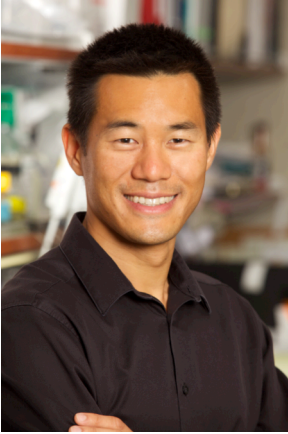


## Gene W. Yeo, Ph.D., MBA

Associate Professor of Cellular and Molecular Medicine

University of California San Diego

geneyeo@ucsd.edu



Dr. Gene Yeo is an expert in the area of RNA, computational biology, genomics and neurological diseases. Dr. Yeo obtained a bachelor of science in chemical engineering and a bachelor of arts in economics from the University of Illinois, Urbana-Champaign (1998) and a master's degree in business administration from the Rady School of Management at the University of California, San Diego (2008). Funded by the prestigious Lee Kuan Yew Graduate Fellowship from Singapore, Dr. Yeo earned a Ph.D. in Computational Neuroscience (2005) from the Massachusetts Institute of Technology under the joint guidance of Dr. Tomaso Poggio and Dr. Christopher Burge. Using comparative genomics and statistical learning theory Dr. Yeo pioneered new computational approaches to attack the problem of splicing and splicing-mediated gene regulation. In 2005 Dr. Yeo was appointed the first Junior Fellow at the Crick-Jacobs Center for Theoretical and Computational Biology at the Salk Institute under the mentorship of Dr. Fred Gage and Dr. Sean Eddy. Dr. Yeo's collaborative nature has generated successful projects and grants with experts in neuroscience and neurodegeneration (Dr. Fred Gage and Dr. Don Cleveland), RNA

processing (Nobel Laureate Dr. Phillip Sharp, Dr. Manuel Ares, Jr, Dr. Brenton Graveley, Dr. Xiangdong Fu and Dr. Amy Pasquinelli) and virology (Dr. Deborah Spector). In late 2008, Dr. Yeo was appointed an Assistant Professor in the Department of Cellular and Molecular Medicine at UCSD. In 2011, Dr. Yeo was awarded the Alfred P Sloan Fellowship in recognition of his work in computational molecular biology. In 2014, Dr. Yeo was promoted with tenure to Associate Professor at UCSD. Since 2003, Dr. Yeo has authored over 70 peer-reviewed publications, invited book chapters, review articles in the areas of neurodegeneration, RNA processing, computational biology and stem cell models and served as Editor on several books on RNA binding proteins. Dr. Yeo has successfully authored 4 and co-authored 2 grants from the California Institute of Regenerative Medicine totaling \$8.5 million. Dr. Yeo is a principal investigator or co-PI on several large NIH R01, U19 and U54 grants. The ALS Association, Genentech and Roche Pharmaceuticals fund Dr. Yeo's work. Dr. Yeo is on the Scientific Advisory Boards of several biotech companies, actively serves as a bioinformatics and business consultant to biotech and pharmaceutical companies, and has been involved with start-ups in the biotechnology space. Dr. Yeo is on the Editorial Board of the journals *Cell Reports* and *Cell Research*. Dr. Yeo is a Visiting Associate Professor at the National University of Singapore, an Adjunct Senior Research Scientist at the Genome Institute of Singapore and a visiting researcher at the Molecular Engineering Laboratory under Nobel Laureate Sydney Brenner's auspices. Dr. Yeo was a Sword of Honor recipient (the highest honor) in Officer Cadet School in 1999 and has served in the Singapore Navy as a Naval officer.

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 La Jolla, CA 92037  
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# Gene W. Yeo

## PhD MBA

**Associate Professor (with tenure)**

Dept. of Cellular and Molecular Medicine  
 UCSD Stem Cell Program  
 Institute for Genomic Medicine  
 Moores Cancer Center

### RESEARCH INTERESTS

- ◆ Gene regulation: My lab seeks to uncover mechanisms and pathways underlying post-transcriptional control, mediated by the interaction between RNA binding proteins and *cis*-regulatory elements. We utilize large-scale biochemical and genomics assays coupled with high-throughput sequencing to study alternative splicing, polyadenylation, transport, translation, turnover and microRNA biology.
- ◆ Neurological diseases: My lab models mental disorders such as autism spectrum disorders and neurodegenerative diseases (ALS) using *in vitro* stem cell models and *in vivo* mice models.
- ◆ Virus-host interactions: My lab reveals new insights into how DNA viruses affect the host transcriptome.
- ◆ Single cell technologies and analysis: My lab develops machine-learning approaches to single cell RNA-seq/DNA analysis and visualization tools.

### EDUCATION AND TRAINING

<b>Salk Institute, La Jolla, CA</b>	Junior Fellow, Crick-Jacobs Center for Computational and Theoretical Biology; Senior Fellow Mentors: Fred Gage and Sean Eddy	<b>July 2005-Sept 2008</b>
<b>University of California, San Diego, CA</b>	Masters of Business Administration at the Rady School of Management	<b>Sept 2006- Aug 2008</b>
<b>Massachusetts Institute of Technology, Cambridge, MA</b>	Ph.D. in Computational Neuroscience, Department of Brain and Cognitive Sciences; Advisors: Christopher Burge and Tomaso Poggio, Members: Phillip Sharp and Martha Constantine-Paton.	<b>Sept 2000- Feb 2005</b>
<b>University of Illinois, Urbana-Champaign, IL</b>	Bachelor of Science (B.S.) in Chemical Engineering, Highest Honors, Supervisor: Charles Zukoski. Bachelor of Arts (B.A.) in Economics, High Honors	<b>1994-1998</b>

### PRIMARY FACULTY APPOINTMENTS

<b>University of California, San Diego, CA</b>	Associate Professor, Department of Cellular and Molecular Medicine	<b>July 2014-current</b>
	Assistant Professor, Department of Cellular and Molecular Medicine Institute for Genomic Medicine UCSD Stem Cell Program UCSD Moores Cancer Center Bioinformatics Graduate Program Biomedical Sciences Graduate Program Material Science and Engineering Graduate Program	<b>Oct 2008-June 2014</b>

## OTHER APPOINTMENTS

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<b>National University of Singapore</b>	Consultant (Visiting Investigator), Department of Physiology	<b>Aug 2013-present</b>
	Adjunct Assistant Professor, Department of Biological Sciences	<b>Aug 2009-Aug 2013</b>
<b>A*STAR</b>	Adjunct Senior Research Scientist, Genome Institute of Singapore	<b>Aug 2013-present</b>
	Visiting Professor, Molecular Engineering Laboratory.	<b>Aug 2009-present</b>

## PROFESSIONAL EXPERIENCE

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Beckman Institute of Advanced Science and Technology, University of Illinois, Urbana-Champaign Zukoski group: Conducted studies on Thin Film Drying stresses using an automated ellipsometer; Conducted studies on the effect of electric fields on 20 micro gold-coated glass spheres using an Atomic Force Microscope.	<b>1996-1997</b>
Affymetrix, Santa Clara, CA Research Technician	<b>1997</b>
Institute of Molecular and Cell Biology, Singapore Research Associate Mentors: Venkatesh Byrappa and Sydney Brenner: Regulatory elements conserved in non-coding regions.	<b>2000</b>
Chiron, Research and Development, Emeryville, CA Research Technician	<b>2000</b>
Millennium Pharmaceuticals, Millennium Predictive Medicine (MPMX), MA Bioinformatics Researcher Developed and critiqued millennium in-house web-tools for classification and feature selection for marker selection in large-scale microarray data. Integrated microarray data and clinical data using Bayesian networks.	<b>2001</b>
Neuron Systems, MA Bioinformatics Consulting	<b>2004-2006</b>
GeneBytes Co-Founder Molecular Sequencing Analysis	<b>2008-2010</b>
Bioinformatics Consultant Clients include: ISIS Pharmaceuticals, Sequenom, Roche	<b>2011-current</b>
Scientific Advisory Board Member, Aquillah	<b>2014-current</b>
Scientific Advisory Board Member, Interpreta	<b>2014-current</b>
Co-founder, Enzerna	<b>2014-current</b>

## HONORS, AWARDS AND FELLOWSHIPS

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Dean's list, College of Engineering, 1994; College of Liberal Arts and Sciences, 1995-1997.  
A.T. Widiger Chemical Engineering Scholarship, 1996.  
Hauser Chemical Engineering Scholarship for research, 1996.  
Chemical Engineering Alumni Award, 1997.  
James Scholar, College of Liberal Arts and Sciences, 1996-1998.  
Best in Company and Best in Physical Training Awards during Basic Military Training, 1998 (Singapore)  
Sword of Honor, Officer Cadet School, Navy, 1999 (Singapore)  
Brain-Cognitive Science Team Award for Outstanding Teaching, 2005  
Lee Kuan Yew Graduate Scholarship, by the Lee Kuan Yew Foundation in Singapore, 2000-2005.  
First Crick-Jacobs Junior Fellow, Crick-Jacobs Center for Computational and Theoretical Biology, Salk Institute, 2005-2008  
Alfred P. Sloan Foundation Sloan Research Fellow, 2011 (2-year fellowships awarded yearly to researchers in recognition of distinguished performance and a unique potential to make substantial contributions on the field; announced in New York Times)

## **PROFESSIONAL ASSOCIATIONS AND ACADEMIC SERVICE**

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### MEMBERSHIPS AND EXTERNAL SERVICE AT PROFESSIONAL SOCIETIES AND CIVIC ORGANIZATIONS

The Honor Society of Phi Kappa Phi (1997-present)  
The American Institute of Chemical Engineers (1997-present)  
The Phil Lambdas Upsilon Honorary Chemical Society (1997-present)  
The Tau Beta Pi National Engineering Honor Society (1997-present)  
The Phi Beta Kappa Honor Society (1997-present)  
The Golden Key Honor Society (1997-present)  
The RNA Society (2005-present)  
International Society of Computational Biology (2005-present)  
Organizer for Alternative Splicing Special Interest Group, Satellite Conference of ISMB (2012)  
Gordon Conference on Post-transcriptional gene regulation (2014, Poster Judge)  
RNA society meeting (2015, May, Poster judge)  
BIOCOM CRO Steering Committee (2015-current)  
Advisory Board (for Oxford Global's 2016 Next Generation Sequencing and Single Cell Congress) (2015-current)

### UNIVERSITY SERVICE

Stem Cell on the Mesa Planning Committee (2008, 2009, 2010)  
UCSD Research Council chaired by Prof Susan Taylor (2008-present)  
UCSD Institute for Genomic Medicine, Founding Member (2009-present)  
Committee to restructure Biology Graduate Program by adding Bioinformatics, Chaired by Dr Gabriele Wienhausen, Assoc Dean for Education in Div Bio Sciences (2011)  
Chair of Sanford Stem Cell Center Genomics and Bioinformatics Core Subcommittee (2011)  
Organizing Committee, Institute for Genomic Medicine Annual Conference (2011)  
UCSD Biomedical Sciences Graduate Program Admission Committee (2014)  
Organizing Committee for IGM Symposium, Single Cell Genomics UCSD (2014)  
UCSD Bioinformatics and Systems Biology Graduate Program Admission Committee (2014)  
UCSD Genomics Cores Steering Committee (2014-2015)  
Center for Computational Biology and Bioinformatics Steering Committee (2013, 2014, 2015)  
Institute for Genomic Medicine High-throughput sequencing Steering Committee (2013, 2014, 2015)  
Sanford Consortium Stem Cell Genomics Core, Scientific Director and Chair of Steering Committee (2013, 2014, 2015)  
Dept of CMM co-representative For Academic Senate Assembly Meetings (2015)

### REVIEWER FOR GRANTS AND FELLOWSHIPS (NATIONAL AND INTERNATIONAL)

Ad Hoc Grant Reviewer, NIH/NSF, Collaborative Research in Computational Neuroscience (2008-09)  
Ad Hoc Grant Reviewer, Israel Science Foundation (2008)  
NIH reviewer for ZRG1 MOSS K(02) Special Emphasis Panel (2010)  
Ad Hoc reviewer for GCAT (Genomics, Computational Biology and Technology) study section meeting (2010)  
Invited reviewer for European Research Council (2010)  
Ad Hoc reviewer for NIH/NHLBI SBIR (2012)  
Ad Hoc reviewer for MNG study section (2012, June, Sept)  
Grant reviewer for Pines Beatrix Fonds, The Netherlands  
Grant reviewer for INSERM, France  
Ad Hoc reviewer for GCAT study section (2012, Oct)  
Grant reviewer for MNG study section (2013, Feb)  
Grant reviewer for American Heart Association (2013, April)  
Grant reviewer for Israel Science Foundation (2013)  
Training Grant reviewer for CIRM predoc/clinical fellows (2013, May)  
Grant reviewer for NIH K99 grants (2013, June)  
Grant reviewer for MNG study section (2014, Feb)

Grant reviewer for GGG study section (2014, March)  
 Grant reviewer for MNG study section (2015, Feb, Co-chair)  
 Grant reviewer for MND association (2015, April)  
 Grant reviewer for MNG study section (2015, June, Co-chair)  
 Grant reviewer for MNG study section (2015, October, Co-chair)

#### PROFESSIONAL ROLES IN JOURNAL REVIEWS

Guest Editor, PLoS Genetics (2011)  
 Editorial Board, Cell Reports (2011-current)  
 Editorial Board, Cell Research (2014-current)  
 Guest Editor, Elife (2015)

**Active Reviewer** (40-80 manuscripts reviewed a year) for *Nature*, *Science*, *Cell*, *ELife*, *Nature Structural & Molecular Biology*, *Nature Methods*, *Nature Cell Biology*, *Nature Biotechnology*, *Molecular Cell*, *Cell Stem Cell*, *Cancer Cell*, *Cell Reports*, *Neuron*, *Genes and Development*, *PLoS One*, *PLoS Biology*, *PLoS Computational Biology*, *PLoS Genetics*, *PNAS*, *Nucleic Acids Research*, *Genome Research*, *RNA*, *Genome Biology*, *BMC Bioinformatics*, *Applied Bioinformatics*, *Bioinformatics*, *Molecular Biology and Evolution*, *Nature Review Genetics*, *Molecular Cell Biology*, *EMBO Molecular Medicine*, *Human Molecular Genetics*, *JoVE*

#### **TEACHING**

<b>University of Illinois, Urbana-Champaign, Chemical Engineering</b>	<b>1997</b>
Teaching Assistant	
Mass Transfer. Conducted discussion sections on diffusion, mass transfer coefficients, heat and mass transfer, distillation and absorption, membrane separations, and chemical reactions in mass transfer.	
<b>Northeastern University, Bioinformatics Essentials Graduate Certification Course</b>	<b>2001</b>
Lecturer	
Structured course syllabus and co-taught a 12 week course in microarray data analysis, including classification, feature selection, experimental design, Bayesian networks and microarray technology.	
<b>Massachusetts Institute of Technology</b>	<b>2002-2004</b>
Teaching Assistant	
Course 9.02 (Brain Laboratory), 9.00 (Psychology), 9.35 (Vision)	
<b>University of California, San Diego</b>	<b>2007, 2008</b>
Lecturer in BGGN220 (Graduate Molecular Biology) organized by Amy Pasquinelli.	
<b>University of California, San Diego</b>	<b>Winter 2009</b>
Lecturer in BGGN231. Current Concepts in Stem Cell Biology organized by Karl Willert (Winter 2009)	
<b>University of California, San Diego</b>	<b>Spring 2009</b>
Lecturer (Four 3-hour lectures) in BIOM 262 Quantitative Methods in Genetics organized by Bruce Hamilton (Spring 2009)	
Lecturer in BIOM 252 (3 hours) Human Genetics and Genomics organized by Frank Funari (Spring 2009)	
<b>University of California, San Diego</b>	<b>Fall 2009</b>
Lecturer (Ten 1-hour group discussions) in BIOM 201 Seminars in Biomedical Research organized by Seth Field (Fall 2009)	
Lecturer in BGGN220 (Graduate Molecular Biology) organized by Amy Pasquinelli (Fall 2009)	
<b>University of California, San Diego</b>	<b>Winter 2010</b>
Lecturer (Four 3-hour lectures) in BIOM 262 Quantitative Methods in Genetics organized by Bruce Hamilton (Winter 2010)	
<b>University of California, San Diego</b>	<b>Spring 2010</b>
Lecturer (3 hours) in BIOM 252 Genetics and Genomics organized by Frank Funari (Spring 2010)	
Lecturer (Four 3-hour lectures) in BIOM 254 Molecular and Cell Biology (directors: Arshad Desai and Bing Ren) (Spring 2010)	
<b>University of California, San Diego</b>	<b>Fall 2010</b>
Lecturer (Two 2-hour lectures) in BIOM 200 BMS Graduate Core Course (directors: Karen Oegema and Dwayne Stupack) (Fall 2010)	
Lecturer (Ten 1-hour group discussions) in BIOM 201 Seminars in Biomedical Research organized by Seth	

Field (Fall 2010)

Lecturer in BGGN220 (Graduate Molecular Biology) organized by Jens Lykke-Anderson (Fall 2010)

**University of California, San Diego**

Lecturer (Four 3-hour lectures) in BIOM 262 Quantitative Methods in Genetics organized by Bruce Hamilton (Winter 2011)

**Winter 2011**

Course Director and Lecturer (Four 3-hour lectures) in BIOM 254 Molecular and Cell Biology (directors: Arshad Desai and Gene Yeo) (Winter 2011)

**University of California, San Diego**

**Spring 2011**

Lecturer (3 hours) in BIOM 252 Genetics and Genomics organized by Frank Funari (Spring 2011)

**University of California, San Diego**

**Fall 2011**

Lecturer (4.5 hours) in BGGN 220 Graduate Molecular Biology organized by Jens Lykke-Anderson (Fall 2011)

Lecturer (Ten 1-hour group discussions) in BIOM 201 Seminars in Biomedical Research organized by Seth Field (Fall 2011)

Lecturer (Two 2-hour lectures) in BIOM 200 BMS Graduate Core Course (directors: Karen Oegema and Dwayne Stupack) (Fall 2011)

**University of California, San Diego**

**Fall 2011**

Lead (5 hours) Small Literature Group for Foundations of Human Biology organized by Connie Holm (Fall 2011)

**University of California, San Diego**

Lecturer (Four 3-hour lectures) in BIOM 262 Quantitative Methods in Genetics organized by Bruce Hamilton (Winter 2012)

**Winter 2012**

Course Director and Lecturer (Four 3-hour lectures) in BIOM 254 Molecular and Cell Biology (directors: Arshad Desai and Gene Yeo) (Winter 2012)

Lecturer in BISP194 2.5 hours (director: Al La Spada) (Winter 2012)

**University of California, San Diego**

**Spring 2012**

Lecturer (3 hours) in BIOM 252 Genetics and Genomics organized by Frank Funari (Spring 2012)

**University of California, San Diego**

**Fall 2012**

Lecturer (4.5 hours) in BGGN 220 Graduate Molecular Biology organized by Jens Lykke-Anderson (Fall 2012)

**University of California, San Diego**

Lecturer (Four 3-hour lectures) in BIOM 262 Quantitative Methods in Genetics organized by Bruce Hamilton (Winter 2013)

**Winter 2013**

Course Director and Lecturer (Four 3-hour lectures) in BIOM 254 Molecular and Cell Biology (directors: Arshad Desai and Gene Yeo) (Winter 2013)

Lecturer in BISP194 2.5 hours (director: Al La Spada) (Winter 2013)

**University of California, San Diego**

**Spring 2013**

Lecturer (3 hours) in BIOM 252 Genetics and Genomics organized by Frank Funari (Spring 2013)

**University of California, San Diego**

**Fall 2013**

Lecturer (4.5 hours) in BGGN 220 Graduate Molecular Biology organized by Emily Troemel (Fall 2013)

**University of California, San Diego**

Lecturer (Four 3-hour lectures) in BIOM 262 Quantitative Methods in Genetics organized by Bruce Hamilton (Winter 2014)

**Winter 2014**

Course Director and Lecturer (Four 3-hour lectures) in BIOM 254 Molecular and Cell Biology (directors: Arshad Desai and Gene Yeo) (Winter 2014)

Lecturer in BISP194 2.5 hours (director: Al La Spada) (Winter 2014)

**University of California, San Diego**

**Spring 2014**

Lecturer (3 hours) in BIOM 252 Genetics and Genomics organized by Frank Funari (Spring 2014)

**University of California, San Diego**

**Fall 2014**

Lecturer (1.5 hours) in BGGN 220 Graduate Molecular Biology organized by Jens Lykke-Andersen (Fall 2014)

**University of California, San Diego****Winter 2015**

Course Director (10 weeks of 6-hour lectures a week) and Lecturer (for 2 weeks) in BIOM 262 Quantitative Methods in Genetics (Winter 2015)

Lecturer (1.5 hours) in NEU221 Advanced Topics in Neuroscience (Winter 2015) directed by Thomas Hnasko

Course Director and Lecturer (Four 3-hour lectures) in BIOM 254 Molecular and Cell Biology (directors: Arshad Desai and Gene Yeo)

**University of California, San Diego****Spring 2015**

Lecturer (3 hours) in BIOM 252 Genetics and Genomics organized by Frank Funari (Spring 2015)

**University of California, San Diego****Fall 2015**

Lecturer (4 hours) + Paper Discussion (2 hours) in BIOM 200 BMS Graduate Core Course organized by Kevin Corbett and Alysson Muotri (Fall 2015)

**REFEREED PUBLICATIONS (CHRONOLOGICAL ORDER)**

1. Rifkin R, **Yeo, G** and Poggio T. Regularized Least-squares Classification. ***Advances in Learning Theory: Methods, Model and Applications, NATO Science Series III: Computer and System Sciences***, 2003; Vol. 190.
2. Eng L, Coutinho G, Nahas S, **Yeo G**, Tanouye R, Drk T, Burge CB and Gatti RA. Non-classical splicing mutations in the coding and non-coding regions of the ATM gene: a comparison of cDNA with maximum entropy estimates of splice junction strengths. ***Human Mutation***, 2004; 23(1), 67-76. PMID: 14695534.
3. **Yeo G**, and Burge, CB. Maximum entropy modeling of short sequence motifs with applications to RNA splicing signals. ***Proceedings of the Seventh Annual International Conference on Research in Computational Molecular Biology***, 2003; April 10-13.
4. **Yeo G** and Burge C. Maximum entropy modeling of short sequence motifs with applications to RNA splicing signals. ***Journal of Computational Biology***, 2004; 11(2-3):377-94. PMID: 15285897.
5. Fairbrother WG, **Yeo, G**, Yeh, R, Goldstein, P, Mawson, M, Sharp PA, Burge CB. RESCUE-ESE identifies candidate exonic splicing enhancers in vertebrate exons. ***Nucleic Acids Res***, 2004. PMID: 15215377.
6. **Yeo G**, Hoon S, Venkatesh B, and Burge C.B. Variation in the splicing regulatory elements and their organization in vertebrate genomes. ***Proceedings of the National Academy of Sciences, USA***, 2004. PMID: 15505203.
7. **Yeo G**, Holste D, Kreiman G, Burge CB. Variation in alternative splicing across human tissues. ***Genome Biol.*** 2004; 5(10):R74. PMID: 15461793.
8. Wang Z, Rolish ME, **Yeo G**, Tung V, Mawson M, Burge CB. Systematic identification and analysis of exonic splicing silencers. ***Cell***. 2004. Dec 17; 119(6):831-45. PMID: 15607979.
9. **Yeo GW\***, Van Nostrand E, Holste D, Poggio T, Burge CB\*. Identification and analysis of alternative splicing events conserved in human and mouse. ***Proceedings of the National Academy of Sciences, USA***. 2005. Feb 22; 102(8):2850-5. PMID: 15708978. (\*corresponding).
10. Han K\*, **Yeo G\***, An P, Burge CB, Grabowski PJ. A combinatorial code for splicing silencing: UAGG and GGGG motifs. ***PLoS Biology***. 2005. May; 3(5):e158. PMID: 15828859 (\*equal contribution).
11. Stadler MB, Shomron N, **Yeo GW**, Schneider A, Xiao X, Burge CB. Inference of splicing regulatory activities by sequence neighborhood analysis. ***PLoS Genetics***. 2006. Nov 24; 2(11):e191. PMID: 17121466.
12. Van Praag, H, Lucero, MJ, **Yeo G**, Stecker K, Heivand N, Zhao C, Yip E, Afanador M, Schroeter H, Hammerstone J, Gage FH. Plant-derived flavanol (-)epicatechin enhances angiogenesis and memory in mice. ***Journal of Neuroscience***, 2007. May 30;27(22):5869-78. PMID: 17537957.
13. Giorgi C, **Yeo G**, Stone ME, Katz DB, Burge C, Turrigiano C, Moore MJ. The EJC factor eIF4AIII modulates synaptic strength and neuronal protein expression. ***Cell***. 2007. Jul 13;130(1):179-91. PMID: 17632064.
14. **Yeo G\***, Van Nostrand EL, Liang TY. Discovery and analysis of evolutionarily conserved intronic splicing regulatory elements in mammalian genomes. ***PLoS Genetics***. 2007. May 25;3(5):e85. PMID: 17530930. (\*corresponding).

15. **Yeo G\***, Xu X-D, Liang YT, Muotri AM, Carson C, Coufal N, Gage FH\*. Alternative events Identified in Human embryonic stem cells and neural progenitors. **PLoS Computational Biology**, 2007. Oct;3(10):1951-67. Epub 2007 Aug 24. PMID: 17967047. (\*corresponding).
16. Zimmerman, AM, **Yeo, G**, Howe K, Maddox, BJ, Steiner, LA. Immunoglobulin light chains in zebrafish: genomic configurations and inversional rearrangements between (V(L)-J(L)-C(L)) gene clusters. **Dev. Comp. Immunol.** 2008. 32(4):421-34. PMID: 18022691.
17. Olson S, Blanchette M, Park J, Savva Y, **Yeo G**, Yeakley J, Rio D, Graveley, B. A Regulator of Dscam Mutually Exclusive Splicing Fidelity. **Nature Structural and Molecular Biology**, 2007. Dec;14(2):1134-40. PMID: 21188797.
18. Calabrese JM, Seila AC, **Yeo GW**, Sharp PA. RNA sequence analysis defines Dicer's role in mouse embryonic stem cells. **Proceedings of the National Academy of Sciences, USA**, 2007. Nov 13;104(46):18097-102. PMID: 17989215
19. Palakodeti D, Smielewska M, Liu Y, **Yeo G,\*** Graveley BR\*. The PIWI proteins SMEDWI2 and SMEDWI3 are required for stem cell function and piRNA expression in planarians. **RNA**, 2008. Jun;14(6):1174-86. Epub 2008 May 2. PMID: 18456843 (\*corresponding).
20. Seila AC, Calabrese, JM, Levine SS, **Yeo, GW**, Rahl PB, Flynn RA, Young RA, Sharp PA, Divergent Transcription from Active Promoters. **Science**, 2008. Dec 19;322(5909):1849-51. Epub 2008 Dec 4. PMID: 19056940.
21. Li H, Lovci, MT, Kwon YS, Rosenfeld MG, Fu, XD, **Yeo GW**. Determination of tag density required for digital transcriptome analysis: Application to an androgen-sensitive prostate cancer model **Proceedings of the National Academy of Sciences, USA**. 2008. Dec 23;105(51):20179-84. Epub 2008 Dec 16. PMID: 19088194 (\*corresponding).
22. **Yeo GW\***, Coufal NG, Liang TY, Peng GE, Fu XD\*, Gage FH\* An RNA code for the FOX2 splicing regulator revealed by mapping RNA-protein interactions in stem cells. **Nature Structural & Molecular Biology**, 2009. Feb;16(2):130-7. Epub 2009 Jan 11. PMID: 19136955 (\*corresponding).
23. Kuwabara T, Hsieh J, Muotri A, **Yeo GW**, Warashina M, Lie DC, Moore L, Nakashima K, Asashima M, Gage FH. Wnt-mediated activation of NeuroD1 and retroelements during adult neurogenesis, **Nature Neuroscience**, 2009. 12(9):1097-105. PMID: 19701198.
24. Lu Y-C, Smielewska M, Palakodeti D, Lovci MT, Aigner S, **Yeo GW\***, Graveley BR\* Deep sequencing identifies new and regulated microRNAs in *Schmidtea mediterranea*. **RNA**, 2009 Aug;15(8):1483-91. Epub 2009 Jun 24. PMID: 19553344 (\*corresponding).
25. Thuret S, Toni N, Aigner S, **Yeo GW**, Gage FH. Hippocampus-dependent learning is associated with adult neurogenesis in MRL/MpJ mice. **Hippocampus**, 2009. Jul;19(7):658-69. PMID: 19140178.
26. Coufal NG., Garcia-Perez JL, Peng GE, **Yeo GW**, Mu Y, Lovci MT, Maria M, O'Shea KS, Moran JV, Gage FH. L1 Retrotransposition in Human Neural Progenitor Cells. **Nature**, 2009. 460(7259):1127-31. PMID: 19657334.
27. Marchetto MCN, **Yeo GW**, Kainohana O, Marsala M, Gage FH, Muotri AR. Transcriptional Signature and Memory Retention of Human-Induced Pluripotent Stem Cells. **PLoS ONE**, 2009. 4(9):e7076. PMID: 19763270.
28. Xue Y, Zhou Y, Wu T, Zhu T, Ji X, Kwon YS, Zhang C, **Yeo G**, Black DL, Sun H, Fu XD, Zhang Y. Genome-wide analysis of PTB-RNA interactions reveals a strategy used by the general splicing repressor to modulate exon inclusion or skipping. **Mol Cell**, 2009. Dec 25;36(6):996-1006. PMID: 20064465.
29. Zisoulis DG, Lovci MT, Wilbert ML, Hutt KR, Liang YL, Pasquinelli AE, **Yeo GW**. Comprehensive discovery of endogenous Argonaute binding sites in *C. elegans*. **Nature Structural & Molecular Biology**, 2010. Feb;17(2):173-9. Epub 2010 Jan 10. PMID: 20062054.
30. Hinton A, Afrikanova I, Wilson M, King CC, Maurer B, **Yeo GW**, Hayek A, Pasquinelli AE. A distinct microRNA signature for definitive endoderm derived from human embryonic stem cells. **Stem Cells Dev**, 2010; Feb; 17(2):173-9. PMID: 20062054.
31. Muotri AR, Marchetto MC, Coufal NG, Oefner R, **Yeo G**, Nakashima K, Gage FH. L1 retrotransposition in neurons modulated by MeCP2. **Nature**, 2010. 468(7322):443-6. PMID: 21085180.
32. Marchetto MC, Carromeu C, Acab A, Yu D, **Yeo GW**, Mu Y, Checn G, Gage FH, Muotri AR. A model for neural development and treatment of Rett syndrome using human induced pluripotent stem cells. **Cell**, 2010. 143(4):527-39. PMID: 21074045.
33. Van Wynsberghe PM, Kai ZS, Massirer KB, Burton VH, **Yeo GW**, Pasquinelli AE. LIN-28 co-transcriptionally binds primary let-7 to regulate miRNA maturation in *Caenorhabditis elegans*. **Nature Structural and Molecular Biology**, 2011. Mar;18(3):302-8. Epub 2011 Feb 6. PMID: 21297634.



34. Polymenidou M, Lagier-Tourenne C, Hutt KR, Huelga SC, Moran J, Liang TY, Ling S-C, Sun E, Wancewicz E, Mazur C, Kordasiewicz H, Sedaghat Y, Donohue JP, Shiue L, Bennett FC, **Yeo GW\***, Cleveland DW\*. Long pre-mRNA depletion and RNA missplicing contribute to neuronal vulnerability from loss of TDP-43. **Nature Neuroscience**, 2011. Apr;14(4):459-68. Epub 2011 Feb 27. PMID: 21358643 (\*corresponding).
35. Stark TJ, Arnold JD, Spector DH, **Yeo GW**. High-resolution profiling and analysis of viral and host small RNAs during human cytomegalovirus infection. **Journal of Virology**, 2011. PMID: 22013051
36. Huelga SC, Vu AQ, Arnold JD, Liang TY, Liu PP, Yan BY, Donohue JP, Shiue L, Hoon S, Brenner B, Ares M, **Yeo GW**. Integrative genome-wide analysis reveals cooperative regulation of alternative splicing by hnRNP proteins. **Cell Reports**, 2012. PMID: 22574288
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51. Washburn MC, Kakaradov B, Sundararaman B, Wheeler E, Hoon S, **Yeo GW\***, Hundley HA\*. The dsRBP and inactive editor, ADR-1, utilizes dsRNA binding to regulate A-to-I RNA editing across the *C. elegans* transcriptome. **Cell Reports**, 2014. (\*corresponding). PMID: 24508457. NIHMS 557942.
52. Arsenio J, Kakaradov B, Metz PJ, Kim SH, **Yeo GW\***, Chang JT\*. Early specification of CD8+ T lymphocyte fates during adaptive immunity revealed by single-cell gene expression analyses. **Nature Immunology**, 2014. (\*corresponding). PMID: 24584088
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60. Concepcion D, Ross KD, Hutt KR, **Yeo GW**, Hamilton BA. Nxf1 natural variant E610G is a semi-dominant suppressor of IAP-induced RNA processing defects. **PLoS genetics**, 2015. PMID: 25835743
61. Shih HP, Seymour PA, Patel NA, Xie R, Wang A, Liu PL, **Yeo GW**, Magnuson MA, Sander M. A gene regulatory network cooperatively controlled by Pdx1 and Sox9 governs lineage allocation of foregut progenitor cells. **Cell Reports**, 2015. PMID: 26440894
62. Lee SR, Pratt GA, Martinez FJ, **Yeo GW\***, Lykke-Andersen J\*. Target discrimination in nonsense-mediated mRNA decay requires Upf1 ATPase activity. **Molecular Cell**, 2015. \*corresponding. PMID: 26253027
63. Hung T, Pratt G, Sundararaman B, Townsend MJ, Chaivorapol C, Bhangale T, Graham RR, Ortmann W, Criswell LA, **Yeo GW\***, Behrens T. The Ro60 Autoantigen Binds Endogenous Retroelements and Regulates Inflammatory Gene Expression, **Science**, 2015. \*corresponding. PMID: 26382853
64. Dickey AS, Pineda VV, Tsunemi T, Liu PP, Miranda HC, Gilmore-Hall SK, Lomas N, Sampat KR, Buttgerit A, Tores MM, Flores AL, Arreola M, Arbez N, Akimov SS, Gaasterland T, Lazarowski ER, Ross CA, **Yeo GW**, Sopher BL, Magnuson GK, Pinkerton AB, Masliah E, La Spada AR. PPAR-delta is repressed in Huntington's disease, is required for normal neuronal function and can be targeted therapeutically, **Nature Medicine**, 2015. PMID: 26642438
65. Rentas S, Holzapfel N, Belew MS, Pratt G, Voisin V, Wilhelm BT, Bader GD, **Yeo GW\***, Hope K\*. Musashi-2 Posttranscriptionally Attenuates Aryl Hydrocarbon Receptor Signaling to Expand Human Hematopoietic Stem Cells, **Nature**, 2015. \*corresponding.
- 66.

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#### INVITED REVIEWS AND BOOK CHAPTERS (CHRONOLOGICAL ORDER)

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1. **Yeo G.** Splicing regulators: targets and drugs. *Genome Biology*, 2005. 6(12):240. PMID: 16356274.
2. Cao X, **Yeo G**, Muotri A, Kuwabara T and Gage FH. Noncoding RNAs in the Mammalian Central Nervous System. *Annual Review of Neuroscience*. 2006. 29:77-103. PMID: 16776580.
3. Van Nostrand E, **Yeo G**. Evolutionarily conserved intronic splicing elements in the human genome. *The Encyclopedia of Life Sciences*, 2008.
4. **Yeo GW**, Coufal N, Aigner S, Winner B, Scolnick JA, Marchetto MC, Muotri, AR, Carson C, Gage FH. Multiple layers of molecular controls modulate self-renewal and neuronal lineage specification of embryonic stem cells. *Hum Mol Genetic*. 2008. PMID: 18632700.
5. Aigner S, **Yeo G**. Terminal Differentiation: *REST*. *Developmental Neurobiology*, ed. Greg Lemke, Elsevier, Aug 2009.
6. Nelles DA, **Yeo GW**. Alternative splicing in stem cell self-renewal and differentiation. *Adv Exp Med Biol*. 2010; 695:92-104. PMID: 21222201.
7. Wilbert ML, **Yeo GW**. Genome-wide approaches in the study of microRNA biology. *Wiley Interdiscip Rev Syst Biol Med*. 2010. PMID: 21197653.
8. Zisoulis DG, **Yeo GW**, Pasquinelli AE. Comprehensive identification of miRNA target sites in live animals. *Methods Mol Biol*. 2011; 732:169-85. PMID: 21431713.
9. Lovci MT, Li H-R, Fu XD, **Yeo GW**. RNA-seq analysis of Gene expression and alternative splicing by double-random priming strategy. *Methods Mol Biol*. 2011; 729:247-55. PMID: 21365495.
10. Huelga, SC, **Yeo GW**. Genomics of Alternative Splicing in Stem Cells, "Computational Biology of Embryonic Stem Cells", edited by Zhan, Bentham Scientific, 2011.
11. Polymenidou M, Lagier-Tourenne C, Hutt KR, Bennett CF, Cleveland DW, **Yeo GW**. Misregulated RNA processing in amyotrophic lateral sclerosis. *Brain Res.*, 2012. PMID: 22444279
12. Kapeli K, **Yeo GW**. Genome-wide approaches to dissect the role of RNA binding proteins in translation control: implications of neurological diseases. *Frontiers in Neurogenomics*, 2012. PMID: 23060744
13. Nussbacher JK, Batra R, Lagier-Tourenne C, **Yeo GW**. RNA-binding proteins in neurodegeneration: Seq and you shall receive. *Trends in Neurosciences*, 2015. PMID: 25765321
14. Singh G, Pratt G, **Yeo GW**, Moore MJ, The Clothes make the mRNA: past and present trends in mRNP fashion. *Annu. Rev. Biochem*. 2015. 84:29.1–29.30. DOI: 10.1146/annurev-biochem-080111-092106. PMID: 25784054
15. Tan FE, **Yeo GW**. Blurred Boundaries: The RNA binding protein Lin28A is also an epigenetic regulator. *Molecular Cell*. 2016.

## BOOKS PUBLISHED (CHRONOLOGICAL ORDER)

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- i. **Yeo GW**, Editor, Systems Biology of RNA binding proteins. *Advances in Experimental Medicine and Biology*. Volume 825, Springer, 2014.

## INVENTIONS

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MIRESQUE: Software for microRNA gene prediction from high-throughput sequencing, copyrighted (2008)  
 Patent filed on "Regression-based methods for exon array analysis" invented by Gene Yeo, Fred Gage (2008)  
 Patent filed on "GREPSEQ: An almost inexhaustible, cost-effective, high-throughput protocol for the generation of selector sequences" invented by Gene Yeo, Jonathan Scolnick, Fred Gage (2008)  
 Patent disclosure for Programmable CRISPR/Cas for RNA applications at UCSD with Dave Nelles (2015)

## INVITED TALKS/ CONFERENCE PRESENTATIONS (CHRONOLOGICAL ORDER)

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1. RECOMB 2003: Seventh annual international conference on research in computational molecular biology, April 10-13, Berlin, Germany, 2003. Yeo, G, and Burge, C.B. Maximum entropy modeling of short sequence motifs with applications to RNA splicing signals (SELECTED TALK).
2. ISMB 2003: Intelligent systems for molecular biology conference, June 29-July 3, Brisbane, Australia, 2003. Yeo, G, Hoon, S and Burge C. Genomics of vertebrate splicing regulatory elements (BEST POSTER AWARD).
3. Eukaryotic mRNA processing meeting, Aug 20-24, Cold Spring Harbor Laboratory, 2003. Yeo, G, Hoon, S and Burge C. Variation in sequence and organization of splicing regulatory elements in vertebrate genes (POSTER).

4. RNA 2004: Ninth annual meeting of the RNA society, June 1-6, Madison, Wisconsin, 2004. Yeo, G, Holste D, Van Nostrand, E, Poggio, T and Burge, C.B. Predictive discrimination of conserved skipping events in human and mouse (SELECTED TALK).
5. SFN 2004: Society for Neuroscience, San Diego, 2004. Yeo, G, Van Nostrand, E, Holste D, Poggio, T and Burge, C.B. Predictive identification of alternative exons in mammals reveals neural-specific and RNA binding functions (POSTER).
6. Alternative Splicing Special Interest Group Meeting at Intelligent systems for molecular biology (ISMB), 2005. Identification and analysis of alternative splicing events conserved in human and mouse (INVITED TALK).
7. Regulatory RNAs, May 31-June 5, Cold Spring Harbor Laboratory, 2006. Rest-regulated MicroRNAs (POSTER).
8. RNA 2006. Highly conserved intronic elements proximal to mammalian exons predict tissue-specificity of alternatively spliced exons (POSTER).
9. RNA 2006. Identification of REST/NRSF regulated MicroRNAs (SELECTED TALK).
10. Alternative Splicing, Beyond Genome 2007. Intronic splicing regulatory elements in mammalian genomes and alternative splicing in stem cell differentiation (INVITED TALK).
11. 6<sup>th</sup> International Conference on Computational Systems Bioinformatics (CSB2007) sponsored by Life Sciences Society. Workshop on Alternative Splicing, 17<sup>th</sup> August, UCSD, 2007. Discovery of intronic regulatory elements in mammalian genomes (INVITED TALK).
12. Eukaryotic mRNA Processing Meeting, Aug 22-26, Cold Spring Harbor Laboratory, 2007 (SELECTED TALK).
13. The Stem Cell Meeting on the Mesa, Oct 19, Salk Institute, 2007. Small RNA analysis of neural differentiation from human ES cells (INVITED TALK).
14. Stower's Institute, Jan 28. Splicing bits and bytes (INVITED TALK).
15. Human Genetics Seminar, co-sponsored by CCMB and Human Genetics, University of Michigan, Ann Arbor, Feb 25, 2008. Uncovering the Splicing Code, and Alternative splicing in ES cells (INVITED TALK).
16. Genetics and Genomics Lecture Series, Department of Medicine, UCSD, March 6, 2008. Uncovering the Splicing Code, and Alternative splicing in ES cells (INVITED TALK).
17. Seminar in the Dept of Bioengineering and the Whitaker Institute of Biomedical Engineering, UCSD, March 7, 2008. Small RNA analysis in Stem Cells (INVITED TALK).
18. University of Massachusetts, Medical School Invited Talk, March 10, 2008. Uncovering the Splicing Code, and Alternative splicing in ES cells (INVITED TALK).
19. Keystone Conference on RNAi and non-coding RNAs, Whistler, Canada, March 25-30, 2008. Analysis of small RNAs in stem cells (INVITED TALK).
20. University of California, Los Angeles, Eli and Edythe Broad Center of Regenerative Medicine and Stem Cell Research. Uncovering the Splicing Code and Alternative splicing in stem cells (INVITED TALK).
21. RNA 2008. CLIP-Seq reveals a network of FOX2 regulated alternatively spliced exons in human embryonic stem cells (SELECTED TALK).
22. RNA 2008. Global analysis of small RNAs during neural specification of human embryonic stem cells (SELECTED TALK).
23. National University of Singapore, Department of Biological Sciences, hosted by Paul Matsudaira, April 15, 2009. Comprehensive identification of endogenous Argonaute binding sites in animals (INVITED TALK).
24. Institute of Genomic Medicine Symposium, June 3, 2009 Comprehensive identification of endogenous Argonaute binding sites in animals (INVITED TALK).
25. 16<sup>th</sup> Conversation, Albany, 2009. Alternative splicing and stem cells (INVITED TALK).
26. Alternative Splicing Special Interest Group Meeting at ISMB 2009 (Stockholm). Intelligent systems for molecular biology conference, 2009 Analysis of RNA binding networks (DISTINGUISHED SPEAKER).
27. Eukaryotic mRNA Processing Meeting, Aug18-Aug 22, Cold Spring Harbor Laboratory, 2009 (SELECTED TALK).
28. San Diego Consortium for Systems Biology (SDCSB) Next-Gen Sequencing Workshop, Aug 25, 2009 (INVITED TALK)
29. Keystone Conference on RNA Silencing: Mechanism, Biology and Application, Keystone, Colorado, Jan 14-19, 2010 (INVITED TALK)
30. Alternative Splicing in Neurodegenerative Diseases and Cancer, Tel Aviv, Israel, Feb 7-9, 2010 (INVITED TALK)
31. UCLA Bioinformatics Series Invited Speaker April 5, 2010 (INVITED TALK)
32. UCSD Physics of Evolution Series, August 21-Sept 2, 2010 (INVITED TALK)
33. From the RNA world to the Clinic, Janelia Farms, Sept 26-29, 2010 (INVITED TALK)
34. XVIII World Congress on Psychiatric Genetics, Athens, Greece, October 3-7, 2010 (1 INVITED TALK, 1 SELECTED TALK)
35. Institute for Genomic Medicine, October 11, 2010 (INVITED TALK)
36. First Workshop of the Postgraduate Program of the Genetics Department, Ribeirao Preto, Brazil, November 26-27, 2010 (KEYNOTE SPEAKER)
37. Integrated Biological Systems Seminar, Scripps Translational Science Institute, Feb 15, 2011 (INVITED TALK)
38. Cambridge HealthTech, XGEN Congress, San Diego, March 17, 2011 (INVITED TALK)
39. Genomics Institute of Novartis, La Jolla, March 18, 2011 (INVITED TALK)
40. 42<sup>nd</sup> Annual Meeting, American Society for Neurochemistry, March 19-23, 2011 (INVITED TALK)
41. Invited Seminar, Department of Human Genetics, University of Chicago, April 8, 2011 (INVITED TALK)
42. Workshop organized by the French National Research Agency (ANR) and California Institute for Regenerative Medicine (CIRM), July 12-13, 2011 (INVITED TALK)
43. Alternative Splicing Special Interest Group Meeting at ISMB July 15-16, 2011 (Vienna). Intelligent systems for molecular biology conference, 2011 (INVITED SPEAKER).
44. Merck-Serono, NeuroDegenerative Diseases, 19 July, 2011 (INVITED SPEAKER)
45. Roche, Basel, 22 July, 2011 (INVITED SPEAKER)
46. Eukaryotic mRNA processing meeting, Aug 23-27, Cold Spring Harbor Laboratory, 2011 (POSTER).

47. CONNECT's Frontiers in Science and Technology, Oct 11, 2011 (INVITED SPEAKER).
48. 6<sup>th</sup> Brain Research Conference, Nov 10-11, 2011 (INVITED SPEAKER).
49. Biochemistry and Molecular Biology Fall Seminar Series, University of Texas, Medical Branch, Dec 8, 2011 (INVITED SPEAKER)
50. Gladstone Institute for Cardiovascular Disease Seminar, Jan 9, 2012 (INVITED SPEAKER)
51. Social Stem Cell Symposium, Sanford-Burnham Institute, Jan 12, 2012 (INVITED SPEAKER)
52. John Hopkins Bloomberg School of Public Health BMB Seminar, April 30, 2012 (INVITED SPEAKER)
53. Robert Packard Center for ALS Research at John Hopkins, June 15, 2012 (INVITED SPEAKER)
54. Alternative Splicing Special Interest Group Meeting at ISMB July 13-14, 2012 (Long Beach, USA). Intelligent systems for molecular biology conference, 2012 (SELECTED TALK).
55. Gordon Research Conference in Post-transcriptional gene regulation meeting, July 15-20, 2012 (Rhode Island) (INVITED SPEAKER)
56. University of Nebraska Medical Center, Omaha, Department of Pharmacology and Experimental Neuroscience Seminar Series, July 27, 2012 (STUDENT INVITED SPEAKER)
57. University of Pennsylvania, Pittsburgh, Penn Bioinformatics Forum, 19 Sept, 2012 (STUDENT INVITED SPEAKER)
58. Achievement Rewards for College Scientists, Sanford Consortium for Regenerative Medicine, Sept 24, 2012 (INVITED SPEAKER)
59. University of North Carolina, Chapel Hill, Department of Pharmacology Seminar Series, Oct 16, 2012 (INVITED SPEAKER)
60. Congenital Cytomegalovirus Conference, Nov 1, 2012 (INVITED SPEAKER)
61. Yong Loo Lin School of Medicine Dept of Physiology, National University of Singapore, Jan 4, 2013 (INVITED SPEAKER)
62. University of Medicine and Dentistry of New Jersey, Jan 24, 2013 (INVITED SPEAKER)
63. Academic Leadership Symposium, Sanford Consortium for Regenerative Medicine, Feb 23, 2013 (INVITED SPEAKER)
64. Infectious Disease Journal Club, Department of Medicine, Yong Loo Lin School of Medicine, National University of Singapore, Mar 19, 2013 (INVITED SPEAKER)
65. Seminar, Genome Institute of Singapore, Biopolis, Singapore, Mar 21, 2013 (INVITED SPEAKER)
66. Seminar, Neuroscience Research Program, Biopolis, Singapore, Mar 22, 2013 (INVITED SPEAKER)
67. Seminar, School of Biological Sciences, Nanyang Technological University, Singapore, Mar 25, 2013 (INVITED SPEAKER)
68. Samuel Colella Lecture Series in Neurodegeneration, Pittsburgh Institute for Neurodegenerative Diseases, April 17, 2013 (INVITED SPEAKER)
69. Emory University, Department of Pharmacology Speaker Series, May 13, 2013 (INVITED SPEAKER)
70. University of Illinois, Urbana-Champaign, Neuroscience Program Seminar Series, Sept 3, 2013 (INVITED SPEAKER)
71. Oligonucleotide Therapeutics Society, Naples, Italy, Oct 8, 2013 (INVITED SPEAKER)
72. Genentech, Oct 29, 2013 (INVITED SPEAKER)
73. University of Southern California Keck School of Medicine Seminar Series, Nov 25, 2013 (INVITED SPEAKER)
74. World Stem Cell Summit, Single Cell Panel, Dec 4, 2013 (INVITED SPEAKER)
75. 8<sup>th</sup> biennial Chinese RNA society meeting, April 12, 2014 (INVITED SPEAKER)
76. CAS-MPG Partner Institute for Computational Biology, Shanghai Institutes for Biological Sciences, April 14, 2014 (INVITED SPEAKER)
77. Quantitative Biology Seminar Series, Cold spring harbor laboratory, April 16, 2014 (INVITED SPEAKER)
78. Systems-to-synthesis Symposium hosted by the San Diego Center for Systems Biology, La Jolla, May 2, 2014 (INVITED SPEAKER)
79. 7<sup>th</sup> Annual Genetics Training Program Retreat, La Jolla, May 2, 2014 (INVITED SPEAKER)
80. Mini-RNA symposium, IRCM, Montreal, June 3, 2014 (INVITED SPEAKER)
81. RNA 2014, Quebec City, June 3-8, 2014 (SESSION CHAIR: Emerging and high-throughput techniques)
82. Nucleic Acid Research and Discovery Conference, San Diego, June 19-20, 2014 (INVITED SPEAKER)
83. Gordon Research Conference in Post-transcriptional gene regulation meeting, July 13-18, 2014 (Rhode Island) (INVITED SPEAKER)
84. Advanced Topics in Genomics and Cell Biology, Aug 4-6, 2014, UNICAMP, Campinas, Brazil (INVITED SPEAKER)
85. Inauguration ceremony of EPICENTER, Symposium "Biomedical science: a driver of health, wealth and knowledge generation", Aug 11, 2014, Pontificia Universidade Catolica do Parana (PUCPR), Curitiba, Brazil (KEYNOTE SPEAKER and PANELIST)
86. Center for RNA biology Seminar Series Speaker, Ohio State University, 9 Sept, 2014 (INVITED SPEAKER)
87. NUS-UCSD Inaugural symposium, Singapore, 2-3 Oct, 2014 (SPEAKER AND ORGANIZER)
88. 4<sup>th</sup> next generation sequencing and 2<sup>nd</sup> single cell genomics asia congress organized by Oxford Global, Singapore, 7 Oct, 2014 (KEYNOTE SPEAKER)
89. National Neuroscience Institute Research Seminar Series, Singapore, 9 Oct 2014 (INVITED SPEAKER)
90. ALS Association Investigator Research Workshop, PA 19-22 Oct 2014 (INVITED SPEAKER)
91. BaCaTec Wolfgang Summer School Lecture, San Diego, 12 Nov 2014 (INVITED SPEAKER)
92. BD Single Cell Genomics Symposium, San Jose, 13 Nov 2014 (INVITED SPEAKER)
93. RECOMB/ISCB Conference on Regulatory & Systems Genomics, 9-14 Nov 2014 (KEYNOTE SPEAKER)
94. Beckman Seminar Series, City of Hope, 18-19 Jan 2015 (INVITED SPEAKER)
95. The Buck Institute for Research on Aging Seminar Series, 23 Jan 2015 (INVITED SPEAKER)
96. Fluidigm's event: Beyond Biology's Next Frontier. La Jolla, 11 March 2015 (KEYNOTE SPEAKER)
97. Wayne State University School of Medicine Lecture Series, Detroit, 2 April 2015 (INVITED SPEAKER)
98. Protein-RNA Workshop hosted by McGill, Bellairs Research Institute, Barbados, 17-22 April 2015 (INVITED SPEAKER)
99. Stein Clinical Research Institute, University of California, San Diego, La Jolla, 1 May 2015 (INVITED SPEAKER)
100. Microbiology and Molecular Genetics Seminar Speaker, University of California, Irvine, 6 May 2015 (INVITED SPEAKER)
101. Advances and challenges in protein-RNA, Banff International Research Station, 7-12 June 2015 (INVITED SPEAKER)

102. Single Cell Analysis Course, Cold Spring Harbor Laboratory, 3-16 June 2015 (INVITED SPEAKER)
103. UC Santa Cruz - COAT RNA Informatics Summer School (LECTURER) and RNA SUMMIT CONFERENCE (INVITED SPEAKER)
104. Alnylam Pharmaceuticals, Cambridge, MA, 17 August 2015 (INVITED SPEAKER)
105. CECAD Noncode RNA symposium, Cologne, Germany, 24 August 2015 (INVITED SPEAKER)
106. University of London, Dept of Neurology, London, 26 August, 2015 (INVITED SPEAKER) hosted by Jernej Ule
107. University of London, RNA Club, London, 27 Aug 2015 (INVITED SPEAKER) hosted by Andres Ramos
108. Rady School of Management, UCSD, Biotech Demystified Lecture, 14 Sept 2015 (INVITED SPEAKER)
109. Bioinformatics Bootcamp, UCSD, 18 Sept 2015 (INVITED SPEAKER)
110. Riboclub Conference, Magog, Canada, 22 Sept 2015 (INVITED SPEAKER)
111. IRCM, Montreal, Canada, 24 Sept 2015 (INVITED SPEAKER)
112. Festival of Genomics, San Mateo, 5 Nov 2015 (INVITED SPEAKER)
113. Sixth Annual California ALS Research Summit, La Jolla, 9 Jan 2016 (INVITED SPEAKER)
114. Plant and Animal Genome XXIV, Post-transcriptional gene regulation. San Diego, 10 Jan 2016 (INVITED SPEAKER)

## **COURSES/COURSEWORK ATTENDED**

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Revolutionary Sequencing Technologies and Applications, Cold Spring Harbor Laboratory by Greg Hannon, Elaine Mardis, Gabor Marth, Richard McCombie, John McPherson and Michael Zody, November, 2007

Brain development and function at Cold Spring Harbor Laboratory by Michael Posner and Ron McKay, June-July 2000.

Ph.D. coursework included Machine Learning (Jaakkola), Neural Networks (Seung), Statistical Learning Theory and Applications (Poggio), Computational Functional Genomics (Young, Gifford), Cognitive and Behavioral Genetics (Housman, Nedivi, Pinker), Neural Plasticity in Learning and Development (Tonegawa, Quinn, Wilson, Liu), Topics in Statistics (Hardy), Nucleic Acids (RajBhandary, Bartel) GPA: 5.0 / 5.0

## **GRANT SUPPORT**

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### **ACTIVE GRANTS**

#### **NIH GRANTS**

Gene Yeo (PI)

1 R01 NS075449-01A1

02/15/2012-01/31/2017

NIH/NINDS

Defining the messenger RNP code in the brain

This proposal seeks to establish the interactions among selected RNA binding proteins and their functional RNA elements in mammalian neurons. This will be a crucial first step in elucidating the RNA networks regulated by these RNA binding proteins in the brain. The goal is to identify the RNA maps and predictive models for RNA processing in the brain based on functional changes and binding of RNA binding proteins.

R01 HG004659-03 (Fu, X-D, Contact PI)

06/01/2011-05/31/2014

NIH/NHGRI

Functional RNA elements in the human genome

In this multi-PI project, we will couple the CLIP (crosslinking immunoprecipitation) technology with high-throughput sequencing based on the Illumina/Solexa system to identify in vivo binding sites for RNA binding proteins in human 293 cells. We will focus on RNA binding proteins implicated in both constitutive and regulated pre-mRNA processing. We will perform profiling of alternative splicing in addition to physical mapping, which will enable the bioinformatics analysis necessary to decode the functional RNA elements in the human genome.

Gene Yeo (co-PI)

U54HG007005 (Graveley, B, Contact PI)

09/01/2012-8/31/2016

NIH/NHGRI

ENCODE Project: Comprehensive analysis of functional RNA elements in the human genome.

The goals of this project are to identify the functional RNA elements recognized by 250 RNA binding proteins in the human genome in HeLa-S3 and GM12878 cells.

Gene Yeo (PI)

U01 HL107442-01 (Frazer, K, Contact PI)

5/01/2011-4/30/2016

Regulatory Genomic Studies in a cohort of iPS cell derived cardiomyocytes

In this multi-PI grant with the Frazer lab, we will use iPSC derived cardiomyocytes from genotyped individuals as cellular models to investigate how human genetic variation influences the gene regulatory networks involved in cardiac biology.

Gene Yeo (co-PI)

1 R01AI095277-03S1 (Chang, Contact PI) 09/1/2014-8/31/16  
NIH/NIAID Supplement  
Regulation and Function of Polarity and Asymmetric Cell Division in Immunity  
The goal of this grant is to assess the regulation of asymmetric cell division of CD8+ T cells in immunity. My lab is responsible for all the single-cell RNA-seq library preparations and analyses.

Gene Yeo (PI)  
1U19 MH107369-01(Yeo, Contact PI) 07/01/15-06/30/20  
NIH/NIMH  
Collaboration on preclinical autism cellular assays, biosignatures, and network analyses (Copacabana)  
The major goal of the project is to develop and optimize cellular differentiation and characterization protocols and disease-relevant assays using hiPSCs, focusing on developing robust, replicable and transparent platforms and diagnostic tools to enable new biology to be discovered, relevant to Autism Spectrum Disorder (ASD).

**CIRM GRANTS**

Gene Yeo (PI)  
CIRM TR3-05676 Early Translation III 12/1/2012-11/30/2015  
Molecules to correct aberrant RNA signature in human diseased neurons  
In this project, we focus on using an RNA signature for ALS to screen for small molecules that reverse the signature to a healthy neuron.

Gene Yeo (PI)  
CIRM RB4-06045 Basic Biology IV 3/01/2013-2/28/2016  
Stem cell models to analyze the role of mutated C9ORF72 in neurodegeneration  
In this project we will reprogram somatic cells from C9ORF72 mutant patients to generate human iPSC models for the disease. We will use genome-wide technologies to reveal molecular pathways that differ between motor neurons derived from C9ORF72 patients, isogenic controls and repeat-harboring ES cells.

**ALSA GRANTS**

Gene Yeo (PI)  
ALSA VC8370 8/1/2015-7/31/2018  
Comprehensive analysis of RNA localization and transport mechanisms in wildtype and ALS motor neurons  
The major goals of this project are to use computational and molecular techniques to identify an RNA signature of TDP-43 dependent misregulation in human neurons derived from stem cells.

**COMPLETED GRANTS**

Gene Yeo (co-PI)  
3 U01HL107442-04S1 (Frazer and Yeo) 9/1/2014-6/30/15  
NIH/NHLBI Supplement  
Regulatory Genomic Studies in a Cohort of IPS Cell Derived Cardiomyocytes  
The goal of this grant is to perform single-cell sequencing to identify regulatory circuits during cardiomyocyte specification from induced pluripotent stem cells. My lab is responsible for all the single-cell RNA-seq library preparations and analyses

Gene Yeo (PI)  
R01 GM084317-01A1 (Ares, M, Contact PI) 01/01/2009-12/31/2012  
NIH/NIGMS (sub-award with UC Santa Cruz)  
Genomic measurement of alternative splicing  
In this multi-PI project, we will focus on the development and application of alternative splicing DNA microarrays that allow medium to high-throughput parallel detection and analysis of multiple alternative splicing patterns.

Gene Yeo (PI)  
CIRM RB1-01413 Basic Biology I 10/01/2009-9/30/2012  
RNA binding protein-mediated Post-transcriptional Networks Regulating HPSC Pluripotency  
In this project, we will focus on comprehensively identify transcribed RNAs in human pluripotent stem cells that are directly targeted by RNA binding proteins important in pluripotency.

Gene Yeo (Co-investigator)  
CIRM RB3-05219 Basic Biology III 10/01/2011-9/30/2014  
Viral-host interactions affecting neural differentiation of human progenitors  
In this project with the Spector lab, we focus on studying if HCMV infection of human neural progenitors affects differentiation using a battery of genomics and computational methods.

Gene Yeo (PI)  
CIRM RB3-05009 Basic Biology III 10/01/2011-9/30/2014

Neural and general splicing factors control self-renewal, neural survival and differentiation  
In this project, we focus on studying if splicing factors can control stem cell pluripotency and differentiation.

Gene Yeo (PI)  
ALSA VC8K27

8/1/2011-7/31/2013

Identification of an RNA Signature of TDP-43 Dependent Misregulation in Human Neurons

The major goals of this project are to use computational and molecular techniques to identify an RNA signature of TDP-43 dependent misregulation in human neurons derived from stem cells.

Gene Yeo (PI)  
Roche EIN Grant

01/01/2012-01/01/2014

Reversing RNA processing defects, a common basis for neurodegenerative disorders

In this grant with Roche Pharmaceuticals, we will use robust, inexpensive and scalable genomic technologies to identify small molecules that can revert the RNA signature of an abnormal neuron to normality.

Gene Yeo (Co-investigator)  
CIRM RT2-01927 Tools and Technologies II

04/01/2011-03/31/2014

Developing a method for rapid identification of high-quality disease specific hiPSC lines

In this project with the Goldstein lab, we will focus on developing high-throughput assays and methods to generate and identify hiPSC lines.

Gene Yeo (PI)  
BRFSG-2014-14

06/01/2014-05/31/2015

From the Brain Research Foundation: Global analysis of transcriptome diversity at the single cell level in human neurons

This project funds single cell analysis in human neurons.

## MENTORING

### Postdoctoral fellows (2008-current)

Past / Current Trainee	Trainee Name	Postdoc Research Training Period	Current Position of Past Trainees or Source of Support for Current Trainees
Past	Katlin Massirer	2010-2011	<b>Faculty</b> (Professor), State University of Campinas, Sao Paulo, Brazil
Past	Kasey Hutt	2010-2014	Bioinformatics Scientist, R&D, Invivoscribe, San Diego
Past	Jason Nathanson	2009-2014	Scientist II, R&D, Sequenom, San Diego
Past	Leo Kurian	2013-2014	<b>Faculty</b> (Group leader), Cologne University, Germany
Past	Suzanne Lee	2013-2014	<b>Faculty</b> , Western Washington University, Bellingham, WA
Past	Katannya Kapeli	2012-2015	Senior Research Fellow at National University of Singapore
Current	Tomas Bos	2012-current	BAEF – Belgian American Education Foundation
Current	Sebastian Markmiller	2011-current	Larry L Hilblom Fellowship
Current	Eric Van Nostrand	2012-current	Damon Runyon Cancer Fellowship
Current	Kristopher Brannan	2014-current	CIRM Post-doc Fellowship; UC President's Fellowship
Current	Yan Song	2011-current	NIH Grant
Current	Frederick Tan	2015-current	NIH Grant
Current	Ron Batra	2015-current	Myotonic Dystrophy Association Fellowship
Current	Ashleigh Schaffer	2015-current	NIH K99 Award



**Graduate (PhD) students (2008-current)**

Past / Current Trainee	Trainee Name	Training Period	Current Position of Past Trainee /Source of Support for Trainee
Past	Melissa Wilbert	2008-2014	Computational Biologist, Novartis, Boston/ Genetics Training Program and CIRM Predoc Fellowship
Past	Stephanie Huelga	2009-2014	Bioinformatics Scientist at Nugen /NSF Graduate Fellowship
Past	Michael Lovci	2009-2014	Postdoc in Germany/NSF GK12 Fellowship, Gift from Genentech
Past	Thomas Stark	2008-2014	Postdoc at CDC/ UCSD Genetics Training Program
Past	Anne Conway	2008-2014	Postdoc at UCSD/ Genetics Training Program
Past	Boyko Kakaradov	2012-2015	Bioinformatics Scientist, Human Longevity Institute/ NSF Graduate Fellowship
Current	David Nelles	2010-current	NSF Graduate Fellowship
Current	Julia Nussbacher	2012-current	NIH T32 Cancer cell Training Grant
Current	Fernando Martinez	2012-current	NIH Genetics Training Grant
Current	Gabriel Pratt	2012-current	NSF Graduate Fellowship
Current	Olga Botvinnik	2013-current	NDSEG Fellow, John Hunter Open Source Fellow
Current	Mark Fang	2015-current	MSTP program, NIH grant (Yeo)
Current	Leen Jamal	2013-current	NSF Graduate Fellowship
Current	Emily Wheeler	2015-current	NIH grant (Yeo)
Current	En-ching Luo	2015-current	Taiwan government Fellowship, NIH grant (Yeo)
Current	Jaclyn Einstein	2015-current	NIH grant (Yeo)
Current	Zhaoren He	2015-current	Joint student with Kees Murres
Current	Matthew Hunt	2015-current	Joint student with Mark Tuszynski

**PHD/MS THESIS COMMITTEE CHAIR/CO-CHAIR/(MEMBER by default)**

Anthony Quoc Vu, Biology (Graduated, Fred Gage's Lab), MS, Summer 2008  
 Beverly Chen, (Graduated, Michael Rosenfeld's Lab), MS, Fall 2010  
 Mary Winn, BMS (Graduated, Nick Schork's Lab), PhD, Fall 2011, **Co-Chair**  
 Benjamin O'Connor, Biology (Graduated, Jean Wang's Lab), PhD, Spring 2012  
 Lorne Walker, BMS (Graduated, Doug Richman's Lab), PhD, Summer 2013  
 Gloria Kuo Lefkowitz, BMS (Graduated, Ben Yu's Lab), PhD, Winter 2012  
 Boris Reznik, Biology (Graduated, Jens Lykke-Andersen's Lab), PhD, Fall 2012  
 Mark Kuei-Chun Wang, Bioengineering (Graduated, Shu Chien's Lab), PhD, Fall 2012  
 Gregory Dane Clemenson, Biology (Graduated, Fred Gage's Lab), PhD, Winter 2012  
 Yunghui Chang, Biology (Graduated), MS, Fall 2011  
 Wesley Gifford, Group in Neurosciences (Graduated, Sam Pfaff's Lab), PhD, Spring 2013  
 Nisha Rajagopal, Bioinformatics (Graduated, Bing Ren's Lab), PhD, Fall 2013  
 Shannon Muir, BMS (Graduated, Karen Arden's Lab), PhD, Summer 2014  
 Jeremy Coleman Davis-Turak, Bioinformatics (Graduated, Alex Hoffman's Lab), PhD, Summer 2014, **Co-chair**  
 Charles Thomas, BMS (Graduated, Alysson Muotri's Lab), PhD, Summer 2014  
 Qi Ma, Bioinformatics (Graduated, Michael Rosenfeld's Lab), Winter 2015, **Co-chair**  
 Gary Johnston, Material Science (Graduated, Sung Ho Jin's Lab), PhD, Spring 2015  
 Eleen Shum, BMS (Graduated, Miles Wilkinson's Lab), PhD, Spring 2015  
 Allan Acab, BMS (Graduated, Alysson Muotri's Lab), PhD, Spring 2015

Sol Reyna, BMS (Graduated, Larry Goldstein's Lab), PhD, Summer 2015  
Daria Merkurjev, Bioinformatics (Graduated, Michael Rosenfeld's Lab), PhD, Fall 2015  
Matthew Sternfeld, Biology (Current, Sam Pfaff's Lab)  
Lauren Fong, BMS (Current, Larry Goldstein's Lab)  
Jennifer Higginbotham, BMS (Current, Clodagh O'Shea's Lab)  
Rui Fu, Biology (Current, Lykke-Andersen's Lab)  
Steven Lee Ceto (Current, SPAC Advisor)  
Amy Michelle Chinn (Current, SPAC Advisor)  
Martha Flores, Biology (Current, Kees Murres's Lab)  
Elaine Pirie, BMS (Current, John Ravit's Lab), Co-chair  
Layla Fijany, Biology (Current, Yeo Lab), Advisor  
Jonathan Grinstein, BMS (Current, Neil Chi's Lab)  
Sarah Anne Barnhill, Materials Sciences (Current, Nathan Gianneschi's Lab)  
Alexander Sinclair Hamil (Current, Steve Dowdy's Lab)  
Polly Pu Huang, BMS (Current, Pamela Mellon's Lab)  
Charles Bradford Larson (Current, Bradley Moore/Victor Nizet's Lab)  
Soohwan Oh, Biology (Current, Michael Rosenfeld's Lab)  
Naomi Ellen Searle, BMS (Current, Lorraine Pillus' Lab)  
Kristopher Standish, BMS (Current, Nicholas Schork's Lab), **Co-chair**  
Nicholas Vinckier, BMS (Current, Maïke Sander's Lab)

#### **SERVED ON MINOR PROPOSITION COMMITTEE**

Shannon Muir – Committee Member, 2009  
Jesse Dixon – Committee Member, 2009  
Sol Reyna - Committee Member, 2010  
Eleen Shum - Committee Member, 2010  
Brandon Sos - Committee Member, 2011  
Jacqueline Ward - Committee Member, 2011  
Babette Hammerling - Committee Member, 2012  
Elaine Pirie - Committee Member, 2012  
Charles Larson – Chair, 2013  
Kevin Ross - Committee Member, 2013  
Navarre Gutierrez-Reed - Committee Member, 2014  
Sarah Ur - Committee Member, 2014  
Vivian Fu - Committee Member, 2015  
David Jakubosky - Committee Member, 2015  
Jackson Jones - Committee Member, 2015

#### Undergraduate/Masters Students (selection)

Eric Van Nostrand, 2004-2006, graduated with a PhD from Stanford  
Melody Chang, 2009-2012, Masters student, graduated with her Masters.  
Ashley Wu, 2012-current.  
Jeremy Chang, 2012-current.  
Govind Raghavan, 2011-current.  
Yiu Cheung Wong, 2011-current.  
Bernice Yan, 2010-current.  
Jade Laguer, 2012-current.  
Truc Nguyen, 2012-current.  
Jonathan Day, 2012-current  
Layla Fijany, 2014-current.

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#### **HOBBIES**

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Endurance sports (Half and full Ironman triathlons, Half and full marathons), Sailing

## REFERENCES

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