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born 23/07/1959 Syracuse, NY

Education:

1992 PhD Brandeis University, Waltham, MA Jeffrey C. Hall, advisor
1982 BA Biochemistry, Brown University, Providence, RI

Experience:

2000 - Forskarassistent (Assistant Professor), Södertörns högskola, Stockholm.
1998-2000 Research Assistant Professor, UMBI CAB, College Park, MD.
1996-1998 Research Assistant Professor and lecturer, University of Notre Dame.
1993-1996 Postdoc, Department of Molecular Biology, Stockholm University/Dan Hultmark.
1992-1993 Postdoctoral research fellow, University of California, Riverside/Nancy Beckage.
1986-1992 Doctoral student, Department of Biology, Brandeis University/Jeffrey C. Hall.
1983-1985 SUNYAB School of Medicine, Buffalo, NY/Philip T. LoVerde.

Grants

- EMBO Short Term Fellowship ASTF 74-2005 to M.S.Dushay. Hemolymph coagulation in *Anopheles gambiae* mosquito larvae. 65,899SEK (ca. \$9,595) March - April, Sept. 2005.
- The Swedish National Research Council - to Dr Uli Theopold and M.S. Dushay. For the study of insect hemolymph coagulation. 2,400,000SEK (\$357,000) 2003 - 2006.
- Graduate Research School in Genomics and Bioinformatics - to M.S. Dushay. For the study of lamins in immunity & development. 1,000,000SEK (\$149,000) 2002 - 2007.
- Wenner-Gren Center Foundation - Postdoctoral fellowship for the study of the *Relish* gene in *Drosophila*. 1995-1996.
- Wenner Grenska Samfundet - Postdoctoral fellowship for the study of the regulation of humoral immunity in *Drosophila*. 1994-1995.
- Swedish National Research Council - Postdoctoral fellowship for the study of the regulation of humoral immunity in *Drosophila*. 1993-1994.
- NIH Molecular endocrinology fellow at University of California, Riverside - for the study of parasitoid wasps, polydnavirus, and immunity in *Manduca sexta* larvae. 1992 - 1993.
- National Research Council associateship - Centers for Disease Control. 1992.

Awards

Docent. Awarded in 2004 by Södertörns högskola. This Swedish award is similar to the German *habilitation* and recognizes independence and achievement in research, teaching, and supervision of students.

Membership

Genetics Society of America
International Society of Developmental and Comparative Immunology
American Association for the Advancement of Science

Peer-reviewed Publications

- Bidla, G., **M.S.Dushay**, and U. Theopold (2005). "Activation of phenoloxidase at the wound site in *Drosophila melanogaster*." *Submitted*.
- Bidla, G., M.Lindgren, U.Theopold, and **M.S.Dushay** (2005). "Hemolymph Coagulation and Phenoloxidase in *Drosophila* Larvae." *Dev. Comp. Immunol.* **29**: 669 - 679.
- Karlsson, C., A.M.Korayem, C.Scherfer, O.Loseva, **M.S.Dushay**, and U.Theopold (2004). "Proteomic analysis of the *Drosophila* larval hemolymph clot." *JBC* **279**: 52033 - 52041.
- Korayem, A.M., M.Fabbri, K.Takahashi, C.Scherfer, M.Lindgren, O.Schmidt, R.Ueda, **M.S. Dushay**, and U.Theopold(2004). "A *Drosophila* salivary gland mucin is also expressed in immune tissues..." *Insect Biochem Mol Biol* **34**: 1297 - 1304.
- Theopold, U., O.Schmidt, K.Söderhall, and **M.S.Dushay** (2004). "Coagulation in arthropods: Defence, wound closure and healing." *Trends in Immunology* **25**: 289-294.
- Scherfer, C., C.Karlsson, O.Loseva, G.Bidla, A.Goto, J.Havemann, **M.S.Dushay**, and U.Theopold (2004). "Isolation and characterization of hemolymph clotting factors in *Drosophila melanogaster* by a pull-out method." *Current Biology* **14**: 625 - 629.
- Ekengen, S., Y. Tryselius, **M.S.Dushay**, G. Liu, H. Steiner, and D. Hultmark (2001). "A humoral stress response in *Drosophila*." *Current Biology* **11**:714-718 (*addendum* 11:1479)
- Dushay, M.S.**, J.Roethele, and E.D. Eldon (2000). "Two attacin antibacterial genes of *Drosophila melanogaster*." *Gene.* **246**: 49-57.
- Hedengren, M., B.Åsling, **M.S.Dushay**, I.Ando, S.Ekengren, M.Wihlborg, and D.Hultmark (1999). "Relish, a central factor in the control of humoral but not cellular immunity in *Drosophila*." *Mol Cell.* **4**: 827-37.
- Dushay, M.S.**, B. Åsling, and D. Hultmark (1996). Origins of immunity: *Relish*, a compound gene in the antibacterial defense of *Drosophila*. *PNAS* **93**: 10343 - 10347.
- Åsling, B., **M.S. Dushay**, and D. Hultmark (1995). Identification of early genes in the *Drosophila* immune response by PCR-based Differential Display: the *Attacin A* gene and the evolution of attacin-like proteins. *Insect Biochem. Molecular Biol* **25**: 511 - 518.
- Dushay, M.S.**, N. E. Beckage (1993). Dose-dependent separation of *Cotesia congregata*-associated polydnavirus effects on *Manduca sexta* larval dev. and immunity. *J. Insect Physiol.* **39**: 1029-40.
- Wheeler, D. A., M.J.Hamblen-Coyle, **M.S.Dushay**, M.Rosbash, and J.C.Hall (1993). Behavior in light-dark cycles of *Drosophila* mutants... *J. Biol. Rhythms.* **8**: 67 - 94.
- Dushay, M.S.**, M.Rosbash, and J.C.Hall (1992). Mapping the *Clock* rhythm mutation to the *period* locus of *Drosophila melanogaster* by germline transformation. *J. Neurogenet* **8**:173-9.
- Dushay, M.S.**, R. J. Konopka, D. Orr, M. L. Greenacre, C. P. Kyriacou, M. Rosbash, and J. C. Hall (1990). Phenotypic and genetic analysis of *Clock*, a new circadian rhythm mutant in *Drosophila melanogaster*. *Genetics* **125**: 556 - 578.
- Dowse, H.B., **M.S.Dushay**, J.C.Hall, and J.M.Ringo (1989). High resolution analyses of locomotor activity rhythms in *disco*, a visual system mutant of *Drosophila*. *Behavior Genet.*, **19**: 529 - 542.
- Dushay, M.S.**, M.Rosbash, and J.C.Hall (1989). The *disconnected* visual system mutations in *Drosophila melanogaster* drastically disrupt circadian rhythms. *J. Biol. Rhythms*, **4**:1 - 27.

other Publications

Dushay, M.S., E.D.Eldon (1998). *Drosophila* Immune responses as models for Human immunity. *Am. J. Human Genet.* **62**: 10 - 14.

Dushay, M.S. (1997). "Insect physiology". In *McGraw-Hill Yearbook of Science & Technology 1997* (Ed. Parker, S.P.) McGraw-Hill Book Co., NY p256 - 258.

Presentations

Lindgren, M., G. Bidla, **M.S.Dushay**, and U. Theopold (2005). Function of phenoloxidase in the *Drosophila* clot. *European Fly Meeting*.

Lesch, C., A. Goto, **M.S.Dushay**, and U. Theopold (2005). Analysis of *Drosophila melanogaster* hemolectin mutants. *European Fly Meeting*.

Muños-Alarcon, A., M. Pavlovic, P. Kylsten, and **M.S.Dushay** (2005). *Lam* mutations affect longevity and locomotory behavior in *Drosophila*. *Canadian Fly Meeting*.

Pavlovic, M, A.Muños-Alarcon, P. Kylsten, and **M.S.Dushay** (2005). *Lam* defects reduce longevity and impair locomotory behavior in *Drosophila*. *Scandanavian Fly Meeting*.

Bidla G, C.Scherfer, **M.S.Dushay**, U. Theopold (2005). Death of *Drosophila* hemocytes activates Phenoloxidase during hemolymph coagulation by exposure of inner membrane phospholipids. *Drosophila Research Conference (DRC) 46*.

Theopold U. and **M.S.Dushay** (2004). Coagulation in insects: defense, wound closer and healing. *Innate immunity International Workshop* in Plön, Germany.

Bidla, G., C.Scherfer, C.Karlsson, O.Loseva, J.Havemann, **M.S.Dushay**, U.Theopold (2004). Isolation and characterization of hemolymph clotting factors by a novel, pull-out assay. *DRC 45*.

Lindgren, M., A.Korayem, U.Theopold, **M.S.Dushay** (2003). Hemolymph coagulation - the 1st immune response. *DRC 44*.

Dushay, M.S., P.W. Atkinson, D.A.O'Brochta (2000). Interactions between transposons. *DRC 41*.

Eldon, E.D., J.M.Chaverri, **M.S.Dushay**, J.B.Roethele, M.Giesen, D.E.Dulek, R.McNeilly, J.J.McEntee, S.K.Syed, T.Kitami (2000). Testing the usefulness of attacin reporter constructs as monitors of 18-wheeler activity in the humoral immune response. *DRC 41*.

Hedengren, M., B. Åsling, **M.S.Dushay**, I.Ando, S.Ekengren, M.Wihlborg, D.Hultmark (1999). Relish - a key player in the humoral immune response of *Drosophila melanogaster*, *European DRC 16*.

Dushay, M.S., J. Roethele, E. Eldon (1998). Immunity; sequence and expression analysis of the 2 Attacin genes of *D. melanogaster*. *DRC 39*.

Hedengren, M., B. Åsling, M.Wihlborg, **M.S.Dushay**, D.Hultmark (1998). Effect of Relish mutations on viability and antimicrobial peptide induction in *Drosophila* after bacterial infection. *DRC 39*.

Dushay, M.S., S.Syed, B. Åsling, M.Hedengren, D.Hultmark, E.Eldon (1997). Relish maternal expression and mutant phenotypes. *DRC 38*.

Dushay, M.S., B. Åsling, G.Bjorklund, Y.Engstrom, D.Hultmark (1996). RELISH's effect on cecropin gene induction in the fly's humoral immune response. *DRC 37*.

Åsling, B., **M.S.Dushay**, D.Hultmark (1996). Characterization and genomic localization of Relish, a *Drosophila* Rel protein. *DRC 37*.

Dushay, M.S., M. Rosbash, J.C.Hall (1988). *Drosophila* circadian rhythms are drastically disrupted by *disconnected* visual system mutations. *Society for Neuroscience 18*.

Nambu, J.R., **M.S.Dushay**, M. Rosbash, J.C.Hall (1988). Analysis of the *Clock* circadian rhythm mutation in *Drosophila melanogaster*. *Society for Neuroscience 18*.

Faculty service

PhD Registration Committee for Evgeni Onischenko	2001	Stockholm University
PhD Registration Committee for Andrés Munos-Alarcon	2002	Karolinska Institute
Master's Thesis Committee for Kerstin Mehnert	2003	Stockholm University

Students

Malin Lindgren - Licentiate June, 2005 (Swedish degree ~ half-way to a PhD)
Maja Pavlovic

Invited lectures

University of Houston, Houston, Texas.	1995
University of Nevada Las Vegas, Las Vegas, Nevada.	1997
Rutgers University, Camden New Jersey.	1997
Umeå University, Sweden.	1998
Simon Fraser University, Vancouver, British Columbia.	2005
University of Western Michigan, Kalamazoo, Michigan.	2005
Oklahoma State School of Medicine, Tulsa.	2005
Queen's University, Belfast	2005

Collaborations

Dr Uli Theopold, Department of Molecular Biology and Functional Genomics, Stockholm University, Sweden. "Hemolymph Coagulation in Larvae and Immune Defense".

Dr Bruno Lemaitre, CGM, CNRS, Gif Sur Yvette, France. "Coagulation and Immune Defense".

Dr Jules Reichhart, IBMC, CNRS, Strasbourg, France. "Coagulation and Immune Defense".

Dr Fotis Kafatos, EMBL, Heidelberg, Germany. "Coagulation in *Anopheles* mosquito larvae."

Dr Per Kylsten, Department of Natural Sciences, Södertörns högskola, Sweden. "Lamins and Muscular Dysfunction in *Drosophila*".

Dr Maria Eriksson, Department of Medical Nutrition, Karolinska Institute, Sweden. "Lamins and Progeria in *Drosophila*".

References

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