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Department of Human Genetics
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Yoav Gilad

Positions

07/2013-Present Professor, Dept. of Human Genetics, University of Chicago
11/2009-06/2013 Associate Professor, Dept. of Human Genetics, University of Chicago
08/2005-10/2009 Assistant Professor, Dept. of Human Genetics, University of Chicago
08/2003-08/2005 European Molecular Biology Organization Postdoctoral Fellow in the Genetics Dept., at Yale University, New Haven, CT
Sponsoring scientist: Kevin P. White

Leadership Positions

07/1014-present Chair, Committee on Genetics, Genomics, and Systems Biology at the University of Chicago
04/2010-present Director, Functional Genomics and Sequencing core Facility at the University of Chicago

Additional appointments

10/2011-present Committee on Development, Regeneration, and Stem Cell Biology at the University of Chicago
03/2008-present Committee on Immunology at the University of Chicago
05/2007-present Fellow of the Institute for Genomics and Systems Biology at the University of Chicago
10/2005-present Committee on Genetics, Genomics, and Systems Biology at the University of Chicago

Education

09/2000-08/2003 Ph.D. in Molecular Genetics
Weizmann Institute of Science, Rehovot, Israel
Advisor: Doron Lancet
Title: Evolution of the human olfactory receptor gene repertoire
10/1998-09/2000 M.Sc., *cum laude* in Molecular Genetics
Weizmann Institute of Science, Rehovot, Israel

Advisor: Doron Lancet

- 10/1996-08/1998 B.Sc. in Molecular Genetics and Biochemistry
Ben Gurion University, Beer-Sheva, Israel
- 1991-1993 First year of B.Sc. degree obtained as a high-school student

Teaching

- 2005-2012 *Fall* Co-teaching graduate "HGEN4700 - Human Genetics", Human Genetics Dept,
University of Chicago (teaching 25% of the lectures)
- 2006-present *Spring* Teaching undergraduate/graduate "HGEN473 - Genomics and Systems biology",
Human Genetics Dept and the college at the University of Chicago

Teaching statement

Genomics is a relatively new field that, at its best, addresses biological questions by combining large-scale collection of biological data with rigorous mathematical and statistical design and analysis. In order to provide undergraduate and graduate students with the tool kit required to perform genomic research, I developed a new undergraduate/graduate "Genomics and systems biology" course. In this continuously evolving lecture course, we explore the technologies that enable high-throughput collection of genomic-scale data, including sequencing, genotyping, gene expression profiling, regulatory mechanisms, assays of copy number variation, protein expression and protein-protein interaction. In addition, the course covers issues in study design and statistical analysis of large data sets, as well as how data from different sources can be used to understand regulatory networks, i.e., systems. Statistical tools that are introduced include linear models, likelihood-based inference, supervised and unsupervised learning techniques, methods for assessing quality of data, hidden Markov models, and controlling for false discovery rates in large data sets. The lectures are designed to allow students to learn the relevant statistical tools for each biological question or individual technology. The structure of this course aims at providing an appreciation for the importance of study design as well as analysis, and at motivating the statistical aspects by biological questions and experiments.

Services

Session coordinator at the 2014 meeting of the Society of Molecular Biology and Evolution, Puerto Rico.

Symposium co-chair at the 2014 Biology of Genomes meeting, Cold Spring Harbor Laboratory, NY

NIGMS Human Genetic Cell Repository Scientific Advisory Committee (2011-present)

Associate Editor for BMC Genomics (2010-2013)

Co-chair of the organizing committee for the 2013 Society of Molecular Biology and Evolution annual meeting (Chicago, IL)

Symposium co-chair at the 2011 Biology of Genomes meeting, Cold Spring Harbor Laboratory, NY

Scientific committee of the 2010 European Chemoreception Research Organization Meeting, Avignon, France

Faculty of 1000 (2008 - 2010)

Session coordinator at the 2008 meeting of the Society of Molecular Biology and Evolution, Barcelona, Spain

Session coordinator at the 2007 AchemS meeting, Sarasota, Florida

Session coordinator at the 2005 Gordon conference for Structural, Functional & Evolutionary Genomics, Lewiston, Maine

Co-organizer of BigRoc, the Bioinformatics and Genome Research Open Club at the Weizmann Institute of Science (1999 – 2002)

Reviewer for the following grant agencies: *The National Institute of Health (GCAT and GHD study sections, different special emphasis panels), National Science Foundation, The Nebraska Experimental Program to Stimulate Competitive Research (EPSCoR), Israel Science Foundation, U.S.-Israel Binational Science Foundation (BSF), Marsden Fund, Deutsche Forschungsgemeinschaft (German Research Foundation), National Development and Research Institute, Danish National Research Foundation, Cancer Research UK, Qatar National Research Fund (QNRF), The French National Research Agency.*

Reviewer and/or ad-hoc academic editor for the following journals: *Aging Cell, American Journal of Human Genetics, Annals of Human Genetics, Bioinformatics, BMC journals, Evolution, Gene, Genetics, Genomics, Genome Biology, Genome Research, Human Genomics, Human Molecular Genetics, Molecular Biology and Evolution, Molecular Ecology, Nature, Nature Genetics, Nature Methods, Nucleic Acid Research, PLoS Biology, PLoS Computational Biology, PLoS Genetics, PLoS ONE, PNAS, Science, and Trends in Genetics*

Services at the University of Chicago

BSD Graduate student admission committee (2006 – 2008, 2010 – 2014)

Human Genetics curriculum committee (2009 – 2011)

Committee on Genetics, Genomics, and Systems Biology curriculum committee (2014 – present)

Oversight committee of the Functional Genomics Facility (2011 – present)

Selected invited Seminars and Talks (may include upcoming):

- Jul 2015 Speaker at the 2015 Society of Molecular Biology and Evolution annual meeting, Vienna, Austria
- Mar 2015 Seminar at Oregon National Primate Research Center, Beaverton, OR
- Nov 2014 Seminar at the Department of Molecular Genetics at the University of Toronto, Toronto Canada
- Sep 2014 Speaker at the Evolution of Genomes workshop, Villars-sur-Ollon, Switzerland
- Jun 2014 Speaker at the 2014 Society of Molecular Biology and Evolution annual meeting, Puerto Rico.
- May 2014 Seminar at the Institute for Computational Biomedicine, Weill Cornell Medical College, New York, NY
- May 2014 Speaker at the 2014 Biology of Genome meeting, Cold Spring Harbor Laboratory, NY
- Jan 2014 Seminar at the Semel Institute for Neuroscience and Human Behavior, UCLA, Los Angeles, CA
- Dec 2013 Seminar at the Department of Molecular Genetics at the Weizmann Institute of Science, Rehovot, Israel
- Aug 2013 Speaker at the 2013 Statistical Data Integration Challenges in Computational Biology workshop, Banff, Ab, Canada
- Jul 2013 Speaker at the 2013 ASBMB Special Symposia on Evolution and Core Processes in Gene Regulation, Chicago, IL
- Jul 2013 Keynote speaker at the 2013 Clinical and Translational Research Forum, Chicago, IL
- Jul 2013 Speaker at the 2013 Society of Molecular Biology and Evolution annual meeting, Chicago, IL
- Jun 2013 Speaker at the European Society of Human Genetics (ESHG) meeting, Paris, France
- Apr 2013 Speaker at the Fifth Barbados Workshop on computational and evolutionary gene regulation, Holetown, Barbados
- Mar 2013 Seminar at the Department of Genetics and the Center for Genome Sciences and Systems Biology at the Washington University School of Medicine, Saint Louis, MO
- Feb 2013 Seminar at Genome Science Institute, Boston University, Boston, MA
- Feb 2013 Speaker at the Primate Genomics symposium of 'The Future of Genome Sciences' series. University of Washington, Seattle, WA
- Nov 2012 Keynote Speaker at the 9th annual RECOMB Conference on Regulatory and Systems Genomics, San Francisco Bay, Redwood City CA
- Oct 2012 Seminar at the Institute for Genome Sciences & Policy, Duke University, Durham, NC
- Oct 2012 Seminar at the Lewis-Sigler Institute at Princeton University, Princeton, NJ
- Sep 2012 Seminar at the Gladstone Institute, UCSF, San Francisco, CA
- May 2012 Keynote Speaker at the 20th Annual Symposium New Developments in Prenatal Diagnosis and Medical Genetics. Mount Sinai Hospital, Toronto, Canada.
- Jan 2012 Seminar at the Division of Developmental & Cognitive Neuroscience, Yerkes National Primate Research Center, Emory University, Atlanta, GA
- Jan 2012 Seminar at the Section of Ecology, Behavior and Evolution, UC San Diego, San Diego, CA
- Dec 2011 Seminar at the European Bioinformatics Institute, Wellcome Trust Genome Campus, Hinxton

Cambridge, UK

Dec 2011 Seminar at the Department of Pathology, Stanford University, Stanford, CA

Oct 2011 Seminar at the Institute for Computational Biomedicine, Weill Cornell Medical College, New York, NY

Oct 2011 Seminar at the Institute for Systems Biology, Seattle, WA

Sep 2011 Seminar at the Genetics Department at Cornell University, Ithaca, NY

May 2011 Speaker at the 2011 Biology of Genome meeting, Cold Spring Harbor Laboratory, NY

May 2011 Seminar at the Cancer Center of Loyola Medical School, Chicago, IL

Apr 2011 Speaker at the 2011 Genetics of Humanness CARTA symposium, La Jolla, CA

Apr 2011 Seminar at the Ludwig Institute for Cancer Research, UCSD, La Jolla, CA

Mar 2011 Seminar at the Arizona Center for the Biology of Complex Diseases, University of Arizona, Tucson, AZ

Feb 2011 Seminar at the Center for Study of Gene Structure and Function, Hunter College, New York, NY

Dec 2010 Seminar at the Genomes and Genetics Department of the Institut Pasteur, Paris, France

July 2010 Speaker at the 2010 Statistical Genomics in Biomedical Research workshop, Banff, Ab, Canada

Apr 2010 Keynote Speaker of the 2010 Frontiers in Life Science Seminar, Loyola University, Chicago, IL

Jan 2010 Seminar at the Department of Molecular Genetics at the Weizmann Institute of Science, Rehovot, Israel

Jan 2010 Seminar at the Department of Human Molecular Genetics & Biochemistry at the Sackler Medical School of Tel Aviv University, Tel Aviv, Israel

Aug 2009 Seminar at the Channing Laboratory, Brigham and Women's Hospital, Harvard Medical School, Boston, MA

Jun 2009 Speaker at the SMBE meeting, Iowa City, Iowa

May 2009 Seminar at the Biology department, Stanford University, Stanford, CA

Apr 2009 Speaker at the AchemS meeting, Sarasota, Florida

Mar 2009 Speaker at the American Association of Physical Anthropology meeting, Chicago, IL

Feb 2009 Seminar at the Walter and Eliza Hall Institute of Medical Science, Melbourne, Australia

Jan 2009 Seminar at the Ecology and Evolution department, University of Arizona, Tucson, AZ

Nov 2008 Seminar at the Department of Biology, Indiana University, Bloomington, IN

Oct 2008 Seminar at the Department of Biology and Center for Evolutionary Genomics Institute for Genome Sciences & Policy. Duke University, Durham, NC

Sep 2008 Seminar at the Weizmann Institute of Science, Rehovot, Israel

May 2008 Speaker at the 28th Minerva-Gentner Symposium on Sensory Signaling and Information Processing, Hamburg, Germany

Apr 2008 Speaker at the Fourth Barbados Workshop on computational gene regulation, Holetown, Barbados

Jan 2008 Seminar at the department of Molecular Genetics, University of Toronto, Toronto, Canada

Oct 2007 Seminar at the Walter and Eliza Hall Institute of Medical Science, Melbourne, Australia

Apr 2007 Speaker at the AchemS meeting, Sarasota, FL

Mar 2007 Seminar at the Wayne State University school of medicine, Detroit, Michigan

Mar 2007 Seminar at the University of Uppsala, Uppsala, Sweden

Feb 2007 Seminar at the Department of Ecology and Evolutionary Biology, University of California at Irvine, Irvine, CA

Dec 2006 Seminar at Tel Aviv University, Tel Aviv, Israel

Nov 2006 Seminar at the Department of Biology, University of Maryland, College Park, Maryland

Sep 2006 Speaker at the ComBio2006 meeting, Brisbane, Australia

Jun 2006 Speaker at the American Diabetes Association 66th scientific sessions, Washington, DC

May 2006 Speaker at the SMBE meeting, Tampe, AZ

Apr 2006 Speaker at the AchemS meeting, Sarasota, FL

Jun 2005 Seminar at the Unitat de Biologia Evolutiva, Universitat Pompeu Fabra, Barcelona

Apr 2005 Speaker at the AchemS meeting, Sarasota, FL
 Sep 2004 Keynote Speaker at the European Chemoreception Research Organization meeting, Dijon, France
 Apr 2004 Speaker at the American Association for Physical Anthropology meeting, Tampa, Florida
 Nov 2003 Speaker at the American Society of Human Genetics meeting, Los Angeles, CA
 Apr 2003 Speaker at the AchemS meeting, Sarasota, FL
 Mar 2003 Seminar at the Division of Medical Genetics, University of Geneva Medical School, Switzerland
 Mar 2003 Seminar at the Institute of Ecology, University of Lausanne, Switzerland
 Mar 2002 Seminar at the Whitehead Institute, Boston, MA
 Aug 2001 Speaker at the Northwest Microarray Conference, Seattle, Washington
 Nov 2000 Speaker at the "Human genetics in the post- genomic age" meeting, Maagan, Israel

Fellowships and grants

Ongoing

2 R01 GM077959 (PI) 04/01/06 - 03/31/15
 NIH/NIGMS

Natural Selection on Gene Regulation in Humans

The purpose of this grant is to study the contribution of changes in different genetic and epigenetic regulatory mechanisms to the evolution of gene regulation in primates.

2 R01 HL092206 (PI) 04/15/09 - 04/14/18
 NIH/NHLBI

Integrating genomics and gene expression analyses to map CVD-associated loci

The purpose of this work was to combine gene expression analysis in differentiated cardiomyocytes, comparative genomics and genetic associations to identify genes or regulatory regions that contribute to variability in susceptibility to and severity of cardiovascular disease (CVD).

1 R01 AI087658 (PI) 01/01/11 - 12/31/15
 NIH/NIAID

Mapping eQTLs that affect susceptibility to Tuberculosis

The goals of this project are to map response eQTLs for infection with *Mycobacterium tuberculosis* (MTB), the etiological agent causing tuberculosis (TB), as well as to identify regulatory variation that is associated with differences in susceptibility to TB.

1 R01 HG006123 (PI) 03/01/11 - 03/31/15 (1-year NCE)
 NIH/NHGRI

Mapping QTLs Associated with Variation in RNA Decay Rates

The goals of this project are to study inter-individual variation in RNA decay rates in humans and to map associated RNA decay eQTLs. At the conclusion of this work, we will gain a better understanding of RNA decay mechanisms, the associated regulatory elements, and their role in determining overall variation in transcript and gene expression levels.

2 R01 MH084703 (MPI) 07/25/13 – 08/31/16
 NIH/NIMH

Analysis and interpretation of noncoding regulatory variation

The purpose of this project is to improve our understanding of the mechanistic links between genetic variation and differences in gene regulation across individuals by collecting different types of genomic data on the same set of samples.

Completed

1 R01 GM084996 (PI)
NIH/NIGMS

03/01/10-02/28/14

The Evolution of Human Specific Regulatory Pathways

The goals of this work are to identify a first set of regulatory pathways that have been remodeled in humans, and to learn about the genetic basis of gene regulatory changes in primates.

2 R01 HL70831 (PI: Lemanske; U Chicago PI: C. Ober)
NIH/NHLBI

05/01/08 - 04/31/13

Gene-Environment Interactions and the Origins of Asthma

The aims of this project are to 1) investigate the role of genes in RV pathways and assess their function; 2) explore potential mechanisms for sex differences in IFN-gamma responses at age 7 (pre-puberty) and age 12 (peri-puberty); and 3) study micro-RNA populations in human bronchial epithelial (BE) cells before and after infection with RV. Role: Co-Investigator, will provide assistance in designing the high-throughput collection studies and analyzing the data

DDRCC P30 DK42086 (PI)
Pilot and Feasibility Project Grant

11/01/2011–10/31/2012

The genetic basis for variation in the human gut microbiome

The goal of this pilot project was to explore genetic and environmental (e.g., diet) factors that might explain variation in the human gut microbiome.

1 R01 GM081533 (PI: C. Lee)
NIH/NIGMS

04/01/08 – 03/31/12

Characterization and evolution of copy number variation among primates

The purpose of this grant is to characterize copy number variation within and between primate species. Role: Co-Investigator, performed the multi-species gene expression experiments and analyses, as well as designed a multi-primate tiling array to study CNVs within and between species.

Alfred P. Sloan Research fellowship

09/01/07-08/31/09

DDRCC P30 DK42086 (PI)
Pilot and Feasibility Project Grant

11/2005–11/2006

Identifying human specific adaptations in the regulation of genes expressed in liver and kidney.

The aim of this pilot grant was to collect preliminary results on functional differences in promoter regions in humans and chimpanzees using reporter gene assays.

EMBO postdoctoral Fellowship
European Molecular Biology Organization

8/2003-8/2005

The purpose of this fellowship was to collect preliminary data on gene expression differences between primates using a pilot multi-species cDNA array.

Honors

- 2013 ISCB Top Ten Papers in Regulatory and Systems Genomics for 2012 (Degner FD, Pai AP, Pique-Regi R, Veyrieras JP, Gaffney JD, Pickrell, JK, De Leon S, Michelini K, Lewellen N, Crawford GE, Stephens M, **Gilad Y**, and Pritchard JK. *DNaseI sensitivity QTLs are a major determinant of human expression variation*. Nature 2012 Feb 5 [Epub ahead of print]
- 2012 ISCB Top Ten Papers in Regulatory and Systems Genomics for 2011 (Pique-Regi R, Degner FJ, Pai AA, Gaffney DJ, **Gilad Y**, and Pritchard JK. *Accurate inference of transcription factor binding from DNA sequence and chromatin accessibility data*. Genome Research 2011 Mar;21(3):447-55)
- 2012 Selected to deliver presentation at the plenary session of the 2012 American Society of Human Genetics meeting.
- 2007 Alfred P. Sloan Research fellowship in Computational and Molecular Evolutionary Biology
- 2004 The John F. Kennedy Prize, Weizmann Institute of Science
Highest prize of the Feinberg graduate school
- 2003 The Walter M. Fitch Prize for best student paper, given by the Society for Molecular Biology and Evolution
- 2002 Clore Foundation Doctoral Prize
Graduate fellowship awarded to top ten Science doctoral students in Israel
- 2002 Weizmann Institute Scholarship for Distinguished Graduate Students
- 2001 "Best M.Sc. Prize", Weizmann Institute of Science
Awarded to the top ten M.Sc. students
- 1999 Kreitman Foundation Fellowship, Ben Gurion University (declined)
Graduate fellowship offered to Valedictorian of first degree in Biology
- 1996 Roll of Distinction of the Dean of the Department of Life Science, Ben Gurion University

Honors and awards received by trainees

- 2009 AHA pre-doctoral fellowship awarded to graduate student Athma Pai
- 2009 University of Chicago postdoctoral fellowship awarded to postdoctoral scholar Jenny Tung
- 2009 NIH NRSA fellowship awarded to postdoctoral scholar George Perry
- 2009 EMBO fellowship awarded to postdoctoral scholar Luis Barreiro (declined)
- 2009 HFSP fellowship awarded to postdoctoral scholar Luis Barreiro
- 2011 Sir Henry Wellcome Postdoctoral fellowship awarded to postdoctoral scholar Irene Gallego Romero
- 2011 Marie Curie fellowship awarded to postdoctoral scholar Julien Roux
- 2012 NIH NRSA fellowship awarded to postdoctoral scholar Zia Khan
- 2013 CSTA pre-doctoral fellowship awarded to graduate student Courtney Kagan
- 2014 NIH NRSA fellowship awarded to graduate student Nicholas Banovich
- 2014 EMBO fellowship awarded to postdoctoral scholar Michelle Ward

Current and Past Trainees (not including undergraduates)

Name	Status	Tenure	Project title	Funding source	Current Position
Current Trainees					
John Blischak	Pre-doc	2011-present	Mapping immune response eQTLs in the context of MTB infection	Genetics NIH training grant	N/A
Courtney Kagan	Pre-doc	2011-present	Characterizing regulatory response to pharmacological toxicity in cardiomyocytes	CSTA pre-doctoral fellowship	N/A
Irene Gallego Romero	Postdoc	2011-present	Comparative genomics of IPS cells and developmental pathways in primates	Sir Henry Wellcome Postdoctoral fellowship	N/A
Julien Roux	Postdoc	2011-present	Evolution of regulatory variation within and between primates	Marie Curie fellowship	N/A
Nicholas Banovich	Pre-doc	2012-present	Characterizing and mapping regulatory variation in cell types differentiated from iPSCs	NRSA pre-doctoral fellowship	N/A
Bryan Pavlovic	Pre-doc	2013-present	Comparative studies in primates using iPSC derived motor neuron cells	R01 to YG	N/A
Samantha Thomas	MTSP Pre-doc	2013-present	Characterizing and mapping functional variation in hepatocytes differentiated from iPSCs	MSTP program	N/A
Sidney Wang	Postdoc	2012-present	Comparative study of translational regulation in primates	R01 to YG	N/A
Brett Engelmann	Postdoc	2013-present	Characterizing inter-individual variation in protein phosphorylation levels	R01 to YG	N/A
Michelle Ward	Postdoc	2013-present	A comparative study of the effects of hypoxia on cardiomyocytes in primates	EMBO Fellowship	N/A
Po-Yuan Tung	Postdoc	2014-present	QTL mapping of regulatory robustness	R01 to YG	N/A

Previous Trainees					
Emily Davenport	Pre-doc	2010-2014	QTL mapping of microbiome phenotypes in the Hutterites	Genetics NIH training grant	Postdoctoral fellow at Cornell University
Darren Cusanovich	Pre-doc	2009-2014	Integrating genomics and gene expression analyses to map CVD-associated loci	Genetics NIH training grant	Postdoctoral fellow at Washington University
Zia Khan	Postdoc	2011-2013	Characterizing inter-individual variation in protein expression levels and the associated regulatory mechanisms	NRSA fellowship	Assistant Professor at University of Maryland
Orna Man	Postdoc	2011-2013	Bioinformatics of the human microbiome	R01 to YG	Time off to be a mom
Allegra Petti	Research Associate (Assistant Professor)	2012-2013	Mapping the genetic basis for variation in transcription rates	R01 to YG	Assistant Professor at Washington University
Carolyn Cain	Pre-doc	2007-2012	Evolution of transcription factors and their targets in primates	Genetics NIH training grant	Medical Writer
Athma Pai	Pre-doc	2008-2012	Characterizing mechanisms underlying regulatory variation within and between species	AHA pre-doctoral fellowship	Postdoctoral fellow at MIT
Russell Bainer	Pre-doc	2007-2012	Functional characterization of speciation and adaptation of the p53 network during recent primate history	Genetics NIH training grant	Postdoctoral fellow at UCSF
Jenny Tung	Postdoc	2010-2012	The genetic/epigenetic basis for social and physical environmental effects	University of Chicago postdoctoral fellowship	Assistant Professor at Duke University
George Perry	Postdoc	2008-2011	Characterizing protein regulation within and between primates	NRSA Fellowship	Assistant Professor at Penn State University
Luis Barreiro	Postdoc	2008-2010	Evolution of innate immune response in primates	HFSP Fellowship	Assistant Professor at the University of Montreal
Ran Blekhan	Pre-doc	2005-2010	Differentially expressed regulatory pathways that contribute to phenotypic differences between primates	R01 to YG	Assistant Professor at the University of Minnesota.
Paola De Candia	Postdoc	2005-2008	Mapping transcriptional pathways that have been remodeled in human evolution	R01 to YG	Senior Researcher at University of Milano – Bicocca

Publications (84)

A. Preprints

- Raj A, Shim H, **Gilad Y**, Pritchard JK, and Stephens M. msCentipede: Modeling heterogeneity across genomic sites improves accuracy in the inference of transcription factor binding. bioRxiv. 2014 Nov: <http://dx.doi.org/10.1101/012013>.
- van de Geijn B, McVicker G, **Gilad Y**, and Pritchard JK. WASP: allele-specific software for robust discovery of molecular quantitative trait loci. bioRxiv. 2014 Nov.
- Gallego Romero I, Pavlovic BJ, Hernando-Herraez I, Banovich NE, Kagan CJ, Burnett JE, Huang CH, Mitrano A, Chavarria CI, Friedrich Ben-Nun I, Yingchun L, Sabatini KJ, Marques-Bonet T, Laurent LC, Loring JF, and **Gilad Y**. *Generation of a Panel of Induced Pluripotent Stem Cells From Chimpanzees: a Resource for Comparative Functional Genomics*. bioRxiv. 2014 Sept: <http://dx.doi.org/10.1101/008862>.
- Tung J, Zhou X, Alberts SC, Stephens M, and **Gilad Y**. *The Genetic Architecture of Gene Expression Levels in Wild Baboons*. bioRxiv. 2014 Aug: <http://dx.doi.org/10.1101/008490>.

B. Peer Reviewed Publications (76)

B1. Research papers – not including reviews (68)

2014

- Zhou X, Cain CE, Myrthil M, Lewellen N, Michelini K, Davenport ER, Stephens M, Pritchard JK, and **Gilad Y**. *Epigenetic Modifications are Associated with Inter-species Gene Expression Variation in Primates*. Genome Biology. 2014 Dec 3; 15:547.
- Banovich NE, Lan X, McVicker G, van de Geijn B, Degner JF, Blischak JD, Roux J, Pritchard JK, and **Gilad Y**. *Methylation QTLs Are Associated with Coordinated Changes in Transcription Factor Binding, Histone Modifications, and Gene Expression Levels*. PLoS Genetics 2014 Sep 18;10(9):e1004663.
- Çalışkan M, Pritchard JK, Ober C, and **Gilad Y**. *The Effect of Freeze-Thaw Cycles on Gene Expression Levels in Lymphoblastoid Cell Lines*. PLoS One. 2014 Sep 5;9(9):e107166.
- Bleckman R, Perry GH, Shahbaz S, Fiehn O, Clark AC, and **Gilad Y**. *Comparative metabolomics in primates reveals the effects of diet and gene regulatory variation on metabolic divergence*. Scientific Reports. 2014 July 28;4:5809.
- Gallego Romero I, Pai AA, Tung J, and **Gilad Y**. RNA-seq: Impact of RNA degradation on transcript quantification. BMC Biology. 2014 May 30; 12(1):42 (Epub ahead of print)
- Davenport ER, Mizrahi-Man O, Michelini K, Barreiro LB, Ober C, and **Gilad Y**. *Seasonal variation in human gut microbiome composition*. PLoS One. 2014 Mar 11;9(3):e90731.
- Cusanovich DA, Pavlovic B, Pritchard JK, and **Gilad Y**. *The functional consequences of variation in transcription factor binding*. PLoS Genetics 2014 Mar 6;10(3):e1004226.

2013

- Schwalie PC, Ward MC, Cain CE, Faure AJ, **Gilad Y**, Odom DT, and Flicek P. *Co-binding by YY1 identifies the transcriptionally active, highly conserved set of CTCF-bound regions in primate genomes*. Genome Biol. 2013 Dec 31;14(12):R148. [Epub ahead of print]
- McVicker G, van de Geijn B, Degner DF, Cain CE, Banovich NE, Raj A, Lewellen N, Myrthil M, **Gilad Y**, and Pritchard JK. *Identification of genetic variants that affect histone modifications in human cells*. Science 2013 Oct 17. [Epub ahead of print]
- Khan Z, Ford MJ, Cusanovich DA, Mitrano A, Pritchard JK, and **Gilad Y**. *Primate Transcript and Protein Expression Levels Evolve under Compensatory Selection Pressures*. Science 2013 Oct 17. [Epub ahead of print]
- Mizrahi-Man O, Davenport ER, and **Gilad Y**. *Taxonomic classification of bacterial 16S rRNA genes using short sequencing reads: Evaluation of effective study designs*. PLoS One. 2013 8(1):e53608.

2012

- Gaffney DJ, McVicker, Pai AA, Fondufe-Mittendorf YN, Lewellen N, Michelini K, Widom J, **Gilad Y**, and Pritchard JK. *Controls of nucleosome positioning in the human genome* PLoS Genetics 2012 Nov;8(11):e1003036.
- Pai AA, Cain CE, Mizrahi-Man O, De Leon S, Lewellen N, Veyrieras JB, Degner JF, Gaffney DJ, Pickrell JK, Stephens M, Pritchard JK, and **Gilad Y**. *The contribution of RNA decay quantitative trait loci to inter-individual variation in steady-state gene expression levels*. PLoS Genetics 2012 Oct 11 [Epub ahead of print]
- Keydar I, Ben-Asher E, Feldmesser E, Oshimoto A, Restrepo D, Matsunami H, **Gilad Y**, Olender T, and Lancet D. *General olfactory sensitivity: candidate genes and their genomic variations*. Human Mutation 2012 Aug 30 [Epub ahead of print]
- Iskow RC, Gokcumen O, Abyzov A, Malukiewicz J, Zhu Q, Sukumar AT, Pai AA, Mills RE, Habegger L, Cusanovich DA, Rubel MA, Perry GH, Gerstein MA, Stone AC, **Gilad Y**, and Lee C. *Regulatory element copy number differences shape primate expression profiles* PNAS 2012 Jul 31;109(31):12656-61.
- Tung J, Barreiro LB, Johnson ZP, Hansen KD, Michopoulos M, Toufexis T, Michelini K, Wilson ME, and **Gilad Y**. *Social environment is associated with gene regulatory variation in the rhesus macaque immune system*. PNAS 2012 Apr 24;109(17):6490-5.
- Pickrell JK, **Gilad Y**, and Pritchard JK. *Comment on "Widespread RNA and DNA sequence differences in the human transcriptome"*. Science 2012 March 16; 335(6074): 1302-1303
- Bainer RO, Veneris TJ, Yamada SD, Montag A, Lingen MW, **Gilad Y**, and Rinker-Schaeffer CW. *Time-dependent transcriptional profiling links gene expression to mitogen-activated protein kinase kinase 4 (MKK4)-mediated suppression of omental colonization*. Clinical Experimental Metastasis 2012 Feb 21 [Epub ahead of print]

- Veyrieras JP, Gaffney JD, Pickrell JK, **Gilad Y**, Stephens M, and Pritchard JK. *Exon-specific QTLs skew the inferred distribution of expression QTLs detected using gene expression array data*. PLoS ONE 2012 Feb 16 [Epub ahead of print]
- Degner FD, Pai AP, Pique-Regi R, Veyrieras JP, Gaffney JD, Pickrell, JK, De Leon S, Michelini K, Lewellen N, Crawford GE, Stephens M, **Gilad Y**, and Pritchard JK. *DNaseI sensitivity QTLs are a major determinant of human expression variation*. Nature 2012 Feb 5 [Epub ahead of print]
- Gaffney JD, Veyrieras JP, Degner JF, Pique-Regi R, Pai AA, Crawford GE, Stephens M, **Gilad Y**, and Pritchard JK. *Dissecting the regulatory architecture of gene expression QTLs*. Genome Biology 2012 Jan 31 [Epub ahead of print]
- Cusanovich DA, Billstrand C, Zhou C, Chavarria C, De Leon S, Michelini K, Pai AA, Ober C, and **Gilad Y**. *The Combination of a Genome-Wide Association Study of Lymphocyte Count and Analysis of Gene Expression Data Reveals Novel Asthma Candidate Genes* Human Molecular Genetics 2012 Jan 27 [Epub ahead of print]
- Barreiro LB, Tailleux L, Pai AA, Gicquelc B, Marioni JC, and **Gilad Y**. *Deciphering the genetic architecture of variation in the immune response to Mycobacterium tuberculosis infection*. PNAS 2012 Jan 10 [Epub ahead of print]

2011

- Perry GH, Melsted P, Marioni JC, Wang Y, Bainer R, Pickrell JK, Michelini K, Zehr S, Yoder AD, Stephens M, Pritchard JK, and **Gilad Y**. *Comparative RNA sequencing reveals substantial genetic variation in endangered primates*. Genome Research 2011 Dec 29 [Epub ahead of print]
- Perry GH, Reeves D, Melsted P, Ratan A, Miller W, Michelini K, Louis EE, Pritchard JK, Mason CE, and **Gilad Y**. *A genome sequence resource for the aye-aye (Daubentonia madagascariensis), a nocturnal lemur from Madagascar*. Genome Biology and Evolution 2011 Dec 7 [Epub ahead of print]
- Pickrell JK, Gaffney DJ, **Gilad Y**, and Pritchard JK. *False positive peaks in ChIP-seq and other sequencing-based assays caused by unannotated high copy number regions*. Bioinformatics 2011 June 19 [Epub ahead of print]
- Pai AA, Bell JT, Marioni JC, Pritchard JK, and **Gilad Y**. *A genome-wide study of DNA methylation patterns and gene expression levels in multiple human and chimpanzee tissues*. PLoS Genetics 2011 7(2):e1001316
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