

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 2011 Honorary Membership and Award nominations is October 9, 2010.

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. Nominees for the Congressional Science Leadership Award are reviewed and recommended by the Communications Committee and approved by Council.

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. 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, Special Interest Groups, and Specialty Sections. 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). **A student 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 can 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	..... Dennis Parke*
1962	..... W. F. Von Oettingen*	1997	..... John E. Casida
1962	..... Torald H. Sollman*	1997	..... Roger W. Russell*
1963	..... Ethel Browning*	1998	..... Jud Coon
1966	..... R. Tecwyn Williams*	1998	..... Michel Mercier
1976	..... Norton Nelson*	1999	..... William O. Robertson
1982	..... George H. Hitchings*	1999	..... Takashi Sugimura
1986	..... Bernard B. Brodie*	2000	..... Findlay Russell
1986	..... Herbert Remmer*	2001	..... Herbert Needleman
1991	..... Hyman J. Zimmerman*	2007	..... Mario Molina
1994	..... Ronald W. Estabrook	2008	..... Lee Hartwell
1994	..... Wendell W. Weber	2008	..... H. Robert Horvitz
1995	..... Gertrude B. Elion*	2009	..... Gilbert S. Omenn
1995	..... Charles S. Lieber*	2009	..... Sir John E. Walker
1996	..... Sten G. Orrenius	2010	..... Sir Philip Cohen
		2010	..... Ferid Murad



Indicates an SOT Sponsored Award

*Deceased

SOT Honor and Award Descriptions and History

SOT Award Descriptions



Achievement Award

The Achievement Award is presented to a member of the Society of Toxicology who, within 15 years since obtaining his/her highest earned degree (in the year of the SOT Annual Meeting), 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 José E. Manautou
2007 Jeffrey M. Peters
2008 Ivan Rusyn
2009 Russell S. Thomas
2010 Gary W. Miller



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. Kherra*
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
2010 Edward V. Ohanian

SOT Honor and Award Descriptions and History



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, 2009, and September 30, 2010. 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
2010 Bret F. Bessac, Manabu Nukaya, Nicholas Radio



Board of Publications Award for the Best Paper in Toxicological Sciences

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 known as the Frank R. Blood Award from 1974–1994.)

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. Bacchanale, 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. Pepper, 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 Q. Yang, T. Nagano, Y. Shah, C. Cheung, S. Ito, F. J. Gonzalez
2010 R. L. M. Dobson, S. Motlagh, M. Quijano, R. T. Cambron, T. R. Baker, A. M. Pullen, B.T. Regg, A. S. Bigalow-Kern, T. Vennard, A. Fix, R. Reimschuessel, G. Overmann, Y. Shan, G. P. Daston

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

SOT Honor and Award Descriptions and History



Congressional Science Leadership Award

The 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) dedicated advancement of legislation for the protection of human, animal, and environmental health. This award consists of a plaque.

Award Recipients

2009 Congressman David Wu (D-OR)
2010 Senator Johnny Isakson (R-GA)
 Congressman David Price (D-NC)



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 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 to both ensure and enhance the quality of human and animal health and the environment. This award consists of a plaque and a cash stipend.

Award Recipients

2000 Allegheny-Erie Regional 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 accomplishment. This award consists of a plaque and a cash stipend. The recipient delivers the Distinguished Toxicology Scholar Award Lecture at the SOT Annual Meeting. (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
2010 Harihara M. Mehendale



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, Serrine S. Lau
2010 Tetsuo Satoh

SOT Honor and Award Descriptions and History



Enhancement of Animal Welfare Award

The Enhancement of Animal Welfare Award is presented annually to a member of the Society in recognition of a 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. The achievement recognized may be either a seminal piece of work or a long-term contribution to toxicological science and animal welfare. This 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
2010 Leonard M. Schechtman



Founders Award

The SOT Founders Award is presented to a Full, Emeritus 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. This award consists of a plaque and a cash stipend.

Award Recipients

2008 John Doull
2009 Roger O. McClellan
2010 James S. Bus



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 an 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. A full listing of recipients can be found under the Graduate Travel Support section on page 288.



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. The recipient delivers the Leading Edge in Basic Science Award Lecture at the SOT Annual Meeting. This award consists of a plaque and a cash stipend.

Award Recipients

2009 John Katzenellenbogen
2010 Richard S. Paules



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

SOT Honor and Award Descriptions and History

1992	.....	W. Norman Aldridge
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 O. McClellan
2006	.....	A. Wallace Hayes
2007	.....	James A. Swenberg
2008	.....	Hanspeter Witschi
2009	.....	Gary M. Williams
2010	.....	Marion F. Ehrich



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 Awards

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 Recipients

2009	.....	Enrique Fuentes-Mattei, Sheppard A. Martin
2010	.....	Haitian Lu, Erica N. Rogers, Hariharan Saminathan



Perry J. Gehring Diversity Student Travel Award

The Perry J. Gehring Diversity Student Travel 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 Recipients

2009	.....	Vanessa De La Rosa
2010	.....	Nygerma L. Dangleben



Public Communications Award

The Public Communications Award is presented by the Society of Toxicology to 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, databases, extension bulletins, magazines, newspapers (local or national), outreach, public presentations, public forums, radio and television scripts, and workshops. This 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
2010	.....	Philip Wexler

SOT Honor and Award Descriptions and History



SOT AstraZeneca IUTOX Fellowship

AstraZeneca 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 Srianjata (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 Gàrcia (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)
- 2010 Asongalem Emmanuel Acha (Cameroon)
Ayse Basak Engin (Turkey)
Ronnie A. D. Frazer-Williams (Sierra Leone)
Yan Li (China)
Jesus T. Olivero-Verbel (Colombia)
Suresh V. S. Rana (India)
Ganna Shayakhmetova (Ukraine)
Vanessa Steenkamp (South Africa)
Marcelo J. Wolansky (Argentina)
Motao Zhu (China)



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 at the SOT Annual Meeting 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 Specialty Sections or the Awards and Fellowships section.

SOT Honor and Award Descriptions and History



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.). This award consists of a plaque and a cash stipend. The recipient delivers the Translational Impact Award Lecture at the SOT Annual Meeting.

Award Recipients

2009 Thomas W. Kensler
2010 Kenneth E. McMartin



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.

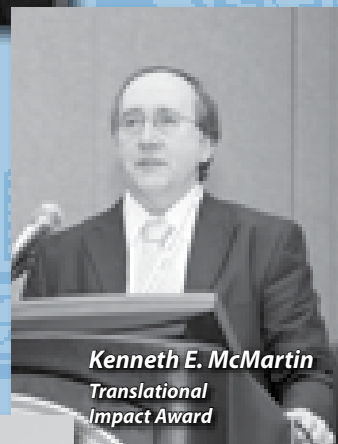
2010 Annual Meeting Award Lecturers



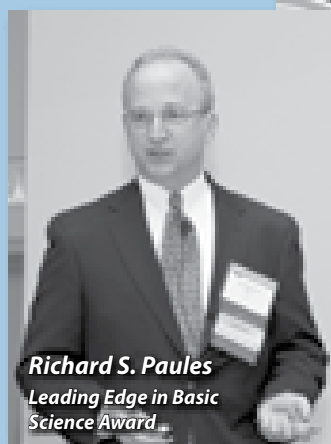
Marion F. Ehrich
Merit Award



Harihara M. Mehendale
Distinguished Toxicology Scholar Award



Kenneth E. McMartin
Translational Impact Award



Richard S. Paules
Leading Edge in Basic Science 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 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 and to 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
2010 J. Chris Corton

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. Two or more awards, up to \$3,750 each, are available. Awards will defray travel, *per diem*, and training expenses.

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, use of 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.

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 Bhawe, 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
2010 Maxwell C. K. Leung, David T. Szabo, Natalia M. VanDuyn

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, made as a single lump payment. Awardees can re-apply for funding in subsequent years.

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. Cerven, Duncan C. Ferguson, Shashi K. Ramiah
2009 Qin M. Chen, Timothy J. Shafer, Mehmet Uzumcu
2010 Patrick Allard, Duncan C. Ferguson, 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 annually and includes stipend and research-related costs (up to \$44,000) for one year, and funding to attend the SOT Annual Meeting to present this research. 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.

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
2010 Ankur Dnyanmote

Colgate-Palmolive Traveling Lectureship in Alternative Methods in Toxicology Award

Offered 1996–2008

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 University of Louisiana at Monroe
Visiting Professor: George Michalopoulos

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. 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
2010 Eric N. Liberda

(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 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
2010 Annie L. Carlton, Alisha Chitrakar, Megan E. Culbreth,
Chang Woo Lee, Sharon Ochs

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.

Award Recipient

2010 Haitian Lu

2010 Honor and Award Recipients



Honorary Membership



Sir Philip Cohen

Professor Sir Philip Cohen is the founder and Co-Director of the Division of Signal Transduction Therapy (DSTT), the UK's largest collaboration between a basic research institution and the pharmaceutical industry. It is widely regarded as a model for how industry and academia should interact, for which it received a Queen's Anniversary Award for Higher Education in 2006.

For the past 40 years, Dr. Cohen's research has been devoted to studying the role of protein phosphorylation in cell regulation and human disease, a process that controls almost all aspects of cell life. His contributions to this area include working out over a 25-year period how calmodulin, the calcium-binding protein, is involved in the insulin-induced stimulation of glycogen metabolism in muscle. Currently, his laboratory is investigating the signaling pathways that regulate the production of pro-inflammatory cytokines and interferons during bacterial and viral infection, research that is aimed at understanding how the uncontrolled production of these substances causes chronic inflammatory diseases, such as rheumatoid arthritis, asthma, and septic shock.

Dr. Cohen was born on July 22, 1945, in Edgware, Middlesex, England, and received his B.Sc. (1966) and Ph.D. (1969) from University College London. He then spent two years as a postdoctoral fellow at the University of Washington (Seattle, WA) with Dr. Edmond Fischer (the 1992 Nobel Laureate for Medicine or Physiology).

In 1971, Dr. Cohen returned to the UK to become a faculty member at the University of Dundee, Scotland, where he has worked ever since. He has been a Royal Society Research Professor since 1984, Director of the Medical Research Council (MRC) Protein Phosphorylation Unit since its inception in 1990, and was the Honorary President of the British Biochemical Society from 2006–2008. He was knighted in 1998.



Honorary Membership



Ferid Murad

Nobel Laureate Ferid Murad is renowned for his contributions to public health and medicine. He is the Director of the Institute of Molecular Medicine and holds the John S. Dunn Distinguished Chair in Physiology and Medicine at the University of Texas.

His key research demonstrated that nitroglycerin and related drugs work by releasing nitric oxide into the body, which acts as a signaling molecule in the cardiovascular system, making blood vessels dilate. The missing steps in the signaling process were filled in by Robert F. Furchgott and Louis J. Ignarro. The three received the 1998 Nobel Prize in Physiology or Medicine for this work. Drs. Murad and Furchgott received the Albert Lasker Award for Basic Medical Research in 1996.

Dr. Murad is an Albanian-American physician and pharmacologist, who was born September 14, 1936, in Whiting, Indiana. He received his undergraduate degree in chemistry from the pre-med program at DePauw University in 1958. An early graduate of the first Medical Scientist Training Program to be developed, he received an M.D. and Ph.D. in pharmacology from Case Western Reserve University in 1965. He then joined the faculty of University of Virginia, where he was made professor in 1970, before moving to Stanford University in 1981. Dr. Murad left Stanford in 1988 for a position at Abbott Laboratories, where he served as a Vice President until starting his own biotechnology company, the Molecular Geriatrics Corporation, in 1993. Dr. Murad relocated to the University of Texas in 1997 to create a new department of integrative biology, pharmacology, and physiology.

2010 Honor and Award Recipients



Achievement Award



Gary W. Miller

Gary W. Miller, Ph.D., Professor of Environmental and Occupational Health and Associate Dean for Research, Rollins School of Public Health, Emory University, is the recipient of the SOT 2010 Achievement Award for his significant early career contributions to toxicology.

Dr. Miller's research focuses on toxicology and environmental and genetic factors involved in neurological disease, particularly the role of pesticides

in the development of Parkinson's disease. By performing top-notch toxicological research in the field of neuroscience, Dr. Miller has attracted considerable attention to the field and served as an example of the key role of toxicology in elucidation of pathogenesis of neuronal disease. He has been continuously funded throughout his career starting with a Society of Toxicology predoctoral fellowship all the way to an NIEHS-funded P01 Center that was awarded in 2008.

He is Chair of Emory's Institutional Health and Biosafety Committee, Director of Emory Parkinson's Disease Collaborative Environmental Research Center, Director of the Emory NIEHS-funded Toxicology Training Grant, and holds additional appointments in Neurology and Pharmacology. In addition to serving as President of the SOT Southeastern Regional Chapter and Vice President of the Neurotoxicology Specialty Section, he was a member of the Neurotoxicology and Alcohol Study Section and has served on numerous other NIH and international review panels and editorial boards.

Dr. Miller earned an M.S. (1992) from Old Dominion University, a Ph.D. (1995) from the University of Georgia, and completed postdoctoral fellowships at Emory University (1997) and Duke University (1998). He was recruited to Emory from the University at Texas at Austin as an Associate Professor in 2002 and awarded tenure in 2004. For the significant contributions to toxicology that he has made in the early stages of his career, the Society of Toxicology is pleased to present the SOT 2010 Achievement Award to Dr. Gary Miller.



Arnold J. Lehman Award



Edward V. Ohanian

Edward V. Ohanian, Ph.D., is recognized as the 2010 Arnold J. Lehman Award recipient for his contributions to risk assessment and regulation of chemical agents. He is the Director of the Health and Ecological Criteria Division at U.S. Environmental Protection Agency's (U.S. EPA) Office of Water (OW), and is responsible for conducting human and ecological risk assessments of national and international importance. His expertise, experience, and broad knowledge have helped to shape science policy in U.S. EPA's OW and across the Agency at large. He serves as mediator and the voice of reason in resolving contentious issues of scientific interpretation.

Dr. Ohanian demonstrates superior scientific judgment in addressing critical areas of water contamination. He helped to guide U.S. EPA through the highly contentious and sometime vitriolic debates on a veritable who's who of drinking water contaminants and issues including lead, fluoride, chromium, arsenic, and perchlorate to name just a few. His judgment and calm, reasoned advice have been instrumental in guiding senior managers, including the Administrators, on these and other issues throughout the years.

His influence is also evident outside of U.S. EPA. His input is valued on the world stage in WHO Drinking-Water Guidelines Committees. His conclusions and advice are accepted as authoritative U.S. EPA positions. He chairs the U.S. EPA Risk Assessment Forum, where difficult risk assessments and toxicology problems are addressed, and science policy is formulated. As co-founder of the Federal-State Toxicology and Risk Analysis Committee, he has been instrumental in fostering partnership to improve risk analysis methods. He also chairs the Health Advisory Board of NSF International, which is responsible for setting safe levels for direct and indirect drinking water additives.

Dr. Ohanian is well published, credible in his work, forceful yet polite in his arguments, and reasoned and patient in his leadership. He is also purposeful, determined, and untiring in his efforts to incorporate the best toxicology into risk assessments. He has advanced the field of risk assessment through innovative thinking and principled risk assessment practice. The SOT Awards Committee is pleased to announce Dr. Ohanian as the recipient of the 2010 Arnold J. Lehman Award.



Society of Toxicology
Sponsored Awards

2010 Honor and Award Recipients



Best Postdoctoral Publication Award

The Postdoctoral Assembly recognizes these three recipients of their 2010 awards:



Bret F. Bessac, *Yale University School of Medicine*

Transient Receptor Potential
Ankyrin 1 Antagonists Block the Noxious
Effects of Toxic Industrial Isocyanates
and Tear Gases

The FASEB Journal 2009, Vol. 23
1102–1114

Bret F. Bessac



Manabu Nukaya, *University of Wisconsin-Madison*

The Role of the Dioxin Responsive
Elements Cluster Between Cyp1a1
and Cyp1a2 Loci in Aryl Hydrocarbon
Receptor Biology

*Proceedings of the National Academy of
Sciences USA* 2009, 106, 4923–4928

**Manabu
Nukaya**



Nicholas Radio, *Cellumen*

Assessment of Chemical Effects on
Neurite Outgrowth in PC12 Cells Using
High Content Screening

Toxicological Sciences 2008, 105(1),
106–118

Nicholas Radio



Board of Publications Award for the Best Paper in Toxicological Sciences



The Board of Publications has selected the paper entitled “Identification and Characterization of Toxicity of Contaminants in Pet Food Leading to an Outbreak of Renal Toxicity in Cats and Dogs” as the best paper published in *Toxicological Sciences* in the past year (*Toxicological Sciences* 2008, 106: 251–262). The authors of the paper are Roy L.

M. Dobson, Safa Motlagh, Mike Quijano, R. Thomas Cambron, Timothy R. Baker, Aletha M. Pullen, Brian T. Regg, Adrienne S. Bigalow-Kern, Thomas Vennard, Andrew Fix, Ranate Reimschuessel, Gary Overmann, Yuching Shan, and George P. Daston.

The work described in the paper was conducted after the observation of acute renal failure in cats and dogs led to a major recall of pet food in 2007. The authors carried out an extensive analytical effort to identify possible contaminants in wheat gluten and ultimately discovered numerous small molecule contaminants including melamine and several other triazines (ammeline, ammelide, ureidomelamine, N-methylmelamine, and cyanuric acid). These compounds were not cytotoxic when tested individually in cultured kidney cells or *in vivo* in rats, but mixtures of the triazines caused renal failure associated with crystalline deposits in the medullary region. The authors subsequently correlated these findings in rats to post-mortem analysis of crystals obtained from cats and confirmed the presence of high levels of melamine and cyanuric acid in the crystals. Collectively, the results established a causal link between the contaminated gluten and renal toxicity and demonstrated that although relatively innocuous in isolation, the combination of melamine and cyanuric acid formed insoluble precipitates that damaged the renal tubules leading to renal failure and death.

This paper is being recognized because it is an outstanding example of the integration of analytical chemistry, *in vitro* and *in vivo* studies, and histopathology to identify molecular mechanisms of toxicity. In addition, the research was highlighted in a press release by the Society and Oxford University Press because it provided important insight to the general public regarding the analysis and toxicity of contaminated pet food (and subsequently infant formula as well). In this way, it also brought public visibility to the collective efforts of toxicologists to create a safer and healthier world.

2010 Honor and Award Recipients



Congressional Science Leadership Award



Johnny Isakson

Senator Johnny Isakson (R-GA) is honored as the 2010 Congressional Science Leadership Award recipient for his leadership in supporting and sponsoring legislation that recognizes the importance of science as the basis for sound decision making. The Senator has consistently pursued public policy that is based on sound scientific principles and has demonstrated his dedication to advancing legislation for the protection of human, animal and environmental health. Senator Isakson

was elected to the U.S. Senate in 2004 and is a member of the Senate Committees on Health, Education, Labor and Pensions; Commerce, Science, and Transportation; Foreign Relations; Veterans' Affairs; Small Businesses and Entrepreneurship; and Select Committee on Ethics. He has been a consistent supporter of moving forward with stem cell research in an ethical and moral way. Senator Isakson is also a staunch supporter of legislation that advances scientific research to combat such diseases as muscular dystrophy and spinal muscular atrophy, a hereditary disorder that destroys the nerves controlling voluntary muscle movement. He has been consistent in his support for adequate research funding for those government agencies that are working to find cures for various diseases and has consistently supported legislation that ensures continued protection of the nation's environment.

The citation that SOT leaders issued for the Senator noted that, "Senator Isakson is known for defending the integrity of legislative processes that set federal priorities for research and national policymaking." For this, Senator Isakson has earned the deep admiration and gratitude of the Society of Toxicology.



David Price

Congressman David Price (D-NC) is honored as the 2010 Congressional Science Leadership Award recipient for his staunch support of scientific research and education, and his unwavering commitment to advancing the health and safety of our Nation. Congressman Price is known for fiercely defending the integrity of legislative processes that set federal priorities for research and national policymaking. He has played a critical role in garnering support for scientific agencies including the National

Institutes of Health, the Environmental Protection Agency, and National Science Foundation. Mr. Price is a member of the Congressional Research and Development Caucus and a tireless advocate of STEM education through his efforts with the Congressional Science, Technology, Engineering, and Math Education Caucus. He was twice named "Champion of Science" by the Science Coalition, a non-partisan organization of top

public and private research universities. While representing an area that includes Raleigh, Cary, Durham, and Chapel Hill, North Carolina, Mr. Price has led the fight for strong science and has been unusually effective in advancing legislation to protect human, animal, and environmental health. For this, Congressman Price has earned the deep admiration and gratitude of the Society of Toxicology.



Distinguished Toxicology Scholar Award



Harihara M. Mehendale

Harihara M. Mehendale, Ph.D., ATS, the Kitty Degree Endowed Chair of Toxicology, College of Pharmacy at University of Louisiana at Monroe, Monroe, Louisiana, is the recipient of the 2010 Distinguished Toxicology Scholar Award.

After several years at the National Institute of Environmental Health Sciences as a visiting fellow then staff fellow, Dr. Mehendale began a career spanning 35 years as an independent investigator. Seminal contributions in pulmonary, hepatic, and renal toxicology are hallmarks of his achievements in biomedical research. Perhaps Dr. Mehendale's most novel insight is the key role of stimulation of tissue repair in the ultimate outcome in diverse models of organ damage. Initial observations of remarkable potentiation of halomethane hepatotoxicity in rats previously exposed to an organochlorine insecticide lead to a series of studies to elucidate this novel mechanism. Stimulation of tissue repair in response to injury is essential for prevention of organ failure and death in multiple model systems. Chemicals and other metabolic disturbances (such as diabetes) that interfere with stimulation of tissue repair therefore presents a novel mechanism for potentiation of toxicity. Identification of candidate genes for regulation of stimulated tissue repair by Dr. Mehendale's group promises new therapeutic or preventative approaches for organ injury. In large part due to remarkable success with competitive grants, Dr. Mehendale consistently provided opportunity for education and training for graduate students and postdoctoral researchers. The National Institutes of Health and Agency for Toxic Substances and Disease Registry are examples of long-term sponsors of this research. His commitment to quality, continuous adoption of new technologies, and enthusiasm for refining understanding of mechanisms of toxicity define him as an outstanding mentor. Dr. Harihara Mehendale's record of achievement in independent investigator-initiated research, and success as a mentor, make him a highly deserving recipient of the SOT 2010 Distinguished Toxicology Scholar Award.

2010 Honor and Award Recipients



Education Award



Tetsuo Satoh, Ph.D., has had a prestigious career as one of the leaders of education in the science of toxicology and thus is recognized with the 2010 Education Award. In addition to the international recognition he has received for his scientific contributions to the toxicologic aspects of drug metabolism, Dr. Satoh is recognized for his exceptional efforts in support of education in toxicology. Dr. Satoh joined the Chiba University, Chiba, Japan in 1966 where he directed toxicology teaching and research for 30

years until leaving the Chiba University in 1996 as Emeritus Professor of Toxicology. More than two hundred students have graduated from his laboratory and they are currently working as leaders in toxicology for academia, government, and companies in Japan and in other countries. Dr. Satoh has served the Japanese Society of Toxicology (JST) in numerous positions including the Executive Committee. He established the Toxicology Education Program in the JST, which later developed into the Certification Program for Toxicologists in Japan. Dr. Satoh was the Founding President of the International Assembly for the Recognition of Toxicologists (IART), a group whose focus was on accreditation and certification of toxicologists worldwide. Dr. Satoh was one of the founders of the Asian Society of Toxicology (ASITOX), and currently is the Senior Advisor to ASITOX. He has been invited to a number of international meetings to give lectures concerning education and training of toxicologists.

Dr. Satoh joined the Society of Toxicology in 1974 and he was the first recipient of the Colgate-Palmolive Traveling Lectureship in Alternative Methods in Toxicology Award in 1996. In addition, he served as an Associate Editor of the journal *Toxicological Sciences*. Dr. Satoh has served the International Union of Toxicology (IUTOX) in numerous positions including Vice President, and he was awarded the 2007 IUTOX Merit Award for his outstanding work and significant contributions to the field of toxicology. He is an eminent toxicologist and a marvelous teacher who has contributed significantly over 30 years to education and training of graduate students and young toxicologists at the national, regional, and international levels. The Society of Toxicology recognizes Dr. Tetsuo Satoh with the 2010 Education Award.



Enhancement of Animal Welfare Award



Leonard M. Schechtman, Ph.D., is presented the SOT 2010 Enhancement of Animal Welfare Award in recognition of the outstanding contributions he has made to the advancement of toxicological science through the development and application of methods that replace, refine, and reduce experimental animal use in research, education, and regulatory safety testing.

Dr. Schechtman was the U.S. Food and Drug Administration's Principal Agency Representative to the Interagency Coordinating Committee on the Validation of Alternative Methods from 1999 through 2006 and served as Chairman of ICCVAM from 2001 through 2006. Under his leadership, ICCVAM developed guidelines for nomination and submission of alternative test methods, defined and implemented test method performance standards to expedite validation, enhanced international cooperation with the ECVAM and JaCVAM, and successfully evaluated and transmitted formal recommendations to U.S. federal agencies on the scientific validity of several new alternative methods in accordance with the 2000 ICCVAM Authorization Act. These alternative safety testing methods were subsequently adopted by U.S. regulatory agencies and international organizations such as the OECD and its 30 member countries. The methods now allow for required regulatory safety testing for dermal corrosion, acute systemic toxicity, ocular toxicity, and pyrogenicity testing to be conducted more humanely and with fewer or no animals.

Dr. Schechtman also has contributed significantly to the development and adoption of internationally harmonized guidance on the validation and use of novel *in vitro* and *in vivo* safety evaluation methods. As President of Innovative Toxicology Consulting, he is further contributing to the development, scientific validation, and advancement of alternative methods for regulatory safety testing. The Society of Toxicology is pleased and honored to award Dr. Schechtman the SOT 2010 Enhancement of Animal Welfare Award.

2010 Honor and Award Recipients



Founders Award



James S. Bus

James S. Bus, Ph.D., recipient of the SOT 2010 Founders Award, is Director of External Technology, Toxicology and Environmental Research and Consulting at The Dow Chemical Company. He has worked tirelessly and vocally on the very issues that describe the Founders award, demonstrating "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."

Dr. Bus has truly distinguished himself over the years in toxicology research and its application in safety assessment. His leadership is demonstrated through his positions on such boards as the National Academy of Sciences Board of Environmental Sciences and Toxicology, the ILSI Health and Environmental Sciences Institute, the U.S. Environmental Protection Agency Science Advisory Board, and the Toxicology Forum, to name a few. He has served as President of the Society of Toxicology and the American Board of Toxicology. Among his awards is the Society of Toxicology Achievement Award (1987) for his outstanding contributions to the science of toxicology. His research interests include mechanisms of oxidant toxicity, defense mechanisms to chemical toxicity, relationships of pharmacokinetics to expression of chemical toxicity, and general pesticide and industrial chemical toxicology.

Dr. Bus has constantly pushed the science of toxicology to improve and expand the application of the best toxicological data into regulatory decisions. He is driven by a passion and contagious enthusiasm for improving the toxicological basis for regulatory decisions. Dr. Bus has worked to ensure that state-of-the-art approaches are applied to regulatory decisions. He is determined to work to improve the quality of our regulatory system to better protect human health and more capably set safe levels for chemical agents. We congratulate and recognize Dr. James Bus as the recipient of the SOT 2010 Founders Award.



Leading Edge in Basic Science Award



Richard S. Paules

Richard S. Paules, Ph.D., Senior Scientist and Head, Environmental Stress and Cancer Group, Laboratory of Molecular Toxicology, Division of Intramural Research, NIEHS, and Director, NIEHS Microarray Group, is awarded the Leading Edge in Basic Science Award for his recent and seminal scientific contribution to understanding fundamental mechanisms of toxicology.

A respected leader and strong force in the field of toxicogenomics, Dr. Paules proved to be a true visionary who early on captured the essence of the field and the power of the technology and has diligently positioned NIEHS at the forefront of the field. He has been a major contributor to the development of the National Center for Toxicogenomics (NCT) research infrastructure and the development of strong partnerships between the Institute, academia and the corporate sector. Dr. Paules led a large research effort in which proof-of-concept toxicogenomics studies were performed to demonstrate the utility of bringing together genomic approaches with more traditional approaches of biology, molecular biology, physiology, pathology, and toxicology in order to gain insight into the molecular mechanisms involved in the etiology and progression of injury and disease processes. An additional goal was to develop predictive biomarkers of the initiation and progression of those processes. In addition to his studies incorporating genomics into studies of xenobiotic-induced liver injury, Dr. Paules has successfully integrated genomics into his studies of a mechanistic understanding of how errors in DNA damage responses can contribute to diseases including cancer.

Dr. Paules continually displays the attributes expected of the best scientists and his record of scientific achievements suggests that he will continue to excel as a leader in environmental health research and toxicology. For his work in the integration of genomics into the investigation of the molecular basis of injury and disease processes, the Society of Toxicology recognizes Dr. Richard Paules with the SOT 2010 Leading Edge in Basic Science Award.

2010 Honor and Award Recipients



Merit Award



Marion F. Ehrich

Marion F. Ehrich, Ph.D., receives the 2010 Merit Award. She is a tenured professor of pharmacology and toxicology and the co-director of the Laboratory for Neurotoxicity Studies at the Virginia-Maryland Regional College of Veterinary Medicine (VMRCVM) on the campus of Virginia Tech. Her research interests include biochemical neurotoxicology, particularly neurotoxicity of organophosphates. Dr. Ehrich is nationally known and her accomplishments in neurotoxicology

and *in vitro* toxicology are most notable. She has been a leading investigator in determining the mechanisms and pathogenesis of organophosphate ester-induced neurotoxicity (OPIDN) and other pesticide-induced injuries to the nervous system. An expert in the assessment and role of neurotoxic esterase in OPIDN, she is often called upon by both government and industry for her expertise. She has been a pioneer in the use of *in vitro* systems for mechanistic studies and safety assessment in neurotoxicology, with potential contribution to a diminished need for animal use in chemical safety assessments.

Dr. Ehrich is a practicing registered pharmacist and pharmacy consultant to the VMRCVM, served as SOT President 2003–2004, and American Veterinary Medical Association, and is also a member of the Academy of Toxicological Sciences, and American Academy of Veterinary Pharmacology and Therapeutics. She has mentored more than 35 masters and doctoral level students. Dr. Ehrich's publications span 38 years, including 300 book chapters, reviews, research and educational publications. Her grant funding sources have included National Institutes of Health, U.S. Department of Agricultural, U.S. Environmental Protection Agency, the Department of Defense and others. Her distinguished contributions to toxicology over 30 years encompass research, teaching, consulting, and mentoring as well as an unbridled dedication to the Society. It is a true pleasure to honor and recognize Dr. Marion Ehrich with the SOT 2010 Merit Award.



Outstanding Graduate Student Leadership Award



Haitian Lu,
*Michigan State University,
East Lansing, MI*



Erica N. Rogers,
University of Louisville, Louisville, KY



Hariharan Saminathan,
Iowa State University, Ames, IA



Perry J. Gehring Diversity Student Travel Award



Nygerma L. Dangleben,
University of California, Berkeley

Abstract Title: Investigating
Beta-Defensin-1 Down-Regulation
in Arsenic Toxicity

2010 Honor and Award Recipients



Public Communications Award



Philip Wexler

Philip Wexler's extensive career at the U.S. National Library of Medicine's (NLM) Toxicology and Environmental Health Information Program, coupled with his other professional affiliations, collaborations, and independent projects, designed to make toxicology more accessible to the public, uniquely qualify him for the SOT Public Communications Award.

Serving as Editor-in-Chief of Elsevier's *Information Resources in Toxicology* (4th ed., 2009) and the 4-volume *Encyclopedia of Toxicology* (2nd ed., 2005), he has managed the fine balance of communicating with both scientific audiences and the public. An author of numerous papers, Mr. Wexler is currently preparing "Toxicology: An Evolving Informatics Framework" for *Critical Reviews in Toxicology*. His public policy orientation will be featured in another book he is co-editing, *Chemicals, Environment, Health: A Global Management Perspective*, for Taylor and Francis.

He served for two terms as Chair of the SOT's World Wide Web Advisory Committee and is 2010 President of SOT's Ethical, Legal, and Social Issues Specialty Section. With Steve Gilbert, he assembled the Toxicology History Room at SOT's 2009 Annual Meeting. He is Vice President of the Toxicology Education Foundation, which promotes the public understanding of toxicology.

Mr. Wexler is a member of the recently assembled Education and Communications Work Group of the Center for Disease Control and Prevention/Agency for Toxic Substances and Disease Registry's National Conversation on Public Health and Chemical Exposure project. At NLM, he has been instrumental in developing and enhancing the TOXNET system and its components, serves as file manager for the LactMed, Integrated Risk Information System and International Toxicity Estimates for Risk databases, and heads the Risk Assessment Information Team. He spearheaded the development of the multi-stakeholder produced World Library of Toxicology, Chemical Safety, and Environmental Health, an on-line global collaborative and network.

Mr. Wexler oversees the NLM-SOT joint project ToxLearn, a multi-module tutorial covering the basic principles of toxicology for general audiences. He has taught countless medical librarians and others the use of toxicology information systems, at NLM and other venues, and made numerous presentations and conducted continuing education courses at meetings throughout the world.

Mr. Wexler's contributions have had and continue to have an enormous impact on how scientists, other professionals, and the public at large access toxicological information. We congratulate and recognize Philip Wexler, M.L.S., with the SOT 2010 Public Communications Award.



SOT AstraZeneca IUTOX Fellowship

- Asongalem Emmanuel Acha** (Cameroon)
- Ayse Basak Engin** (Turkey)
- Ronnie A. D. Frazer-Williams** (Sierra Leone)
- Yan Li** (China)
- Jesus T. Olivero-Verbel** (Colombia)
- Suresh V. S. Rana** (India)
- Ganna Shayakhmetova** (Ukraine)
- Vanessa Steenkamp** (South Africa)
- Marcelo J. Wolansky** (Argentina)
- Motao Zhu** (China)



Translational Impact Award



Kenneth E. McMartin

Kenneth E. McMartin, Ph.D., is the 2010 Translational Impact Award recipient. He is a Professor in the Department of Pharmacology, Toxicology and Neuroscience at the LSU Health Sciences Center—Shreveport, Director of the LSUHSC-S interdisciplinary graduate program in toxicology, and Co-Director of the Pharmacokinetics Core for the Center for Experimental Cancer Therapeutics.

Dr. McMartin's early studies showed that, in experimental methanol poisonings, formic acid was the proximate toxicant and had a causative role in the severe metabolic acidosis observed for these intoxications. He worked with collaborating laboratories to develop treatment modalities. This effort culminated in the commercialization of the antidote 4-methylpyrazole, now called fomepizole. The ensuing product development progressed through animal experimentation and then phase I–phase III clinical trials. Importantly, fomepizole is now utilized worldwide and has become the standard of care for both ethylene glycol and methanol poisonings.

In recent years, Dr. McMartin has conducted mechanistic experimental studies on the pathogenesis of the renal toxicity of ethylene glycol, demonstrating that the precipitation of calcium oxalate crystals in the kidneys was a causative factor in the observed renal tubular toxicity. He is currently investigating mechanisms of toxicity for diethylene glycol poisonings, an important problem evident by recent and past epidemic intoxications worldwide. Thus, Dr. McMartin has had a significant impact on clinical toxicology, dedicating his career to the study of mechanisms of action of toxicants important in common poisonings and in the development of antidotes for their therapy. We are delighted to recognize Dr. Kenneth McMartin as the SOT 2010 Translational Impact awardee.

2010 Sponsored Award Recipients

AstraZeneca Traveling Lectureship Award



J. Chris Corton

J. Chris Corton, Ph.D., is the 2010 AstraZeneca Traveling Lectureship Award winner. The award recognizes excellence in research and service in toxicology and enables a lecture tour of Europe to promote collaborations between European and North American toxicologists. Dr. Corton is a Senior Research Biologist in the Integrated Systems Toxicology Division at the National Health and Environmental Effects Research Laboratory of the U.S. Environmental Protection Agency in

Research Triangle Park, NC. For more than two decades, Dr. Corton has studied the mode of action and human relevance of hepatotoxicants. His group has successfully used a multi-pronged strategy dominated by toxicogenomics and nullizygous mouse models to uncover chemical mode of action useful for risk assessment. More recently, his group is evaluating and implementing the use of high-throughput *in vitro* methods as first-tier screening for hepatotoxicity and mode of action categorization. He is on the editorial boards of 6 journals and has served as member and chair on numerous NIH study sections. He has also served in many capacities in SOT including member and chair of the Continuing Education Committee. Dr. Corton will focus his lecture tour to European scientists who are part of the REACH chemical testing program and who are part of the HepatoSys collaborative network of scientists directed toward building predictive computational models of the liver. Dr. Corton will conduct a lecture series at both industrial and academic institutions in Europe with the objective to establish productive relationships and collaborations with European colleagues, gain an understanding of approaches and methods in *in vitro* hepatotoxicology in Europe, and to gain a better understanding of the European viewpoints on *in vitro* testing, risk assessment and science policy of chemicals in general and hepatotoxicants in particular. We recognize Dr. Corton with the 2010 AstraZeneca Traveling Lectureship Award.

Colgate-Palmolive Awards for Student Research Training in Alternative Methods



Maxwell C. K. Leung, Duke University

Project Title: Physiological and Developmental Effects of Persistent Mitochondrial DNA Damage in *Caenorhabditis elegans*

Host Institution: Vanderbilt University



David T. Szabo, University of North Carolina at Chapel Hill

Project Title: From Mice to Men: Generation of a Stereoisomer Specific Physiological Based Pharmacokinetic (PBPK) Model of the Flame Retardant Hexabromocyclododecane (HBCD)

Host Institution: University of Montréal



Natalia M. VanDuyn, Indiana University

Project Title: Evaluating the Role of Intracellular Calcium and Mitochondrial Membrane Potential in a Novel *C. elegans* Model of Methylmercury Toxicity

Host Institution: Michigan State University

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Award Sponsors

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- AstraZeneca Traveling Lectureship Award
- SOT AstraZeneca IUTOX Fellowship

Colgate-Palmolive

- Colgate-Palmolive Awards for Student Research Training in Alternative Methods
- Colgate-Palmolive Grants for Alternative Research
- Colgate-Palmolive Postdoctoral Fellowship Award in *In Vitro* Toxicology

Novartis

- Graduate Student Fellowship Award—Novartis

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- Graduate Travel Support

Millennium Pharmaceuticals

- Graduate Travel Support

Pfizer

- Pfizer Undergraduate Student Travel Award

2010 Sponsored Award Recipients

Colgate-Palmolive Grants for Alternative Research



Patrick Allard, *Harvard School of Public Health*

Project Title: High-Throughput Strategy for the Study of Environmental Disruption of Reproductive Health Using *Caenorhabditis elegans*



Duncan C. Ferguson, *University of Illinois at Urbana-Champaign*

Project Title: Human Neural Stem Cell Line in Defined Medium As a Screen for Neurodevelopmental Toxins (Part II: Applications)



Mehmet Uzumcu, *Rutgers*

Project Title: Monitoring Folliculogenesis in Ovary Organ Culture by Multiphoton Fluorescence Microscopy: An *In Vitro* Alternative for Testing Epigenetic Effects of Endocrine-Disrupting Chemicals

Graduate Student Fellowship Award—Novartis



Eric N. Liberda,
New York University

Pfizer Undergraduate Student Travel Award



Annie L. Carlton,
Bates College



Alisha Chitrakar,
Saint Peter's College



Megan E. Culbreth,
North Carolina State University



Chang Woo Lee,
University of Texas MD Anderson Cancer Center



Sharon Ochs,
Wright State University

Syngenta Fellowship Award in Human Health Applications of New Technologies



Haitian Lu,
Michigan State University

2010 Graduate Travel Support Recipients

Society of Toxicology Graduate Travel Support

Ghada Abdelhamid Mohamed, *University of Alberta*
Erin Allen, *The University of Iowa*
Anwar Anwar-Mohamed, *University of Alberta*
Donald Backos, *University of Colorado Denver*
Angela A. Baker, *Rutgers University/UMDNJ*
James M. Brown, *Marshall University*
Gayathri Chadalapaka, *Texas A&M University*
Yaofeng Cheng, *University of Arizona*
Michael Coronado, *Johns Hopkins University*
Alice Crane, *University at Buffalo*
Brenna Flannery, *Michigan State University*
Jill Franzosa, *Oregon State University*
Brandon Gaytan, *University of California at Berkeley*
Jaclyn Goodrich, *University of Michigan*
Jessica C. Graham, *University of Medicine and Dentistry of New Jersey*
Angie Groves, *Rutgers University*
Kaiyu He, *Michigan State University*
Thomas Hill, III, *University of California, Davis*
Lisa Hoffman, *St. Johns University*
Ashley Corrin Huderson, *Meharry Medical College*
Shadia Muhammad Ihlaseh, *Botucatu Medical School, São Paulo State University*
Natalie Johnson, *Texas A&M University*
Suntae Kim, *Michigan State University*
Tejas Suresh Lahoti, *The Pennsylvania State University*
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Jingtao Lu, *Michigan State University*
Lutfiya Miller, *University of Toronto*
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Ji-Yoon Noh, *Seoul National University*
Satya Sreehari Pathi, *Texas A&M University*
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Sam Peterson, *Purdue University*
Guoqing Qian, *University of Georgia*
Kristen R. Ryan, *University of Colorado*
Katerine S. Saili, *Oregon State University*
Andrea Scarino, *Université du Québec*
Allan Schell, *Colorado State University*
Sumitra Sengupta, *Oregon State University*
Jonathan Shannahan, *University of North Carolina at Chapel Hill*
Hua Shen, *The University of Iowa*

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