricted largely to scientists who have made major contributions to knowledge and are in a position, upon request, to serve the government in the solution of its problems in science.

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FROM THE UNIVERSITY OF WISCONSIN NEWS SERVICE, MADISON, WISCONSIN 53706 RELEASE: Immediately

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MADISON, Wis.--Four Russian scientists--astronomers and specialists in optical instrumentation--will visit the staff and facilities of the University of Wisconsin's Washburn Observatory at Madison beginning Monday (Nov. 9).

Their four-day get together with Wisconsin astronomers is part of an interacademy exchange program being carried out by the American National Academy of Sciences and the Academy of Sciences of the USSR.

The visiting scientists are Vladimir B. Nikonov, head of the stellar physic. section, Crimean Astrophysical Observatory; N. N. Mikhelson, senior scientific associate at the Main Astronomical Observatory of the Academy of Sciences, Leningrad; A. R. Gorshkov, also a senior scientific associate at the Main Astronomical Observatory and a consultant of the State Optical Instrument Plant, Leningrad; and B. K. Ioannisiani, consultant at the Main Stronomical Observatory and section head at the State Optical Instrument Plant, Leningrad.

The Russians arrived in the U. S. in late September for a two-month tour of American institutions concerned with astronomy. They have already visited western observatories such as Lowell at Flagstaff, Arizona, and Lick, Mount Wilson, and Palomar in California. They will visit the University of Chicago's Yerkes Observatory at Williams Bay, Wis., just prior to arrival at Madison. Harvard's astronomical facilities and staff will also be visited before the scientists leave for home shores in late November.

Russia and the U. S. are perhaps the two leading nations in astronomical research, UW Prof. Robert Bless, astronomy, pointed out as the coming visit of the scientists was announced. The Russians have a long tradition of studies in astronomy and their Pulkova Observatory at Leningrad is one of the oldest and most important observatories in Europe. 2101 CONSTITUTION AVENUE, N W. WASHINGTON STELEPHONE EXECUTIVE 3-8100 FOR RELEASE FEBRUARY 7, 1960 FOR RELEASE FEBRUARY 7, 1960 FOR RELEASE FEBRUARY 7, 1960 FOR RELEASE FEBRUARY 7, 1960

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Washington, Feb. 6 -- Two members of the National Academy of Sciences will visit 11 Asian countries during the next four months to explore with Asian scientific leaders how the development of their countries can most effectively be furthered by science and technology.

The two academic ambassadors of science are Dr. Farrington Daniels, vice president of the Academy and professor emeritus of chemistry, University of Wisconsin, and Dr. Ralph E. Cleland, distinguished service professor of botany, Indiana University, and chairman of the Academy's Committee on Science in UNESCO.

Between them, they will visit Pakistan, India, Burma, Thailand, Malaya, Indonesia, the Philippines, Viet Nam, Republic of China (Taiwan), Republic of Korea, and Japan, as well as Singapore and Hong Kong. Conversations, formal and informal, will be held not only with the heads of leading scientific organizations in each country, but also with government officials in science and education, members of science and engineering faculties, and researchers in basic and applied sciences.

Officials of the Academy, a private organization of U.S. scientists, expressed the conviction that out of these scientist-to-scientist exchanges will come closer working relationships between scientists of both regions and a deeper understanding on the part of the Academy of the scientific and technical aspirations of each country -- and how these can best be served by the Academy and the private and governmental organizations with which it is associated.

This first Asia-wide study of the scientific development problems of emerging nations has been arranged under the joint auspices of the Academy and The Asia Foundation. The latter has representatives in nearly all countries to be visited and supports science programs in Asian scientific and educational institutions. Dr. Robert Blum, president of the Foundation, observed that in science, as in other fields, too few Asian leaders had an opportunity to exchange views with Americans of distinguished reputation and broad interests. Blum sees the tour of Daniels and Cleland as part of a broader program in which outstanding Americans may visit Asia under private sponsorship for candid discussions on issues and problems of mutual interest.

In addition to their broader discussions, Dr. Daniels and Dr. Cleland plan to report on recent findings in two scientific fields of particular interest to Asian countries, both through popularized lectures to large groups and technical lectures to professional specialists.

Dr. Daniels -- a distinguished physical chemist whose special interest in the applications of solar energy has previously taken him to India, Pakistan, and Thailand -will propose that concentrated research in this field of study offers greater and far more immediate rewards to most nations than corresponding efforts in the field of atomic energy.

Dr. Cleland, an internationally recognized botanist, will carry a similarly affirmative message on the subject of plant genetics; he has said that there are many countries on his itinerary whose agriculture could profit directly from an increased emphasis on research in this field.

Accompanying Daniels and Cleland on part of the trip will be Dr. Harold J. Coolidge, executive director of the Pacific Science Board. Established by the Academy in 1946, the Board aids American scientists who wish to engage in scientific investigations in the Pacific area, advises governmental and other agencies on scientific matters pertaining to the Pacific, and furthers international cooperation in the field of Pacific science.

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The members of the Academy mission will lecture -- with slides and films -- to scientific societies as well as participate in symposia and seminars that concern their various scientific specialties.

They may also invite distinguished scientists from Southeast Asia to spend several months in the United States as guests of the National Academy of Sciences. A three-year program to provide for such visits has been developed with The Asia Foundation in order to familiarize scientists from this region with the structure of science organization in this country.

Dr. Daniels, author of numerous books and articles on various branches of physical chemistry, has served as president of the American Chemical Society and the Geochemical Society as well as Chairman of the Board of Governors at the Argonne National Laboratory. He is currently an adviser on Chemical Energy Sources to the National Aeronautics and Space Administration.

Dr. Cleland has served the Academy in several positions. Besides his chairmanship of the Academy's Committee on Science in UNESCO, he has held the post of chairman of the Division of Biology and Agriculture and is currently chairman of the Advisory Committee to the Office of Scientific Personnel. He has been vice president of the International Union of Biological Sciences and president of the Botanical Society of America, American Society of Naturalists, and Genetics Society of America. At the present time, he is a member of the U.S. National Commission to UNESCO and editor of the section on plant cytology of "Biological Abstracts."

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