

CURRICULUM VITAE

Justin R. Thackeray, Ph. D.

Associate Professor of Biology
Clark University

Date of birth: 5th September 1964
Place of birth: Leeds, England
Citizenship: British citizen, United States Permanent Resident
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Education

- 1982-1985 B.Sc. with Honours in Biological Sciences, University of Leicester, UK.
- 1985-1989 Ph.D. in the Department of Genetics, University of Leicester, UK., in the laboratory of Dr. Charalambos Kyriacou. Dissertation entitled "Molecular Analysis of Behavioural Rhythms in *Drosophila*".
- 1989-1994 Postdoctoral study at the Laboratory of Genetics, University of Wisconsin-Madison, USA, in the laboratory of Professor Barry Ganetzky. Molecular and evolutionary studies on the role of alternative splicing in the expression of the *Drosophila* sodium channel gene *paralytic*.
- 1994-1996 Postdoctoral study at the Department of Biology, Yale University USA, in the laboratory of Professor John Carlson. Isolation and characterization of the phospholipase C- γ encoded by the *small wing (sl)* gene in *Drosophila*.
- 1996-2003 Assistant Professor of Biology, Clark University. Genetic and molecular characterization of PLC- γ function in *Drosophila*.
- 2003-present Associate Professor of Biology, Clark University. Genetic and molecular characterization of PLC- γ function in *Drosophila*.

Grants and Awards

- 2001-2005 NIH AREA grant R15 GM55883-02, \$140,740 for "Genetic analysis of the *small wing* PLC- γ in *Drosophila*" (competitive renewal of 97-01 AREA grant).

- 2000-2001 NSF MUE grant DBI-0070241, \$42,454, for "A microscopy imaging system for the Department of Biology, Clark University" (co-PI with D. Hibbett, D. Larochelle and T. Lyerla).
- 1997-2001 NIH AREA grant R15 GM55883-01, \$101,500 for "Genetic analysis of the *small wing* PLC- γ in *Drosophila*".
- 1989-1991 NATO postdoctoral fellowship at the University of Wisconsin.

Teaching

Courses developed and taught at Clark:

- Recombinant DNA
- Genetics
- Biological Clocks
- Biochemistry II
- Signal Transduction
- Introductory Biology
- Seminar in Genetics
- Genetics and Disease
- Biology of Cancer

Graduate Student mentoring

Ph.D.

Rishikesh Mankidy, Graduated 2003, "Functional Analysis of *Drosophila* PLC- γ ". Postdoctoral scientist in laboratory of R. Shivdasani, Dana Farber Cancer Institute, Boston MA.

Tetteh Abbeyquaye, Graduated 2004, "Identification and analysis of genes involved in PLC- γ signaling in *Drosophila*". Postdoctoral scientist in laboratory of E. Hay, Department of Cell Biology, Harvard Medical School, Cambridge MA.

Rachel Stock, left PhD program in her third year (winter 2006) after failing the qualifying exam.

Suresh Kandasamy, Graduated 2012, "Genetic characterization of *docked* in *Drosophila melanogaster*"

Chitra Naidu, 2nd year

M.A/M.S.

Charlene Manning (2001): "Cloning and evolutionary analysis of PLC- γ in *Drosophila pseudoobscura*". Current employment: Research Technician II, laboratory of Philip Leder, HHMI, Harvard Medical School, Boston MA.

Megan Staples (2002): "Generating antibodies against *Drosophila* PLC- γ ". Current employment: Research Associate, Abbott Labs, Worcester MA.

Leah Fico: (2002) "The role of PH domains in *Drosophila* PLC- γ function". Current employment: Research Assistant, Cambria Bioscience, Boston MA.

Arooj Hyat: (2003) "SH2 domain function in *Drosophila* PLC- γ ".

Medical School, University of Vermont

Kiley Maguire (2005) "Genetic and molecular characterization of the *Drosophila docked* gene"

Research Associate, Monsanto, Boston MA

Daniel Hidalgo (2009) "Characterization of a new PLC- γ mutation in *Drosophila melanogaster*"

Research Associate, University of Massachusetts Medical School

Fouad Bou Zeineddine (2010) "Investigating PLC- γ function in *Drosophila*"

PhD Program in Psychology, UConn

Eric Britton (2013) "

Honors Thesis Research during B.A. degree, and immediate post-graduate employment:

Craig Littlejohn (1997): "A screen for new Phospholipase C- γ mutants in *Drosophila melanogaster*".
Medical School, Florida State University.

Wendy Mathews (1999): "Cloning the *Drosophila virilis* PLC- γ gene". Ph.D. program in Genetics,
Johns Hopkins University, Baltimore MD.

Frances Austin (2001): "Screening for genes on the X-chromosome affecting geotaxis in
Drosophila". NIH predoctoral program, Bethesda MD.

Joshua Suhl (2002): "In vitro mutagenesis of the SH2 domains in *Drosophila* PLC- γ ". Ph.D.
program, University of Connecticut.

Nicole Mills (2005) "Knocking out the tyrosine phosphorylation site in *Drosophila* PLC- γ ".

Daniel Hidalgo (2008) "Characterization of a new PLC-gamma Mutation in *Drosophila*
melanogaster. Research Technician, UMass. Medical Center, Worcester MA

Rachel Gore (2013) "Genetic Analysis of growth factor inhibitors in *Drosophila*"

Invited Presentations

1997 "The *Drosophila* gene *small wing* encodes a PLC- γ that affects signaling in the Sevenless and
Drosophila EGFR pathways". GFSTconference on "Modes of EGF Receptor
Signaling", Iowa State University, Ames IA.

1999 "PLC- γ signaling in *Drosophila*". Tufts University School of Medicine, Department of
Neuroscience, Boston MA.

2002 "Control of cell growth and differentiation - tall tales and small wings". Mount Holyoke
College, Department of Biological Science, Hadley MA.

2003 "Phospholipase C- γ and its roles in eye and wing development in
Drosophila" at WPI, Department of Chemistry and Biochemistry, Worcester MA

Poster presentations

1998 38th Annual Meeting of The American Society for Cell Biology, San Francisco CA. Thackeray,
J.R., Hastings, J. and Mankidy, R. "Isolation of new PLC- γ mutations in *Drosophila*"

- 2000 41st Annual Drosophila Research Conference, Pittsburgh PA. Thackeray, J.R., Hastings, J., Mankidy, R and Abbeyquaye, T. "Isolation and characterization of new PLC- γ mutations".
- 2001 42nd Annual Drosophila Research Conference, Washington DC. Mankidy, R. and Thackeray, J.R. "Genetic and molecular analysis of PLC- γ function". Manning, C., Mathews, W and Thackeray, J.R. "Evolution of PLC- γ homologs".
- 2003 44th Annual Drosophila Research Conference, Chicago IL. Mankidy, R. and Thackeray, J.R. "Severity of R7 defect in *small wing* PLC- γ mutations does not correlate with PIP₂ hydrolysis"
- 2004 45th Annual Drosophila Research Conference, Washington DC. Fico L, Stock, R.. and Thackeray, J.R. "Structure-function studies of PLC- γ signaling"
- 2006 47th Annual Drosophila Research Conference, Houston TX. Fico L, Stock, R.. and Thackeray, J.R. "Structure-function studies of PLC- γ signaling"
- 2007 48th Annual Drosophila Research Conference, Philadelphia PA. Kandasamy, S., Maguire, K and Thackeray, J.R. "*docked* encodes a protein predicted to be involved in ER-golgi transport."
- 2008 49th Annual Drosophila Research Conference, San Diego CA. Murillo-Maldonado, J. M., Stock, R., Thackeray, J.R. and Riesgo-Escovar, J. "PLC- γ regulates differentiation and growth in *Drosophila melanogaster*."
- 2009 50th Annual Drosophila research Conference, Chicago, IL "Functional Analysis of the *dp*-interactor *docked*" Kandasamy, S., Maguire, K. and Thackeray, J. R. "PLC- γ modulates differentiation and growth impinging on the MAPK pathway activated by the insulin receptor", Murillo-Maldonado, J. M., Stock, R., Thackeray, J.R. and Riesgo-Escovar, J
- 2010 51st Annual Drosophila Research Conference, Washington DC. Kandasamy, S., Maguire, K and Thackeray, J.R. "Genetic analysis of the *dp*-interactor *docked*"
- 2011 52nd Annual Drosophila Research Conference, San Diego CA. Thackeray J.R., Britton, E., Driscoll, K. and Jeskey, C. "An *in vivo* screen for novel PLC- γ inhibitors."
- 2013 54th Annual Drosophila Research Conference, Washington DC. Kandasamy, S., Maguire, K and Thackeray, J.R. "Vesicle trafficking during wing margin development: a role for *docked*".

PUBLICATIONS

- Murillo-Maldonado, J.M., Bou Zeineddine F., Stock, R., **Thackeray, J.** and Riesgo-Escovar, J. (2011) Insulin receptor-mediated signaling via phospholipase C-gamma regulates growth and differentiation in *Drosophila*. PLoS ONE 6(11): e28067. doi:10.1371/journal.pone.0028067
- Abbeyquaye, T., Raabe, T. and **Thackeray, J.R.** (2003). Evolution of Gab family adaptor proteins. *Gene*, 311:43-50.

- Mankidy, R., Hastings, J. and **Thackeray, J.R.** (2003). Distinct PLC- γ -dependent signaling pathways in the *Drosophila* eye and wing are revealed by a new *small wing* allele. *Genetics*, 164:553-563.
- Manning, C., Mathews, W., Fico, L. and **Thackeray, J.R.** (2003). PLC- γ contains introns shared by many SH2 domains in unrelated proteins. *Genetics*, 164:433-442.
- Powe, A.C. Jr, Strathdee, D., Cutforth, T., D'Souza-Correia, T., Gaines, P., **Thackeray, J.**, Carlson, J and Gaul, U. (1999). In vivo functional analysis of *Drosophila* Gap1: involvement of Ca²⁺ and IP₄ regulation. *Mech Dev.* 81(1-2):89-101.
- Demetriades, M.C., **Thackeray, J.R.** and Kyriacou, C.P. (1999). Courtship song rhythms in *Drosophila yakuba*. *Anim. Behav.*, 57, 379-386.
- Thackeray, J.R.**, Gaines, P.C.W., Ebert, P. and Carlson, J. (1998). *small wing* encodes a phospholipase C- γ that acts as a negative regulator of R7 development in *Drosophila*. *Development*, 125, 5033-5042.
- Thackeray, J.R.** and Ganetzky, B. (1995). Conserved alternative splicing patterns and splicing signals in the *Drosophila* sodium channel gene *para*. *Genetics*, **141**, 203-214.
- Thackeray, J.R.** and Ganetzky, B. (1994). Developmentally regulated alternative splicing generates a complex array of *para* sodium channel isoforms in *Drosophila*. *J Neurosci*, **14**, 2569-2578.
- Kyriacou, C.P., Greenacre, M.L., **Thackeray, J.R.** and Hall, J.C. (1992). Genetic and molecular analysis of song rhythms in *Drosophila*. In: *Molecular Genetics of Biological Rhythms*, ed: MW Young. Marcel Dekker, New York.
- Costa, R., Peixoto, A.A., **Thackeray, J.R.**, Dagleish, R. and Kyriacou, C.P. (1991). Length polymorphism in the threonine/ glycine encoding repeat region of the period gene in *Drosophila*. *J Mol Evol*, **32**, 238-246.
- Thackeray, J.R.** and Kyriacou, C.P. (1990). Molecular evolution in the *Drosophila yakuba* period locus. *J Mol Evol*, **31**, 389-401.
- Harris, S., **Thackeray, J.**, Jeffreys, A.J. and Weiss, M.L. (1986). Nucleotide sequence analysis of the Lemur β globin gene family: evidence for major rate fluctuations in globin gene evolution. *Mol Biol Evol* **3**, 465-484.

University Service

2012-	PBR
2008 – 12	Faculty Secretary
2004 – 07	Graduate Board (Chair 05/06, 06/07)
2001 – 04	Faculty Library Committee
2000 – 05	CETL steering committee
1998 - 99	Undergraduate Academic Board
1997 - 99	Faculty Library Committee