

## ***American Scientist***

### **Promoting cross-disciplinary communication.**

Sigma Xi's award-winning bimonthly magazine, *American Scientist*, explores the world of discovery – from biology, chemistry, physics and geology, to astronomy, computing, psychology, mathematics and technology. The magazine's primary aim is to inform scientists and engineers about developments outside their own fields, but teachers and journalists also find it highly useful. Included in every issue, Scientists' Bookshelf is the most comprehensive book-review section offered by any science magazine. Through *American Scientist Online*, subscribers have access to a range of additional features and services, including free e-newsletters, supplementary interviews and a full-text archive. Visit [www.americanscientist.org](http://www.americanscientist.org) for more information and highlights of the current issue.

## **Grants-in-Aid of Research**

### **Investing in the future of science and engineering.**

For more than 80 years, Sigma Xi has invested in the future of science by awarding small grants to approximately 30,000 graduate and undergraduate students. Often, Sigma Xi Grants-in-Aid of Research provide "seed" money, enabling young scientists to gather the initial data they need to launch their careers and compete for larger grants. Receiving a Sigma Xi grant has been an early milestone in many distinguished careers. Since 1983, Sigma Xi also has administered a pool of grant funds for the National Academy of Sciences. A volunteer committee of Sigma Xi members reviews grant proposals, which are judged solely on the basis of their scientific merit.

# SIGMA XI

THE SCIENTIFIC RESEARCH SOCIETY

Sigma Xi has a distinguished history of more than a century of service to science and society. Its programs and activities have expanded to include new initiatives in science and engineering education, ethics in research, public understanding of science, international science networking and the overall health of the research enterprise.

In addition to publishing award-winning *American Scientist* magazine, Sigma Xi provides hundreds of grants annually to promising student researchers. The Sigma Xi Student Research Conference, held in conjunction with the Society's annual meeting, is well on its way to becoming the premiere event of its kind.

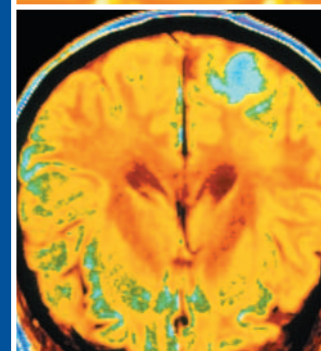
Approximately 70,000 scientists and engineers maintain active membership in Sigma Xi and most are affiliated with one of the more than 500 Sigma Xi chapters located in North America and around the world.

Nearly 200 Sigma Xi members have received the Nobel Prize.

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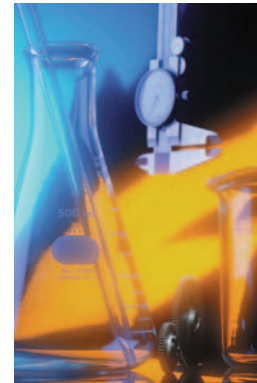
# SIGMA XI

THE SCIENTIFIC RESEARCH SOCIETY



## **Sigma Xi, The Scientific Research Society**

Sigma Xi is the international honor society of science and engineering. Founded in 1886, it is one of the oldest and largest interdisciplinary scientific organizations in the world. Its mission is to enhance the health of the research enterprise, foster integrity in science and engineering and promote the public's understanding of science for the purpose of improving the human condition.



Today, Sigma Xi is a non-profit membership society of scientists and engineers whose research spans the spectrum of science and technology. Sigma Xi chapters, located at colleges and universities, government laboratories and industry research centers in North America and around the world, provide a supportive environment for those engaged in multi-disciplinary research activities.

Membership in Sigma Xi is by invitation. Those who have shown potential as researchers are invited to join as associate members. Full membership is conferred upon those who have demonstrated noteworthy achievements in research. Each year the Society initiates approximately 5,000 new members.

## Sigma Xi – Making a Difference

### Nurturing programs at the grass-roots level.

Sigma Xi's more than 500 chapters constitute a unique network for education, mentoring, public involvement and collegial interaction. It is at the chapter level, working within the local community, that Sigma Xi has its greatest influence and potential. Major programmatic efforts focus on:

- Ethics and values in research
- Science and engineering education
- Public understanding of science
- International science networking
- The health of the research enterprise

Among other activities, many Sigma Xi chapters honor outstanding local science and mathematics students and teachers; hold lively public forums; organize student research symposiums; sponsor scholarships and grants; provide judges for high school science fairs; and undertake minority outreach programs and public education projects in partnership with local schools.

### Society Outreach Programs

#### Promoting the health of the research enterprise.

Initiatives at the Society level address issues impacting science and society. For example, an international United Nations-Sigma Xi Scientific Expert Group is developing practical recommendations for addressing the effects of global climate change. Sigma Xi's popular ethics guidebooks, *Honor in Science* and *The Responsible Researcher*, are required reading in many graduate programs and research departments. The national Sigma Xi Postdoctoral Survey is designed to allow institutions to benchmark their postdoc policies and practices against those at peer institutions.



## Student Research Conference

### Encouraging the next generation of researchers.

Held in conjunction with the Society's annual meeting, the Sigma Xi Student Research Conference showcases the work of hundreds of undergraduate researchers from North America and abroad. During the two-day conference, participants present research posters, attend career development workshops and participate in mentoring and networking activities, panel discussions and other events. Local Sigma Xi members and those attending the annual meeting serve as judges for the poster competition. Monetary awards are presented for outstanding research.

### Science in the News

#### Providing a bridge between science and the media.

Sigma Xi's Media Resource Service (MediaResource) produces the popular "Science in the News" daily e-newsletter highlighting the top science news stories from major newspapers. Produced in conjunction with *American Scientist Online*, "Science in the News Weekly" provides a digest of the week's top stories from "Science in the News," plus weekend breaking news and feature stories. Visit [www.mediaresource.org](http://www.mediaresource.org) to subscribe to these free e-newsletters. Sigma Xi operates MediaResource as part of its mission to improve the public understanding of science. Every day, MediaResource helps print and broadcast journalists locate experts in science and technology to interview for their news and feature stories. The service is free to journalists.

### The Sigma Xi Center

#### A hub of activity in support of science and engineering.

The Society's new home in Research Triangle Park, North Carolina, enhances Sigma Xi's ability to support and facilitate chapter activities, while providing a higher level of member service. It also allows expansion of programs in support of the science and engineering community. Webcasts of workshops and conferences from the Sigma Xi Center will broaden important discussions among chapters and members. A capital campaign is currently under way to fund the cost of constructing the new building. Members and friends have the opportunity to honor others with their tax-deductible gifts. Visit [www.sigmaxi.org](http://www.sigmaxi.org) for more information.

*The Hall of Honor, commemorating Sigma Xi Nobel laureates, overlooks the Sigma Xi Center entry plaza. Inscribed paving stones in the plaza acknowledge gifts in support of the Sigma Xi Center made in honor of mentors or others. A special section recognizes gifts by Sigma Xi chapters.*

## Nobel Prize Winners in Sigma Xi

### Physics

1907 Albert A. Michelson  
1921 Albert Einstein  
1923 Robert A. Millikan  
1925 James Franck  
1927 Arthur H. Compton  
1936 Carl D. Anderson  
1937 Clinton Davisson  
1938 Enrico Fermi  
1939 Ernest Lawrence  
1943 Otto Stern  
1944 Isidor Isaac Rabi  
1945 Wolfgang Pauli  
1946 Percy W. Bridgman  
1952 Felix Bloch  
E. M. Purcell  
1955 Polykarp Kusch  
Willis E. Lamb  
1956 John Bardeen  
Walter H. Brattain  
William B. Shockley  
Chen Ning Yang  
1957 Owen Chamberlain  
Emilio Segrè  
1960 Donald A. Glaser  
1961 Robert Hofstadter  
1963 Maria Goeppert-Mayer  
Eugene Wigner  
1964 Charles H. Townes  
1965 Richard P. Feynman  
Julian Schwinger  
1967 Hans Bethe  
1968 Luis Alvarez  
1969 Murray Gell-Mann  
1972 John Bardeen  
Leon N. Cooper  
Robert Schrieffer  
1973 Ivar Giaever  
1975 Ben R. Mottelson  
James Rainwater  
1976 Burton Richter  
1977 Philip W. Anderson  
John H. van Vleck  
1978 Arno Penzias  
Robert Woodrow Wilson  
1979 Sheldon Glashow  
1980 James Cronin  
Val Fitch  
1981 Nicolaas Bloembergen  
Arthur L. Schawlow  
1982 Kenneth G. Wilson

1983 Subramanyan Chandrasekhar  
William A. Fowler  
1988 Leon M. Lederman  
Melvin Schwartz  
Jack Steinberger  
1989 Hans G. Dehmelt  
Norman F. Ramsey  
1990 Henry W. Kendall  
Richard E. Taylor  
1993 Joseph H. Taylor, Jr.  
1994 Clifford G. Shull  
1995 Martin L. Perl  
Frederick Reines  
1996 David M. Lee  
1997 William D. Phillips  
2000 Herbert Kroemer  
2002 Raymond Davis, Jr.  
Masatoshi Koshiba

### Chemistry

1926 The Svedberg  
1932 Irving Langmuir  
1934 Harold C. Urey  
1936 Peter Debye  
1946 John H. Northrop  
James B. Sumner  
1948 Arne Tiselius  
1949 William F. Giauque  
1951 Edwin M. McMillan  
Glenn T. Seaborg  
1954 Linus Pauling  
1955 Vincent du Vigneaud  
1959 Jaroslav Heyrovsky  
1960 Willard F. Libby  
1961 Melvin Calvin  
1965 Robert B. Woodward  
1966 Robert S. Mulliken  
1968 Lars Onsager  
1970 Luis Leloir  
1972 Christian Anfinsen  
Stanford Moore  
William H. Stein  
1973 Geoffrey Wilkinson  
1974 Paul J. Flory  
1976 William Lipscomb  
1979 Herbert C. Brown  
1980 Paul Berg  
Walter Gilbert  
1981 Roald Hoffmann  
1983 Henry Taube  
1984 Bruce Merrifield

1985 Herbert A. Hauptman  
Jerome Karle  
1986 Dudley R. Herschbach  
1987 Donald J. Cram  
1989 Sidney Altman  
1990 Elias James Corey  
1992 Rudolph A. Marcus  
1993 Kary B. Mullis  
Michael Smith  
1994 George A. Olah  
1995 Mario J. Molina  
F. Sherwood Rowland  
1996 Robert F. Curl, Jr.  
1997 Paul D. Boyer  
1998 Walter Kohn  
John Pople  
1999 Ahmed Zewail  
2000 Alan Heeger  
Alan G. MacDiarmid  
2001 William S. Knowles  
2002 John B. Fenn  
2004 Irwin Rose

### Physiology or Medicine

1912 Alexis Carrel  
1920 August Krogh  
1922 Archibald V. Hill  
Otto Meyerhof  
1933 Thomas H. Morgan  
1934 George R. Minot  
William P. Murphy  
George H. Whipple  
1936 Otto Loewi  
1943 Henrik Dam  
Edward A. Doisy  
1944 Joseph Erlanger  
Herbert S. Gasser  
1946 Hermann J. Muller  
1947 Carl Cori  
Gerty Cori  
1950 Philip S. Hench  
Edward C. Kendall  
1951 Max Theiler  
1952 Selman A. Waksman  
1953 Fritz Lipmann  
1954 John F. Enders  
Frederick C. Robbins  
Thomas H. Weller  
1956 Dickinson W. Richards  
1958 George Beadle  
Joshua Lederberg  
Edward Tatum  
1959 Arthur Kornberg  
1961 Georg von Békésy

1962 Francis Crick  
James Watson  
1964 Konrad Bloch  
1966 Charles B. Huggins  
Peyton Rous  
1967 Haldan K. Hartline  
George Wald  
1968 Robert W. Holley  
Marshall W. Nirenberg  
1969 Max Delbrück  
Alfred D. Hershey  
Salvador E. Luria  
1970 Julius Axelrod  
1971 Earl W. Sutherland, Jr.  
1972 Gerald M. Edelman  
1974 Christian de Duve  
George E. Palade  
1975 David Baltimore  
Howard M. Temin  
1976 D. Carleton Gajdusek  
1977 Andrew V. Schally  
Rosalyn Yalow  
1979 Allan M. Cormack  
1980 George D. Snell  
1981 David H. Hubel  
Roger W. Sperry  
1983 Barbara McClintock  
1986 Stanley Cohen  
Rita Levi-Montalcini  
1988 Gertrude B. Elion  
George H. Hitchings  
1992 Edmond H. Fischer  
Edwin G. Krebs  
1994 Alfred G. Gilman  
1998 Robert F. Gilbert  
Louis J. Ignarro  
1999 Günter Blobel  
2000 Paul Greengard  
2002 H. Robert Horvitz  
2003 Paul C. Lauterbur

### Economics

1969 Ragnar Frisch  
1972 Kenneth J. Arrow  
1978 Herbert A. Simon  
1994 John F. Nash, Jr.  
1997 Robert C. Merton  
2001 George A. Akerlof  
2002 Daniel Kahneman

### Peace

1962 Linus Pauling  
1970 Norman Borlaug