

## CURRICULUM VITAE

DAVID A. O'BROCHTA

CERTIFICATION: I have read the following and certify that this Curriculum Vitae is a current and accurate statement of my professional record.

### Personal information:

Place of Birth: Manhasset, New York.  
Birth Date: April 26, 1955  
Citizenship: United States  
Marital Status: Married  
Address: Center for Biosystems Research  
University of Maryland Biotechnology Institute  
5141 Plant Sciences Building  
College Park, Maryland 20742

### Education:

<u>Institution</u>	<u>Field</u>	<u>Degree</u>	<u>Year</u>
University of Kansas	Biology	B.Sc.	1977
University of California, Irvine	Dev. & Cell Biology	Ph.D.	1984

### Positions :

#### Professor, 2004,

Center for Biosystems Research (formerly the Center for Agricultural Biotechnology),  
University of Maryland Biotechnology Institute.

University of Maryland, College Park, Graduate Faculty

Member, Molecular and Cell Biology Graduate Program, College of Life Sciences,  
University of Maryland, College Park

Honorary Professor, Bangalore University, India. 1998

Principal Investigator of an insect molecular genetics laboratory of approximately 10-15 people. Areas of investigation include insect transposable elements including *Hermes* and *Hermes*-like transposable elements, the development of germ-line transformation technologies for insects, vector/parasite interactions in mosquitoes.

Research: 100%      Instruction: 0%      Extension: 0%

#### Associate Professor, 1995 - 2004,

#### Assistant Professor, 1989 - 1995,

Center for Agricultural Biotechnology, University of Maryland Biotechnology Institute.  
1992-1995 100% appointment;      1989-1992 51% appointment.

Department of Entomology, University of Maryland, College Park ,  
1989 – 1992 49% appointment.

University of Maryland, College Park, Graduate Faculty

Member, Molecular and Cell Biology Graduate Program, College of Life Sciences,  
University of Maryland, College Park

Principal Investigator of an insect molecular genetics laboratory of approximately 10-15  
people. Areas of investigation include insect transposable elements including the *hobo*  
element from *D. melanogaster* and *Hermes* from *Musca domestica*, the development of  
germ-line transformation technologies for insects.

Research: 100%      Instruction: 0%      Extension: 0%

**Postdoctoral Fellow (GS-11), 1986-1989,**

USDA-ARS, Insect Attractants Behavior and Basic Biology Laboratory, Gainesville, FL.  
Senior research fellow investigating the *P* transposable elements and their ability to  
function in insects other than *Drosophila*. The development of insect transformation  
technology, Laboratory of: Dr. Alfred M. Handler.

Research: 100%      Instruction: 0%      Extension: 0%

**Postdoctoral Fellow, 1985-1986,**

Department of Biology, University of California, San Diego.

NSF Postdoctoral Fellow in Plant Sciences investigating the molecular genetics of  
*Rhizobium*/legume interactions. Laboratory of: Dr. Donald R. Helinski.

Research: 100%      Instruction: 0%      Extension: 0%

**Research and Teaching Assistant, 1979-1984,**

Developmental and Cell Biology Department, University of California, Irvine.

*Drosophila* developmental genetics, cell death, patterns of growth during imaginal  
development and regeneration. Laboratory of: Dr. Peter J. Bryant.

**Organizational Memberships**

Genetics Society of America, member

Entomological Society of America, member

American Society of Tropical Medicine and Hygiene, member

**Publications:**

**Thesis:**

**O'Brochta, D. A.** (1984). Patterns of growth during the development and regeneration  
of *Drosophila melanogaster* imaginal discs. Ph.D. University of California, Irvine.

**Articles in refereed journals:**

**Submitted:**

**Published:**

**O'Brochta, D. A.**, Subramanian, R. A., Orsetti, J., Peckham, E., Nolan, N., Arensberger, P., Atkinson, P.W., Charlwood, D. (in review). *hAT* element population genetics in *Anopheles gambiae s.l.* in Mozambique. *Genetica*.

Sethuraman, N., **O'Brochta, D. A.** (in press). The *Drosophila melanogaster* cinnabar gene is a cell autonomous genetic marker in *Aedes aegypti* (Diptera: Culicidae). *J. Med. Ent.*

Arensburger P, Kim YJ, Orsetti J, Aluvihare C, **O'Brochta DA**, Atkinson PW. 2005 An Active Transposable Element, *Herves*, From the African Malaria Mosquito *Anopheles gambiae*. *Genetics*. 169(2):697-708.

Rowan, K., Orsetti, Atkinson, P.W., and **D. A. O'Brochta**. (2004). *Tn5* as an insect gene vector. *Insect Bioch. Molec. Biol.* 34:695-705.

Irvin, N., M. S. Hoddle, **D. A. O'Brochta**, B. Carey and P. W. Atkinson (2004) Assessing fitness costs for transgenic *Aedes aegypti* expressing the green fluorescent protein marker and transposase genes. *Proc. Natl. Acad. Sci.* 1001:891-896.

Kim, W., H. Koo, A. M. Richman, D. Seeley, J. Vizioli, A. D. Klocko and **D. A. O'Brochta**. (2004) Ectopic expression of a cecropin transgene in the human malaria vector mosquito *Anopheles gambiae* (Diptera: Culicidae): Effects on susceptibility to *Plasmodium*. *J. Med. Ent.* 41:447-455

**O'Brochta, D. A.**, N. Sethuraman, R. Wilson, R. H. Hice, A. C. Pinkerton, C. S. Levesque, D. K. Bideshi, N. Jasinskiene, C. J. Coates, A. A. James, M. J. Lehane and P. W. Atkinson. (2003). Gene vector and transposable element behavior in mosquitoes. *J. Exp. Biol.* 206:3823-3834.

Michel, K. D., **D. A. O'Brochta** and P. W. Atkinson. (2003) The C-terminus of the *Hermes* transposase contains a protein dimerization domain. *Insect Biochem. Molec. Biol.* 33:959-70.

Wilson, R., Orsetti, J., Klocko, A. D., Aluvihare, C., Peckham, E., Atkinson, P. W., Lehane, M. J. and **D. A. O'Brochta**. (2003). Post-integration behavior of a *mariner* gene vector in *Aedes aegypti*. *Insect Biochem. Molec. Biol* 33:853-63.

Guimond, N., D. K. Bideshi, A. C. Pinkerton, P.W. Atkinson and **D. A. O'Brochta**. (2003). Patterns of *Hermes* transposition in *Drosophila melanogaster*. *Mol. Gen. Genomics*. 268:779-90.

Holt R. A., G. M. Subramanian, A. Halpern , G. G. Sutton, R. Charlab, D. R. Nusskern, P. Wincker, A. G. Clark, J. M. Ribeiro, R. Wides, S. L. Salzberg, R. Loftus, M. Yandell, W. H. Majoros, D. B. Rusch, Z. Lai, C. L. Kraft, J. F. Abril, V. Anthouard, P.

- Arensburger, P. W. Atkinson, H. Baden, V. de Berardinis, D. Baldwin, V. Benes, J. Biedler, C. Blass, R. Bolanos, D. Boscus, M. Barnstead, S. Cai, A. Center, K. Chaturverdi, G. K. Christophides, M. A. Chrystal, M. Clamp, A. Cravchik, V. Curwen, A. Dana, A. Delcher, I. Dew, C. A. Evans, M. Flanigan, A. Grundschober-Freimoser, L. Friedli, Z. Gu, P. Guan, R. Guigo, M. E. Hillenmeyer, S. L. Hladun, J. R. Hogan, Y. S. Hong, J. Hoover, O. Jaillon, Z. Ke, C. Kodira, E. Kokoza, A. Koutsos, I. Letunic, A. Levitsky, Y. Liang, J. J. Lin, N. F. Lobo, J. R. Lopez, J. A. Malek, T. C. McIntosh, S. Meister, J. Miller, C. Mobarry, E. Mongin, S. D. Murphy, **D. A. O'Brochta**, C. Pfannkoch, R. Qi, M. A. Regier, K. Remington, H. Shao, M. V. Sharakhova, C. D. Sitter, J. Shetty, T. J. Smith, R. Strong, J. Sun, D. Thomasova, L. Q. Ton, P. Topalis, Z. Tu, M. F. Unger, B. Walenz, A. Wang, J. Wang, M. Wang, X. Wang, K. J. Woodford, J. R. Wortman, M. Wu, A. Yao, E. M. Zdobnov, H. Zhang, Q. Zhao, S. Zhao, S. C. Zhu, I. Zhimulev, M. Coluzzi, A. della Torre, C. W. Roth, C. Louis, F. Kalush, R. J. Mural, E. W. Myers, M. D. Adams, H. O. Smith, S. Broder, M. J. Gardner, C. M. Fraser, E. Birney, P. Bork, P. T. Brey, J. C. Venter, J. Weissenbach, F. C. Kafatos, F. H. Collins, S. L. Hoffman. (2002). The genome sequence of the malaria mosquito *Anopheles gambiae*. *Science*. 298:129-49.
- Michel, K., **D. A. O'Brochta** and P. W. Atkinson. (2002). Does the DES motif form the active center in the *Hermes* transposase? *Gene*. 29:141-146
- Allen, M. L., **D. A. O'Brochta**, P. W. Atkinson and C. S. Levesque, (2001). Stable, germ-line transformation of *Culex quinquefasciatus* (Diptera: Culicidae). *J. Med. Entomol.* 38:701-710.
- Michel, K., A. Stamenova, A. C. Pinkerton, G. Franz, A. S. Robinson, A. Gariou-Papalexioiu, A. Zacharopoulou, **D. A. O'Brochta** and P. W. Atkinson, (2001). *Hermes*-mediated germ-line transformation of the Mediterranean fruit fly, *Ceratitis capitata*. *Insect. Molec. Biol.* 10:155-62..
- O'Brochta, D. A.**, P. W. Atkinson and M. J. Lehane, (2000). Transformation of *Stomoxys calcitrans* with a *Hermes* gene vector. *Insect. Molec. Biol.* 9:531-538.
- Pinkerton, A. C., K. Michel, **D. A. O'Brochta** and P. W. Atkinson, (2000). Green fluorescent protein as a genetic marker in transgenic *Aedes aegypti*. *Insect Molec. Biol.* 9:1-10.
- A. C. Pinkerton,, Whyard, S., H. A. Mende, C. J. Coates, **D. A. O'Brochta** and P. W. Atkinson, (1999) The Queensland fruit fly, *Bactrocera tryoni*, contains multiple members of the *hAT* family of transposable elements. *Insect Molec. Biol.* 8:423-434
- Saville, K. J., W. D. Warren, P. W. Atkinson and **D. A. O'Brochta** (1999). Integration specificity of the *hobo* element of *Drosophila melanogaster* is dependent on sequences flanking the target site. *Genetica.* 105:133-147.
- Sundararajan, P., P. W. Atkinson and **D. A. O'Brochta**, (1999). Transposable element interactions in insects: Crossmobilization of *Hermes* and *hobo*. *Insect Molec. Biol.* . 8:359-368.
- Coates, C. J., C. L. Turney, M. Frommer, **D. A. O'Brochta** and P. W. Atkinson, (1997) Interplasmid transposition of the *mariner* transposable element in non-drosophilid insects. *Molec. Gen. Genet.* 253: 728-733.

- Sarkar, A., C. C. Coates, S. Whyard, U. Willhoeft, P. W. Atkinson and **D. A. O'Brochta**, (1997) The *Hermes* element from *Musca domestica* can transpose in four families of cyclorrhaphan flies. *Genetica* 99: 15-29.
- Sarkar, A., K. Yardley, P. W. Atkinson, A. A. James and **D. A. O'Brochta**, (1997) Transposition of the *Hermes* element in embryos of the vector mosquito, *Aedes aegypti*. *Insect Biochem. Molec. Biol.* 27: 359-363.
- Coates, C. J., K. N. Johnson, H. D. Perkins, A. J. Howells, **D. A. O'Brochta** and P. W. Atkinson, (1996) The *hermit* transposable element of the Australian sheep blowfly, *Lucilia cuprina*, belongs to the *hAT* family of transposable elements. *Genetica* 97: 23-31.
- Coates, C. J., A. J. Howells, **D. A. O'Brochta** and P. A. Atkinson, (1996) The 5' regulatory region from the *Drosophila pseudoobscura hsp82* gene results in a high level of reporter gene expression in *Lucilia cuprina* embryos. *Gene* 175: 199-201.
- O'Brochta, D. A.**, W. D. Warren, K. J. Saville and P. W. Atkinson, (1996) *Hermes*, a functional non-drosophilid insect gene vector from *Musca domestica*. *Genetics*. 142: 907-914.
- Pinkerton, A. C., **D. A. O'Brochta** and P. W. Atkinson, (1996) Mobility of *hAT* transposable elements in the Old World American bollworm, *Helicoverpa armigera*. *Insect Molec. Biol.* 5: 223-227.
- White, L. D., J. C. Coates, P. W. Atkinson and **D. A. O'Brochta**, (1996) An eye color gene for the detection of transgenic non-drosophilid insects. *Insect Biochem. Molec. Biol.* 26: 641-644.
- Coates, C. J., C. L. Truney, M. Frommer, **D. A. O'Brochta**, W. D. Warren and P. W. Atkinson, (1995) *Mariner* can excise in non-drosophilid insects. *Molec. Gen. Genet.* 249: 246-252.
- Warren, W. D., P. W. Atkinson and **D. A. O'Brochta**, (1995) The Australian bushfly *Musca vetustissima*. contains a sequence related to transposons of the *hobo*, *Ac* and *Tam3* family. *Gene* 154: 133-134.
- O'Brochta, D. A.**, W. D. Warren, K. J. Saville and P. W. Atkinson, (1994) Interplasmid transposition of *Drosophila hobo* elements in non-drosophilid insects. *Molec. Gen. Genet.* 244: 9-14.
- Warren, W. D., P. W. Atkinson and **D. A. O'Brochta**, (1994) The *Hermes* transposable element from the housefly, *Musca domestica*, is a short inverted repeat-type element of the *hobo*, *Ac*, and *Tam3 (hAT)* element family. *Genetical Res. Camb.* 64: 87-97.
- Atkinson, P. W., W. D. Warren and **D. A. O'Brochta**, (1993) The *hobo* transposable element of *Drosophila* can be cross-mobilized in houseflies and excises like the *Ac* element of maize. *Proc. Natl. Acad. Sci. USA* 90: 9693-9697.
- Handler, A. M., S. P. Gomez and **D. A. O'Brochta**, (1993) A functional analysis of the *P* element gene transfer vector in insects. *Arch. Insect Biochem* 22: 373-384.
- Handler, A. M., S. P. Gomez and **D. A. O'Brochta**, (1993) Negative regulation of *P*-elements in *Drosophila melanogaster*. *Molec. Gen. Genet.* 237: 145-151.

- Atkinson, P.W. and **O'Brochta**, D.A. (1992). *In vivo* expression of two highly conserved *Drosophila* genes in the Australian sheep blowfly, *Lucilia cuprina*. Insect Biochem. Molec. Biol. 22:423-431.
- O'Brochta**, D.A., Gomez, S.P. and Handler, A.M. (1991). P-element excision in *Drosophila melanogaster* and related drosophilids. Mol. Gen. Genet. 225:387-394.
- Handler, A.M. and **O'Brochta**, D.A. (1991). Prospects for gene transformation in insects. Ann. Rev. Entomol. 36:159-183.
- O'Brochta**, D.A. (1990). Genetic transformation and its potential for insect pest control. Bull. Entomol. Res. 80:3-6.
- O'Brochta**, D.A. and Handler, A.M. (1988). Mobility of P-elements in drosophilids and non-drosophilids. Proc. Natl. Acad. Sci. USA 85:6052-6056.
- Stanfield, S.W., Ielpe, L., **O'Brochta**, D., Helinski, D.R. and Ditta G. S. (1988). The ndv A gene product in *Rhizobium meliloti* is required for  $\beta$ -(1-2) glucan production and has homology to the ATP-binding export protein HylB. J. Bact. 170:3523-3530.
- O'Brochta**, D.A. and Bryant, P.J. (1987). Patterns of growth during the regeneration of *Drosophila* imaginal wing discs. Develop. Biol. 119:137-142.
- O'Brochta**, D.A. and Bryant, P.J. (1985). A zone of non-proliferating cells at a cell lineage restriction boundary in *Drosophila*. Nature 313:138-141.
- O'Brochta**, D.A. (1985). The patterns of growth during the development and regeneration of *Drosophila melanogaster* imaginal discs. Ph.D. Thesis, University of California at Irvine.
- O'Brochta**, D.A. and Bryant, P.J. (1983). Cell degeneration and elimination in the imaginal wing disc caused by the mutations *vestigial* and *Ultravestigial* of *Drosophila melanogaster*. Wilhelm. Roux's Arch. 192:285-294.
- Wells, D.E., Bruskin, A.M., **O'Brochta**, D.A. and Raff, R.A. (1982). Prevalent RNA sequences of mitochondrial origin of an extremely prevalent set of transcripts in sea urchin embryos. Develop. Biol. 92:557-562.
- O'Brochta**, D.A., Speith, J., Raff, R.A., Brandhorst, B.P., Klein, W.H. and Wells, D. (1981). Mitochondrial origin of an extremely prevalent set of transcripts in sea urchin embryos. Biol. Bull. 161-321.
- O'Brochta**, D. (1980). Cell degeneration in the *vestigial* mutant of *Drosophila melanogaster*. Amer. Zool. 20:913.

#### Review Articles and Book Chapters:

**In Press:**

Handler, A.M., and **O'Brochta, D.A.** (in press). Transposable Elements for Insect Transformation. In: Comprehensive Insect Physiology, Biochemistry, Pharmacology, and Molecular Biology, (L.I. Gilbert, K. Iatrou, and S. Gill, eds.) Elsevier Limited, Oxford.

**Published:**

**O'Brochta, D. A.** and P. W. Atkinson. (2004). Transformation systems in insects. In: Mobile genetic elements: Protocols and genomic applications. (W. J. Miller, P. Capy, eds) Humana Press. Pp227-254

**O'Brochta, D. A.** (2003). Transgenic mosquitoes: The state of the art. In: Ecological aspects for application of genetically modified mosquitoes. (W. Takken, T. W. Scott, eds) Frontis – Wageningen International Nucleus for Strategic Expertise Wageningen University and Research Centre, Wageningen, The Netherlands

**O'Brochta, D. A.** (2002). Transgenic Insects: Programs, Technology, Benefits and Risks. In: LMOs and the Environment: Proceedings of an International Conference. (C. R. Roseland ed.) Organization of Economic Cooperation and Development, Paris, France.

Atkinson, P. W. and **D. A. O'Brochta.** (2002). Genetic engineering in insects. In "Encyclopedia of Insects", (R. T. Cardé and V. H. Resh, eds), Academic Press. Pp471-488.

Atkinson, P. W., A. C. Pinkerton and **D. A. O'Brochta,** (2001). Genetic transformation systems in insects. *Annu. Rev. Entomol.* 46: 317-346

Atkinson, P. W. and **D. A. O'Brochta.** (2001). Hermes and other *hAT* elements as gene vectors in insects. In: Transgenic Insects: Methods and Applications. (A. M. Handler, A. A. James, eds), CRC Press, Boca Raton, pp 213-235.

Atkinson, P. W. and **D. A. O'Brochta.** (2000). Arriving at the age of insect pest transgenesis. In: Area-wide control of fruit flies and other pest insects. (K.-H. Tan, ed), Penerbit Universiti Sains, Penang, Malaysia, pp 251-261.

Atkinson, P. W. and **D. A. O'Brochta,** (1999). Genetic transformation of non-drosophilid insects by transposable elements. *Annals of the Entomological Society of America.*92:930-936

**O'Brochta, D. A.** and P. W. Atkinson, (1998) Transgenic insects. *Scientific American.* 279:60-65

**O'Brochta, D. A.** and P. W. Atkinson, (1997) Recent developments in transgenic insect technology. *Parasitology Today* 13: 99-104.

**O'Brochta, D. A.** and P. W. Atkinson, (1996) Transposable elements and gene transformation in non-drosophilid insects. *Insect Biochem. Molec. Biol.* 26: 739-753.

Atkinson, P.W., Coates, C.J., Pinkerton, A.C., Mende, H.A., Howels, A.J. and **O'Brochta, D.A.** (1993). Prospects for non-drosophilid germline transformation. In: Management of Insect Pests: Nuclear and Related Molecular and Genetic Techniques, ASO/IAEA.

**O'Brochta, D.A.** and Handler, A.M. (1993). Prospects and possibilities for gene transfer techniques in insects. In: Molecular Entomology (M. Whitten, J. Oakeshott, eds.), Springer Verlag, pp. 451-488.

Handler, A.M. and **O'Brochta, D.A.** (1989). Molecular genetic approaches to genetic sexing. In: Fruit flies of Economic Importance (ed. R. Cavalloro), A.A. Balkema Pub., Netherlands.

Shirk, P.D., **O'Brochta, D.A.**, Roberts, E.P. and Handler, A.M. (1988). Sex specific selection using chimeric genes. In: Biotechnology in Crop Protection (eds. P. A. Hedin, J. H. Menn and R. Hollingworth), ACS Books, Washington, D.C.

Bryant, P.J. and **O'Brochta, D.A.** (1986). Growth patterns in *Drosophila* imaginal discs. In: Progress in Developmental Biology 217A (ed. A.C. Slavkin), Alan R. Liss, Inc., New York, pp. 305-308.

#### **Technical Reports:**

**O'Brochta, D. A.**, M. L. Allen, M. Dushay, G. Franz, A. Gariou-Papalexidou, M. J. Lehane, C. S. Levesque, K. Michel, A. C. Pinkerton, A. S. Robinson, A. Stamenova, A. Zacharopoulou, and P. W. Atkinson. 2000. Continuing Efforts to Develop *Hermes* into an Insect Gene Vector: Host Range Studies and the Use of *Hermes* as a Genetic Drive System. In: Enhancement of the Sterile Insect Technique Through Genetic Transformation Using Nuclear Techniques. Sao Paulo, Brazil, Aug. 14-18, 2000. 8 pp.

**O'Brochta, D. A.**, M. Lehane, P. Sundararajan, and P. W. Atkinson. 1998. *hAT* Transposable Elements as Broad Host Range Insect Gene Vectors: Host Influences and Intrafamily Interactions. 1998. Presented at the Joint FAO/IAEA Division Second Research Co-Ordination Meeting on "Enhancement of the Sterile Insect Technique Through Genetic Transformation Using Nuclear Techniques." Penang, Malaysia, May 26-30, 1998. 11 pp.

Atkinson, P. W., and **D. A. O'Brochta.** 1998. Arriving at the Age of Pest Insect Transgenesis. FAO/IAEA International Conference on Area-Wide Control of Insect Pests Integrating the Sterile Insect and Related and Other Techniques. Penang, Malaysia, May 28- June 2, 1998. 8 pp.

Atkinson, P. W. and **D. A. O'Brochta.** 1996. *Hermes* Mobility in Insects. 1996. Presented at the Joint FAO/IAEA Division First Research Co-Ordination Meeting on "Enhancement of the Sterile Insect Technique Through Genetic Transformation Using Nuclear Techniques." Vienna, Austria, Sept. 30-Oct. 4, 1996. 19 pp.

Atkinson, P. W. and **D. A. O'Brochta**. 1996. Transposable Elements as Gene Vectors in Insects. 1996. Presented at the Joint FAO/IAEA Division First Research Co-Ordination Meeting on "Enhancement of the Sterile Insect Technique Through Genetic Transformation Using Nuclear Techniques." Vienna, Austria, Sept. 30-Oct. 4, 1996. 12 pp.

**O'Brochta, D.A.**, W. D. Warren, K. J. Saville, S. Whyard, H.A. Mende, A.C. Pinkerton, C. J. Coates, and P. W. Atkinson. 1994. *Hobo*-Like Transposable Elements as Non-Drosophilid Gene Vectors. International Atomic Energy Agency meeting on "Genetic Engineering and the Improvement of the SIT," Vienna, Austria, 1994, pp. 25-29.

Atkinson, P.W., W.D. Warren, S. Whyard, K.J. Saville, H.A. Mende, A.C. Pinkerton, C.J. Coates, and **D.A. O'Brochta**. 1994. Mobility of *hobo* Transposable Elements in Non-Drosophilid Insects. International Atomic Energy Agency meeting on "Genetic Engineering and the Improvement of the SIT," Vienna, Austria, 1994, pp. 17-24.

Atkinson, P.W., C.J. Coates, A.C. Pinkerton, H.A. Mende, A.J. Howells, and **D.A. O'Brochta**. 1993. Prospects for Non-Drosophilid Germ-Line Transformation. *In*: Management of Insect Pests: Nuclear and Related Molecular and Genetic Techniques. International Atomic Energy Agency, Vienna, pp. 93-100.

#### **Book Reviews:**

**O'Brochta, D.** (1996). Animals with novel genes. *Quart. Rev. Biol.* 71:273-274.

#### **Abstracts (from 1996)**

Arensburger, Peter, Jamison Orsetti, Channa Aluvihare, Yu-Jung Kim, **David A. O'Brochta** & Peter W. Atkinson, A New Active Transposable Element, *Herves*, from the African malaria mosquito *Anopheles gambiae*. Annual Meeting of the American Society of Tropical Medicine and Hygiene, Miami, FL Nov 2004

**O'Brochta, D. A.** , Jamison Orsetti, Channa Aluvihare, Edward Peckam, Wilhelmine Meeraus, Peter W. Atkinson, Chris Curtis, Derek Charlewood. *Herves* transposable element movement in populations of *Anopheles gambiae*. Annual Meeting of the American Society of Tropical Medicine and Hygiene, Miami, FL Nov 2004.

**O'Brochta, D. A.**, N. Sethuraman, R. Wilson, R. H. Hice, A. C. Pinkerton, C. S. Levesque, D. K. Bideshi, N. Jasinskiene, C. J. Coates, A. A. James, M. J. Lehane and P. W. Atkinson. (. Gene vector and transposable element behavior in mosquitoes. 52 Annual Meeting of the American Society of Tropical Medicine and Hygiene, Philadelphia, PA. Dec. 3-7, 2003.

Rowan, K., Orsetti, Atkinson, P.W., and **D. A. O'Brochta**. . *Tn5* as an insect gene vector. 52 Annual Meeting of the American Society of Tropical Medicine and Hygiene, Philadelphia, PA. Dec. 3-7, 2003.

- Wilson, R., Orsetti, J., Klocko, A. D., Aluvihare, C., Peckham, E., Atkinson, P. W., Lehane, M. J. and **D. A. O'Brochta**. Post-integration behavior of a *mariner* gene vector in *Aedes aegypti*. 52 Annual Meeting of the American Society of Tropical Medicine and Hygiene, Philadelphia, PA. Dec. 3-7, 2003.
- Sethuraman, N., Aluvihare, C., Peckham, E., Klocko, A. D., Orsetti, J., Atkinson, P. W., and **D. A. O'Brochta**. Integration and post-integration behavior of *piggyBac* in *Aedes aegypti*. 52 Annual Meeting of the American Society of Tropical Medicine and Hygiene, Philadelphia, PA. Dec. 3-7, 2003.
- Atkinson, P. W., P. Arensburger, R. H. Hice, D. C. Allen, R. Smith, N. A. Irvine, M. S. Hoddle, and **D. A. O'Brochta**. "Transposable Element Behavior in Mosquitoes." In: Proceedings, EMBO workshop on Molecular and Population Biology of Mosquitoes, Kolymbari, Crete, Greece, August 14-19, 2003.
- Wilson, R., Rowan, K., Orsetti, J., Klocko, A., Aluvihare, C., Peckham, E., Atkinson, P. W., Lehane, M. J. and **D. A. O'Brochta**. "Post-integration behavior of *MosI(mariner)* in *Aedes aegypti* and *Tn5* as a mosquito gene vector". In: Proceedings, EMBO workshop on Molecular and Population Biology of Mosquitoes, Kolymbari, Crete, Greece, August 14-19, 2003.
- Stosic, C., R. Hice, P. Atkinson, and **D. O'Brochta**. "Examination of the Possible Role of *Hermes* Circles in Transposition." In: Proceedings, Fourth International Workshop on Transgenesis and Genomics of Invertebrate Organisms. Asilomar, CA. May 11-15, 2003.
- Sethuraman, N., C. Aluvihare, E. Peckham, A. Klocko, J. Orsetti, P. W. Atkinson, and **D. A. O'Brochta**. "Integration and Post-Integration Behavior of *piggybac* in *Aedes aegypti*." In: Proceedings, Fourth International Workshop on Transgenesis and Genomics of Invertebrate Organisms. Asilomar, CA. May 11-15, 2003.
- Rowan, K., J. Orsetti, P. W. Atkinson, and **D. A. O'Brochta**. "TN5-Mediated Transformation of *Aedes aegypti*." In: Proceedings: Fourth International Workshop on Transgenesis and Genomics of Invertebrate Organisms. Asilomar, CA. May 11-15, 2003.
- Laver, T. A., R. Hice, **D. A. O'Brochta**, and P. W. Atkinson. "The *Hermes* Transposable Element in Cell Line-Based and *in vitro* Transposition Assays." In: Proceedings: Fourth International Workshop on Transgenesis and Genomics of Invertebrate Organisms. Asilomar, CA. May 11-15, 2003.
- Arensburger, P. **D. A. O'Brochta**, and P. Atkinson. "A New *hAT* Transposable Element Found in the *Anopheles gambiae* Genome." In: Proceedings: Fourth International Workshop on Transgenesis and Genomics of Invertebrate Organisms. Asilomar, CA. May 11-15, 2003.

- Atkinson, P. W., R. H. Hice, K. Michel, C. D. Stosic, N. L. Craig, and **D. A. O'Brochta**. "Hermes Element Structure and Function." *In: Proceedings, Fourth International Workshop on Transgenesis and Genomics of Invertebrate Organisms*. Asilomar, CA. May 11-15, 2003.
- Hogan, J. R., H. Shao, J. Biedler, P. Topalis, A. Koutsos, P. Arensburger, L. Mill, A. Grundschober, R. Charlab, P. Atkinson, **D. O'Brochta**, Z. Tu, C. Louis, R. Holt, and F. Collins. "Distribution and Abundance of Transposons in the Recently Completed *Anopheles gambiae* Whole Genome Assembly." *In: Proceedings, 51<sup>st</sup> Annual Meeting of the American Society of Tropical Medicine and Hygiene*. Denver, CO, Nov. 10-14, 2002.
- Kim, W., H. Koo, A. Richman, **D. A. O'Brochta**. "Transgenic cecropin expression in the posterior midgut of the malaria vector, *Anopheles gambiae*." *In: Proceedings, 51<sup>st</sup> Annual Meeting of the American Society of Tropical Medicine and Hygiene*. Denver, CO, Nov. 10-14, 2002.
- Irwin, N., M. S. Hoddle, **D. A. O'Brochta**, P. W. Atkinson, R. Carey. "Assessing fitness costs for transgenic *Aedes aegypti* expressing the green fluorescent protein marker gene." *In: Proceedings, 51<sup>st</sup> Annual Meeting of the American Society of Tropical Medicine and Hygiene*. Denver, CO, Nov. 10-14, 2002.
- Michel, K., **D. A. O'Brochta**, and P. W. Atkinson. "Functional Mapping of the *Hermes* Transposase". 3<sup>rd</sup> International Congress of Vector Ecology, Barcelona, Spain, Sept. 16-21, 2001.
- O'Brochta, D.A.**, Guimond, N., Grundschober, A., Hice, R. H., LeVesque, C. S., Pinkerton, A. C., Kline, M. A., Atkinson, P.W. The behavior of autonomous *Hermes* elements in *Aedes aegypti* and *Drosophila melanogaster*. 3<sup>rd</sup> International Congress of Vector Ecology, Barcelona, Spain, Sept. 16-21, 2001.
- Torti, C., L. M. Gomulski, K. Michel, P. W. Atkinson, **D. A. O'Brochta**, G. Franz, S. Robinson, G. Gasperi, and A. R. Malacrida. 2002. Characterization of Two Medfly *Hermes* Transformed Lines: 7M-6FRE and 7M-6FYE. Keystone Symposium on Genetic Manipulation of Insects, Taos, NM, Feb. 5-11, 2001
- O'Brochta, D. A.**, and P. W. Atkinson. 2002. "Transposable Element Diversity in Insects. Keystone Symposium on Genetic Manipulation of Insects", Taos, NM, February 5 -11, 2001.
- Allen, M. L., C. S. LeVesque, R. H. Hice, **D. A. O'Brochta** and P. W. Atkinson. 2002. *Hermes* Transformation and Remobilization in *Culex quinquefasciatus*. Keystone Symposium on Genetic Manipulation of Insects, Taos, NM, Feb. 5-11, 2001.
- Kim, Y.-J., **D. A. O'Brochta**, and P.W. Atkinson. 2002. Structural and Functional

- Analysis of the *hobo* Transposable Element. Keystone Symposium on Genetic Manipulation of Insects, Taos, NM, Feb. 5-11, 2001.
- LeVesque, C. S., R. H. Hice, M. Allen, A. C. Pinkerton, **D. A. O'Brochta**, and P. W. Atkinson. On the Nature of Genomic Integration of the *Hermes* Element in Mosquitoes. Keystone Symposium on Genetic Manipulation of Insects, Taos, NM, Feb. 5-11, 2001.
- O'Brochta, D. A.** and P. W. Atkinson. Transgenic Insects: Programs, Technology, Benefits and Risks. International Conference of OECD LMO's and the Environment, Raleigh-Durham, North Carolina, Nov. 27-30, 2001
- O'Brochta, D.A.** and P. W. Atkinson. *hAT* mediated transformation of insects . XXI International Congress of Entomology in Iguassu Falls, Brazil, August 20 – 25, 2000.
- Wilson, R., M. J. Lehane, P. W. Atkinson and **D. A. O'Brochta**. Weak expression of GFP in *Aedes aegypti* and *Stomoxys calcitrans* despite the presence of multiple copies of the transgene. XXI International Congress of Entomology in Iguassu Falls, Brazil, August 20 – 25. 2000.
- Atkinson, P. W. and **D. A. O'Brochta**. The genetic transformation of insects by hAT transposable elements. Entomological Society of America, Annual Meeting. 1999.
- Dushay, M. S., P. W. Atkinson and **D. A. O'Brochta**. Interactions between related transposable elements. 41<sup>st</sup> Annual Drosophila Research Conference. 1999
- Whyard, S., H. Mende, A. Pinkerton, **D. O'Brochta**, and P. Atkinson. . Transposable Element-Mediated Transformation of Commercially Important Invertebrates of Australia." Third International Workshop on Transgenesis of Invertebrate Organisms. Orthodox Academy of Crete, Kolymbari, Crete, Greece, Aug. 21-26, 1999.
- Michel, K., A. C. Pinkerton, A. Stamenova, **D. A. O'Brochta**, G. Franz, A. S. Robinson, M. Lehane, and P. W. Atkinson.. Hermes Mediated Germ-Line Transformation of Insects. Third International Workshop on Transgenesis of Invertebrate Organisms. Orthodox Academy of Crete, Kolymbari, Crete, Greece, Aug. 21-26, 1999.
- Michel, K., J. Watson, A. C. Pinkerton, S. Thibault, **D. A. O'Brochta**, and P. W. Atkinson.. Expression and Utilization of Green Fluorescent Protein as a Genetic Marker in Insects. Keystone meeting on "Toward the Genetic Manipulation of Insects," Taos, NM, Jan. 9-15, 1998. p. 51.
- Doll, S., DeCamillis, Chiles, J., **O'Brochta, D.**, ffrench-Constant, R., James, A., Christensen, B. *Hermes*, a transposable element from *Musca domestica* inserts a transgene into the genome of *Aedes aegypti*. Keystone Symposium- Toward the genetic manipulation of insects. Taos, NM. 1998.

- Atkinson, P. W. and **D. A. O'Brochta**. Arriving at the Age of Insect Pest Transgenesis. FAO/IAEA International Conference on Area-Wide Control of Insect Pests Integrating the Sterile Insect and Related and Other Techniques. Penang, Malaysia, May 28- June 2, 1998. p. 41.
- Atkinson, P. W. and **D. A. O'Brochta**. Transposable Elements as Tools. John D. and Catherine T. MacArthur Foundation Workshop to Develop an Action Plan for the Transformation of *Anopheles gambiae*. Snowbird, Utah, June 2-3, 1998.
- Atkinson, P. W. and **D. A. O'Brochta**. 1998. Approaches for Evaluating Transposon Mobility in Insect Embryos. John D. and Catherine T. MacArthur Foundation Workshop to Develop an Action Plan for the Transformation of *Anopheles gambiae*. Snowbird, Utah, June 2-3, 1998.
- Michel, K. A. C. Pinkerton, A. Stamenova, J. A. Watson, **D. A. O'Brochta**, G. Franz, A. S. Robinson, and P. W. Atkinson. 1998. Green Fluorescent Protein as an Autonomous Marker for Germline Transformation of Dipterans. VI European Congress of Entomology, Ceske Budejovice, Czech Republic, Aug. 23-29, 1998.
- Allen, M., **D. A. O'Brochta**, and P. W. Atkinson. 1998. A Hermes Transformation System for *Culex quinquefasciatus*. ESA Annual Meeting, Las Vegas, NV, Nov. 8-12, 1998.
- Atkinson, P. W., R. H. Hice, and **D. A. O'Brochta**. Isolation and Purification of hAT Element Transposase Proteins. Keystone meeting on "Toward the Genetic Manipulation of Insects," Taos, NM, Jan. 9-15, 1998. p. 49.
- Sundararajan, S., P. W. Atkinson, and **D. A. O'Brochta**. Transposable Element Interactions and Gene Vector Stability. Keystone meeting on "Toward the Genetic Manipulation of Insects," Taos, NM, Jan. 9-15, 1998. p. 52.
- Pinkerton, A. C., S. Whyard, H. A. Mende, C. J. Coates, **D. A. O'Brochta**, and P. W. Atkinson. The Homer Transposable Element from the Queensland Fruit Fly *Bactrocera tryoni* is a Member of the *hAT* Family of Transposable Elements. Keystone meeting on "Toward the Genetic Manipulation of Insects," Taos, NM, Jan. 9-15, 1998. p. 52.
- Atkinson, P. W. and **D. A. O'Brochta**. *hAT* Mediated Transformation Systems in Insects. Second International Workshop on Transgenesis of Invertebrate Organisms. Asilomar Conference Center, Pacific Grove CA, May 9-13, 1997. p. 36.
- Sarkar, A., Coates, C., Yardley, K., Whyard, S., Wilhoeft, U., A., James, A., Atkinson, P., and **O'Brochta, D.** Target site preferences of a *hobo*-like transposable element. 38th Annual Drosophila Conference, Chicago, IL. 1997.

DeCamillis, Doll, S., **O'Brochta, D.**, James, A., Christensen, B., ffrench-Constant, R. Genetic transformation of a mosquito using the *Hermes* transposable element. 38th Annual Drosophila Conference, Chicago, IL. 1997.

Pinkerton, A. C., S. Whyard, C. J. Coates, H. A. Mende, **D. A. O'Brochta**, and P. W. Atkinson. The Homer Transposable Element of *Bactrocera tryoni* is A Member of the hAT Family of Transposable Elements. Genetics Society of Australia 43rd Annual Meeting, Melbourne, Vic., Australia, July 7-11, 1996.

Atkinson, P. W. and **D. A. O'Brochta**. Transgenic Insect Technology, Genetic Society of Australia 42nd Annual Meeting, Melbourne, Vic, Australia, July 7-11, 1996.

Atkinson, P. W. and **D. A. O'Brochta**. *hAT* Transposable Elements as Gene Vectors in Insects. XX International Congress of Entomology, Florence, Italy, Aug. 25-31 1996. p. 267.

DeCamillis, M. , R. ffrench-Constant, **D. O'Brochta**, B. Christensen and A. James. Use of the *Hermes* transposon from *Musca domestica* in conjunction with putative selectable marker resistance to dieldrin (RDL) for germline transformation experiments in *Aedes aegypti*. 5th Annual Meeting of the International Centers for Tropical Disease Research, Bethesda, MD, 1996.

Sarkar, A., J. Scura, K. Yardley, K. Saville, C. Coates, A. Pinkerton, A. James, P. Atkinson and **D. O'Brochta**. Interplasmid mobility of the transposable element *Hermes* in insect embryos. 36th Annual Drosophila Conference. 1996.

### **Invitations (since 1996):**

#### **Speaker:**

USDA/BioControl Laboratory, Newark, Delaware Feb 2005.

Pew Initiative on Food and Biotechnology "Biotech Bugs: A look at the science and public policy surrounding the release of genetically modified insects." Sept. 2004

Keystone Symposium on Genetic Manipulation of Insects, Taos, NM, Feb, 2004.

53<sup>rd</sup> Annual Meeting of the American Society of Tropical Medicine and Hygiene, Dec, 2003.

EMBO Workshop: Molecular and Population Biology of Mosquitoes, Kolymbari, Greece. Aug, 2003

4<sup>th</sup> International Workshop on Transgenesis and Genomics of Invertebrate Organisms, Asilomar, CA. May, 2003.

North Carolina State University, Dept of Entomology, Raleigh, N.C. Oct, 2002

Keystone Symposium on Genetic Manipulation of Insects, Taos, NM, Feb, 2001.

International Conference of OECD LMO's and the Environment, Raleigh-Durham, North Carolina, Nov, 2001

- 3<sup>rd</sup> International Congress of Vector Ecology, Barcelona, Spain, Sept, 2001.
- 50<sup>th</sup> Annual Meeting of the American Society of Tropical Medicine and Hygiene. Atlanta, GA. Dec, 2001.
- XXI International Congress of Entomology in Iguassu Falls, Brazil, Aug, 2000.
- Virginia Tech. University, Dept. Biochemistry, Blacksburg, VA, Oct, 2000.
- Maryland Entomology Society, Baltimore, MD., Oct, 2000.
- Exotic Fruitfly Symposium, Riverside, CA. Sept. 2000.
- Washington Area Sigma Psi Society, College Park, MD. Oct. 2000.
- Chesapeake Area Biological Safety Association , Laurel, MD. March, 2000.
- 3<sup>rd</sup> International Workshop on Transgenesis of Invertebrate Organisms, Kolymbari, Greece. Aug, 1999.
- Keystone Symposium, Toward the Genetic Manipulation of Insects, Taos, NM, Feb, 1998.
- Cornell University, Department of Entomology and Department of Genetics. Ithaca, NY, March 1998.
- 7<sup>th</sup> Annual Meeting of the International Centers for Tropical Disease Research, Bethesda, MD, May, 1998.
- FAO/IAEA International Conference on Area-Wide Control of Insect Pests Integrating the Sterile Insect and Related and Other Techniques. Penang, Malaysia, May , 1998.
- 2<sup>nd</sup> International Workshop on Transgenesis of Invertebrate Organisms. Asilomar, CA, May, 1997.

**Consultant/Expert:**

- USDA Biotechnology Risk Assessment Program, Washington, D.C., May 2003
- USDA Biotechnology Risk Assessment Program, Washington, D.C., Feb 2002
- Joint FAO/IAEA Division, Third Research Co-Ordination Meeting on “Enhancement of the Sterile Insect Technique Through Genetic Transformation Using Nuclear Techniques.” Capri, Italy, July, 2002.
- Genetically engineered arthropod vectors of human infectious diseases: A Meeting to Consider Benefits and Risks. London, England. Sept. 2001.
- Joint FAO/IAEA Division, Second Research Co-Ordination Meeting on “Enhancement of the Sterile Insect Technique Through Genetic Transformation Using Nuclear Techniques.” Sao Paulo, Brazil. Aug, 2000
- Biotechnological approaches to bat rabies control in the United States. Philadelphia, PA. April 1998.
- Joint FAO/IAEA Division, First Research Co-Ordination Meeting on “Enhancement of the Sterile Insect Technique Through Genetic Transformation Using Nuclear Techniques.” Penang, Malaysia, May , 1998.

NIH Transgenic Insect Risk Assessment Workshop. Rockville, MD. Sept. 1998.

National Institutes of Health, Biology I Study Section. Washington, D.C., Nov.1997.

National Institutes of Health, Biology I Study Section. Washington, D.C., March 1997.

National Institutes of Health, Biology I Study Section. Washington, D.C., March 1996

## **Grants**

NIH-NIAID "Population genetics of transgenes in mosquito vectors" (AI054954) 2004-2009.\$775,000. (Subcontracted investigator)

NIH-NIGMS "Hobo-like transposable elements in insects." (GM48102) 2005-2009. \$1.500,000. (Principal Investigator).

NIH-NIGMS "Tn5 as an insect genomics tool." (GM62793) 2001-2003. \$140,000. (Principal Investigator).

NIH-NIGMS "Genetics of mosquito/parasite interactions." (AI45743) 1999-2003. \$729,180. (Principal Investigator).

NIH-NIGMS "Hobo-like transposable elements in insects." (GM48102) 2000-2004. \$1.229,869. (Principal Investigator).

UNDP/WORLD BANK/WHO "Increasing Hermes activity in Anopheles gambiae." (980646) 1999-2000. \$45,000. (Principal Investigator).

NIH-NIGMS "Hobo-like transposable elements in insects." (GM48102)Supplement 1997-1999. \$140,650. (Principal Investigator).

NIH-NIGMS "Hobo-like transposable elements in insects." (GM48102) 1996-1999. \$709,810. (Principal Investigator).

USDA Competitive Grant "Non-Drosophilid gene vectors." 1995-1998. \$225,000. (Principal Investigator).

USDA Competitive Grant "Non-Drosophilid gene vectors." 1994-1995. \$50,000. (Co-Principal Investigator).

NSF-Eukaryotic Genetics Program. "Molecular basis of the circadian mechanism in the insect reproductive system." 1994-1996. \$60,000. (Co-Principal Investigator).

NIH-NIGMS-Supplements for Undergraduate Research Experience Program. "Hobo-like transposable elements in insects" 1993. \$4,222. (Principal Investigator)

NIH-NIGMS "Hobo-like transposable elements in insects" 1992-1995. \$750,000. (Principal Investigator)

NIH-Small equipment grant 1994-1995. \$6,500. (Principal Investigator).

Biomedical Equipment Support Grant, University of Maryland, College Park. 1992. \$2,000.  
(Principal Investigator)

USDA Competitive Grant. "Gene-transfer vector analysis in insects or economic importance." 1990-1993. \$180,000. (Co-principal Investigator)

Maryland Agriculture Experiment Station Competitive Grant. "Insect gene vector development." 1990-1991. \$25,109. (Principal Investigator)

Summer Research Award, General Research Board, University of Maryland, College Park. 1991. \$5,400. (Principal Investigator).

USDA Competitive Grant. "Gene-transfer vector analysis in insects of economic importance." 1988-1990. \$120,000. (Co-principal Investigator)

## Patents

Gene transformation system for insects. Inventors: **D. A. O'Brochta**, W. D. Warren, and P. W. Atkinson. Patent number 5614398.

The functional *Herves* transposable element from the mosquito, *Anopheles gambiae*.. disclosed September 2003. P. Arensburger, P. W. Atkinson, D. A. O'Brochta

## Service

### University of Maryland

#### Committees:

Center for Biosystems Research, chaired Assistant Director Search Committee, 2004.

Center for Biosystems Research Plant Scientist Search Committee, 2003.

Center for Agricultural Biotechnology Building Committee 2001-2002

Center for Agricultural Biotechnology Promotion and Tenure Committee, chair, 1997-1998.

University of Maryland Biotechnology Institute, Faculty Senate, Senator 1998-2000

Molecular and Cell Biology Graduate Program, Core Course Review Committee, 1997.

Center for Agricultural Biotechnology/University of Maryland College Park Chemistry and Biochemistry Search Committee 1995.

Center for Agricultural Biotechnology Plant and Insect Scientist Search Committee, Chair, 1994.

Center for Agricultural Biotechnology, Assistant Professor of Biochemical Engineering Search Committee 1994.

Molecular and Cell Biology Graduate Program, Executive Committee, 1993-1995.

Molecular and Cell Biology Graduate Program, MOCB Symposium Committee, 1991.  
Molecular and Cell Biology Graduate Program, Course Development Committee, Chair, 1990.

### **Courses Taught**

GEMS 397 (Spring 2004) TEAM PROJECT SEMINAR IV  
GEMS 496 (Fall 2004) PROJECT WRITING SEMINAR  
MOCB 899 (Spring 2004) DOC DISSERTATN RES  
MOCB 899 (Fall 2004) DOC DISSERTATN RES  
Mentor – GEMSTONES Team Remediation Through Biotechnology –2002-present  
Lecturer - College Park Scholars (Science and Technology) Spring 2002  
Lecturer - College Park Scholars (Science and Technology) Spring 2000.  
Lecturer - College Park Scholars (Science and Technology) Spring 1999.  
MOCB-630 - Eukaryote Molecular Genetics: Fall 1991; Fall 1992; Fall 1993; Fall 1994  
MOCB Laboratory Rotation Program; Fall 1991-1 student; Summer 1991-1 student;  
Spring 1992-1 student; Spring 1993-1 student; Summer 1993-1 student., Fall 1999

### **Training**

#### Visiting Scientists

Dr. Corey Washington, Dept. Philosophy, University of Maryland, College Park.  
11/02-6/03  
Dr. Won Kim, Seoul National University, Korea 8/01-8/02  
Dr. Hyeyoung Koo, Sangji University, Korea 8/01-02  
Dr. Michael Lehane, U. of Wales, (2 weeks, 1998)  
Dr. Geetha Bali, Bangalore University, India. 1996-1997  
Dr. Jadwiga Giebultowicz, USDA, 1992-1995  
Dr. Peter W. Atkinson, Visiting Scientist, CSIRO, Canberra, Australia, 1991

#### Postdoctoral Fellows

Dr. Nagaraja Sethuraman, 2002- present.  
Dr. Anne Grundschober, , 2000-2002  
Dr. Raymond Wilson, 1999-2002  
Dr. Sunday Oghiakhe, 1999- 2002  
Dr. Mitchel Dushay, 1998-2000  
Dr. Jose Estrada-Franco, 1997-2001  
Dr. Lisa D. White, 1995-1997  
Dr. Kenneth Saville, 1993-1995  
Dr. William Warren, 1991-1994

#### Graduate Students:

R. Arun Subramanian, PhD. candidate, 2004 – present

Wilhelmene Meeraus, MS, 2004 coadvisor for London School Trop. Med. Hyg.  
Nicole Guimond, Ph.D. candidate 2000- 2002 (MOCB Program)  
Priya Sundararajan, Ph.D. candidate, 1994-1999 (MOCB Program)  
Abhimanyu Sarkar, Ph.D. candidate, 1992-1997 (MOCB Program)  
Jason Scura, Ph.D. candidate, 1994-1997 (MOCB Program)  
Deepak Warikoo, Ph.D. candidate, 1991-1992 (MOCB Program)

#### Thesis Committees

Yuda Anriany, Ph.D. CBMG, 2003-2005.  
Deborah Ladner, MS, University of Maryland, College Park, Entomology, 2003-2005  
Abi Zegeye, Ph.D. Animal Science, 1997- 2004  
Stephanie Ambrosio, Ph.D.MOCB, 1995-2000  
James Zondlo, Ph.D. MOCB, 1992-2001  
Lisa Simpson, Ph.D. MOCB, 1995-2002  
John Parsch, Ph.D. MOCB, 1992-1997  
Panagiotis Kalaitzis, Ph.D. MOCB, 1994-1996  
Delia Rameriz, Ph.D. Chem. Engineering, 1993-1996  
Robert Danaher, Ph.D. Microbiology, 1992-1994  
Michael Blackburn, Ph.D. Entomology, 1990-1992  
Gayatri Varma, Ph.D. Animal Science, 1992-2000  
Lyndon Skeet, Ph.D. Zoology, 1992-1994  
M. Andrew Newman, Ph.D. Zoology, 1992-1995  
Jaebong Kim, Ph.D. Chemistry & Biochemistry, 1994

#### Undergraduate Research Mentor

Philip Brazio, GEMSTONES 2002- present  
Madeline Brown, , GEMSTONES 2002- present  
Dan Burden, GEMSTONES 2002- present  
Philip Grieshaber, GEMSTONES 2002- present  
Brian Meenaghan, GEMSTONES 2002- present  
Lisa Perrygo, GEMSTONES 2002- present  
Nikhil Saralkar, GEMSTONES 2002- present  
Mike Sheer, GEMSTONES 2002- present  
Nicolas Tilsman, GEMSTONES 2002- present  
Nicci Nolan, Work Scholar, 2003- present  
Andrew Klocko HHMI fellow 2001-2003  
Nana Bene HHMI fellow 2001-2002  
Jamison Orsetti, 1998-2000  
Dara Hemphill, 2000  
Bella Andella 1994  
Mark Lustberg 1993- 1994

#### High school Student Mentor

Daniel Tessler, James Hubert Blake High School, Montgomery Co. MD. 2004-2005

last updated April 5, 2005

Esther Kim, James Hubert Blake High School, Montgomery Co. MD. 2001  
Zehra Qureshi, Wilde Lake HS, Howard Co. MD, 1998-2001  
Sara Caughey, Roosevelt HS, PG Co. MD, 1999.  
Laura Cathcart, Wilde Lake HS, Howard Co. MD, 1997-1998  
1 student, Montgomery Blair HS, Montgomery Co. MD, 1991-1992

**Other.**

Associate Editor, Insect Molecular Biology, 1992-present