



American Chemical Society NATIONAL AWARDS NOMINATION FORM

Deadline: November 1

Directions: Any individual, except a member of the award selection committee for that award, may nominate or support *only* one nominee for each award during any given award year. Please save this Microsoft Word document to your hard drive before completing. Complete all fields.

Submittal process: Method of submittal is by email attachment of each of the following: nomination and optional support forms, publications and patent list, and biographical sketch or curriculum vitae, in separate files to awards@acs.org.

Date: October 9, 2006

ACS Award Name: 2008 ACS Award in Organic Chemistry

NOMINATOR INFORMATION

First Name: Jane

Middle Initial: A.

Last Name: Jones

Company or Institutional Affiliation: Stratford University

Present Position (Exact Title): Associate Professor

Address: Department of Chemistry, 1444 Running Point Road

City: Pittsfield

State: MD

Zip: 20777

Country: USA

Telephone: 301-555-1400

Fax: 301-555-1450

Email: jonesja@chemistry.stratford.edu

SAMPLE

NOMINEE INFORMATION

First Name: James

Middle Initial: R

Last Name: Smith

Company or Institutional Affiliation: The Deer Park Institute

Present Position (Exact Title): Professor and Chair

Address: Department of Chemistry, 1111 Texas Avenue, NW

City: Washington

State: DC

Zip: 20004

Country: USA

Business Telephone: 202-555-2400

Home Telephone: 202-555-4001

Fax: 202-555-2469

Email: jrsmith@deerpark.edu

Date of Birth: January 5, 1946

Is the nominee an U.S. citizen?

Yes No

Required for the Earle B. Barnes Award, the Francis P. Garvan–John M. Olin Medal, and the Charles Lathrop Parsons Award)

Has this nomination been discussed with the nominee? Yes No

SUGGESTED CITATION (25 words or less)

In the space below, paste or type a suggested citation. A citation is a hallmark or brief summary of the nominee's accomplishments in reference to the award for which they are nominated.

For outstanding contributions to organic chemistry, biology, and medicine regarding total synthesis of natural products, new synthetics technologies, and chemical biology

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Has this achievement been the basis of any other previously awarded ACS national award?

Yes No

If yes, how does this nomination differ from previous body of work honored?

RECOMMENDATION

In the space below, paste or type a narrative summary of 1,000 words or less. A separate attachment may be substituted. Include the following in your narrative:

- Evaluate the nominee's accomplishments and a specific identification of the work to be recognized.
- Explain why the nominee is being recommended for this award with regard to the stated purposes of the award.
- If the nominee has received another ACS award within the last five years, specifically describe why this nomination is appropriate.
- If the nominee has received a previous ACS award, describe why this award nomination does not cover the basis for a previous award.
- Analyze patents if cited.
- If the nominee is not the sole author of works, specify the contribution of the nominee.

SAMPLE

It is with distinct pleasure that I am writing to nominate Professor James R. Smith for the 2008 ACS Award in Organic Chemistry for his outstanding contributions to the field of organic chemistry. Professor Smith was recognized by the ACS with both the Arthur C. Cope Award and the Guenther Award in the Chemistry of Natural Products. This nomination is based specifically on the grounds of Professor Smith's important contributions to total synthesis, new synthetic technologies and chemical biology.

Professor Smith is widely considered today as one of the most creative and productive synthetic organic chemists in the world. His original and imaginative work in natural products synthesis has pushed forward the frontiers of the field beyond its classical boundaries into new territories. Three aspects of his work distinguish him as a world leader of this field. He not only selects his targets carefully and with exquisite taste for unique and imposing molecular architectures, but also he proceeds to synthesize them swiftly through elegant and novel strategies, usually being the first to succeed. Second, he intentionally practices, with remarkable

ingenuity, the concept of inventing and developing new synthetic technologies for solving the total synthesis at hand but which often find far wider applications. Third, once the chemical synthesis of the target molecule is accomplished, he proceeds further to design and synthesize biological tools and mimics of the naturally occurring substances for biological and medical investigations. As such, his contributions reflect a new duality in the field of natural products, where the target itself affords the opportunity to create new science in organic chemistry and natural product-like mimics enable exploration of problems in biology and medicine. Thus, the field of chemical synthesis and natural products synthesis has been advanced largely due to his pioneering research and vision for natural products synthesis and for the chemistry-biology interface. Examination of his work amply demonstrates the originality, elegance and practical applications of his contributions to this new field of investigation, for the overall benefit of mankind.

Specific examples of his most notable recent landmark achievement include the total syntheses of Compound B, substance A, mixture-1, amalgam A, amal toxin C, blendotoxin, the AR-molecules, compound AF, substance TZ, blend A, combination C, amalgam Z, compound Z, compound XY, blend BC, amalgam-5, and compound AB, most of which he published first or essentially simultaneously with others. Furthermore, his leadership and preeminence extends over the areas of chemical synthesis and chemical biology of an impressively diverse array of compound classes such as oligosaccharides, and antimimetics, fields that he decisively helped to shape.

Throughout his career, Smith has demonstrated originality and imagination in his new synthetic methods and strategies towards his target molecules. Among his most recent forays in this arena are his accomplishments in new synthetic methods which accompanied his total syntheses of amal toxin-1, the AR-toxins, biamal toxins (biomimetic cascades) and blends AC, compound DC, the substances A-Z, and compound X (Diels-Alder cascade). Besides being successful in solving the specific problems at hand, Smith's synthetic methods, reagents and strategies, are receiving widespread praise and use in other areas of chemistry, including the pharmaceutical and biotechnology industries. Most importantly, careful examination of the literature reveals that his original discoveries often pave the way and stimulate new developments in many other laboratories.

A most important and significant aspect of Smith's work in synthesis is the impact it has had on the fields of biology and medicine. His creativity does not stop at the chemical synthesis border; instead it crosses the boundaries into biology through the art and science of molecular design, chemical synthesis, and biological investigation. Many natural products with important cellular actions have been rendered available for extensive biological investigations. In recent years, these compounds include mixtures A and B, two potent antitumor agents isolated from bacteria, and compounds A and B and substance R, three marine-derived and polymerization and microtubule stabilizing agents. Combining the newer techniques and concepts in molecular design, solid phase synthesis, combinatorial chemistry, and biological screening, these endeavors point to a new style by which target-driven total synthesis will be practiced in the new century.

Smith has also made important contributions to combinatorial chemistry, as a co-inventor of a new strategy, known as analog-frequency chemistry (AFC), which decisively helped to shape the revolution in drug discovery of in terms of both scope and speed. Developed in collaboration with a biotechnology company and already enjoying widespread use in the pharmaceutical industry, this new technology combines ideas from chemistry and electronics for large numbers of compounds with non-invasive encoding for structural identification. He continues to make major contributions in this field, as his recent solid phase synthesis of oligosaccharides, his elegant and ground-breaking solid phase synthesis of mixture A and subsequent library construction, and the many solid phase reagents and strategies emanating from his laboratories demonstrate.

The impact of Smith's work is manifested in the dozens of complex natural products and thousands of designed molecules he synthesized, as well as the hundreds of graduates students and postdoctoral fellows he has trained, and the worldwide use of his textbooks on organic synthesis. The influential nature of his contributions is reflected in the Institute of Scientific Information's (ISI) designation of him as one of the 10 most Highly Cited chemists in the world for the past 20 years.

He has served as an editor and on the editorial board of many books and journals, including being Associate Editor of the Journal of the American Chemical Society. He has served as a member of many panels and scientific delegations. He has held more than 75 special university lectureships and presented more than 150 lectures at national and international meetings. He has published two books and more than 500 scientific articles.

In summary, the works of Professor James R. Smith in the field of total synthesis, new synthetic methods and strategies, combinatorial chemistry, and chemical biology stand out as pioneering. His contributions have been widely recognized as evidenced by a number of international awards including the Monday Prize (2001), the John Doe Medal (2002), the Johnson Foundation Prize (2002), the Sunday Medal for Organic Chemistry (2001), the Signature Award (2002), and the Mercredi Prize (2002). He is a Member of the American Academy of Arts and Sciences and the National Academy of Sciences.

It is, therefore, with the outmost enthusiasm that I nominate him for the 2008 ACS Award in Organic Chemistry for his rich contributions to organic chemistry. His case is both compelling and timely, and his name on the list of previous winners will be appropriate and well deserved.

PUBLICATIONS AND PATENTS

In the space below, paste the nominee's publications and patents list. A separate attachment may be substituted.

Patents

1. Pharmaceutically Active 1,2-Compound A Analogs, J.R. Smith, W.E. Jones, R.L. Johnson.
2. Cyclic Ethers Including Oxygen and Sulfur Analogs of Compound XZ, J.R. Smith, W.E. Jones, R.L. Johnson, and Z. Smith.
3. Substance DC Analogs and N-Oxides Thereof, J.R. Smith, W.E. Jones and R.L. Johnson.
4. Compound R Analogs, J.R. Smith and R.L. Johnson.
5. Carbocyclic Compound R Analog, J.R. Smith, R.L. Johnson and D.A. Jones.
6. Cyclic Compound R Analog, J.R. Smith, R.L. Johnson and D.A. Jones.
7. Compound K Analogs, J.R. Smith, N.A. Carter and S.P. Seitz; Serial No. 325,553;

Books

1. Natural Products Synthesis, J.R. Smith and N.A. Carter, RA, Inc. Philadelphia, p. 100, 2001.
2. Total Synthesis, J.R. Smith and E.J. Sorensen, HVC Publishers, Berlin, Germany, p. 100, 2001.

3. Total Synthesis II, J.R. Smith and S.A. Snyder, HVC Publishers, Hamburg, Germany, p. 100, 2001.

Publications

1. Dicyclic Allenes, J.R. Smith, P.J. Brown, F. James, J. Chem. Soc., Chem. Commun., 100-105 (2001).
2. Synthesis of Compound Analog XZ, J.R. Smith, P.J. Brown, F. James, J. Chem. Soc., Chem. Commun., 105-110 (2001).
3. Monocyclic Dialkyls, J.R. Smith, P.J. Brown, F. James, Tetrahedron Lett., 110-115 (2001).
4. Diastereomeric Monocyclic Diallenes. The Synthesis and Properties of the Diastereomeric 3,4,9,10-Cyclodecatetraene-1,7-diones and 3,4,10,11-Cyclotetradecatetraene-1,8-diones, J.R. Smith, P.J. Brown, F. James, J. Am. Chem. Soc. 95, 115-120 (2001).
5. Monocyclic Allenes. The Synthesis of 3,8,9-Compound XY, J.R. Smith, P.J. Brown, F. James, J. Org. Chem. 38, 200-210 (2001).
6. Synthesis of 1,2,3,4,5,6-Cycloblendatoxin, J.R. Smith, P.J. Brown, F. James, J. Org. Chem. 38, 211-215 (2001).
7. Additions of Chloro- Halides to Compound ZZ, J.R. Smith and Thomas J. Thompson, J. Am. Chem. Soc. 96, 300-350 (2001).
8. A Short Synthetic Route to Triglycerides, J.E. Cortland, J.R. Smith, D.J. Bremer, Tetrahedron Lett. 400-500 (2001).
9. An Efficient and Mild Method for the Synthesis of Triglycerides, J.J. Cortland and J.R. Smith, J. Am. Chem. Soc. 96, 100-102 (2001).
10. Synthesis of Novel Carbohydrates in the Triglyceride Series, J.E. Cortland, J.R. Smith, L.S. Melvin, J. Am. Chem. Soc. 97, 100-110 (2001).

BIOGRAPHICAL SKETCH

In the space below, paste the nominee's biographical sketch (curriculum vitae). A separate attachment may be substituted.

Curriculum Vitae

James R. Smith

Date and Place of Birth: January 5, 1946, Washington, DC.

Marital Status: Married to Georgette K. Smith Children: (2) John and Jacob
Address: Department of Chemistry, The Deer Park Institute 1111 Texas Avenue, Washington, DC 20004 Telephone: (202) 555-2400; Facsimile: (202) 555-2469
Education: B.Sc. 1969 Stratford College, Philadelphia
Ph.D. 1972, Stratford College, Philadelphia with Professors F. Jones

Appointments:

1972-1974 - Research Assistant, Johnson University New York, NY with Professor J.T. Smith
1974-1976 - Research Associate, Vandenberg University Boston, MA with Professor J.E. Jones
1976-1980 - Assistant Professor of Chemistry University of Rockledge, Pittsburgh, PA
1981-1982 - Associate Professor of Chemistry University of Yorktown, Philadelphia, PA
1982-1989 - Professor of Chemistry McHendry University, Pensacola, FL
1989-1991 - Bridges-Thomas Professor of Chemistry University of Yorktown, Philadelphia, PA
1991-Present - Chairman, Department of Chemistry The Deer Park Institute, Washington, DC

Selected Professional Honors

- A.P. Sloan Fellowship
- Paul Janssen Prize for Creativity in Organic Synthesis
- J.S. Guggenheim Fellow
- Camille and Henry Dreyfus Teacher-Scholar Award
- ACS Arthur C. Cope Scholar Award
- Fellow of the New York Academy of Sciences
- Honorary M.A. (honoris causa) from the University of Stratford
- Alan R. Day Award, Washington Organic Chemist's Club
- ACS Arthur Cope Award
- Johnson Research Award for Synthetic Organic Chemistry
- Honorary Ph.D. (honoris causa) from the University of Frederick
- D.Sc. degree, University College, Paris University
- Rhone-Poulenc Medal of the Association of Chemistry
- ACS (Stratford Section) William H. Williams Medal

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- Pioneer of the American College of Chemists Award
- Capture Research Award
- ACS Ernest Guenther Award in the Chemistry of Natural Products
- Member of the National Academy of Sciences,
- Honorary Member of the Pharmaceutical Society of Canada
- Honorary Ph.D. (honoris causa) from the University of Avon
- Cliff S. Flavin Award in Organic Chemistry, University of Stratford
- Honorary Ph.D. (honoris causa) from the Vandenberg University
- ACS (Birchwood Section) Distinguished Scientist Award
- Honorary Ph.D. (honoris causa) from the Universidad de Oaxaca,
- ACS Linus Pauling Medal
- Honorary Ph.D. (honoris causa) from The Rosewood University
- Press Club Headliner Award, Washington, DC Press Club
- Sunday Prize, Japan
- Max Teller Prize, Birchwood University
- Fellow, American Association for the Advancement of Science
- Honorary Professorship from the Mercedes Institute of Organic Chemistry
- Paul Smith Gold Medal USA
- Honorary Ph.D. (honoris causa) from the Agricultural University of Stratford
- Ernest Johnson Prize, Ernest Johnson Research Foundation
- Sunday Medal of Organic Chemistry, Sunday University,
- Foreign Member, Academy of Paris, France
- Mercredi Prize for Creativity in Organic Chemistry
- Signature Award for Graduate Education in Chemistry

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Membership in Professional Organizations

American Chemical Society

Japanese Chemical Society

European Chemical Society

German Chemical Society

American Association for the Advancement of Science

American Institute of Chemical Engineers

Selected Professional Activities

Position	Years	Journal
Board of Consulting Editors	1995-pres.	Synthesis Publications
Co-Editor	1985-1990	Octagon
Co-Editor-in-Chief	1995-pres.	Science and Nature
Editorial Advisory Board	1995-pres.	Combinatorial Screening
Editorial Advisory Board	1995-pres.	Organic Communications
Editorial Advisory Board	1995-pres.	Chemical Biophysical
Editorial Advisory Board	1995-pres.	Chemistry & Biophysics
Editorial Board	1975-1988	Triglycerides and Medicine
Editorial Board	1995-pres.	Octagon
Editorial Board	1995-1998	Chemical Research
Editorial Board	1995-pres.	Carbohydrates
Editorial Board Magazine	1995-pres.	Chemistry – An American
Editorial Board	1995-pres.	Perspectives in Drug Design
Editorial Board Chemistry, Section B	1995-1997; 2001-pres.	Stratford Journal of
Editorial Board Chemistry	1995-pres.	Communications in Bioorganic
Editorial Board	1995-pres.	Current Organic Catalysis
International Advisory Board	1995-pres.	Angewandte Chemie
International Advisory Board	1995-pres.	Contemporary Organic Synthesis
International Advisory Board	1995-pres.	Perkins I
International Advisory Board	1995-pres.	Biomolecular Chemistry
International Advisory Board	1995-pres.	QSAR Science
Regional Advisory Board	1995-pres.	Chemical Communications
Regional Advisory Board	1995-2002	Chemical Transactions I

Lectureships and Symposia

2001

- ◆ Lecturer, Frontiers in Biochemistry Symposium, Center for Sciences at the Golden Gate University, San Francisco, CA
- ◆ Plenary Lecturer, International Carbohydrate Symposium, London
- ◆ Glaxo Lecturer, Stratford University, Philadelphia, PA

2002

- ◆ Lecturer, 10th Annual William S. Williams Symposium in Organic Chemistry, Stratford University, Dallas
- ◆ Mulberg Lecturer in Organic Chemistry, University of Columbia, Toronto, Canada
- ◆ Merck Dottman Lecturer, University of London, Ontario, Canada

2003

- ◆ Lecturer, Frontiers in Chemistry Symposium, University of Illinois, Champaign, IL
- ◆ Werner E. Baikeland Memorial Lecturer, University of Hamburg, Hamburg, Germany
- ◆ Pell-Johnson Centennial Lecturer, University of Yorktown, Williamsburg, VA
- ◆ Plenary Lecturer, Vascular Conference- Advanced School of Organic Chemistry, Italy
- ◆ Speaker, 40th Princeton ACS Fall Organic Chemistry Symposium, Princeton, NJ
- ◆ H. Williams Smith Lecturer in Chemistry at the University of South Dakota, SD
- ◆ Avon-Merton Jones Distinguished Lecturer, Vandenburg University, NY
- ◆ Cecil L. Myers Lecturer, The State University of New Jersey, New Brunswick, NJ
- ◆ Speaker, Organic Colloquium Series, Harvard University, Cambridge, MA

2004

- ◆ Karpman-Jones Lecturer, Vandenburg University, Washington, DC
- ◆ John Johnson Memorial Lecturer, Hoffmann-La Roche, Inc. Nutley, NJ
- ◆ Chemical Research Lecturer, Texas A&M University, College Station, TX
- ◆ Perlmann Lecturer, Technische Universitat Berlin, Germany

2005

- ◆ Stephens-Jones Distinguished Lecturer, Baylor University, Waco, TX
- ◆ Plenary Lecturer, 221st ACS National Meeting, San Francisco, CA
- ◆ ACL Distinguished Lecturer, The Birchwood University of New York, New York
- ◆ Burroughs Wellcome Distinguished Lecturer, University of Vandenburg, Denver,
- ◆ Speaker, Advanced School of Organic Chemistry, Rome, Italy
- ◆ Speaker, 3rd World Bio-Medical Conference, Paris, France

SUPPORT FORMS

Support forms are being requested from the following individuals (No more than two will be accepted).

Name, Affiliation, Telephone, Email

1. J.E. Cortland, Department of Chemistry, Mollenburgh University, 444-555-1400, 444-555-1500

2. Burton Thomas, Stratford College, Philadelphia, PA, 215-555-2440, thomasbk@chemistry.stratford.edu.

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