

James W. Tracy

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Current Positions:

2014 – present Special Assistant for Research Compliance, University of Kentucky
2007 – 2014 Vice President for Research, University of Kentucky
2012 – 2014 Executive Director and Vice President
University of Kentucky Research Foundation
2007 – present Professor, Department of Molecular & Cellular Biochemistry, College of Medicine,
University of Kentucky

Previous Positions:

2005 – 2007 Responsible Official, Select Agent & Toxin Program, University of Wisconsin–
Madison
2004 – 2007 Interim Director, Biotron Laboratory, Graduate School, University of
Wisconsin–Madison
2000 – 2007 Associate Dean for Research & Graduate Training, School of Veterinary Medicine,
University of Wisconsin–Madison
2000 – 2007 Director, Animal Resource Center, School of Veterinary Medicine, University of
Wisconsin–Madison
2000 – 2007 Assistant Director for Animal Health (Section 1433), Wisconsin Agricultural
Experiment Station, University of Wisconsin–Madison
1994 – 2008 Professor, Department of Comparative Biosciences, School of Veterinary
Medicine, University of Wisconsin–Madison
1993 Visiting Professor, Faculty of Medicine (Biochemistry), Ain Shams University
Cairo, Egypt
1992 – 1998 Associate Director, Molecular & Environmental Toxicology Center, University
of Wisconsin–Madison.
1989 – 1994 Associate Professor (with tenure), Department of Comparative Biosciences,
University of Wisconsin–Madison
1983 – 1989 Assistant Professor, Department of Comparative Biosciences, University of
Wisconsin–Madison, Madison, Wisconsin
1979 – 1983 Research Assistant Professor (non-tenure track), Division of Geographic
Medicine, School of Medicine, Case Western Reserve University
1976 – 1983 Research Associate/Senior Research Associate, Department of Pharmacology,
School of Medicine, Case Western Reserve University, Cleveland, Ohio
1972 – 1976 Graduate Research Assistant and NIH pre-doctoral trainee, Department of

1969 – 1972 Biochemistry, Purdue University, West Lafayette, Indiana
 Undergraduate Research Assistant, Department of Chemistry, Bowling Green State University, Bowling Green, Ohio

Education:

	<u>Degree</u>	<u>Date</u>	<u>Field of Study</u>
Bowling Green State University Bowling Green, Ohio	BS	1972	Chemistry
Purdue University West Lafayette, Indiana	PhD	1976	Biochemistry

Leadership Training:

2011 Lean Executive Leadership Institute, True Lean Systems Program, UK College of Engineering (in cooperation with Toyota North America)

2005 – 2006 Fellow, Academic Leadership Program, Committee on Institutional Cooperation (consortium of Big Ten universities and the University of Chicago)

2005 Looking Glass Experience®, Center for Creative Leadership, Greensboro, NC

2001 – 2002 Administrative Development Program (now the Joseph F. Kauffman Seminar), University of Wisconsin–Madison

Synopsis of Leadership Responsibilities at the University of Kentucky:

As Vice President for Research, I reported directly to the president and served on President's Council. I oversaw the administration and operation of the university's \$360-million research enterprise. I provided senior leadership for supporting existing areas of research strength and developing new research initiatives. Faced with declining federal research investment, I led a team working to expand UK's partnerships with private industry and business. I coordinated the activities of various administrative units, such as sponsored programs administration, proposal development, and research communications. The office responsible for intellectual property protection and technology transfer reported to me, as did the Advanced Science and Technology Commercialization Center (ASTeCC), the on-campus business incubator.

I oversaw the university's federal relations and lobbying activities. We have developed a particularly close working relationship with Kentucky's Congressional delegation. I worked with the Kentucky Council on Postsecondary Education on matters relating to research and economic development in the Commonwealth.

I was responsible for ensuring compliance with federal, state, and university regulations and policies governing research, and served as Institutional Official in those areas (e.g., human subjects protection, animal care and use, research misconduct). I oversaw campus-wide multidisciplinary research centers and institutes, including some that are statutorily mandated (e.g., Kentucky Geological Survey, Center for Applied Energy Research). Eleven research core facilities that serve campus investigators report to the VPR. I worked cooperatively with the provost and

academic deans to recruit and retain faculty, including funding the majority of faculty start-up packages.

I participated in the work of various campus committees. Some examples include: University Committee on Academic Planning and Priorities, University Risk Management Committee, Administrative Process Improvement Steering Committee, Campus Master Plan Executive Committee, Budget Model Steering Committee, Endowment Advisory Group, and Executive Steering Committee of the Center for Clinical and Translational Science. I have chaired *ad hoc* committees to review campus emergency management and the former office for commercialization and economic development. I served on a group to analyze and make policy recommendations regarding copyright and online learning. I was extensively involved in developing the 2009-2014 strategic planning effort with an emphasis on goals dealing with research and infrastructure.

I served as Vice President and Executive Director of the University of Kentucky Research Foundation (UKRF), a non-profit corporation that acts as the university's agent for all grants and contracts and for protecting and commercializing university intellectual property. I oversaw the foundation's operations and manage its \$50 million annual budget, which derives from the facilities and administrative (F&A) cost income. I oversaw the F&A rate negotiation with the federal government.

My direct reports included ten administrative directors, four of whom are part-time associate vice presidents, and nine institute/center directors. Collectively, the VPR has over 575 employees and an annual operating budget of about \$65 million.

Board Service:

2009 – 2015	Member, Council on Governmental Relations (COGR), Washington, DC
2012 – 2014	Chair, Research Compliance & Administration Committee, COGR
2009 – 2011	Member, National EPSCoR/IDeA Foundation Board, Washington, DC
2007 – 2014	Permanent member, Kentucky Statewide EPSCoR Committee

EPSCoR = Experimental Program to Stimulate Competitive Research

I was an unpaid *ex officio* board member for several companies and organizations, including:

- Board of Directors, Kentucky Technology, Inc. (owned by UKRF)
- Board of Directors, Coldstream Laboratories, Inc. (owned by UKRF)
- Board of Directors, Kentucky Science & Technology Corp.
- Advisory Board, Kentucky Science & Engineering Foundation
- Kentucky Tobacco Research Board, Kentucky Tobacco Research & Development Center
- Board of Directors, UK Mining Engineering Foundation
- Trustee, Southeastern Universities Research Association
- Councilor, Oak Ridge Associated Universities
- Advisory Board, Kentucky-Argonne National Battery Manufacturing Research & Development Center

Academic Administration at the University of Wisconsin–Madison:**University Service:**

2006	<i>Ad hoc</i> Committee on Institutional Conflict of Interest Policy
2006	Request-for-Proposals Committee, Grants.gov Vendor Solution, Research & Sponsored Programs
2005 – 2007	Grants.gov Task Force
2005 – 2007	Emergency Operations Center (EOC), Resource Management team
2005 – 2007	Campus Advisory Committee, Grants Management Software Implementation, Research & Sponsored Programs
2005 – 2007	Occupational Health Committee (Chair)
2005	Search Committee, Safety Department Director, Facilities Planning & Management
2004 – 2005	Access Control Implementation Team, UW–Madison Police Department
2004	Request-for-Proposals Committee, Centralized Campus Access Control, UW–Madison Police Department
2004	Search Committee, Director of Research & Sponsored Programs, Graduate School (Chair)
2003 – 2007	Physical Security Policy Committee, UW Police Department
2003 – 2007	Research Policy Advisory Council, Graduate School
2003	<i>Ad hoc</i> Committee on Occupational Health and Safety in Animal Care and Use, Graduate School (Chair)
2002 – 2007	Federal Demonstration Partnership, Faculty Standing Committee
2001 – 2007	Federal Demonstration Partnership (FDP), Faculty Representative
2002 – 2007	Biosecurity Task Force, Select Agent Program; (Chair, 2005 – 2007)
1998 – 2000	Principal Investigators Committee, Graduate School (Chair, 1999–2000)
1998 – 2000	Committee on Faculty Rights & Responsibilities (elected)
1998 – 2000	Hearing Examiner, Dean of Students Office
1993 – 1997	Research Committee (Biological Sciences Division), Graduate School
1994	Graduate School representative, USDA, Cooperative State Research Service (CSRS) Review of the Department of Food Microbiology & Toxicology, 1994.
1994	<i>Ad hoc</i> committee to monitor Department of Anthropology graduate program, Graduate School
1993	Graduate School representative, USDA, Cooperative State Research Service (CSRS) Review of the Department of Wildlife Ecology
1994 – 1996	Academic Planning Council, Graduate School (strategic planning)
1993 – 1995	Executive Committee, Graduate School
1991 – 1994	Fellowship Committee, Graduate School (Chair, 1993–1994)
1991 – 1992	Search Committee, Radiation Safety Officer
1991 – 1992	Campus Safety Strategic Planning
1991	Search Committee, Safety Department Director

- 1984 – 1993 University Radiation Safety Committee (URSC); (Chair 1985–1992)
 1984 – 1986 Faculty Senate

School of Veterinary Medicine:

- 2002 – 2007 Combined Degrees Program (DVM/PhD) Planning Committee, (co-Chair)
 2001 – 2007 Research Resources Planning Committee (Chair)
 2000 – 2007 Shared Facilities/Resources Committee (Chair, 2000-2003)
 2000 – 2003 Information Technology Advisory Committee, *ex officio*
 2000 – 2007 Research Committee, *ex officio*
 2000 – 2007 Animal Care & Use Committee, *ex officio*
 2000 – 2007 Space Committee, *ex officio*
 2000 – 2007 Administrative Advisory Council (strategic planning)
 2004 – 2007 Student Appeals Committee
 1996 – 2004 Educational Policy Committee (Chair: 1996–2004)
 1996 – 1998 Dean's Advisory Committee on Promotions & Appointments
 1994 – 1996 Curriculum Committee
 1993 – 1998 Animal Care & Use Committee
 1993 *Ad hoc* Committee on Future Facilities; (Chair)
 1993 – 1995 Information Technology Advisory Committee
 1992 – 1993 Task Force on Learning & Instruction
 1991 – 1993 *Ad hoc* Graduate Program Committee
 1990 – 1991 *Ad hoc* Committee on Para mutual Drug Testing Laboratory
 1988 – 1991 Research Committee
 1988 – 1993 Academic Planning Council (strategic planning group)
 1985 – 1992 Safety Committee (Chair: 1986–1990)
 1986 – 1987 *Ad hoc* Committee on Building Security
 1984 – 1992 Multi-user Research Facilities Committee
 1984 – 1992 Teaching Assistants Policies & Procedures Committee (Chair: 1984–1986)
 1984 – 1986 Admissions Committee, DVM program

Department of Comparative Biosciences:

- 2001 *Ad hoc* Committee on Scientist-track Appointments, *ex officio*
 1999 Faculty Search Committee (cell biology)
 1997 *Ad hoc* Committee on World Wide Web activities (Chair)
 1993 *Ad hoc* Committee on Post-tenure Review
 1990 Academic Program Review Committee
 1989 – 2007 Executive Committee
 1988 – 1990 Faculty Annual Evaluation Committee (Chair: 1990)
 1986 Faculty Search Committee (toxicology) (Chair)
 1984 Faculty Search Committee (toxicology)

Molecular & Environmental Toxicology Center:

- 1992 – 2003 Training Grant Committee (deputy director)
- 1986 – 2000 Preliminary Examinations Committee (Chair 1992–1995, 1998-2000)
- 1986 – 2000 Admissions Committee (Chair, 1987–2000)
- 1996 – 2003 Graduate Achievement & Curriculum Committee
- 1992 – 1996 Environmental Behavior of Toxicants Committee (curriculum & student certification), *ex officio*
- 1986 – 1996 Health-Related Toxicology Committee (curriculum & student certification; Chair: 1988–1990, *ex officio*: 1992–1996)
- 1986 – 2001 Steering Committee

Program in Cell & Molecular Biology:

- 1988 – 1989 Preliminary Examination Committee
- 1984 – 1985 Curriculum & Graduate Certification Committee

College of Letters and Science:

- 1989 – 1996 Academic advisor, Undergraduate Molecular Biology Program

Mentor Committees and Promotion Reviews:

- 2004 Dr. Peter Zimmerman, Division of Geographic Medicine, Department of Medicine, Case Western Reserve University. Promotion to tenure
- 2002 Dr. Peter Zimmerman, Division of Geographic Medicine, Department of Medicine, Case Western Reserve University. Promotion to associate professor.
- 2000 – 2003 Dr. Jeffrey Johnson, School of Pharmacy, UW-Madison, mentor committee; Promotion to associate professor with tenure.
- 1997 – 2003 Dr. Lauren Trepanier, Department of Medical Sciences, UW-Madison, Mentor committee; promotion to associate professor with tenure
- 1994 Dr. Cynthia Chappel, School of Public Health, University of Texas–Houston. Promotion to associate professor with tenure
- 1994 Dr. James Schoster, Department of Surgical Sciences, UW-Madison. Promotion to associate clinical professor
- 1993 Dr. Bruce Thomadsen, Department of Human Oncology, UW-Madison. Promotion to associate professor
- 1993 Dr. Patricia Komuniecki, Department of Biology, University of Toledo, Toledo, OH. Promotion to professor
- 1990 Dr. Patricia Komuniecki, Department of Biology, University of Toledo, Toledo, OH. Promotion to associate professor with tenure
- 1992 Dr. Brian A. Catto, Department of Infectious Diseases, Medical College of Georgia, Augusta, GA. Promotion to associate professor with tenure
- 1991 – 1993 Dr. Patty Snyder, Assistant Professor, Department of Medical Sciences, School of Veterinary Medicine, mentor committee

Grant Reviews:

- 2004, 2005, 2006 *Ad hoc* reviewer, Pathogenic Eukaryotes Study Section (replaced Tropical Medicine & Parasitology), CSR/NIH
- 1999 – 2000 Steering Committee, Peer Review Panel, Military Infectious Diseases Research Program (MIDRP), U.S. Army Medical Research & Materiel Command (USAMRMC)
- 1999 – 2000 Antiparasitic Drugs Peer Review Panel, Military Infectious Diseases Research Program (MIDRP), U.S. Army Medical Research & Materiel Command (USAMRMC); (Chair)
- 2002, 2003, 2004 *Ad hoc* reviewer, Tropical Medicine & Parasitology (TMP) Study Section, CSR/NIH
- 1995 – 2001 Member, Tropical Medicine & Parasitology (TMP) Study Section, CSR/NIH (Chair 1998–2001)
- 1994 – 2001 Member, Special Review Committees, CSR/NIH (Chair, 1996, 1997, 1998, 1999, 2000, 2001)
- 1990, 1991, 1994 *Ad hoc* member, Tropical Medicine & Parasitology (TMP) Study Section, NIH
- 1996 – 1998 *Ad hoc* reviewer, The Wellcome Trust
- 1992, 1996 *Ad hoc* reviewer, Medical Research Council, Canada
- 1990 – 1995 *Ad hoc* reviewer, National Research Council, National Academy of Sciences
- 1990 Member, NIH Special Study Section: Tropical Medical Research Center (TMRC) Grants, NIAID
- 1989 *Ad hoc* reviewer, Animal Biotechnology (Animal Molecular Biology and Mechanisms of Animal Growth and Development), USDA, CSREES
- 1988 *Ad hoc* member, Microbial Physiology & Genetics Study Section, NIH
- 1988 Member, NIH Special Study Section: Small Business Innovation Research (SBIR), NIAID
- 1988 NIH Special Study Section: International Collaboration in Infectious Disease Research (ICIDR)
- 1987, 1993, 2001 *Ad hoc* reviewer, USDA, CSREES

Editorial Service:

- 1998 – 2001 Editor, *Experimental Parasitology*
- 1993 – 1997 Associate Editor (Cell & Molecular Biology), *Journal of Parasitology*
- 1989 – 1998 Editorial Board, *Experimental Parasitology*

Community Service:

- 2001 – 2002 New Land Use Plan Committee and Town Ordinances Committee (chair), Town of Springdale, Wisconsin
- 2002 – 2007 Commissioner, Plan Commission, Town of Springdale, Wisconsin (Chair, 2003 – 2007)

Research Summary:

The biochemistry of the human trematode parasite *Schistosoma mansoni* and the chemotherapy of schistosomiasis, the disease it causes, has been the primary research focus of my research for the past twenty-five years. Early on I studied the role of parasite egg antigens in the pathogenesis of schistosomiasis and the mechanism of action of the antischistosomal drug niridazole. After arriving at the University of Wisconsin, my laboratory turned its attention to studying the enzymes of drug metabolism in schistosomes. We investigated schistosome glutathione *S*-transferases and demonstrated that conjugation with glutathione is a pathway of xenobiotic conjugation in these organisms. Work from our laboratory and others established the importance of glutathione and glutathione *S*-transferases as cellular defense mechanisms in parasites.

More recently we discovered quite by chance the schistosome homologue of a yeast protein, Mak16p, that plays an essential, but undefined role in regulating biogenesis of 60S ribosomal subunits. Mak16 has since been found in every eukaryotic species examined. Its protein sequence contains both nuclear localization sequences and nucleolar retention signals, consistent with a role in ribosome biogenesis, and a highly conserved cluster of cysteine residues that is essential for function. Because schistosomes are not amenable to genetic manipulation, our most recent work used the yeast *Saccharomyces cerevisiae* as a model organism.

Because my administrative duties occupied an inordinate amount of time, I concluded it was no longer possible to provide adequate mentoring to graduate students and postdocs. I suspended active research at the end of 2004.

Extramural Grant Support:**University of Kentucky****Active:**

2010 – 2013 NIH/National Center for Research Resources (NCRR) (1G20RR031064): ARRA: Core Rederivation and Barrier Renovation. \$6,428,471. This infrastructure grant will renovate a 9,000 net square foot Division of Laboratory Animal Resources vivarium in the Sanders Brown Institute on Aging to provide a centralized core embryo transfer laboratory for rodent rederivation and a sperm and embryo cryopreservation facility. Construction and commissioning have been completed. The facility received LEED Silver certification. Role: Principal Investigator

Past:

2008 – 2009 Health Resources & Services Administration (DHHS) (1C76HF09195-01-00): High Bandwidth Network Connection to Support Health Care Delivery and Critical Clinical and Biomedical Research. \$1,422,094 (direct costs). This HRSA grant established the required dual 10G research network connection to the NewNet access point in Louisville, KY, and enabled the University of Kentucky and other Kentucky institutions of post-secondary education to address four major needs of the citizens of Kentucky: health care delivery, medical education, translation of research findings to health care practice, and medical research. Role: Principal Investigator

University of Wisconsin–Madison:

- 1998 – 2000 NIH/NIEHS, Center for Developmental & Molecular Toxicology. C.R. Jefcoate, Program Director. Role: Training & Enrichment Core leader. I withdrew from participation after becoming associate dean.
- 1997 – 2003 NIH (R01 AI41293): Schistosome Nuclear Protein Function and Regulation. Principal investigator.
- 1993 – 1998 NIH (R01 AI22520): Biochemistry of Schistosome Glutathione S-Transferases. Principal investigator.
- 1990 – 1995 NIH, U.S.–Japan Cooperative Medical Sciences Program (R37 AI19769): Immune Response of Mosquitoes to Filarial Worms. B.M. Christensen, principal investigator. Role: Co-investigator.
- 1990 – 1995 NIH, Tropical Diseases Research Unit (TDRU) Program Project: Parasite Function in Response to the Host Environment (P01 AI28781); Program Director: B.M. Christensen; Project #3: Enzymatic Basis of Drug Activation by Schistosomes. Principal investigator.
- 1989 – 1993 NIH, U.S.–Japan Cooperative Medical Sciences Program (R22 AI22520): Biochemistry of Schistosome Glutathione S-Transferases. Principal investigator.
- 1986 – 1990 NIH, U.S.–Japan Cooperative Medical Sciences Program (R22 AI19769): Immune Response of Mosquitoes to Filarial Worms; B.M. Christensen, Principal investigator.
- 1985 – 1989 NIH, U.S.–Japan Cooperative Medical Sciences Program (R22 AI22520): Role of Glutathione in Drug Metabolism by Schistosomes. Principal investigator.
- 1984 – 1986 Edna McConnell Clark Foundation, “Young Investigator Award” (ECMF #284–0057): The relationship between quinone metabolism and eggshell formation in *Schistosoma mansoni*. Principal investigator.
- 1983 – 1984 Rockefeller Foundation, Grant-In-Aid (GA HS8336): To establish a *Schistosoma mansoni* Life Cycle Facility. Principal investigator.

Participation in Training Grants:

- 2001 – 2004 NIH (K08 AI51953): Role of IL-4 During Acute Schistosomiasis. Elisabeth A. Patton, DVM, PhD, Principal Investigator. Role: sponsor.
- 1991 – 2007 NIAID (T32 AI07414): Cellular & Molecular Parasitology Training Program. Role: trainer.
- 1985 – 2003 NIEHS Environmental Toxicology Training Grant. T32 ES07015. UW-Madison Environmental Toxicology Center. C.R. Jefcoate; B.L. Allen-Hoffmann, Program Directors. Role: deputy director (1992 – 2003) and trainer.

Publications: (exclusive of abstracts)

1. Den Besten, I.E. and Tracy, J.W. (1973). Electrodelessly discharged photochemical lamps. *J. Chem. Ed.* **50**: 303.
2. Ryan, E.D., Tracy, J.W. and Kohlhaw, G.B. (1973). Subcellular localization of leucine biosynthetic enzymes in yeast. *J. Bacteriol.* **116**: 222-225.

3. Tracy, J.W. and Kohlhaw, G.B. (1975). Reversible, Coenzyme A-mediated inactivation of biosynthetic condensing enzymes in yeast: A possible regulatory mechanism. *Proc. Natl. Acad. Sci. USA* **72**: 1082-1086.
4. Tracy, J.W. and Kohlhaw, G.B. (1977). Evidence for two distinct CoA binding sites on yeast α -isopropylmalate synthase. *J. Biol. Chem.* **252**: 4085-4091.
5. Mahmoud, A.A.F., Stone, M.K. and Tracy, J.W. (1979). Eosinophilopoietin production: relationship to eosinophilia of infection and thymus function. *Trans. Assoc. Am. Phys.* **92**: 355-359.
6. Tracy, J.W., Fairchild, E.H., Lucas, S.V. and Webster, Jr., L.T. (1980). Isolation, characterization and synthesis of an immunoregulatory metabolite of niridazole: 1-thiocarbamoyl-2-imidazolidinone. *Mol. Pharmacol.* **18**: 313-319.
7. Tracy, J.W. and Webster, Jr., L.T. (1981). The formation of 1-thiocarbamoyl-2-imidazolidinone from niridazole in mouse intestine. *J. Pharmacol. Exp. Ther.* **217**: 363-368.
8. Rocklin, R.E., Tracy, J.W. and El Kohly, A. (1981). Activation of antigen-specific suppressor cells in human schistosomiasis mansoni by fractions of soluble egg antigen nonadherent to ConA-Sepharose. *J. Immunol.* **127**: 2314-2318.
9. Olds, G.R., Olveda, R., Tracy, J.W. and Mahmoud, A.A.F. (1982). Adoptive transfer of modulation of granuloma formation and hepatosplenic disease in murine schistosomiasis japonica by serum from chronically infected animals. *J. Immunol.* **128**: 1391-1393.
10. Spagnulo, P.J., Butler, T., Block, E.H., Santoro, C., Tracy, J.W. and Johnson, R.C. (1982). Opsonic requirements for phagocytosis of *Borrelia hermsii* by human polymorphonuclear leucocytes. *J. Infect. Dis.* **145**: 358-364.
11. Tracy, J.W., Kazura, J.W. and Webster, Jr., L.T. (1982). Suppression of cell-mediated immune responses in vivo and in vitro by 1-thiocarbamoyl-2-imidazolidinone. *Immunopharmacology* **4**: 187-200.
12. Tracy, J.W. and Mahmoud, A.A.F. (1982). Isolation of *Schistosoma japonicum* egg glycoprotein antigens which sensitize mice to lung granuloma formation and elicit an immediate hypersensitivity response. *Am. J. Trop. Med. Hyg.* **31**: 1201-1212.
13. Wyler, D.J. and Tracy, J.W. (1982). Fibroblast stimulation in schistosomiasis. III. Direct and indirect effects of soluble extracts of schistosome eggs (SEA) on fibroblast proliferation in vitro. *Infect. Immunity* **38**: 103-108.
14. Garb, K.S., Stavitsky, A.B., Olds, G.R., Tracy, J.W. and Mahmoud, A.A.F. (1982). Immune regulation in murine schistosomiasis japonica: Inhibition of in vitro antigen- and mitogen-induced cellular responses by splenocyte culture supernatants and by purified fractions of serum from chronically infected mice. *J. Immunol.* **129**: 2752-2758.
15. Mott, K.E. and Dixon, H. (1982). Collaborative study on antigens for immunodiagnosis of schistosomiasis. *Bull. WHO* **60**: 729-753. Tracy, J.W. (Contributing Investigator). *Note*: This refereed publication was the result of a World Health Organization-sponsored collaborative research effort of ten laboratories. The paper was written by the participating investigators. By agreement, only Drs. Mott and Dixon, representing World Health Organization Secretariat, appear as authors.
16. Tracy, J.W., Catto, B.A. and Webster, Jr., L.T. (1983). Reductive metabolism of niridazole by adult *Schistosoma mansoni*: correlation with covalent drug binding to parasite macromolecules. *Mol. Pharmacol.* **24**: 291-299.

17. Catto, B.A., Tracy, J.W., Fairchild, E.H. and Webster, Jr., L.T. (1983). 1-Thiocarbamoyl-2-imidazolidinone (TCI): A metabolite of niridazole in schistosomes. *Mol. Biochem. Parasitol.* **10**: 111-120.
18. Webster, Jr., L.T., Tracy, J.W., Blumer, J.L., Catto, B.A. and Sissors, D.S. (1984). Relationships of niridazole metabolism to antiparasitic activity and host toxicity. in *Proceedings of IUPHAR Ninth International Congress of Pharmacology*. Macmillan Press, Ltd., London. pp. 363-367.
19. Tracy, J.W., Domingo, E.O., and Mahmoud, A.A.F. (1985). Preliminary evaluation of a purified *Schistosoma japonicum* egg glycoprotein antigen, gp-2, for the specific immunodiagnosis of schistosomiasis in man. *Am. J. Trop. Med. Hyg.* **34**: 92-95.
20. Nappi, A.J., Christensen, B.M. and Tracy, J.W. (1987). Quantitative analysis of hemolymph phenoloxidase activity in immune reactive *Aedes aegypti*. *Insect Biochem.* **17**: 685-688.
21. Fantel, A.G., Person, R.E., Tracy, J.W., and Juchau, M.R. (1988). Niridazole metabolism by rat embryos in vitro. *Teratology* **37**: 213-221
22. O'Leary, K.A. and Tracy, J.W. (1988). Purification of three cytosolic glutathione S-transferases from adult *Schistosoma mansoni*. *Arch. Biochem. Biophys.* **264**: 1-12.
23. Siegel, D.A. and Tracy, J.W. (1988). Effect of pairing in vitro on the glutathione level of male *Schistosoma mansoni*. *J. Parasitol.* **74**: 524-531.
24. Fantel, A.G., Juchau, M.R., Tracy, J.W., Burroughs, C.J., and Person, R.E. (1989). Studies on mechanisms of niridazole-elicited embryotoxicity. Evidence against a major role for covalent binding. *Teratology* **39**: 63-74.
25. Li, J., Tracy, J.W., and Christensen, B.M. (1989). Hemocyte monophenol oxidase activity in mosquitoes exposed to microfilariae. *J. Parasitol.* **75**: 1-5.
26. Holy, J.M., O'Leary, K.A., Oaks, J.A., and Tracy, J.W. (1989). Immunocytochemical localization of the major glutathione S-transferases in adult *Schistosoma mansoni*. *J. Parasitol.* **75**: 181-190.
27. Siegel, D.A. and Tracy, J.W. (1989). *Schistosoma mansoni*: Influence of the female parasite on glutathione biosynthesis in the male. *Exp. Parasitol.* **69**: 116-124.
28. Christensen, B.M. and Tracy, J.W. (1989). Arthropod-transmitted parasites: Mechanisms of immune defense interactions. *Am. Zoologist.* **29**: 387-398.
29. Li, J., Christensen, B.M., and Tracy, J.W. (1990). Electrochemical determination of diphenol oxidase activity using high pressure liquid chromatography. *Anal. Biochem.* **190**: 354-359.
30. Munkirs, D.D., Christensen, B.M., and Tracy, J.W. (1990). High-pressure liquid chromatographic analysis of hemolymph plasma substrates in immune reactive *Aedes aegypti*. *J. Invert. Pathol.* **56**: 267-279.
31. Tracy, J.W. and O'Leary, K.A. (1991). Analysis of glutathione S-transferase catalyzed S-alkylglutathione formation by high performance liquid chromatography. *Anal. Biochem.* **193**: 1-5.
32. O'Leary, K.A. and Tracy, J.W. (1991). *Schistosoma mansoni*: Glutathione S-transferase catalyzed detoxication of dichlorvos. *Exp. Parasitol.* **72**: 355-361.
33. Tracy, J.W., Catto, B.A., and Webster, Jr., L.T. (1991). Formation of N-(5-nitro-2-thiazolyl)-N'-carboxymethylurea from 5-hydroxyniridazole: Role of aldehyde dehydrogenase in the oxidative metabolism of niridazole. *Drug Metab. Dispos.* **19**: 508-515.

34. Vande Waa, E.A. and Tracy, J.W. "Antiparasitic Agents" in *Textbook of Pharmacology*, A.M. Reynard and C.M. Smith, eds., W.B. Saunders, Orlando, 1991.
35. Li, J., Tracy, J.W., and Christensen, B.M. (1992). Phenoloxidase activity in hemolymph compartments of *Aedes aegypti* during melanotic encapsulation reactions against microfilariae. *Dev. Compar. Immunol.* **16**: 41-48.
36. O'Leary, K.A., Hathaway, K.M., and Tracy, J.W. (1992). *Schistosoma mansoni*: Single step-purification and characterization of glutathione S-transferase isoenzyme 4. *Exp. Parasitol.* **75**: 47-55.
37. Li, J., Tracy, J.W., and Christensen, B.M. (1992). Relationship of phenol oxidase, mosquito age, and immune capacity in *Aedes aegypti*. *J. Inv. Pathol.* **60**: 188-191.
38. Vande Waa, E.A., Campbell, C.K., O'Leary, K.A., and Tracy, J.W. (1993). Induction of *Schistosoma mansoni* glutathione S-transferase by xenobiotics. *Arch. Biochem. Biophys.* **303**: 105-113.
39. Thiboldeaux, R.L., Lindroth, R.L., and Tracy, J.W. (1994). Toxicity of juglone (5-hydroxy-1,4-naphthoquinone) and related naphthoquinones in Saturniid moths. *J. Chem. Ecol.* **20**: 1631-1641.
40. Milhon, J.L. and Tracy, J.W. (1995). Updated codon usage in *Schistosoma*. *Exp. Parasitol.* **80**: 353–356.
41. Tracy, J.W. and Vande Waa, E.A. (1995) "Xenobiotic Metabolism" in *Biochemistry of Parasitic Organisms and its Molecular Foundations*, M. Muller and J.J. Marr, eds., Academic Press, London.
42. Tracy, J.W. and Webster, L.T., Jr. (1996) "Chemotherapy of Parasitic Infections—Section VIII" in *Goodman & Gilman's: The Pharmacological Basis of Therapeutics*, 9th ed., J.G. Hardman & L.E. Limbird, eds, McGraw-Hill, New York.
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44. Tracy, J.W. and Webster, L.T., Jr. (1996) "Chemotherapy of Parasitic Infections: Drugs used in the chemotherapy of protozoal infections—Amebiasis, giardiasis, trichomoniasis, trypanosomiasis, leishmaniasis, and other protozoal infections" in *Goodman & Gilman's: The Pharmacological Basis of Therapeutics*, 9th ed., J.G. Hardman & L.E. Limbird, eds, McGraw-Hill, New York.
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- MAK16 from Yeast, Directs Nucleolar Protein Import. *Mol. Biochem. Parasitol.* **108**: 225–236.
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 54. Pellett, S. and Tracy, J.W. Mak16p is required for the maturation of 25S and 5.8S ribosomal RNAs in *Saccharomyces cerevisiae*. (2006) *Yeast* **23**: 495-506.

Didactic Teaching:

Molecular Approaches to Xenobiotic Metabolism. Comparative Biosciences 750 (also Environmental Toxicology). Sem I; 2 credits; 15-20 students (1986-2000). Course coordinator.

Good Practices in Science: Research Ethics and Survival Skills seminar. Sem 1; non-credit; 12-36 students (1994 – 2002); 8 x 2-hr sessions. (team taught)

Fundamentals of Veterinary Pharmacology. Comparative Biosciences 552. 1st-year veterinary medical curriculum; Sem II, 2 credits; 80-82 students (1984-2002).

Basic Veterinary Pharmacology. Comparative Biosciences 675. 1st-year veterinary medical curriculum; Sem II; 1 credit, 80 students (2002-2007). This course replaced CBS 552.

Good Practices in Science: Research Ethics and Survival Skills. Animal Health and Biomedical Sciences 875. Sem I; 2 credits; 14-20 students. (team taught)

Basic & Clinical Therapeutics. Comparative Biosciences 556. 2nd-year veterinary medical curriculum; Sem II, 3 credits, 80 students (1984-2007). From 2004 to 2007 this course was taught using a *tutorial* strategy rather than traditional lecture format (“flipped classroom”)

General Parasitology. Medical Microbiology 350. Sem II; 2 credits, 150-200 students. I was responsible for the parasite biochemistry and drug therapy sections of this team-taught course.

Graduate and Postdoctoral Education:

Graduate Students Supervised: Dimitri D. Munkirs, MS, Veterinary Science, 1988; David A. Siegel, MS, Pharmacology, 1989; Kathleen A. O’Leary, PhD, Environmental Toxicology, 1989; Jangyong

Li, PhD, Veterinary Science, 1990; Karen M. Hathaway, MS, Environmental Toxicology, 1990; James P. Fialkowski, MS, Pharmacology, 1994; Robert L. Thiboldeaux, PhD, Environmental Toxicology, 1996; Christin K. Campbell, MS, Environmental Toxicology, 1997; Kholoud Ramadan, PhD, Biochemistry, Faculty of Science, Ain Shams University, Cairo, Egypt, 1999. Doctoral research done at UW 1996-1998; Russhawn N. Jackson, PhD, Environmental Toxicology, 1999; Thomas J. Albert, PhD, Environmental Toxicology, 2000; Sabine Pellett, PhD, Molecular and Environmental Toxicology, 2004.

Postdoctoral Trainees: Elizabeth A. Vande Waa, PhD, 1989–1993; Julia A. Thissen-Para, PhD, 1989–1990; Jon L. Milhon, PhD, 1993–2000; Robert L. Thiboldeaux, PhD, 1996–2000; Elisabeth Patton, DVM, PhD, 2001-2003; Elizabeth A. Capowski, PhD, 2001-2004.

Visiting Scientists: Prof. A.J. Nappi, Department of Biology, Loyola University, Chicago, IL., 1986; Prof. K. Kobayashi, Life Science Institute, Sophia University, Tokyo, Japan, 1990.

Graduate Student Committees: C. Wilhelms, Environmental Toxicology, MS, 1985; M LaFont, Veterinary Science, MS, 1986; T. Maziasz, Environmental Toxicology, PhD, 1987; S. Duddy, Environmental Toxicology, PhD, 1987; E. Denkers, Cell & Molecular Biology, PhD, 1989; C. Williams, Environmental Toxicology, PhD, 1990; P. Snyder, Veterinary Science, MS, 1990; Y.-J. Surh, Environmental Toxicology, PhD, 1990; J. Poyner, Veterinary Science, MS, 1991; S. Otto, Pharmacology, PhD, 1992; J. Johnson, Environmental Toxicology, PhD, 1992; P. Sausen, Environmental Toxicology, PhD, 1992; J. Poyner, Veterinary Science, PhD, 1992; J. Sharer, Environmental Toxicology, PhD, 1993; C. Platz, Environmental Toxicology, PhD, 1995; B. Bogan, Cell & Molecular Biology, PhD, 1996; M. Ripple, Environmental Toxicology, PhD, 1997; H. Bell, Environmental Toxicology, MS, 1997; D. Daggett, Environmental Toxicology, PhD, 1998; H. Moinova, Human Oncology, PhD, 1998; C. Keohler, Environmental Toxicology, MS, 1998; L. Ganem, Environmental Toxicology, PhD, 2000; A. Taft, Veterinary Science, 2001; L. Zipper, Human Oncology, PhD, 2002; T. Miyabe, Comparative Biomedical Sciences, MS, 2003; PhD, 2005.

External Thesis Reviews: H. Mei, PhD, Department of Microbiology, School of Medicine & Biomedical Science, State University of New York at Buffalo, 1995; K. Ramadan, PhD, Department of Biochemistry, Faculty of Science, Ain Shams University, Cairo, Egypt, 1998.

Revised July 2014