Jeffrey Vedanayagam

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Education

Ph.D., Population/Evolutionary genomics, University of Rochester, USA, 2016.
Dissertation: *Evolutionary Genomics of piRNA Mediated Transposon Silencing in Drosophila.*
Committee: *Drs. Daniel Garrigan (advisor), Daven Presgraves, Thomas Eickbush and Justin Blumenstiel*

M.S., Biology, University of Rochester, USA, 2011.

M.Sc., Genomics, Madurai Kamaraj University, India, 2007.
Thesis: *Evolutionary Trails of Two Ancient Dravidian Populations in Southern India: Insights from the Non-recombining Y Chromosome and Human Leukocyte Antigen Diversity*

B.Sc., Biology & Biotechnology, Loyola College, University of Madras, India, 2005.

Research Experience

Reserach Fellow, Sloan Kettering Institute, 2016–till date.
Mentor: *Eric C. Lai, Ph.D.*

Research Assistant, Centre for DNA Fingerprinting & Diagnostics, India 2007–2009.

Grants, Honors, & Awards

Doctoral Dissertation Improvement Grant, National Science Foundation, 2012–2015
Travel Award, Department of Biology, University of Rochester, 2015.
Graduate Student Association Travel Award, University of Rochester, 2015.
Graduate Student Teaching Award, University of Rochester, 2014.
Travel Award, Cold Spring Harbor Laboratory, 2013 & 2014.
Ernst Caspari Fellowship, University of Rochester, 2009.
Summer Research Fellowship, University of Madras, 2005.

Publications

Manuscripts in revision/preparation

Kingan S.B., Geneva A.J., **Vedanayagam J.**, Garrigan D., Meiklejohn C., Presgraves D.C. Genome Divergence and Introgression between *Drosophila simulans* and *Drosophila mauritiana. biorxiv.org/024711* (in revision)

Vedanayagam J., Charkraborty M., Khost D.E., Chang C., Emerson J.J., Garrigan D. Single-molecule sequencing reveals the structural complexity of *flamenco* in closely related *Drosophila* species.

Chakraborty M., Chang C., **Vedanayagam J.**, Khost E., Adrion J., Montooth K., Meiklejohn C., Larracuente A., Emerson J.J. Evolution of genome structure in the *Drosophila simulans* clade.

Peer-reviewed publications

Kondo S*., **Vedanayagam J.***, Mohammed J., et al. New genes often acquire male-specific functions but rarely become essential in *Drosophila*. *Genes & Dev.* 31:1841–1846 *co first-authors

Article highlight: *Nyberg K.G and Carthew R.W. Out of testis: biological impacts of new genes. Genes & Dev. 31:1825-1826*

Kan L., Grozhik A.V., **Vedanayagam J.**, Patil D.P., et al. The m6A pathway facilitates sex determination in *Drosophila*. *Nature Comm.* 8:15737

Vedanayagam J. and Garrigan D. 2015. The Effects of Natural Selection Across Molecular Pathways in *Drosophila melanogaster BMC Evol Biol* 15:203.

Garrigan D., Kingan S.B., Geneva A.J., **Vedanayagam J.**, and Presgraves D.C. 2014. Genome Diversity and Divergence in *Drosophila mauritiana*: Multiple Signatures of Faster X Evolution. *Genome Biol Evol* 6(9): 2444–2458.

Nandineni M.R., and **Vedanayagam J.**. 2009. Selective Enrichment of Human DNA from non-Human DNA for DNA Typing of Decomposed Skeletal Remains. *Forensic Sci Int Gene Suppl* 2(1): 520–521.

Seminars/ Talks

Department of Developmental Biology, Sloan-Kettering Institute, November 2017.
RNA Therapeutics Institute, University of Massachusetts Medical School, July 2015.
Department of Molecular Biology & Genetics, Cornell University, June 2015.
Department of Developmental Biology, Sloan-Kettering Institute, April 2015.
New York Genome Center, January 2015.
Department of Biology, University of Rochester, January 2014.
Wellcome Trust Centre for Human Genetics, University of Oxford, April 2008.

Conference Presentations

(P)–Poster / (T)–Platform
56th Annual *Drosophila* Research Conference, Chicago, March 2015 (P).
New York Area Population Genomics Workshop, New York, January 2015 (T).
Regulatory and non-coding RNA meeting, CSHL, New York, August 2014 (P).
Regional Meeting on Mobile Genetic Elements, CSHL, New York, October 2013 (P).
54th Annual *Drosophila* Research Conference, Washington D.C., April 2013 (P).
Society for Molecular Biology and Evolution Meeting, Dublin, June 2012 (T).

Teaching

Teaching Assistant, Department of Biology, University of Rochester

BIO111P, Introductory Biology Lab: *Spring: 2010, 2013, and 2014.*

BIO113P, Advanced Biology Lab: *Spring: 2011.*

Guest lecturer for BIO472: Genomic Conflict and Selfish Genetic Elements, University of Rochester, March 2014
Two lectures for the Advanced Ecology & Evolutionary Biology course taught by Prof. Thomas Eickbush.

Instructor, Rochester Scholars Program, University of Rochester, July–August, 2013
Developed and taught a course for high school students titled 'Genes and genomes: Why is DNA the secret molecule of life?'.

Upward bound tutor for high school students, David T. Kearns center for Leadership and Diversity, University of Rochester, January 2012–May 2012.

Service

Journal Referee (ad hoc) :PLoS Genetics; Evolutionary Bioinformatics.

Grant Referee : Sigma Delta Epsilon graduate women in science fellowship.

Other : Member, Library Advisory Committee, University of Rochester 2014–2015.

Research Funding

National Science Foundation (DEB-1209536), April 2012–May 2015
*PI: Garrigan D. (co-PI: **Vedanayagam J.P**).*
Title: Evolutionary Genomics of piRNA Mediated Transposon Silencing in Drosophila.

Professional Memberships

Society for Molecualar Biology and Evolution 2011–Present
Genetics Society of America 2012–Present
The RNA Society 2011–Present
The New York Academy of Sciences 2011–Present

References

Dr. Daniel Garrigan
Ancestry DNA
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San Francisco, CA 94107
e-mail: dgarriga@lummei.net

Dr. Daven Presgraves
Dean's Professor of Arts, Sciences & Engineering
Department of Biology
University of Rochester
Rochester, NY 14627
e-mail: daven.presgraves@rochester.edu

Dr. Justin Blumenstiel
Associate Professor
Department of Ecology & Evolutionary Biology
University of Kansas
Lawrence, KS 66045
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