

SOT HONOR AND AWARD DESCRIPTIONS AND HISTORY

In recognition of distinguished toxicologists and students, SOT presents Honorary Membership and awards each year. In addition to receiving a plaque, recipients are honored at a special Awards Ceremony at the SOT Annual Meeting and their names are listed in SOT publications. The deadline for 2010 Honorary Membership and Award nominations is October 9, 2009.

SOT Council reviews nominations for Honorary Membership and the Awards Committee reviews applications for SOT Awards and most Sponsored Awards. Awards Committee members are not eligible to receive any awards conferred by the Committee while serving on the Committee and for one subsequent year.

The Best Paper Awards in *Toxicological Sciences* are reviewed by the Board of Publications. The Education Committee selects the recipients of the Pfizer Undergraduate Travel Award and the Committee on Diversity Initiatives selects the recipients of other undergraduate student awards. The Postdoctoral Assembly selects those receiving the Best Postdoctoral Publication Awards and the Student Advisory Council selects the recipients of the Outstanding Leadership Award. The Congressional Science Leadership Award is determined by Communications Committee and then the Council reviews the final candidates.

Nominations for many awards must be submitted by a sponsor and a seconder who are Full members of SOT using the On-Line Award Nomination form. The supporting documentation must indicate the candidate's achievements in toxicology and is critical in the review of each application. Some awards are submitted by the applicant. See the award description for the additional requirements and details. There are specific applications for Fellowships and Graduate Travel Support.

Other graduate student and postdoctoral fellow awards are available through Regional Chapters, Specialty Sections, and Special Interest Groups. A student or postdoctoral scholar may apply for any award for which he or she is eligible and may apply for and receive multiple awards, whether SOT, Regional Chapters, Special Interest Groups, or Specialty Sections sponsor the awards. Policies related to travel support are determined by the sponsor (SOT, Regional Chapter, Special Interest Group, or Specialty Section). **Students may only receive one SOT national travel award.**

Full descriptions of all current awards, awards no longer being offered, application procedures, and names of past recipients may be found on the SOT Web site at www.toxicology.org.

SOT Honor Descriptions



Honorary Membership

The Society of Toxicology recognizes non-members who embody outstanding and sustained achievements in the field of toxicology with Honorary Membership. Candidates are nominated by two full or associate members of the Society. Seconding letters and information regarding career achievements in toxicology should accompany the nomination. A two-thirds vote of Council determines recipients, with not more than two Honorary Members elected during any one term of Council. Nominations should be sent to SOT Headquarters by October 9.

Inductees

1962	..... Eugene M. K. Geiling*	1996	..... Sten G. Orrenius
1962	..... W. F. Von Oettingen*	1996	..... Dennis Parke
1962	..... Torald H. Sollman*	1997	..... John E. Casida
1963	..... Ethel Browning*	1997	..... Roger W. Russell*
1966	..... R. Tecwyn Williams*	1998	..... Jud Coon
1976	..... Norton Nelson*	1998	..... Michel Mercier
1982	..... George H. Hitchings*	1999	..... William O. Robertson
1986	..... Bernard B. Brodie*	1999	..... Takashi Sugimura
1986	..... Herbert Remmer*	2000	..... Findlay Russell
1991	..... Hyman J. Zimmerman*	2001	..... Herbert Needleman
1994	..... Ronald W. Estabrook	2007	..... Mario Molina
1994	..... Wendell W. Weber	2008	..... Lee Hartwell
1995	..... Gertrude B. Elion*	2008	..... H. Robert Horvitz
1995 Charles S. Lieber	2009 Gilbert S. Omenn
		2009 Sir John E. Walker



Indicates an SOT Sponsored Award

*Deceased

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SOT Award Descriptions



Achievement Award

The Achievement Award is presented to a member of the Society of Toxicology who has less than 15 years experience since obtaining his/her highest earned degree (in the year of the Annual Meeting of the Society of Toxicology) and who has made significant contributions to toxicology. This award consists of a plaque and a cash stipend.

Award Recipients

1967 Gabriel L. Plaa
1968 Allan H. Conney
1969 Samuel S. Epstein
1970 Sheldon D. Murphy*
1971 Yves Alarie
1972 Robert L. Dixon*
1974 Morris F. Cranmer
1975 Ian C. Munro
1976 Curtis D. Klaassen
1977 James E. Gibson
1978 Raymond D. Harbison
1979 Michael R. Boyd
1980 Philip G. Watanabe*
1982 Frederick P. Guengerich
1984 Melvin E. Andersen
1985 Alan R. Buckpitt
1986 Sam Kacew
1987 James S. Bus
1988 Jeanne M. Manson
1989 James P. Kehrer
1990 Michael P. Waalkes
1991 Debra Lynn Laskin
1992 Michael P. Holsapple
1993 David L. Eaton
1994 James L. Stevens
1995 Lucio G. Costa
1996 Kenneth S. Ramos
1997 Kevin E. Driscoll
1998 Rick G. Schnellmann
1999 Michel Charbonneau
2000 Christopher Bradfield
2001 Martin A. Philbert
2002 Ruth A. Roberts
2003 Lois D. Lehman-McKeeman
2004 David C. Dorman
2006 Jose E. Manautou
2007 Jeffrey M. Peters
2008 Ivan Rusyn
2009 Russell S. Thomas



Arnold J. Lehman Award

The Arnold J. Lehman Award is presented to recognize an individual who has made a major contribution to risk assessment and/or the regulation of chemical agents, including pharmaceuticals. The contribution may have resulted from the application of sound scientific principles to regulation and/or from research activities that have significantly influenced the regulatory process. The nominee may be employed in academia, government, or industry and must be an SOT member. This award consists of a plaque and a cash stipend.

Award Recipients

1980 Allan H. Conney
1981 Gabriel L. Plaa
1982 Gary M. Williams
1983 David P. Rall*
1984 Tibor Balasz
1985 Frederick Coulston*
1986 Gerrit Johannes Van Esch
1987 John P. Frawley*
1988 Kundan S. Khera*
1989 Richard H. Adamson
1990 Harold C. Grice
1991 Bernard A. Schwetz
1992 Roger O. McClellan
1993 Thomas W. Clarkson
1994 Bruce Ames
1995 Emil A. Pfitzer
1996 John F. Rosen
1998 Helmut Alfred Greim
2000 Carole A. Kimmel and Janardan K. Reddy
2001 Samuel M. Cohen
2002 Dennis Paustenbach
2003 Michael L. Dourson
2004 Melvin E. Andersen
2005 Rory B. Conolly
2006 Kathryn R. Mahaffey
2007 Harvey J. Clewell
2008 Vicki Dellarco
2009 Michael Bolger

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Best Postdoctoral Publication Awards

The Best Postdoctoral Publication Awards recognize talented postdoctoral researchers who have recently published exceptional papers in the field of toxicology. Applications are reviewed by the Postdoctoral Assembly Board and outside reviewers with appropriate scientific expertise. The research reported in the paper must have been conducted while the applicant was engaged in a postdoctoral research position. The applicant will be the first author on a peer-reviewed paper published on-line or in print, or in press, in the preceding interval of June 1 and May 31. The review process follows NIH conflict of interest, confidentiality, and nondisclosure rules.

Award Recipients

- 2007 Nadine Dragin
Kristen Mitchell
Drobna Zuzana
- 2008 Joshua P. Gray
Christie M. Sayes
Khristy J. Thompson
- 2009 Jeffrey W. Card
Kembra Howdeshell
Lewis Zhichang Shi



Board of Publications Best Paper in Toxicological Sciences Award

The Board of Publications Award for the Best Paper in *Toxicological Sciences* is presented to the author(s) of the best paper published in this official SOT publication during a 12-month period, terminating with the June issue of the calendar year preceding the Annual Meeting at which the award is presented. The author(s) need not be a member of the Society of Toxicology. Submissions should include a one-page summary of the paper's contribution to the science of toxicology and a copy of the article for which the nomination is being made. Any member of the Society may submit one title for consideration. In addition, the titles of no more than six papers to be considered are submitted by the editor of *Toxicological Sciences*. All papers submitted will be evaluated by the Board of Publications. This award consists of a plaque and a cash stipend. (This award was formerly known as the Frank R. Blood Award.)

Best Paper in Toxicological Sciences

Award Recipients

- 1995 J. L. Larson, D. C. Wolf, B. E. Butterworth
- 1995 M. I. Luster, C. Portier, D. G. Pait, G. J. Rosenthal,
D. R. Germolec, E. Corsini, B. L. Blaylock, P. Pollock,
Y. Kouchi, W. Craig, K. L. White, A. E. Munson,
C. E. Comment
- 1996 B. C. Allen, R. J. Kavlock, C. A. Kimmel,
E. M. Faustman

- 1997 F. L. Fort, H. Ando, T. Suzuki, M. Yamamoto,
T. Hamashima, S. Sato, T. Kitazaki, M. C. Matony,
G. D. Hodgen
- 1998 D. D. Parrish, M. J. Schlosser, J. C. Kapeghian, V. M. Traina
- 1999 C. A. Franklin, M. J. Inskip, C. L. Baccanale, C. M. Edwards,
W. I. Manton, E. Edwards, E. J. O'Flaherty
- 2000 H. A. Boulares, C. Giardina, C. L. Navarro, E. A. Khairallah*,
S. D. Cohen
- 2001 J. Chen, Y. Li, J. A. Lavigne, M. A. Trush, J. D. Yager
- 2002 M. J. Bajt, J. A. Lawson, S. L. Vonderfecht, J. S. Gujral,
H. Jaeschke
- 2003 S. Haddad, M. Beliveau, R. Tardif, K. Krishnan
- 2004 A. Nyska, C. Moyer, A. Ledbetter, D. Christiani,
M. Schlasweiler, D. Costa, R. Hauser, U. Kodavanti,
- 2005 N. V. Soucy, M. A. Ihnat, L. Hess, C. D. Kamat,
A. Barchowsky, M. J. Post, L. R. Klei, C. Clark,
- 2006 H. Sawada, K. Takami, S. Ashai
- 2007 T. Green, R. Lee, S. Lloyd, J. Noakes, T. Pastoor, R. Peffer,
M. Robinson, P. Rose, A. Toghil, F. Waechter, E. Weber
- 2008 S. Snykers, T. Vanhaecke, P. Papelue, A. Luttun, Y. Jiang,
Y. V. Heyden, C. Verfaillie, V. Rogiers
- 2009 Qian Yang, Tomokazu Nagano, Yatrik Shah,
Connie Cheung, Shinji Ito, Frank J. Gonzalez

Frank R. Blood Award

Award Recipients

- 1974 Y. Alarie
- 1975 D. J. Ecobichon, G. J. Johnstone, O. Hutzinger
- 1976 R. D. Brown
- 1977 J. Dedinas, G. D. DiVincenzo, C. J. Kaplan
- 1978 P. J. Gehring*, E. O. Madrid, G. R. McGowan,
P. G. Watanabe*
- 1979 R. Fradkin, E. J. Ritter, W. J. Scott, J. G. Wilson
- 1980 J. A. Last, P. F. Moore, O. G. Raabe, B. K. Tarkington
- 1981 Y. Alarie, M. Brady, C. Dixon, M. Karol
- 1982 M. E. Andersen, M. L. Gargas, L. J. Jenkins, Jr., R. A. Jones
- 1983 H. D. Heck
- 1984 E. Dybing, S. Nelson, E. Soderlund, C. Von Bahr
- 1985 N. Imura, M. Inokawa, K. Miura
- 1986 C. C. Wilhite, M. I. Dawson, K. J. Williams
- 1987 J. Kao, F. K. Patterson, J. Hall
- 1988 D. L. Laskin, S. Ji, A. M. Pilaro
- 1989 R. G. Cuddihy, W. C. Griffith, R. F. Henderson,
J. L. Mauderly, R. O. McClellan, M. D. Snipes, R. K. Wolff
- 1990 W. P. Beierschmitt, J. T. Brady, J. B. Bartolone, D. S. Wyand,
E. A. Khairallah*, S. D. Cohen
- 1991 J. B. Silkworth, D. Cutler, L. Antrim, D. Houston,
C. Tumasonis, L. S. Kaminsky
- 1992 D. A. Fox, S. D. Rubinstein, P. Hsu
- 1993 T. Mably, R. W. Moore, R. W. Goy, R. E. Peterson
- 1994 S. J. Borghoff, W. H. Lagarde

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Congressional Science Leadership Award

Congressional Science Leadership Award provides recognition of a Congressional leader who demonstrates reliance upon sound scientific principles in either 1) public policy or decision-making relating to health and safety or 2) in dedicated advancement of legislation for the protection of human, animal, and environmental health. The award consists of a plaque.

Award Recipient

2009 Congressman David Wu (D-OR)



Contributions to Public Awareness of the Importance of Animals in Toxicology Research Award

The Contributions to Public Awareness of the Importance of Animals in Toxicology Research Award is presented annually to an individual (or organization) in recognition of the contributions made to the public understanding of the role and importance of experimental animals in toxicological science. This award may be for either a single seminal piece of work or a longer-term contribution to public understanding of the necessity of the use of animals in toxicological research both to ensure and enhance the quality of human and animal health and the environment. The award consists of a plaque and a cash stipend.

Award Recipients

2000 Allegheny-Erie Chapter
2001 Massachusetts Society for Medical Research
2002 George Nethercutt
2003 Michael Derelanko
2004 North Carolina Association for Biomedical Research (NCABR), Americans for Medical Progress (AMP)
2005 Orrin G. Hatch, Foundation for Biomedical Research (FBR)
2006 Jayne Mackta



Distinguished Toxicology Scholar Award

The Distinguished Toxicology Scholar Award is presented to a member of SOT who has made substantial and seminal scientific contributions to our understanding of the science of toxicology. Nominees should be active scientists involved in toxicological research. The prime consideration for this award is scientific accomplishments. This award consists of a plaque and a cash stipend. (This award was presented in 2001 as the Scientific Achievement Award.)

Award Recipients

2001 James E. Troska
2003 Henry C. Pitot
2004 Gerald N. Wogan

2005 Daniel Nebert
2006 Sten G. Orrenius
2007 Stephen H. Safe
2008 Toshio Narahashi
2009 Lance R. Pohl



Education Award

The Education Award is presented to an individual who is distinguished by the teaching and training of toxicologists and who has made significant contributions to education in the broad field of toxicology. This award consists of a plaque and a cash stipend.

Award Recipients

1975 Harold C. Hodge*
1976 Ted A. Loomis
1977 Robert B. Forney*
1979 Sheldon D. Murphy*
1980 Herbert H. Cornish*
1981 Frederick Sperling*
1982 Lloyd W. Hazleton*
1983 Julius M. Coon*
1984 Frank Guthrie, Ernest Hodgson
1985 William B. Buck
1986 Robert I. Krieger
1987 Gabriel L. Plaa
1988 John Autian
1989 Tom S. Miya
1990 Charles H. Hine
1991 Hanspeter R. Witschi
1992 Dean E. Carter
1993 Curtis D. Klaassen
1994 Robert A. Neal
1995 William Carlton
1996 Robert Snyder
1997 Albert E. Munson
1998 David J. Holbrook
1999 Jules Brodeur
2000 Gary Carlson
2001 Harihara Mehendale
2002 Joseph Borzelleca
2003 Frederick W. Oehme
2004 A. Jay Gandolfi
2005 Nobuyuki Ito
2006 Robert A. Schatz
2007 Torbjörn Malmfors
2008 Steven Cohen
2009 Janice E. Chambers
2009 Serrine S. Lau

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Enhancement of Animal Welfare Award

The Enhancement of Animal Welfare Award is presented annually to a member of the Society in recognition of the contribution made to the advancement of toxicological science through the development and application of methods that replace, refine, or reduce the need for experimental animals. This award recognizes outstanding/significant contributions made by members of the Society of Toxicology to the sound and responsible use of animals in scientific research. The achievement recognized may be either a seminal piece of work or a long-term contribution to toxicological science and animal welfare. The award consists of a plaque and a cash stipend.

Award Recipients

2000 Yves Alarie
2001 Alan Goldberg
2002 Gary Williams
2003 G. Frank Gerberick
2003 Ian Kimber
2005 Daniel Acosta
2006 William S. Stokes
2007 Thomas Hartung
2009 Sally Robinson



Founders Award

The SOT Founders Award is presented to a full or retired full member of the Society of Toxicology who has demonstrated outstanding leadership in fostering the role of toxicological sciences in safety decision-making through the development and/or application of state-of-the-art approaches that elucidate, with a high degree of confidence, the distinctions for humans between safe and unsafe levels of exposures to chemical and physical agents.

Award Recipient

2008 John Doull
2009 Roger O. McClellan



Graduate Student Travel Support

Graduate Student Travel Support defrays expenses for doctoral students presenting platform talks or posters at the SOT Annual Meeting. To be eligible, the student must be a SOT member (or have submitted a membership application) who has not previously received SOT Graduate Student Travel Support. Funding priority is based on seniority in graduate school.



Leading Edge in Basic Science Award

The Leading Edge in Basic Science Award is presented to a scientist who, based on his/her research, has made a recent (within the last 5 years), seminal basic scientific contribution to understanding fundamental mechanisms of toxicity. The recipient may be a respected basic scientist, member or non-member, including toxicologists as well as other scientists who may not identify themselves with the discipline of toxicology but whose research findings are likely to have a pervasive impact on the field of toxicology.

Award Recipient

2009 John Katzenellenbogen



Merit Award

The Merit Award is presented to a member of the Society of Toxicology in recognition of distinguished contributions to toxicology throughout an entire career in areas such as research, teaching, regulatory activities, consulting, and service to the Society. This award consists of a plaque and a cash stipend. The recipient delivers the Merit Awardee Lecture at the SOT Annual Meeting.

Award Recipients

1966 Henry F. Smyth, Jr.*
1967 Arnold J. Lehman*
1968 R. T. Williams*
1969 Harold C. Hodge*
1970 Don D. Irish
1971 Kenneth P. DuBois
1972 O. Garth Fitzhugh*
1973 Herbert E. Stokinger*
1974 William B. Deichmann*
1975 Frederick Coulston*
1976 Verald K. Rowe*
1977 Harry W. Hays*
1978 Julius M. Coon*
1979 David W. Fassett*
1980 Bernard L. Oser
1981 John H. Weisburger
1982 Harold M. Peck
1983 Perry J. Gehring*
1984 Tom S. Miya
1985 Carrol S. Weil*
1986 Ted A. Loomis
1987 Bo Holmstedt
1988 Seymour L. Friess
1989 Wayland J. Hayes, Jr.*
1990 Sheldon D. Murphy*
1991 Toshio Narahashi
1992 W. Norman Aldridge

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1993	John Doull
1994	Ernest Hodgson
1995	Robert A. Scala
1996	Gabriel L. Plaa
1997	.....	Mary O. Amdur*
1998	.....	John A. Thomas
1999	.....	Thomas Clarkson
2000	.....	Philippe Shubik*
2001	.....	Donald Reed
2002	.....	Bernard Schwetz
2003	.....	M. W. Anders
2004	.....	Robert Goyer
2005	.....	Roger McClellan
2006	.....	A. Wallace Hayes
2007	.....	James A. Swenberg
2008	.....	Hanspeter Witschi
2009	.....	Gary M. Williams



Minority Undergraduate Student and Advisor Awards

The Minority Undergraduate Student and Advisor Awards provide support for awardees to participate in the Undergraduate Education Program at the SOT Annual Meeting. This program is an introduction to the discipline of toxicology for undergraduate science majors and includes an orientation, a special poster session with scientists, and activities with an SOT mentor. The travel awards are for those from races and ethnic groups underrepresented in the sciences (African American, American Indian, or Hispanic American) and for their advisors. The advisors are eligible regardless of racial or ethnic background. Meeting registration and support for travel, lodging, and meals are provided for students and advisors who are not local to the meeting site. Students and advisors from local institutions receive meeting and program registration and meals. In the past, the program has been supported in part by NIH-MARC, Pfizer, Johnson & Johnson, Covance, and other supporters. The recipient list is available on the Web site.



Outstanding Graduate Student Leadership Award

The Outstanding Graduate Student Leadership Award is presented by the SOT Student Advisory Council in recognition of graduate student representatives who have contributed to the Society in a significant manner beyond the routine duties of a representative of a Regional Chapter, Specialty Section, or Special Interest Group.

Award Recipient

2009	.....	Enrique Fuentes-Mattei
2009	.....	Sheppard Allen Martin



Perry J. Gehring Diversity Student Travel Award

The Perry J. Gehring Diversity Student Award recognizes a student who was selected to participate in a previous SOT Undergraduate Program, is from an ethnic group underrepresented in toxicology (African American, Hispanic, Native American or Pacific Islander), and is presenting a paper at the upcoming SOT meeting. The award recipient is selected by the Committee on Diversity Initiatives.

The Gehring Student Travel Award is provided through the Society of Toxicology Endowment Fund. This award recognizes Dr. Perry J. Gehring, who served as SOT President in 1980–1981 and made important scientific contributions, especially in biological modeling and evidence-based assessment. Dr. Gehring had a strong interest in encouraging individuals from ethnic groups underrepresented in the sciences to enter biomedical sciences and toxicology.

Award Recipient

2009	Vanessa De La Rosa
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Public Communications Award

The Public Communications Award is presented by the Society of Toxicology to recognize an individual who has made a major contribution to broadening the awareness of the general public on toxicological issues through any aspect of public communications. The award should reflect accomplishments made over a significant period of time. Examples of qualifying media in which the nominated communication may appear are as follows: books, brochures, continuing education courses, data bases, extension bulletins, magazines, newspapers (local or national), outreach, public presentations, public forums, radio and television scripts, and workshops. The award consists of a plaque and a cash stipend.

Award Recipients

1994	.....	Michael A. Kamrin
1995	.....	Philip Abelson*
1996	.....	Bruce N. Ames
1997	.....	Audrey Gotsch
1999	.....	Ann de Peyster
2001	.....	Anna Shvedova
2002	.....	Sam Kacew
2003	Charlene A. McQueen
2004	Kenneth Olden
2005	Robert Kreiger
2007	Linda S. Birnbaum

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SOT AstraZeneca IUTOX Fellowship

The AstraZeneca, Ltd., and SOT sponsor travel fellowship awards annually, which are administered by IUTOX. Awards are available to senior scientists from a country where toxicology is underrepresented to assist with travel to attend the Society of Toxicology Annual Meeting.

Award Recipients

- 2002 Christophor Dishovsky (Bulgaria)
Zoltan Gregus (Hungary)
Maritza Rojas Martini (Venezuela)
Choon-Nam Ong (Singapore)
W. Wasowicz (Poland)
Ping-kun Zhou (China)
- 2003 Jian-Hui Liang (China)
Eman A. Seif (Egypt)
Marjan G. Vracko (Slovenia)
- 2004 Cristina Bolaton (Phillipines)
P. K. Gupta (India)
Salmaan Inayat-Hussain (Malaysia)
Xianping Ying (China)
- 2005 Diana B. Apostolova (Bulgaria)
Marite Arija Bake (Latvia)
Teresa I. Fortuoul (Mexico)
Mary Gulumian (South Africa)
He Jiliang (China)
Khalidya Khamidulina (Russia)
L. Orish Orisakwe (Nigeria)
Songsak Srianujata (Thailand)
Sinan Suzen (Turkey)
- 2006 Olanike Adeyemo (Nigeria)
Deepak Argwal (India)
Carlos Colangelo (Argentina)
Sandra Demichelis (Argentina)
Mumtaz Iscan (Turkey)
Karolina Lyubomirova (Bulgaria)
Osman Aly Osman (Egypt)
Shuang-Qing Peng (China)
Julia Radenkova-Saeva (Bulgaria)
- 2007 Hatem Ahmed (Egypt)
Jiri Bajgar (Czech Republic)
Ismet Çok (Turkey)
Carlos García (Peru)
Wenceslao Kiat (Philippines)
Calivarathan Latchoumycandane (Singapore)
Fateheya Metwally (Egypt)
Hilmi Orhan (Turkey)
Nwoha Umunna (Nigeria)

- 2008 Gafe Rageh Ahmed (Egypt)
Sayed Bakry (Egypt)
Phillip Burcham (Australia)
Kemal Buyukguzel (Turkey)
Jin-Ho Chung (Korea)
Hande Gurer-Orhan (Turkey)
Lyndy McGaw (South Africa)
Zdravko Paskalev (Bulgaria)
- 2009 Sema Burgaz (Turkey)
Estefania G. Moreira (Brazil)
Kolawole V. Olorunshola (Nigeria)
Kelly P.K. Olympio (Brazil)
Betzabet Quintanilla-Vega (Mexico)
Jalila Ben Salah (Tunisia)
Suleeporn Sangrajang (Thailand)



SOT Regional Chapter Awards

Most SOT Regional Chapters provide awards to recognize outstanding students, postdoctoral fellows, or scientists throughout their career. Application requirements and deadlines vary. For more details refer to the Award descriptions on the SOT Web site at www.toxicology.org, under Regional Chapters or the Awards and Fellowships section.



SOT Special Interest Group Awards

SOT Special Interest Groups provide awards to recognize outstanding students, postdoctoral fellows, or scientists throughout their career. Application requirements and deadlines vary. For more details refer to the Award descriptions on the SOT Web site at www.toxicology.org, under Special Interest Groups or the Awards and Fellowships section.



SOT Specialty Section Awards

Most SOT Specialty Sections provide awards to recognize outstanding students, postdoctoral fellows, or scientists throughout their career at the SOT Annual Meeting. Application requirements and deadlines vary. For more details refer to the Award descriptions on the SOT Web site at www.toxicology.org, under Specialty Sections or the Awards and Fellowships section.

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Translational Impact Award

The Translational Impact Award is presented to a scientist whose recent (in the last 10 years) outstanding clinical, environmental health, or translational research has improved human and/or public health in an area of toxicological concern. Scientists who are leaders in multidisciplinary team efforts who have contributed to alleviating toxicity-related health problems are particularly attractive candidates. The nominee may be a member or non-member from any background (toxicologists, clinicians, basic scientists, epidemiologists, engineers, etc.).

Award Recipient

2009 Thomas W. Kensler

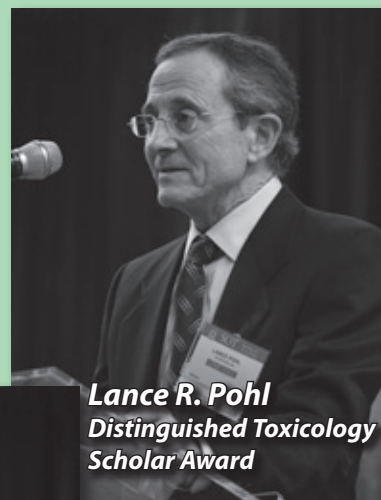


Undergraduate Toxicology Education Awards

The Undergraduate Toxicology Education Awards provide support for awardees to participate in the Undergraduate Education Program at the SOT Annual Meeting. This program is an introduction to the discipline of toxicology for undergraduate science majors and includes an orientation, a special poster session with scientists, and activities with an SOT mentor. The travel awards are for those from institutions that receive a limited amount of Federal funding in science and technology (list is available on the Web site). Preference in selection will be students who are first generation college attendees (that is, neither parent graduated from a four-year academic institution).

Meeting registration and support for travel, lodging, and meals are provided for students who are not local to the meeting site. Students from local institutions receive registration, meeting materials, and an expense stipend. The recipient list is available on the Web site.

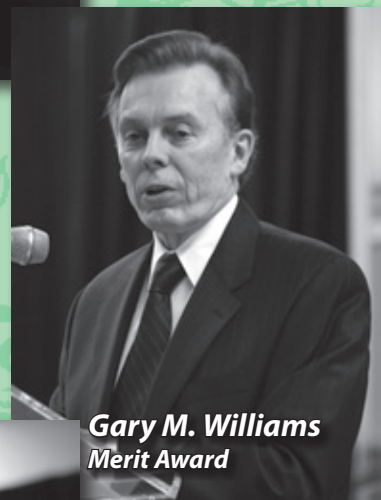
Award Lecturers



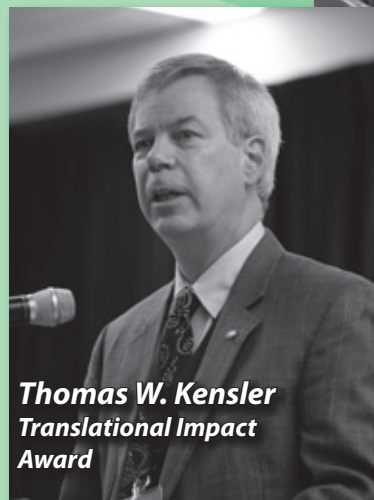
Lance R. Pohl
*Distinguished Toxicology
Scholar Award*



John Katzenellenbogen
*Leading Edge in Basic
Science Award*



Gary M. Williams
Merit Award



Thomas W. Kensler
*Translational Impact
Award*

SPONSORED AWARD DESCRIPTIONS AND HISTORY

AstraZeneca Traveling Lectureship Awards

The AstraZeneca Traveling Lectureship Awards are presented through the Society of Toxicology to recognize excellence in research and service in toxicology. AstraZeneca, Ltd., provides one award annually to promote greater collaboration between European and North American toxicologists and to enable North American toxicologists to undertake a three-four week lecture tour of Europe. The awards are intended to familiarize recipients with research and regulatory issues in Europe as well as bring a North American perspective to these issues. Candidates for these awards should be established, mid-career North American scientists who are members of the Society and who demonstrate the ability to develop collaborative relationships with European colleagues. The awards are given each year in the amount of \$6,000 each.

Award Recipients

1990 Robert I. Krieger, Joseph R. Landolph
1991 Sam Kacew
1992 Charles V. Smith, Jerold A. Last
1993 Terrence James Monks, Harihara H. Mehendale
1995 David L. Eaton, Hanspeter R. Witschi
1996 Rick G. Schnellmann, James P. Kehrer
1997 Lucio G. Costa, Durisala Desaiiah
1998 Syed F. Ali, Curtis J. Omiecinski
1999 Alvaro Pugo
2000 Kenneth Ramos, Garold Yost
2001 Ronald Hines, Richard Seegal
2003 William D. Atchison
2004 Charlene A. McQueen
2005 Kevin M. Crofton
2006 Robert A. Roth
2007 Michael S. Denison
2008 José E. Manautou
2009 Kim Boekelheide

Colgate-Palmolive Awards for Student Research Training in Alternative Methods

The purpose of the Colgate-Palmolive Awards for Student Research Training in Alternative Methods is to enhance student research training using *in vitro* methods or alternative techniques to reduce, replace or refine use of animals in toxicological research. The Awards Committee will present the awards to graduate students. Up to five awards, at \$3,500 each, are available. Deadlines for applications are February 15, June 15, and October 9.

The award is for expenses for training consistent with the goal of this award program. The training may include, but is not limited to, use of *in vitro* and *ex vivo* procedures, non-mammalian animal models, computer modeling, and structure-activity relationships. Graduate students may propose to develop expertise in relevant methodologies at 1) a laboratory away from their home institution; 2) a laboratory at their home institution that would not be available to them otherwise; or 3) approved workshops, symposia, or continuing education programs where hands-on training will be received. The training

should help toxicology graduate students enhance their thesis or dissertation research. The overall goal is to support the replacement, reduction, or refinement of currently used animal models in toxicology research and testing. Awards of up to \$3,500 per student will defray travel, *per diem*, and training expenses.

Award Recipients

2000 Jason Gross
2001 Jason Biggs, Victoria Richards
2002 Kartik Shankar, Chad M. Vezina, Ryan L. Williams
2003 Sachin Devi, Midhun Korrapati, Pallavi Limaye
2004 Jaya Chilakapati, Marc A. Nascarella
2005 Vishaka Bhav, Ankur Dnyanmote, Jonathan Maher
2006 Mary Hassani, Prajakta Palkar
2007 Renee Gardner, Prajakta Palkar, Rohit Singhal, René Vinas
2008 Kimberly A. Hays, Haitian Lu
2009 Jennifer Cole, Katie Beth Paul, Samuel Peterson

Colgate-Palmolive Grants for Alternative Research

The Colgate-Palmolive Grants for Alternative Research will identify and support efforts that promote, develop, refine, or validate scientifically acceptable animal alternative methods to facilitate the safety assessment of new chemicals and formulations. Scientists at any stage of career progression may submit a proposal.

High priority will be given to projects that use *in vitro* or non-animal models, reproductive and developmental toxicology, neurotoxicology, systemic toxicology, sensitization, and acute toxicity.

The maximum award is \$40,000. Awards are made as a single lump payment. An expert panel from the SOT *In Vitro* and Alternative Methods Specialty Section will recommend a prioritized list of applicants for funding, with the final awards designated by the SOT Awards Committee. Awardees can apply again for funding.

Award Recipients

2006 Rola Barhoumi, Abby Benninghoff, Jodie Flaws, Courtney Sulentic, Xiaouzhong Yu
2007 Rita L. Caruso, Daniel R. Cerven, Anne R. Greenlee, Glenn M. Walker
2008 Daniel R. Ceven, Duncan C. Ferguson, Shashi K. Ramiah
2009 Qin M. Chen, Timothy J. Shafer, Mehmet Uzumcu

SPONSORED AWARD DESCRIPTIONS AND HISTORY

Colgate-Palmolive Postdoctoral Fellowship Award in *In Vitro* Toxicology

The Colgate-Palmolive Company sponsors the Colgate-Palmolive Postdoctoral Fellowship Award in *In Vitro* Toxicology through the Society of Toxicology to advance the development of alternatives to animal testing in toxicological research. The award is given in alternate years and includes stipend and research-related costs (up to \$38,500) for one year. The award may be extended for an additional year upon agreement between Colgate-Palmolive and the postdoctoral fellow. The award is available to postdoctoral trainees employed by academic institutions, federal/national laboratories, or research institutes worldwide. Preference will be given to applicants in their first year of postdoctoral study. Applications are due in even calendar years and the fellowship is awarded for the following year. The next application deadline: October 9, 2010.

Award Recipients

1988 Ernest Bloom
1989 Gin Hsieh
1990 Dennis E. Chapman
1991 Anne Walsh
1992 Qin Chen
1993 Erika Cretton
1994 William Chan
1995 Bob Van de Water
1997 Alan Parrish
1999 Russell Thomas
2001 Kevin Kerzee, Christopher Reilly
2002 Kevin Kerzee
2003 Kimberly Miller
2004 Kimberly Miller
2005 Francis Tukov
2007 Aaron Rowland
2008 Aaron Rowland
2009 Ankur Dnyanmote

Colgate-Palmolive Traveling Lectureship in Alternative Methods in Toxicology Award

The Colgate-Palmolive Company sponsors the Colgate-Palmolive Traveling Lectureship in Alternative Methods in Toxicology Award annually through the Society of Toxicology. This award covers expenses for an individual scholar to visit institution(s) for the dissemination of knowledge and for stimulating research that takes advantage of modern *in vitro* toxicology approaches. The overall goal of this program is to make scientists aware of the benefits of modern *in vitro* toxicology approaches and to stimulate research for the replacement, reduction, or refinement of currently used animal models.

Lecturing scholars should be established, mid-career through late-career scientists who are members of SOT and who are developing collaborative relationships with scientists at other institutions.

Requests for funds can be made by the individual scholar or by a host from an academic institution, SOT Regional Chapter, SOT Special Interest Group, SOT Specialty Section, or another toxicology organization. Up to \$15,000 is available for all the awards. The Awards Committee reviews the applications, which must be accompanied by a statement detailing the applicants expertise in alternative methods, a brief overview of the techniques to be discussed in the lecture, the budget request, and a letter from the host indicating interest in serving as host and the potential benefits to the institution.

Award Recipients

1996 University of Mississippi Medical Center
Visiting Professor: Tetsuo Satoh
1996 University of Illinois at Urbana
Visiting Professor: Julio Davila
1996 Mississippi State University
Visiting Professor: Michael Holsapple
1996 Washington State University
Visiting Professor: Daniel Acosta
1997 Indiana University School of Medicine
Visiting Professor: A. Jay Gandolfi
1997 University of Arizona Health Science Center
Visiting Professor: Kevin E. Driscoll
1997 University of New Mexico Health Sciences Center
Visiting Professor: Sam Kacew
1997 University of Illinois
Visiting Professor: Michael Denison
1998 University of Washington
Visiting Professor: Bruce Fowler
1998 San Diego State University
Visiting Professor: Leigh Ann Burns-Naas
1999 San Diego State University
Visiting Professor: Robert Chapin
2000 Yale University, School of Medicine
Visiting Professor: Narendre Singh
2001 Medical College of Wisconsin
Visiting Professor: Garold Yost
2003 Washington State University
Visiting Professor: Marc W. Fariss
2004 University of Louisiana at Monroe
Visiting Professor: Snorri S. Thorgeirsson
2008 George Michalopoulos
Institution to be Visited: University of Louisiana at Monroe

SPONSORED AWARD DESCRIPTIONS AND HISTORY

Graduate Student Fellowship Award—Novartis

The Graduate Student Fellowship—Novartis Award is available for student members of the SOT engaged in full-time graduate study towards a Ph.D. degree in toxicology. The major professor must be an SOT member. The evaluation is based primarily on originality of the dissertation research, research productivity, relevance to toxicology, scholastic achievement, and letters of recommendation. Finalists are interviewed at the Annual Meeting and receive travel support.

Award Recipients

1989 Timothy Zacharewski
1990 Mary Suzanne Stefaniak
1991 Donald Bjerke
1992 Lhanoo Gunawardhana
1993 Christopher Martenson
1994 Nyla Harper
1995 Heather E. Kleiner
1996 Russell Thomas
1997 Melva Rios-Blanco
1998 Kent Carlson
1999 Mark Hickman
2000 Jeffrey Moran
2001 Vishal Vaidya
2002 Kartik Shankar
2003 Sachin Devi
2004 James Luyendyk
2005 Andrea W. Wong
2006 Sheung P. Ng
2007 Atrayee Banerjee
2008 Helen J. Badham
2009 Yue Cui

(Recipients of Graduate Fellowship Awards no longer offered may be found on the SOT Web site at www.toxicology.org.)

Pfizer Undergraduate Student Travel Award

Pfizer Undergraduate Student Travel Awards are presented through the Society of Toxicology to foster an interest in graduate studies in the field of toxicology by bringing promising undergraduate students to the SOT Annual Meetings. Pfizer, Inc., will provide up to five awards per year to undergraduate students presenting research at the Annual Meeting. Awardees will be selected by the Education Committee based on the quality of the submitted abstract and the advisor's supporting recommendation. Those selected will receive travel assistance for the meeting, a plaque presented at the annual Awards Ceremony, and recognition at a special Pfizer function. Awardees will be matched with a graduate student and a Pfizer scientist to mentor them during the Annual Meeting, and will have the opportunity to attend the Society of Toxicology Undergraduate Education Program on the Sunday of the SOT Annual Meeting.

Award Recipients

2006 Shawntay Chaney, Theresa M. Eagle,
Natalie Malek, Adeliada Segarra, Ryan Vaughan
2007 Kay Gonsalves, Lisa Koselke, Basharat Sanni,
Sonia Talathi, Anna Zimmerman
2008 Amy DeMicco, Tharu Fernando, Yamel Perdomo,
Amy Yi Hsan Saik, Kelly Sullivan
2009 Sherine Crawford, Trish T. Hoang, Kelly Krcmarik,
Cory M. Mathias, P. Sean McGrath

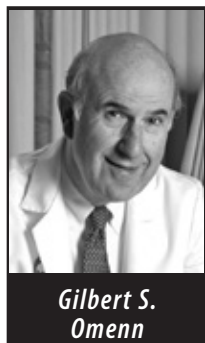
Syngenta Fellowship Award in Human Health Applications of New Technologies

The Syngenta Fellowship Award in Human Health Applications of New Technologies is presented to either a third year (or later) graduate student or a postdoctoral trainee. The funding (\$15,000) is to support mode-of-action research aimed at characterizing dose-dependent effects of xenobiotics on mammalian systems in such a way that the causal sequence of key events underlying toxicity is elucidated. The work should permit a quantitative basis for extrapolation of the results from animal bioassays or animal models (*in silico*, *in vitro*) to humans at relevant human doses. The awardee will receive funding to travel to the SOT Annual Meeting to accept the award and for travel to a Syngenta facility to present the results.

2009 HONOR AND AWARD RECIPIENTS



Honorary Membership



Dr. Gilbert Omenn, M.D., Ph.D., has made tremendous contributions to public health, toxicology, and medicine and has been elected to 2009 SOT Honorary Membership.

Dr. Omenn is Professor of Internal Medicine Human Genetics and Public Health at the University of Michigan. He is the director of the U-M Center for Computational Medicine & Biology and the Proteomics Alliance for Cancer Research. He served as Executive Vice President for Medical Affairs and as Chief

Executive Officer of the University of Michigan Health System from 1997 to 2002. He was formerly Dean of the School of Public Health, and Professor of Medicine and Environmental Health, University of Washington.

He served as Associate Director, Office of Science and Technology Policy, and Associate Director, Office of Management and Budget, in the Executive Office of the President in the Carter Administration. He is a longtime director of Amgen Inc. and of Rohm & Haas Company. He is a member of the Council and leader of the Plasma Proteome Project for the International Human Proteome Organization. He is Chairman of the Board (2006–2007) of the American Association for the Advancement of Science (AAAS). He is also on the advisory board of NextServices.

Dr. Omenn is the archetypal candidate for this honor based on his significant contributions to creating a safer and healthier world.



Honorary Membership



Professor John Walker FRS is Director of the Medical Research Council Dunn Human Nutrition Unit in Cambridge, UK, since 1998. He came to Cambridge in 1974 to join the Laboratory of Molecular Biology where he established the details of the modified genetic code of mitochondrial DNA, and he helped to discover overlapping genes in bacteriophages. In 1978, he began studying the ATP synthase from mitochondria and bacteria, and established their subunit compositions.

From these data he discovered two protein sequence motifs involved in binding nucleotides to which his name has become attached. We know now that they are the most widely dispersed motifs in the entire biological kingdom. These contributions were the overture to his work leading, in 1994, to the determination of the 3D structure of the catalytic domain of this remarkable energy transducer by X-ray crystallography, which at once pointed towards a mechanical rotary mechanism of coupling of transmembrane protonmotive force to ATP synthesis mediated by the asymmetry of the rotating central “stalk”. Since this work, John has continued to unravel the secrets of this all-important enzyme for virtually all forms of life, including the structure of its membrane part (from yeast mitochondria), which demonstrated an unforeseen subunit stoichiometry that has led to new theories of the molecular mechanics of this intriguing nanomachine, the structure of the peripheral stalk or stator and the structure of the regulatory protein IF1 bound to the catalytic domain.

In addition to these achievements, John established the subunit composition of complex I, another highly complex membrane-bound enzyme of the mitochondrion made of 45 different proteins. He has also defined pathways for transport of metabolites, co-factors and biosynthetic precursors across the mitochondrial membrane.

In 1995 he was elected Fellow of the Royal Society. In 1997, he was awarded the Nobel Prize in Chemistry jointly with Dr. Paul Boyer for their elucidation of the enzymatic mechanism underlying the synthesis of adenosine triphosphate (ATP). In 1999 he received his knighthood for his services to medical research. John’s many honours include the A.T. Clay Gold Medal in 1959, the Johnson Foundation Prize (University of Pennsylvania) in 1994, the CIBA medal and prize of the British Biochemical Society and the Peter Mitchell medal of the European Bioenergetics Conference, in 1996. He is a Foreign Member of L’Accademia Nazionale dei Lincei, Rome, Italy and the Royal Netherlands Academy of Sciences, and a Foreign Associate of the U.S. National Academy of Sciences.

2009 HONOR AND AWARD RECIPIENTS



Achievement Award



Russell S. Thomas, M.S., Ph.D., is recognized by the Society of Toxicology for outstanding contributions in bringing high data content, high throughput transformational research approaches to toxicology and applying these methods in a risk assessment context. Dr. Thomas, Director of the Center of Genomic Biology and Bioinformatics, The Hamner Institutes of Health Sciences, received his Ph.D. degree in Toxicology from Colorado State University in 1997 with Dr. Raymond Yang for research modeling the

pharmacokinetics and modes of action of hepatic carcinogens. His interest then shifted to molecular biology, genomics, and high-throughput screening during his postdoctoral period and early career work in the biotech field.

Over the past five years, Dr. Thomas has pursued a broad research program in genomic biology, bioinformatics, and risk assessment to understand the complexities of responses of biological systems to chemical stressors. His high data content, frequently robot-assisted methodologies query underlying biology in much greater depth and breadth to examine the consequences of perturbations of biology by environmental agents. These tools allow much more rapid survey of possible targets of toxicity and provide greater detail about the signaling pathways related to target pathways and their dose response characteristics. For most of his recent publications, Dr. Thomas has had to develop co-ordinate bioinformatics tools to analyze the large quantity of data obtained from these technologies. The contributions in developing these informatic tools are as important as the research results themselves. Key contributions include tools to identify toxicologically predictive gene sets, genome wide functional profiling of the AP-1 signaling pathway, functional mapping of the NFκ-B signaling pathway with full-length gene libraries to identify novel modulators and describe systems level pathway control, and applying benchmark dose modeling of genomic data to identify doses at which different cellular processes are altered. His paper on benchmark dose modeling with genomic data was recognized as the best paper related to the scientific basis of risk assessment for 2008. In recognition of the broad scope and transformational character of his early career research contributions, the Society of Toxicology is pleased to present the 2009 Achievement Award to Dr. Russell S. Thomas.



Arnold J. Lehman Award



Michael Bolger, Ph.D., DABT, receives the 2009 Arnold J. Lehman Award. He is chief of the Chemical Hazards Assessment Team at the U.S. FDA-NCTR Center for Food Safety and Applied Nutrition. Dr. Bolger is an internationally recognized expert in the toxicology and safety/risk assessment of food-borne anthropogenic and naturally-derived chemical contaminants in food. These would include elemental contaminants, mycotoxins, seafood toxins, organic contaminants like dioxin-like contamin-

ants, phenolic compounds, and mixtures of chemicals. As such, he has provided critical leadership and advice on important regulatory decisions on tolerable levels of chemical contaminants and natural toxicants in food. Dr. Bolger's multidisciplinary background in physiology, pharmacology, and toxicology allows him to provide scientific evaluations of highly complex data and insightful conclusions on hazards of these chemical contaminants.

He is highly sought as a member for U.S. government and international review panels such as the Interagency Risk Assessment Workgroup for Dioxin/Furans, the CDC Advisory Committee on Childhood Lead Poisoning, the NOAA Expert Toxicological Committee on Oil Contamination of Seafood, the WHO Task Group on Methyl Mercury, the Interagency Methyl Mercury Workshop, the EPA Dioxin/Furan Reassessment Peer-Review Group, and on many joint expert committees of the World Health Organization (WHO) on food-borne environmental contaminants. He is currently serving in a second five-year term as a WHO designated food safety expert and as a member of the Expert Advisory Panel on Food Safety and the Foodborne Disease Burden Epidemiology Reference Group of the World Health Organization. He has also contributed a number of significant publications that support FDA regulations. Dr. Bolger is well-published, credible in his individual risk assessments, and forceful yet polite in his arguments. He is also purposeful, determined, and untiring in his efforts to incorporate the best toxicology information into individual chemical risk assessments. He has moved the field of risk assessment forward through innovative thinking and principled risk assessment practice. We are delighted to have Dr. Michael Bolger as the Arnold J. Lehman awardee for 2009.



Society of Toxicology
Sponsored Awards

2009 HONOR AND AWARD RECIPIENTS



Best Postdoctoral Publication Award

The Postdoctoral Assembly recognizes these three recipients of their 2009 awards:



Jeffrey W. Card

Jeffrey W. Card, *Cantox Health Services International*

Cyclooxygenase-2 Deficiency Exacerbates Bleomycin Induced Lung Dysfunction but Not Fibrosis

American Journal of Respiratory Cell and Molecular Biology 2007, September, 37(3):300-8



Kembra Howdeshell

Kembra Howdeshell, *NHEERL, U.S. EPA*

A Mixture of Five Phthalate Esters Inhibits Fetal Testicular Testosterone Production in the Sprague-Dawley Rat in a Cumulative, Dose-Additive Manner

Toxicological Sciences 2008, 105:153–165



Lewis Zhichang Shi

Lewis Zhichang Shi, *University of Wisconsin-Madison*

The Aryl Hydrocarbon Receptor Is Required for Optimal Resistance to *Listeria monocytogenes* Infection in Mice

Journal of Immunology 2007, 179: 6952–6962



Board of Publications Award for the Best Paper in Toxicological Sciences



The Board of Publications has selected the paper entitled "The PPAR α -Humanized Mouse: A Model to Investigate Species Differences in Liver Toxicity Mediated by PPAR α " as the best paper published in *Toxicological Sciences* in the past year (*ToxSci* 2008, 101:132–139). The authors of the paper are Qian Yang, Tomokazu Nagano, Yatrik Shah, Connie Cheung, Shinji Ito, and Frank J. Gonzalez.

The paper describes the development and phenotypic characterization of a PPAR α -humanized transgenic mouse that was generated on a mouse *ppara*-null background using the complete human PPAR α gene (designated hPPAR α^{PAC}). Importantly, this model expressed hPPAR α in both hepatic and extra-hepatic tissues, including heart, kidney and intestine. The development of this model represents an important new tool for evaluating the physiologic and toxicologic consequences of PPAR α activation. For example, although fenofibrate elicited similar responses in peroxisome proliferation and lipid lowering in wildtype and hPPAR α^{PAC} mice, reduced serum lipids in hPPAR α^{PAC} mice were not accompanied by the expected increased expression of lipoprotein lipase and decreased expression of apolipoprotein C-III. These results challenge present assumptions regarding the mechanisms by which peroxisome proliferators (PPs) exert their hypolipidemic effects and demonstrate the need to reevaluate this purported mechanism. In addition, the research provided novel insights into species differences in hepatic cell proliferation in response to PPs, as hPPAR α^{PAC} mice showed no evidence of hepatomegaly, cell proliferation or PP-induced expression of CDK4 and cyclin D1, and no change in expression of hepatic miRNA let-7C and *c-Myc* expression. These results identify an important species difference in response to PPs, in that unlike mice, human PPAR α activation is not associated with hepatocyte proliferation. However, no difference in ligand affinity between mouse and human PPAR α was observed, thereby challenging another property proposed to explain species differences in response to PPs. In total, the development of hPPAR α^{PAC} mice provides important new and novel insights into the function of PPAR α in humans and is the foundation for identifying the molecular mechanisms underlying species differences in response to PPs that will ultimately help to refine the human risk assessment for this important class of compounds.

2009 HONOR AND AWARD RECIPIENTS



Congressional Science Leadership Award



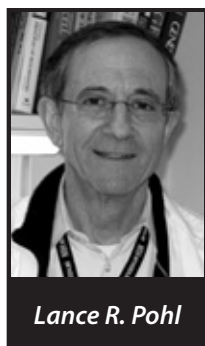
David Wu

Congressman David Wu is the recipient of the first annual Congressional Science Leadership Award for his enduring vision and preeminent leadership in fostering legislation that recognizes the importance of science as the basis for sound decision-making. Congressman Wu has consistently pursued public policy relating to health and safety that is based on sound scientific principles. He has demonstrated his dedication to advancing legislation for the protection of human, animal, and environmental health that is based on sound scientific principles.

Rep. Wu is serving a sixth term as a U.S. Congressman for the 1st District of Oregon. He serves on the House Education and Labor Committee, the House Science and Technology Committee, and chairs the House Subcommittee on Technology and Innovation. The congressman earned a bachelor of science degree from Stanford University in 1977, attended Harvard Medical School and then received a law degree from Yale University in 1982. He co-founded the law firm of Cohen and Wu, which specializes in the high technology industry and services small businesses across Northwest Oregon.



Distinguished Toxicology Scholar Award



Lance R. Pohl

Lance R. Pohl, Pharm.D., Ph.D., is the recipient of the 2009 Distinguished Toxicology Scholar Award. Dr. Pohl is Chief of the Section on Molecular and Cellular Toxicology in the Laboratory of Molecular Immunology at the National Heart, Lung, and Blood Institute at NIH. For more than 30 years, he has been a leader in the field of drug toxicity. His seminal work on the anesthetic halothane established the association between biotransformation, covalent adduct formation and immune response with

idiosyncratic hepatotoxicity. His laboratory has also made several other major contributions to the field of toxicology, including the development of innovative techniques for identifying highly reactive and toxic metabolites of drugs and other xenobiotics that are produced by cytochrome P450s and other hemoproteins and the first design and use of specific antibodies for exploring the identity and toxicologic consequences of *in vivo* protein adducts of hepatotoxic drug metabolites. In more recent years, he and his colleagues have used animal models to identify numerous cytokines and other factors that determine susceptibility to drug-induced liver injury. For example, Dr. Pohl and colleagues discovered that Kupffer cells can protect against drug-induced liver injury,

while endogenous glucocorticoids can potentiate it, and both of these factors may have a role in preventing drug-protein adducts formed in the liver from causing allergic reactions by inducing immunological tolerance. His passion for discovery is reflected in those who have trained in his laboratory, many of whom have gone on to distinguished scientific careers of their own. Dr. Lance Pohl's professional record is the epitome of a career of distinguished scholarship in toxicology, and he is a highly deserving recipient of this 2009 Distinguished Toxicology Scholar Award.



Education Award



Janice E. Chambers

Janice Chambers, Ph.D., has contributed broadly to the successful development of toxicology education and training programs. After receiving a B.S. in Biology at the University of San Francisco and a Ph.D. in Animal Physiology at Mississippi State University, Dr. Chambers has developed an extraordinary career in education as well as research and service in the field of toxicology. She is now one of the few William L. Giles Distinguished Professors at Mississippi State University in recognition of excellence in all three

areas of the academic triad, i.e., teaching, research and service, plus mentoring. Her contributions to educational programs are numerous. She taught physiology-related courses to a large number of students while on faculty in the Department of Biological Sciences, and after moving to the College of Veterinary Medicine, developed several toxicology courses. She maintains an active training program for graduate students and trained many Ph.D. students, most of whom are now active in the field of toxicology in academia or in government institutions. Recognizing her contributions to teaching, the Mississippi Board of Trustees of the Institutions of Higher Learning approved a Ph.D. program in Environmental Toxicology. More recently, she received a \$10 million NCR/NIEHS-funded Center of Biomedical Research Excellence (COBRE) award which was designed to nurture junior faculty members. While actively engaging in such multiple educational programs, she has made substantial progress in her research in pesticide toxicology. She was a recipient of numerous awards and honors, including the highly prestigious International Award for Research in Agrochemicals from the Agrochemical Division of the American Chemical Society, and the Burroughs Wellcome Toxicology Scholar Award. She has been very active in various services such as participating on NIH Study Sections; SOT Continuing Education Committee, Education Committee, Membership Committee, and serving as SOT Secretary; U.S. EPA Scientific Advisory Panel for FIFRA and Human Studies Review Board; and ATSDR/NCEH Board of Scientific Counselors. Thus, Dr. Janice Chambers is not only outstanding in education but she is also making substantial contributions to toxicology research and service, and we honor her with the 2009 Education Award.

2009 HONOR AND AWARD RECIPIENTS



Education Award



Serrine S. Lau

Serrine Lau, Ph.D., has made significant contributions in educating and developing new leaders in toxicology. Professor Lau received her Ph.D. in Pharmacology from the University of Michigan in 1980, followed by a postdoctoral fellowship in the laboratory of Dr. Jim Gillette at the NIH. Her first academic appointment was in 1986 at the University of Texas at Austin, where she became the first Endowed Assistant Professor in the history of the College of Pharmacy (COP), served as Director of a NIEHS supported training

grant, Director of the Short-term Research Training Program for Minority Students, and as Minority Liaison Officer for the COP in the University of Texas Graduate Outreach Program. Professor Lau is currently the Director of the Southwest Environmental Health Sciences Center at the University of Arizona, Scientific Director of the Arizona Proteomics Alliance, Associate Director of the NIEHS supported Toxicogenomics graduate training grant, and co-PI of the Summer Undergraduate Fellowship Program supported by ASPET. Professor Lau has published over 140 peer-reviewed papers with the assistance of many talented students and postdoctoral fellows. Indeed, Professor Lau has mentored many high school, undergraduate, and graduate students who have gone on to successful careers in medicine, academia, government, and the private sector. Her students have won many awards, including two winners of the prestigious Carl C. Smith Graduate Student Award for Meritorious Research in Mechanisms of Toxicology. The success of Professor Lau's students is a reflection of the unyielding passion that she brings each and every day to her laboratory, and her ability to encourage and cultivate scientific creativity. Professor Lau is a dynamic and powerful communicator, with the gift of being able to make complex subjects understandable and scientific research rewarding and enjoyable. Professor Lau has served on SOT Council, Awards Committee, Board of Publications, Education Committee, Task Force on Women in Toxicology, Task Force on Recruitment and Retention of Students in Toxicology, Task Force on NIH Funding, and as President of the Mechanisms Specialty Section. The Society of Toxicology recognizes Dr. Serrine S. Lau with the 2009 Education Award.



Enhancement of Animal Welfare Award



Sally Robinson

Sally Robinson, Ph.D., is honored by the Society of Toxicology for her contributions to the enhancement of animal welfare. The Enhancement of Animal Welfare Award is given in recognition of her vision, tenacity, expertise and determination to make a difference to the science of toxicology and animal welfare and her ongoing commitment to the 3Rs (Replace, Refine, or Reduce the need for experimental animals) at the international level.

Over the last five years, Dr. Robinson has led a cross-industry team, with support from the UK National 3Rs Centre (NC3Rs), that provided a novel, evidence-based challenge to the regulatory requirements for acute toxicity studies where lethality is an endpoint. Dr. Robinson initiated this project within her own company then collaborated with 17 other pharmaceutical companies globally to share data that were used to demonstrate that acute lethality toxicity studies have limited value to assess human safety. Therefore, requirements by regulators for these questionable experiments could not be justified.

The group's results and recommendations have been presented to regulators from the European Union, United States, and Japan to raise awareness of the need to question the requirement for acute toxicity studies within international guidelines. These communications were successful and the ongoing revision of ICH M3 and the EMEA draft position paper on acute toxicity studies has incorporated the recommendations made by the group, citing the publications by Dr. Robinson, *et al.*

Dr. Robinson is Principle Toxicologist within Global Safety Assessment at AstraZeneca, Alderley Park in Cheshire, UK, specializing in animal ethics and the science of *in vivo* study design. She continues to promote enhancement of animal welfare, and to embed these modern concepts through mentorship of other toxicologists. We congratulate Dr. Sally Robinson on these accomplishments and present her with the 2009 Enhancement of Animal Welfare Award.

2009 HONOR AND AWARD RECIPIENTS



Founders Award



**Roger O.
McClellan**

Roger McClellan, D.V.M., is uniquely qualified for the Founders Award based on his outstanding leadership and accomplishments, all centered on understanding the effects of chemicals as a basis for minimizing human health risks. He supports the development of toxicological information from studies at multiple levels of biological organization, from macromolecules through populations of people or laboratory animals. This integration is most useful in predicting human health consequences

of exposure to toxic agents. His experience of over 40 years in the fields of radiation, inhalation, and chemical toxicology have led to noteworthy publications and contributions clearly evident to SOT, as he has received three SOT awards for scientific achievements (Frank Blood, Arnold J. Lehman, and Merit).

His accomplishments also include outstanding leadership and strategic business analysis and planning for science-based organizations. He advocates the development of multi-discipline teams to address complex issues ranging from environmental health matters to new product development. He encourages critical analysis and revitalization of organizations through continuous improvement processes. His leadership is exemplified by his direction of the most distinguished toxicology research institutes in the world, the Lovelace Inhalation Toxicology Research Institute, now part of the Lovelace Respiratory Research Institute and the Chemical Industry Institute of Toxicology, now part of the Hamner Institutes for Health Sciences.

He currently is, or has been, an adjunct faculty member at 10 major research universities. He was elected to the Institute of Medicine of the National Academy of Sciences. He is a Diplomate of the American Board of Toxicology and the American Board of Veterinary Toxicology, and a Fellow of various societies, including the American Association for the Advancement of Science.

His outstanding leadership in fostering toxicology in safety decision-making through state-of-the-art approaches that elucidate the distinctions for humans between safe and unsafe levels of chemical exposures and the building of high-impact organizations leads us to enthusiastically bestow the Founders Award for 2009 on Dr. Roger McClellan.



Leading Edge in Basic Science Award



**John
Katzenellenbogen**

John Katzenellenbogen, Ph.D., recipient of the SOT Leading Edge in Basic Science Award, is an internationally recognized chemist who has been at the forefront of research on the structure and function of the estrogen receptor since the earliest days of his career at the University of Illinois at Urbana-Champaign, when he developed one of the first high affinity labels for the receptor. Currently he is Professor of Bioengineering at that institution. Among his more recent contributions has been the development

of novel ER agonist and antagonists with remarkable selectivity for ER α and β . He has freely provided these compounds to dozens of investigators worldwide, and their use has been instrumental in defining the roles of ER α and ER β in mediating the diverse effects of endogenous, dietary, and environmental estrogens. Recently Dr. Katzenellenbogen has also expanded the structural universe of estrogen active compounds and has developed estrogen dendrimer conjugates as novel tools to study the non-genomic pathway of estrogen signaling. Together, these accomplishments have paved the way for endocrine toxicologists to identify specific targets and dissect complex pathways through which estrogenic endocrine disruptors act. During his distinguished career, Dr. Katzenellenbogen has published over 440 articles and trained over 80 doctoral and postdoctoral students, many of whom are now in leadership positions in academia or industry. The research career of Dr. John Katzenellenbogen provides a shining example of how the innovative investigations of a creative scientist can lead to a series of fundamental discoveries that drive many fields forward and that have profound impact on disciplines like toxicology. Dr. John Katzenellenbogen is a superb example of a researcher making important contributions to the understanding of fundamental mechanisms of toxicity and thus is the first recipient of the Leading Edge in Basic Science Award.

2009 HONOR AND AWARD RECIPIENTS



Merit Award



Gary Williams

Gary Williams, M.D., DABT, is Professor of Pathology at New York Medical College. Dr. Williams has made a number of contributions to chemical carcinogenesis, particularly hepatocarcinogenesis. He conducted pioneering work in developing methods for the culture of hepatocytes and introduced the use of cultured hepatocytes to measure chemical-induced DNA repair synthesis as a means of identifying potential chemical carcinogens. Based in part on extensive findings with hepatocarcinogens in the

hepatocyte system, he advanced the concept of distinct DNA-reactive and epigenetic mechanisms of carcinogenicity. He contributed to the understanding of liver neoplasia as a multi-step process involving the initiation of hepatocytes to form proliferative preneoplastic lesions identifiable by phenotype abnormalities, such as resistance to iron accumulation and expression of glutamine synthetase. Through assessment of the influence of hepatocarcinogens on the development of preneoplastic cells, he documented that DNA-reactive carcinogens rapidly induced such lesions, whereas epigenetic agents only slowly enhanced their expansion, thereby extending the understanding of different modes of action. Furthermore, he helped in distinguishing adaptive from adverse effects in the liver and other tissues. Also, Dr. Williams has investigated in depth the dose-response characteristics of DNA-reactive hepatocarcinogens. By quantifying key events, including DNA adducts, cytotoxicity, cell proliferation and induction of preneoplastic lesions, he has identified non-linearities and no effect levels at low doses for several DNA-reactive carcinogens. Dr. Williams has been involved in teaching toxicology through the organization of symposia and, for the past fifteen years, a course on safety assessment of medicines, and has advanced the discipline by serving on numerous advisory bodies and editorial boards. He received the Arnold J. Lehman Award in 1982 and the Enhancement of Animal Welfare Award in 2002 from SOT and the Ambassador in Toxicology Award from the Mid-Atlantic Regional Chapter of SOT in 2001. We congratulate and recognize Dr. Gary Williams as the recipient of the 2009 Merit Award.



Outstanding Graduate Student Leadership Award



Enrique Fuentes-Mattei

*Hispanic Organization for Toxicologists,
University of Puerto Rico-Medical Sciences
Campus*



Sheppard Allen Martin

*Risk Assessment Specialty Section,
University of Georgia*



Perry J. Gehring Diversity Student Travel Award



Vanessa De La Rosa

University of Texas El Paso

2009 HONOR AND AWARD RECIPIENTS



Translational Impact Award



**Thomas W.
Kensler**

Thomas W. Kensler, Ph.D., is the 2009 Translational Impact awardee. Dr. Kensler is currently Professor of Toxicology in the Department of Environmental Health Sciences at the Johns Hopkins Bloomberg School of Public Health where he holds a joint appointment in the Department of Biochemistry and Molecular Biology as well as in the Departments of Pharmacology and Molecular Sciences, and Oncology in the Johns Hopkins School of Medicine. Dr. Kensler has devoted much of his professional career

to the development of molecular approaches to cancer prevention, seeking to develop the tools to test the hypothesis that enzyme induction through Keap1-Nrf2 signaling is a useful strategy for chemoprevention in humans. In the past decade, he has driven this science through several clinical trials towards practical strategies to affect a reduction of the impact of liver cancer in the economically developing world. He has provided outstanding leadership to bring together multidisciplinary teams of toxicologists, epidemiologists, biostatisticians and clinicians to the field of chemoprevention. Most importantly, he has managed to accomplish these achievements in a multicultural international setting.

Collectively Dr. Kensler has been a major contributor to the translational research efforts that are bringing new prevention opportunities to high-risk populations in the world. His work uses a foundation of rigorous, cutting-edge basic science to bring mechanism-based hypotheses into clinical trials. Over the past decade, this work has led to practical means for reducing the burden of environmentally-induced cancer in humans. These findings not only have importance in cancer research but have also been extended to the larger field of adaptive responses to many environmental stresses. Congratulations to Dr. Thomas Kensler, the first recipient of the Translational Impact Award.



SOT AstraZeneca IUTOX Fellowship

Sema Burgaz (Turkey)

Estefania G. Moreira (Brazil)

Kolawole V. Olorunshola (Nigeria)

Kelly P.K. Olympio (Brazil)

Betzabet Quintanilla-Vega (Mexico)

Jalila Ben Salah (Tunisia)

Suleeporn Sangrajang (Thailand)

2009 HONOR AND AWARD RECIPIENTS



*José Manautou, Myrtle Davis,
Mari Stavanja, and Marion Ehrich*

Recognition of the 20th Anniversary of the Undergraduate Education Program for Minority Students

At the 1989 SOT Annual Meeting in Atlanta, a small group of farsighted members were inspired to reach out to undergraduate institutions in the region with an invitation for students from demographic groups underrepresented in the sciences to come to the SOT meeting, in order to learn about toxicology and career opportunities in science. The Program organizers noted that undergraduate science majors are likely to choose graduate training in fields in which they feel they can make a difference and fields that provide a diversity of career choices, but that only eight institutions offered toxicology as an undergraduate major. To be aware of toxicology as a career choice, the students needed an introduction.

In 1991, candidates could come from anywhere in the U.S. (and territories) because NIH funding for travel support was procured. The track record for this annual event includes almost continuous funding from the NIH Minority Access to Research Careers (MARC) program. As noted by Adolphus Toliver, Chief of the MARC Branch, "It is good to know that your program is successful in helping us meet our goal of increasing the number of underrepresented scientists that participate in the scientific health related workforce of the country."

In the 20 years of the Undergraduate Education Program for Minority Students, it has grown from less than 10 students and 2 advisors in 1989, to 38 students and 8 faculty advisors in 2009, and a total through the Program history of about 700 students and 120 advisors from approximately 120 academic institutions have received travel support to attend the SOT Annual Meeting. In a recent survey of participants, nearly $\frac{3}{4}$ of respondents stated that the Program provided them with a great deal of new information and 72% of surveyed seniors indicated that they were considering graduate school in toxicology.

Perhaps the strongest testimony of the importance of the Program is in increasing the diversity of the SOT membership. As early as the first Program in 1989, the seeds were sown for one of the participants to pursue a career in the sciences and become a faculty member at Bowie State. Now, three of those who first came to the SOT Annual Meeting as Undergraduate Education Program for Minority Students participants have been appointed to the Committee on Diversity Initiatives, the group that oversees the Program.

In summary, the Society of Toxicology has grown in many ways over the last twenty years. We are especially pleased to recognize the strengths that we have gained and the additional contributions made to toxicology as a consequence of the Undergraduate Education Program for Minority Students through the dedicated efforts of the numerous people who have organized these events. SOT visionaries: grant writers, committee chairs, committee members, speakers, mentors, poster presenters, funders, internship hosts, and all the others who have been responsible for developing, conducting, and sustaining a special meeting-within-the SOT meeting. But we are especially pleased to recognize the students who were intrigued by toxicology through the Program and are now here as our colleagues.



2009 SPONSORED AWARD RECIPIENTS

AstraZeneca Traveling Lectureship Award



Kim Boekelheide

Kim Boekelheide, M.D., Ph.D., is Professor of Pathology and Laboratory Medicine at the Brown University School of Medicine. His research focuses on fundamental molecular mechanisms by which environmental and occupational toxicants induce testicular injury, including the study of co-exposure synergy using model testicular toxicants and the effects of *in utero* endocrine disruptor exposure on steroidogenesis and a predisposition to cancer. The AstraZeneca Traveling

Lectureship Award recognizes excellence in research and service in toxicology and enables a lecture tour of Europe to promote collaboration between European and North American toxicologists. He will use this award to address two hot topics—a discussion of the future of toxicity testing and the development in his laboratory of a novel xenotransplant model to investigate the human testicular response to *in utero* active endocrine disruptors. At both industrial and academic institutions in Europe, Dr. Boekelheide's lecture series is designed to stimulate thoughtful discussion of both science policy and basic research in the toxicological sciences with cross-cutting and timely new perspectives with relevance to regulatory issues. We recognize Dr. Kim Boekelheide with the 2009 AstraZeneca Traveling Lectureship Award.

Colgate-Palmolive Grants for Alternative Research



Qin M. Chen, *University of Arizona*

Project Title: Proteomic Identification for Biomarkers of Oxidative Stress



Timothy J. Shafer, *U.S. EPA*

Project Title: Comparison of Rodent and Human Models for High-Throughput Neurotoxicity Screening



Mehmet Uzumcu, *Rutgers, The State University of New Jersey*

Project Title: Fetal/Neonatal Ovary Organ Culture As an *In Vitro* Alternative for Testing Direct Epigenetic Effects of Endocrine Disruptors on Ovarian Development

Colgate-Palmolive Awards for Student Research Training in Alternative Methods



Jennifer Cole, *Texas Tech University*

Project Title: Proteomic Profiling of Organotypic Cultures in Cetaceans

Host Institution: *University of Buffalo, The State University of New York*



Katie Beth Paul, *University of North Carolina*

Project Title: *In Vivo* and *In Vitro* Characterization of the Mode of Action of Triclosan-Induced Hypothyroxinemia

Host Institution: *University of North Carolina*



Samuel Peterson, *Purdue University*

Project Title: Zebrafish Development and Genetics MBL Course

Host Institution: *Purdue University*

Colgate-Palmolive Postdoctoral Fellowship Award in *In Vitro* Toxicology



Ankur Dnyanmote,
University of California, San Diego

Graduate Student Fellowship Award—Novartis



Yue Cui,
University of Kansas

2009 SPONSORED AWARD RECIPIENTS

Pfizer Undergraduate Student Travel Award



Sherine Crawford,
Medgar Evers College



Trish T. Hoang,
University of Illinois at Urbana-Champaign



Kelly Krcmarik,
Michigan State University



Cory M. Mathias,
Westminister College



P. Sean McGrath,
Colorado State University

2009 TRAVEL SUPPORT RECIPIENTS

2009 Society of Toxicology Graduate Travel Support

Ofek Bar-Ilan, *University of Wisconsin Madison*
Brian Barlow, *University of Medicine and Dentistry of New Jersey*
Sudheer Beedanagari, *University of California Los Angeles*
Mamta Behl, *Purdue University*
Lauren Besenhofer, *Louisiana State University*
Elyse Bolterstein, *University of Wisconsin-Madison*
Chad Brocker, *University of Colorado Health Sciences Center*
Samuel Caito, *University of Rochester*
Fanny Casado-Pena, *University of Rochester Medical Center*
Yaneth Castro, *CINVESTAV, Mexico*
Lixia Chen, *Texas Tech University*
Teshome Gherezghiher, *University of Illinois at Chicago*
Glenn Gookin, *University of California Irvine*
Christina Hickey, *New York University School of Medicine*
Indira Jutooru, *Texas A&M University*
Satoko Kakiuchi-Kiyota, *University of Nebraska Medical Center*
Peer Karmaus, *Michigan State University*
Senthilkumar Karuppagounder, *Auburn University*
Miriam Kleinman, *Wayne State University*
Anna Kopec, *Michigan State University*
Courtney Kozul, *Dartmouth Medical School*
Soyoung Lee Kyungpook, *National University, Korea*
Wenjun Li, *University of Florida*
Yichen Lin, *University of Texas at Austin*
Alicia Marroquan-Cardona, *Texas A&M University*
Jessica McCormick, *Rutgers University*
Julie Moreno, *Colorado State University*
Linda Mota, *Clemson University*
Clarisse Muenyi, *University of Louisville*
Colin North, *Michigan State University*
Citlalli Osorio-Yayne, *CINVESTAV-IPN, Mexico*
Katie Paul, *University of North Carolina Chapel Hill*
Priya Raman, *Michigan State University*
Sindhura Ramasahayam, *University of Louisiana Monroe*
Sadiye Rieder, *University of South Carolina*
Tinashe Ruwona, *CDC/NIOSH*
Yogesh Saini, *Michigan State University*
Marco Sanchez, *CINVESTAV IPN, Mexico*
Changxia Shao, *Texas Tech University*
Aaron Shapiro, *University of Toronto, Canada*
Shuijie Shen, *Children's Hospital Research Institute*
Tonya Taylor, *Emory University*
Jessica Weems, *University of Utah*
Aya Westbrook, *University of California Los Angeles*
Jie Zhang, *University of Kentucky*
Jiniqu Zhu, *Texas Tech University*

Funded by Battelle Foundation

Peter Bui, *University of California Los Angeles*
David Castro, *Oregon State University*
Seth Ebersviller, *University of North Carolina Chapel Hill*
Gi Soo Kang, *New York University School of Medicine*
Haitian Lu, *Michigan State University*
Nicholas Manzo, *North Carolina State University*
Smita Salian, *National Institute for Research in Reproductive Health, India*
Shujie Shi, *University of Rochester School of Medicine*
Mitsuko Yamamoto, *University of California Los Angeles*

Funded by Burroughs Wellcome Fund

Helen Badham, *Queens University, Canada*
Thiruchelvam Kariharan, *Auburn University*
Tingting Li, *University of Washington*
Julia Perstin, *University of Toronto, Canada*
Annmarie Ramkissoo, *University of Toronto, Canada*
Echoleah Rufer, *University of Wisconsin Madison*