Yaniv Erlich

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Education

Ph.D. candidate, 2006-present (expected graduation: April, 2010).

Thesis title: "Compressed Sequencing" Watson School of Biological Sciences Cold Spring Harbor Laboratory, NY, USA

Bachelor of Science, 2003-2006 Tel-Aviv University, Tel-Aviv, Israel

Interdisciplinary Program of Neuroscience at Tel-Aviv University

Track: Computational Neuroscience

Double Major in Biology (Summa cum laude) and Psychology (Summa cum laude)

Positions

Doctoral Student

2006-present

Watson School of Biological Sciences, Cold Spring Harbor Laboratory.

Field: Computational Genomics

Advisor: Greg Hannon

Data acquisition researcher

2002-2004, 2006

Special R&D Group, IDF Intelligence Corps. Israel *Final Rank – Captain*.

Vulnerability researcher

Part time, 2005-2006

Vaorta. Israel Start-up activity

Undergraduate Research Program

Summer, 2005

Cold Spring Harbor Laboratory.

Advisor: Partha Mitra

Undergraduate Researcher

2005

Neurobiology Research Unit, Faculty of Psychology, Tel-Aviv University.

Advisor: Shamgar Ben-Eliyahu

Undergraduate Researcher

Summer, 2003

Department of Cell Biology, Faculty of Life Sciences, Tel-Aviv University *Advisor: Jonathan Gershoni*

Head of Group 2000-2001

Signal Analysis Group, IDF Intelligence Corps. Israel

Team leader 2000

Signal Analysis Group, IDF Intelligence Corps. Israel

Signal Analyst 1998-2000

Signal Analysis Group, IDF Intelligence Corps. Israel

Awards	Harold M. Weintraub Graduate Student Award for outstanding achievement during graduate studies in biological sciences.	2010
	Goldberg-Lindsay PhD Fellowship	2006-2010
	ACM/IEEE-CS High Performance Computing PhD Fellowship	2008
	Keystone cancer genomics symposia travel award	2008
	Wolf Foundation Scholarship for excellence in exact sciences	2006
	Emmanuel Ax Scholarship for participating in CSHL Undergraduate Research Program	2005
	IDF Scholarship for outstanding officers	2004-2005
	"Makor Haim" IDF award granted for a technological breakthrough	2004
	Extended Research Project Scholarship for outstanding students	2003
	"Makor Haim" IDF award granted for a technological breakthrough	2001

Patents

- 1. Harnessing High Throughput Sequencing for Multiplexed Specimen Analysis (Provisional). With Greg Hannon. 2009
- 2. Self-optimized Base caller for Next-Generation Sequencing Platforms (Provisional). With Greg Hannon and Partha Mitra. 2008

Journal Publications

- 1. **Compressed Genotyping**. <u>Erlich Y</u>, Gordon A, Brand M, Hannon GJ, Mitra PP. *IEEE Transaction on Information Theory Special Issue on Molecular Biology and Neuroscience*. 2010.
- 2. Joubert Syndrome 2 (JBTS2) in Ashkenazi Jews Is Associated with a TMEM216 Mutation. Edvardson S, Shaag A, Zenvirt S, Erlich Y, Hannon GJ et al. *American Journal of Human Genetics*. 2009.
- 3. **Hierarchical rules for Argonaute loading in Drosophila.** Czech B, Zhou R, Erlich Y, Brennecke J, Binari R et al. *Molecular Cell.* 2009.
- 4. Cell Contact-Dependent Acquisition of Cellular and Viral Non-Autonomously encoded Small RNAs. Rechavi O*, Erlich Y*, Amram H*, Flomenblit L, Karginov FV et al. Genes and Development. 2009. (* equal contribution)

- 5. **DNA Sudoku harnessing high-throughput sequencing for multiplexed specimen analysis.** Erlich Y, Chang K, Gordon A, Ronen R, Navon O, Rooks M, Hannon GJ. *Genome Research.* 2009.
- 6. Alta-Cyclic: a self-optimizing base caller for next-generation sequencing. Erlich Y, Mitra PP, Delabastide M, McCombie WR, Hannon GJ. Nature Methods. 2008.
- 7. A role for microRNAs in maintenance of mouse mammary epithelial progenitor cells. Ibarra I, <u>Erlich Y</u>, Muthuswamy SK, Sachidanandam R, Hannon GJ. *Genes and Development*. 2007.

Conference Publications

1. Compressed Sensing Approaches for High Throughput Carrier Screen.

<u>Erlich Y</u>, Shental N, Amir A, and Zuk O. Invited paper for *Annual Allerton Conference on Communication, Control, and Computing.* 2009.

Invited Seminars

- Whitehead Institute/MIT. Feb 2010
- **IGSB /University of Chicago**. Jan 2010
- Supercomputing International Conference. Nov 2009.
- Advanced Sequencing Course. Nov 2009.
- Illumina Inc San Diego facility. Oct 2009.
- Allerton Conference on Communication, Control and Computing. Sep 2009.
- Directors of the Cold Spring Harbor Lab Association. Sep 2009.
- UCSD Next-Generation Sequencing and Informatics Symposium. Nov 2008.
- **Illumina Inc** UK facility. Aug 2008.
- Keystone Symposia Cancer Genomics and Epigenomics. Feb 2008

Teaching Experience

- TA in Advanced Sequencing Course. Cold Spring Harbor Lab. 2009.
- Teaching in the DNA learning center, Cold Spring Harbor Lab. 2006.