

## Curriculum Vitae

## Judith Anne Blake

**Position:** Associate Professor  
**Address:** The Jackson Laboratory  
600 Main Street  
Bar Harbor, ME 04609  
**Telephone:** (207)-288-6248  
**E-Mail:** [judith.blake@jax.org](mailto:judith.blake@jax.org)

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**POSITIONS****Associate Professor (2007 – Present)**

The Jackson Laboratory, Bar Harbor, ME.

**Visiting Faculty: University of Colorado School of Medicine,**

University of Colorado: Anschutz Medical Campus, Denver, CO.

**Associate Professor of Medicine (clinical appointment)( 2011 – present)**

Tufts School of Medicine: Department of Medicine, Boston, MA.

**Faculty: Sackler School of Graduate Biomedical Sciences (2012- present)**

Tufts University, Boston, MA

**Graduate Faculty Graduate School of Biomedical Sciences (2002-present)**

University of Maine, Orono, ME.

**Assistant Professor (2002-2007)**

The Jackson Laboratory, Bar Harbor, ME.

**Research Scientist (1996-2002)**

Mouse Genome Informatics

The Jackson Laboratory, Bar Harbor, ME.

**Research Staff (1993-1996)**

Molecular Systematics Laboratory,

Dept. of Genome Informatics,

The Institute for Genomic Research (TIGR), Gaithersburg, MD.

**Scientific Program Administrator (1991-1993)**

Laboratory of Molecular Systematics, Natural History Museum

Smithsonian Institution, Washington, D.C.

**Biological Support Staff (1989-1991)**

Laboratory of Molecular Systematics, Natural History Museum

Smithsonian Institution, Washington, D.C.

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**EDUCATION****Ph.D. in Biology (1981)**

Harvard University, Cambridge, MA.

Thesis Advisor: Ernest E. Williams, Ph.D.

Thesis Title: *Chromosomal Speciation in Anolis*

**M.A. in Biology (1978)**

Harvard University, Cambridge, MA.

**B.A. in Biology (1974)**

University of Connecticut, Storrs, CT.

Magna cum laude with High Honors in Biology

Honors Advisor: Hallie M. Krider, Ph.D.

**Publications:****Peer-Reviewed Publications:**

2014

The Gene Ontology Consortium. *The Gene Ontology Consortium: Going Forward*. Nucleic Acid Research 2014 (accepted).

Janan T. Eppig, **Judith A. Blake**, Carol J. Bult, James A. Kadin, Joel E. Richardson. *The Mouse Genome Database (MGD): facilitating mouse as a model for human biology and disease* Nucleic Acids Research 2014; doi: 10.1093/nar/gku967

Ascensao J, Dolan ME, Hill DP, **Blake JA**. Methodology for Inferring Gene Function from Phenotype Data. (in revision BMC Bioinformatics)

Chibucos M, Mungall C, Ralakrishnan R, Christie K, Huntley R, **Blake J**, Lewis S, Giglio M. 2014 Standardized description of scientific evidence using the Evidence Ontology (ECO). DATABASE-2014:bau075 doi:10.1093/database/bau075

Huang, J, Dang J, Borchert, GM, Eilbeck K, Zhang H, Xiong M, Jiang W, Wu H, **Blake JA**, Natale DA, Tan M. 2014. OMIT: A Dynamic, Semi-Automated Ontology Development for the microRNA Domain. PLoS One 9(7):e100855. Di:10.1371/journal.pone.0100855..

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Haendel MA, Balhoff JP, Bastian FB, Blackburn DC, **Blake JA**, Bradford Y, Comete A, Dahdul WM, Dececchi TA, Druzinsky RE, Hayamizu TF, Ibrahim N, Lewis SE, PAbec PM, Niknejac A., Robinson-Rechavi M, Sereno PC, Mungall CJ. 2014. Unification of multi-species vertebrate anatomy ontologies for comparative biology in Uberon. Journal of Biomedical Semantics 5:21.

Huntley RP, Harris MA, Alam-Faruque Y, **Blake JA**, Carbon SJ, Dietze H, Dimmer E, Foulger R, Hill DP, Khodiyar V, Lock A, Lomax J, Lovering RC, Mutowo-Meullenet P, Sawford T, Van Auken K, Wood V, Mungall, CJ. 2014. A Method for Increasing the Expressivity of Gene Ontology Annotations using a Compositional Approach. BMC Bioinformatics 15:155.

Wick HC, Drabkin H, Ngu H, Sackman M, Fournier C, Haggett J, **Blake JA**, Bianchi DW, Slonim DK. 2014. DFLAT: Functional Annotation for Human Development. BMC Bioinformatics doi: 10.1186/1471-2115-15-45. PubMed ID 24507166. PMCID: 3928322.

Yoshihide Hayashizaki, Alistair Forrest, Hideya Kawaji, Michael Rehli, J Baillie, Michiel de Hoon, Vanja Haberle, Timo Lassmann, Ivan Kulakovskiy, Marina Lizio, Masayoshi Itoh, Robin Andersson, Christopher Mungall, Terrence Meehan, Thomas Freeman, Sebastian Schmeier, Nicolas Bertin, Mette Jørgensen, Emmanuel Dimont, Erik Arner, Ulf Schaefer, Yulia Medvedeva, Martin Taylor, Margherita Francescato, Morana Vitezic, Jessica Severin, Colin Semple, Yuri Ishizu, Ai Kaiho, Akiko Saka, Akira Hasegawa, Alan Knox, Alan Mackay-Sim, Albert Edge, Alessandro Bonetti, Alexander Diehl, Alexander Favorov, Alison Meynert, Alka Saxena, Anagha Joshi, Andrea Califano, Andreas Lennartsson, Andrew Gibson, Andrew Kwon, Anita Schwegmann, Anthony Beckhouse, Anthony Mathelier, Antje Blumenthal, Antti Sajantila, Arnab Pain, Artem Kasianov, Atsutaka Kubosaki, Ri-ichiroh Manabe, Beatrice Bodega, Benoit Marchand, Boris Jankovic, Carlo Vittorio Cannistraci, Carrie Davis, Cesare Furlanello, Charles Plessy, Chieko Kai, Christian Schmidl, Christine Wells, Christine Mummery, Claudio Schneider, Daisuke Sugiyama, Daniel Goldowitz, David de Lima Morais, Davide Albanese,

Dipti Vijayan, Dmitry Ovchinnikov, Eivind Valen, Emiliano Dalla, Emily Wood, Eri Saijyo, Erik Schultes, Erik van Nimwegen, Ernst Wolvetang, Finn Drabløs, Frank Brombacher, Fumi Hori, Fumio Nakahara, Gabriel Altschuler, Geoffrey Faulkner, Giuseppe Jurman, Gundula Schulze-Tanzil, Guojun sheng, Hai Fang, Hans Clevers, Haruhiko Koseki, Helena Persson, Hideki Enomoto, Hideki Tatsukawa, Hiroki Sato, Hiroko Ohmiya, Hiromasa Morikawa, Hiromi Nishiyori, Hironori Satoh, Hiroo Toyoda, Hiroshi Kawamoto, Hiroshi Ohno, Hiroshi Tanaka, Daniel Carbajo, Hisashi Shimoji, Hozumi Motohashi, Hui Jia, Ilka Hoof, Ilya Vorontsov, Intikhab Alam, James Briggs, James Prendergast, Jay Shin, Jayson Harshbarger, Jeroen Laros, Jessica Mar, JohnArcher, Jordan Ramilowski, **Judith Blake**, Judith Kempfle, Juha Kere, Julian Gough, Jun Takai, Jun-ichi Furusawa, Kang Li, Kaoru Kaida, Karl Ekwall, Kazuhiro Kajiyama, Kazuyo Moro, Kei Iida, Kelly Hitchens, Kenichi Nakazato, Kim Summers, Leonard Lipovich, Levon Khachigian, Louise Winteringham, Lukasz Huminiecki, Magda Babina, Malcolm Fisher, Mamoon Rashid, Marc van de Wetering, Marco Chierici, Marco Roncador, Margaret Patrikakis, Mariko Okada-Hatakeyama, Mark Thompson, Martin Frith, Mary Farach-Carson, Masaaki Furuno, Masahide Hamaguchi, Masnori Suzuki, Masayuki Yamamoto, Matthias Harbers, Matthias Edinger, A. Maxwell Burroughs, Meenhard Herlyn, Michael Detmar, Michela Fagiolini, Michihira Tagami, Miki Kojima, Misako Yoneda, Mitsuhiro Endoh, Mitsuhiro Ohshima, Mitsuko Hara, Mitsuru Morimoto, Mitsuyoshi Murata, Mizuho Sakai, Morten Rye, Mutsumi Kanamori-Katayama, Naganari Ohkura, Naoko Takahashi, Naoto Kondo, Niklas Mejhert, Noriko Ninomiya, Oliver Hofmann, Owen Rackham, Patrizia Rizzu, Peter 't Hoen, Peter Arner, Peter Zhang, Peter Klinken, Piotr Balwierz, Reto Guler, Rie Fujita, Robert Passier, Roberto Verardo, Rolf Swoboda, Sachi Kato, Sarah Baker, Sarah Krampitz, Sayaka Nagao-Sato, Shannan Ho Sui, Shigehiro Yoshida, Shigeo Koyasu, Shimon Sakaguchi, Shintaro Katayama, Shiro Fukuda, Shohei Noma, Shoko Watanabe, Shuji Kawaguchi, Silvano Piazza, Silvia Zucchelli, Soichi Kojima, Soichi Ogishima, Stefano Gustincich, Sugata Roy, Susan Zabierowski, Suzana Savvi, Sven Guhl, Swati Pradhan Bhatt, Tadasuke Nozaki, Taeko Dohi, Takaaki Sugiyama, Takehiro Hashimoto, Tetsuro Toyoda, Teunis Geijtenbeek, Thierry Sengstag, Thomas Gingeras, Thomas Ha, Timothy Ravasi, Tomokatsu Ikawa, Tony Kenna, Toshio Kitamura, Toshiyuki Nakamura, Tsugumi Kawashima, Valerio Orlando, Weonju Lee, Wyeth Wasserman, Xiaobei Zhao, Yari Ciani, Yasushi Okazaki, Yishai Shimoni, Yohei Yonekura, Yoko Yamaguchi, Yosuke Mizuno, Yuki Hasegawa, Yuki Kawamura, Yukio Nakamura, Yun Chen, Yutaka Nakachi, Zuotian Tatum, Harukazu Suzuki, Carsten Daub, Jun Kawai, Peter Heutink, Winston Hide, Boris Lenhard, Vladimir Bajic, Vsevolod Makeev, Albin Sandelin, David Hume, Piero Carninci, Linda van den Berg, Lynsey Fairbairn, Bogumil Kaczkowski, Berit Lilje, Christophe Simon, Efthymios Motakis, Takeya Kasukawa, Takahiro Arakawa, Naoko Suzuki, and Robert Young. 2014. A promoter lever mammalian expression atlas. *Nature* 507:462-470. PMID:24670763.

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**Blake JA**, Blumenthal A, Bodega B, Bonetti A, Briggs J, Brombacher F, Burroughs AM, Califano A, Cannistraci CV, Carbajo D, Chen Y, Chierici M, Ciani Y, Clevers HC, Dalla E, Davis CA, Detmar M, Diehl AD, Dohi T, Drabløs F, Edge AS, Edinger M, Ekwall K, Endoh M, Enomoto H, Fagiolini M, Fairbairn L, Fang H, Farach-Carson MC, Faulkner GJ, Favorov AV, Fisher ME, Frith MC, Fujita R, Fukuda S, Furlanello C, Furuno M, Furusawa J, Geijtenbeek TB, Gibson AP, Gingeras T, Goldowitz D, Gough J, Guhl S, Guler R, Gustincich S, Ha TJ, Hamaguchi M, Hara M, Harbers M, Harshbarger J, Hasegawa A, Hasegawa Y, Hashimoto T, Herlyn M, Hitchens KJ, Ho Sui SJ, Hofmann OM, Hoof I, Hori F, Huminiecki L, Iida K, Ikawa T, Jankovic BR, Jia H, Joshi A, Jurman G, Kaczkowski B, Kai C, Kaida K, Kaiho A, Kajiyama K, Kanamori-Katayama M, Kasianov AS, Kasukawa T, Katayama S, Kato S, Kawaguchi S, Kawamoto H, Kawamura YI, Kawashima T, Kempfle JS, Kenna TJ, Kere J, Khachigian LM, Kitamura T, Klinken SP, Knox AJ, Kojima M, Kojima S, Kondo N, Koseki H, Koyasu S, Krampitz S, Kubosaki A, Kwon AT, Laros JF, Lee W, Lennartsson A, Li K, Lilje B, Lipovich L, Mackay-sim A, Manabe R, Mar JC, Marchand B, Mathelier A, Mejhert N, Meynert A, Mizuno Y, de Lima Morais DA, Morikawa H, Morimoto M, Moro K, Motakis E, Motohashi H, Mummery CL, Murata M, Nagao-Sato S, Nakachi Y, Nakahara F, Nakamura T, Nakamura Y, Nakazato K, van Nimwegen E, Ninomiya N, Nishiyori H, Noma S, Nozaki T, Ogishima S, Ohkura N, Ohmiya H, Ohno H, Ohshima M, Okada-Hatakeyama M, Okazaki Y, Orlando V, Ovchinnikov DA, Pain A, Passier R, Patrikakis M, Persson H, Piazza S, Prendergast JG, Rackham OJ, Ramilowski JA, Rashid M, Ravasi T, Rizzu P, Roncador M, Roy S, Rye MB, Saijyo E, Sajantila A, Saka A, Sakaguchi S, Sakai M, Sato H, Satoh H, Savvi S, Saxena A, Schneider C, Schultes EA, Schulze-Tanzil GG, Schwegmann A, Sengstag T, Sheng G, Shimoji H, Shimoni Y, Shin JW, Simon C, Sugiyama D, Sugiyama T, Suzuki M, Suzuki N, Swoboda RK, 't Hoen PA, Tagami M, Takahashi N, Takai J, Tanaka H, Tatsukawa H, Tatum Z, Thompson M, Toyoda H, Toyoda T, Valen E, van de Wetering M, van den Berg LM, Verardo R, Vijayan D, Vorontsov IE, Wasserman WW, Watanabe S, Wells CA, Winteringham LN, Wolvetang E, Wood EJ, Yamaguchi Y, Yamamoto M, Yoneda M, Yonekura Y, Yoshida S, Zabierowski SE, Zhang PG, Zhao X, Zucchelli S, Summers KM, Suzuki H, Daub CO, Kawai J, Heutink P, Hide W, Freeman TC, Lenhard B, Bajic VB, Taylor MS, Makeev VJ, Hume DA, Hayashizaki Y. An atlas of active enhancers across human cell types and tissues. *Nature*. 2014 Mar 27;507(7493):455-61. doi: 10.1038/nature12787.PMID:24670763

2013

**Blake JA** (2013) Ten Quick Tips for Using the Gene Ontology. *PLoS Comput Biol* 9(11): e1003343. doi:10.1371/journal.pcbi.1003343.

Tripathi S, Christie K, Balakrishnan R, Huntley R, Hill D, Thommesen L, **Blake JA**, Kuiper M, Laegreid A. 2013. Comprehensive Gene Ontology Annotation of Mammalian-specific DNA Binding Transcription Factors. *Database The Journal of Biological Databases and Curation* DOI:10.1093/database/bat062. PMCID: PMC3753819

Jessica Severin, Marina Lizio, Jayson Harshbarger, Hideya Kawaji, Carsten O Daub, Yoshihide Hayashizaki, the FANTOM consortium, Nicolas Bertin, and Alistair RR Forrest. "Interactive visualization and analysis of large-scale NGS data-sets using ZENBU". *Nature Biotechnology*, <http://dx.doi.org/10.1038/nbt.2840> (2013).

Meehan T, Vasilevsky NA, Mungall CJ, Dougall DS, Haendel MA, **Blake JA**, Diehl AD. 2013. Ontology Based Molecular Signatures for Immune Cell Types Via Gene Expression Analysis. *BMC Bioinformatics*. Aug 30;14:263. PMID:24004649

Burns GAPC, Tallis M, Onda H, Cohen K, Kadin J, **Blake J**. 2013. Supporting Document Triage with the SciKnowMine System in the Mouse Genome Informatics (MGI) Curation Process. Proceedings of the Fourth BioCreative Challenge Evaluation Workshop, vol. 1, 234-240. [http://www.biocreative.org/media/store/files/2013/bc4\\_v1\\_32.pdf](http://www.biocreative.org/media/store/files/2013/bc4_v1_32.pdf)

Bada, M, Sitnikov D, **Blake J**, Hunter L. 2013. Occurrence of Gene Ontology, Protein Ontology, and NCBI Taxonomy Concepts in Text toward Automatic Gene Ontology Annotation. *BioLink Paper* at

2013 BioLink Special Interest Group: Roles for text mining in biomedical knowledge discovery and translational medicine. {{{note: not a publication per NIH public access policy}}}

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2012

Drabkin HJ and **Blake JA**. 2012. Manual Gene Ontology Annotation Workflow at the Mouse Genome Informatics Database. Database: doi:10.1083/database/bas045 PMID: PMC3483533

Bada M, Eckert M, Evans D, Garcia K, Shipley K, Sitnikov D, Baumgartner WA, Cohen KB, Verspoor K, **Blake JA**, Hunter LE. 2012. Concept Annotation in the CRAFT Corpus. *BMC Bioinformatics.* Jul 9;13(1):161. PMID: PMC3476437

Thomas PD, Wood V, Mungall CJ, Lewis SE, **Blake JA**. 2012. On the Use of Gene Ontology Annotations to Assess Functional Similarity among Orthologs and Paralogs: A Short Report. *PLoS Comput Biol.* 2012 Feb;8(2):e1002386. Epub 2012 Feb 16. PMID:PMC3280971

Taşan M, Drabkin HJ, Beaver JE, Chua HN, Dunham J, Tian W, **Blake JA**, Roth FP. 2012. A Resource of Quantitative Functional Annotation for *Homo sapiens* Genes. *G3 (Bethesda).* 2012 Feb;2(2):223-33. Epub 2012 Feb 1. PMID:PMC3284330

Bello SM, Richardson JE, David AP, Wieggers TC, Mattingly CJ, Dolan ME, Smith CL, **Blake JA**, Eppig JT. 2012. Disease Model Curation Improvements at Mouse Genome Informatics. Database, doi:10.1093/database/bar063. PMID: PMC3308153

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The Gene Ontology Consortium. 2012. The Gene Ontology: enhancements for 2011. *Nucleic Acids Res* Jan;40(Database issue):D559-64. Epub 2011 Nov 18. PMID: PMC3245151

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Bult CJ, Drabkin HJ, Eviskov A, Natale D, Arighi C, Roberts, N, Ruttenberg, A D'Eustachio P, Smith B, **Blake J**, Wu C. 2011. The Representation of Protein Complexes in the Protein Ontology (PRO). *BMC Bioinformatics* Sep 19;12:371. PMID: PMC3189193

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Meehan TF, Masci AM, Abdulla A, Cowell LG, **Blake JA**, Mungall CJ, Diehl AD. 2011. Logical Development of the Cell Ontology. 2011 *BMC Bioinformatics* 12:6. PMID: PMC3024222

**Blake JA**, Bult CJ, Kadin JA, Richardson JE, Eppig JT; the Mouse Genome Database Group. 2011. The mouse genome database (MGD): premier model organism resource for mammalian genomics and genetics. *Nucleic Acids Res.* Jan;39 (Database issue):D842-8. PMID: PMC3013640

2010

Natale DA, Arighi CN, Barker WC, **Blake JA**, Bult CJ, Caudy M, Drabkin HJ, D'Eustachio P, Evsikov AV, Huang H, Nchoutmboube J, Roberts NV, Smith B, Zhang J, Wu CH. 2010. The Protein Ontology: a structured representation of protein forms and complexes. *Nucleic Acids Res.* 2010 Oct 8. PMID: PMC3013777

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2009

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2008

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2007

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### **Book Chapters, Reviews and Commentaries**

Deans, A *et al.*, 2014. Finding our way through phenotypes. PLoS Biology. (accepted)

Gaudet P, Arighi C, Bastian F, Bateman A, **Blake JA**, Cherry MJ, D'Eustachio P, Finn R, Giglio M, Hirschman L, Kania R, Klimke W, Martin MJ, Karsch-Mizrachi I, Munoz-Torres M, Natale D, O'Donovan C, Ouellette F, Pruitt KD, Robinson-Rechavi M, Sansone SA, Schofield P, Sutton G, Van Auken K, Vasudevan S, Wu C, Young J, Mazumder R. 2012. Recent advances in biocuration: Meeting Report from the fifth International Biocuration Conference. *Database* (Oxford) 2012 Oct 29; 2012:bas036. PMID: PMC3483532

Gaudet P, Bairoch A, Field D, Sansone SA, Taylor C, Attwood TK, Bateman A, **Blake JA**, Bult CJ, Cherry JM, Chisholm RL, Cochrane G, Cook CE, Eppig JT, Galperin MY, Gentleman R, Goble CA, Gojobori T, ramon JM, Howe DG, Imanishi T, Kelso J, Landsman D, Lewis SE, Mizrachi IK, Orchard S, Ouellette BF, Ranganathan S, Richardson L, Rocca-Serra P, Schofield PN, Smedley D, Southan C, Tan TW, Tatusova T, Whetzel PL, White O, Yamasaki C; on behalf of the BioDBCore working group. Towards BioDBCore: A community-defined information specification for biological databases. *Nucleic Acids ResJan;39(Database issue):D7-10*. Epub 2010 Nov 18. PMID: 21097465

**Blake JA**, 2009. "Genomics and Conservation Genetics" in *Conservation Genetics in the Age of Genomics*. Amato G, Ryder O, Rosenbaum H, and DeSalle R eds. Columbia University Press, New York pp179-186.

Drabkin HJ, Arighi C, Wu C, **Blake JA**. 2008. "Functional Annotation of Protein Isoforms and Modified Forms" In: *International Conference on Bioinformatics & Computational Biology*. Arabnia HR, Yang MG, Yang JY eds. CSREA Press. pp. 701-707.

Altman RB, Bergman CM, **Blake J**, Blaschke C, Cohen A, Gannon F, Grivell L, Hahn U, Hersh W, Hirschman L, Jensen LJ, Krallinger M, B, O'Donoghue SI, Peitsch MC, Rebholz-Schumann D, Shatkay H, Valencia A. 2008. Text mining for biology-the way forward: opinions from leading scientists. *Genome Biol* 9(Suppl 2):S7.

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Santos C, **Blake J**, States DJ. 2005. Supplementary data need to be kept in public repositories. *Nature* 439(7079):912.

**Blake JA**, Eppig JT, Bult CJ. 2003. "Mouse and Rat Genome Informatics" In *Bioinformatics for Geneticists*. Barnes MR, Gray IC eds. Wiley Press, London. pp. 119-142.

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FitzGerald LM, **Blake JA**. 1998. "Databases for use in molecular biology: Concepts in their design, access and use." In *Molecular Approaches to the Study of the Oceans*. Cooksy KE, ed. Chapman and Hall. pp. 515-527.

**Blake JA**, Bult CJ. 1996. "Biological Databases on the Internet." In *Molecular Zoology: Advances, Strategies, and Protocols*. Ferrais JD, Palumbi ST eds. Wiley-Liss, Inc. pp. 3-18.

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### **Creative Commons Data Contributions**

Dolan ME, Mungall CJ, Dietze H, **Blake JA**. A simplified method for creating a cell cycle ontology for the laboratory mouse. Conference on Semantics in Healthcare and Life Sciences (CSHALS) 2011, 23 - 25 Feb 2011, 10. <http://f1000.com/posters/browse/summary/1089988>.

### **Invited Speaker / Invited Participant**

- 2014 Keynote Speaker. ISCB 12<sup>th</sup> Annual Rocky Mountain Bioinformatics Conference. *Modeling Glycolysis in the Gene Ontology: All Roads Lead to Pyruvate*. Aspen, CO. December 11-13.
- 2014 Invited Speaker. NIEHS-EPA Workshop for the Development of a Framework for Environmental Health Science Language. *Impact of Biomedical Ontologies on Data Harmonization and Computational Analysis Pipelines*. North Carolina State University, Raleigh, NC. September 15-16.
- 2014 Selected Speaker, BioOntologies SIG at ISMB, *Representation of Biology in the Gene Ontology*. Boston, MA. July 11.
- 2014 Selected Speaker, BioOntologies SIG at ISMB. *Protein Ontology: Flash Update*. Boston, MA. July 11.
- 2014 Invited Participant, Disease Ontology Workshop, European Bioinformatics Institute, Hinxton, Cambridgeshire, UK. June 12-13.
- 2013 Selected Speaker. ISCB 11<sup>th</sup> Annual Rocky Mountain Bioinformatics Conference. Aspen, CO. December 12-14. *Methodology for Inferring Function from Phenotype Data*.
- 2013 Invited Speaker, Quest for Orthologs 3. Lusanne, Switzerland. July 26-28. *The M:N Project at MGI: Beyond 1:1 Orthology Assertions*.
- 2013 Invited Participant, KOMP2 Translational Workshop. Washington, D.C. June 17-18.
- 2013 Invited Speaker and Participant. PRO-PO-GO Workshop. Buffalo, N.Y. May 15-16.
- 2013 Invited Speaker, 15<sup>th</sup> Genome Standards Consortium meeting, Washington D.C. April 22-23. *Gene Ontology: Functional Annotation for Comparative Genomics*.
- 2012 Selected Speaker, ISCB 10<sup>th</sup> Annual Rocky Mountain Bioinformatics Conference, Aspen CO. December 6-8, 2012. *Promise and Peril of Functional Annotation*.

- 2012 Invited Seminar Speaker, University of Alabama, Mobile, AL. Nov 14, 2012. *Progress and Promise of Biomedical Ontologies for Computational Biology.*
- 2011 Plenary Speaker, 9<sup>th</sup> Annual Rocky Mountain Bioinformatics Conference, Aspen, CO, December 8-10, 2011. *The Future of Research Communication: from Surfing to Deep Diving.*
- 2011 Invited Speaker / Invited Panel 'From Proteins to Disease', International Conference on Biomedical Ontologies. July 28-30, 2011. Buffalo, NY. *Pathways and Complexes: How to Represent What We Know and What We Don't Know.*
- 2011 Invited Speaker / ICR Webinar, caBIG Open Source Development Project and Standards Speaker Series. May 25, 2011. *The Gene Ontology.*
- 2010 Invited Speaker/Participant, NHGRI Informatics and Analysis Planning Meeting. April 21-22, 2010. Washington, DC. *Data Resources and Analysis Tools: Maintenance and Funding.*
- 2009 Plenary Speaker, North Atlantic Health Sciences Libraries Meeting, Oct 25-27, 2009. *Biomedical Literature in the Clouds: Ontologies, Data, and the Semantic Web.*
- 2009 Invited Speaker, BioCreative 11.5 Workshop, Madrid, Spain. Oct 7-9, 2009. *Digital Annotation for Production Bioinformatics Systems.*
- 2009 Invited Participant/Speaker, Quest for Orthologs Meeting, Cambridge-Hinxton Genome Center, U.K. July 3 – 5, 2009. *Orthologs, Paralogs, and Functional Annotations using the Gene Ontology.*
- 2009 Invited Participant, Foundation Meeting, Boston, Massachusetts. April 29, 2009. *Building Linked Web Communities in Biomedicine to Accelerate Research.*
- 2009 Invited Participant. National Evolutionary Synthesis Center, Durham, North Carolina. April 27-28, 2009. *Evolutionary Ontologies Workshop and Phenoscape Planning Meeting.*
- 2009 Invited Speaker. University of Tennessee, Knoxville, Tennessee. April 22, 2009. Talk: *Evidence and Inference: Data, Ontologies, and Comparative Genomics*
- 2009 Invited Speaker. University of Chicago, Chicago, Illinois. February 5, 2009. Talk: *Evidence and Inference: Comparative Biology in the Age of Genomics.*
- 2008 Invited Speaker. Brown University, Providence, Rhode Island. December 17, 2008. Talk: *Evidence and Inference: Comparative Biology in the Age of Genomics.*
- 2008 Invited Speaker. Pacific Northwest National Laboratory, Richland, Washington. December 11-12, 2008. Talk: *Evidence and Inference: Comparative Biology in the Age of Genomics.*
- 2008 Plenary Speaker. International Conference: *Delivering Value from Avian Genomics.* Mississippi State University, Starkville, Mississippi. May 19-20, 2008. Talk: *Ontologies for Biology.*
- 2008 Invited Speaker. Ontologies and Text Mining for Life Sciences: Current Status and Future Perspectives. Dagstuhl, Germany. March 24-28, 2008. Talk: *What makes text mining useful.*

- 2007 Plenary Speaker. Second International Biocuration Meeting, San Jose, CA October 25-28. Talk: *Evidence and Inference: Paths to Curation*.
- 2007 Invited Participant. PubMed Plus: New Directions in Publishing and Data Mining Leadership Conference. Co-chair of Working Group 1 [Capturing experimental design metadata in ways that facilitate data mining] David van Essen and Rob Williams, co-organizers. St. Louis, MO. June 18-19.
- 2007 Invited Participant – US-EC Workshop on Infrastructure Needs of Systems Biology. US-EC Task Force on Biotechnology Research: NSF, NIH, and Research Directorate of the European Commission. Boston, MA May 3-4.
- 2007 Invited Speaker and Participant – Dagstuhl Seminar: Towards Interoperability of Biomedical Ontologies. Wadern, Germany. March 27 – 30. Talk: *Alignment of Ontologies for Biological Research*.
- 2006 Invited Speaker and Participant – Global Dialogues on Emerging Science and Technology (GDEST) Conference on Bioinformatics, Petropolis, Brazil. November 12-15. Co-sponsored by the Office of the Science and Technology Advisor to the Secretary of State (STAD), USA and Brazilian National Laboratory for Scientific Computation. Talk: *Beyond the Data Deluge: The Gene Ontology and Mouse Genome Informatics*.
- 2006 Invited Speaker – South Carolina Medical School Seminar Series, Charleston, S.C. November 1. *Beyond the Data Deluge: The Gene Ontology and Mouse Genome Informatics*.
- 2006 Invited Speaker – Swiss Prot 20<sup>th</sup> Anniversary Celebration Conference, Fortaleza, Brazil. July 30-August 4. Talk: *Using Ontologies for Biomedical Research: Progress and Promise*
- 2006 Invited Speaker – Workshop on Immunology Ontologies Gaithersburg, MD. March 21-22. Talk: *Utilization of Ontologies to Represent Mammalian Biology*.
- 2006 Invited Speaker - American Association for the Advancement of Science Annual Meeting. St. Louis, MO. February 17-20. Title: *Impact of BioOntologies on Biomedical Research*.
- 2006 Invited Participant – Bioinformatics Research Centers Meeting. Philadelphia, PA. February 6-7. Title: *The Gene Ontology*.
- 2005 Plenary Speaker – Mouse Biomedical Informatics Research Network (BIRN) meeting, UCLA, CA. May 31-June 1. Talk: *Beyond the Data Deluge*.
- 2005 Keynote Speaker – BioLINK05 Special Interest Group (SIG) at Intelligent Systems for Molecular Biology (ISMB) Meeting. Detroit, MI. June 23 –29. Talk: *Bioinformatics and the Biomedical Literature: Current Challenges*.
- 2005 Invited Panelist – BioOntologies Special Interest Group (SIG) at Intelligent Systems for Molecular Biology (ISMB) Meeting. Detroit MI. June 23 –29.
- 2005 Invited Participant – Fidelity Knowledge Management Workshop, Washington, D.C. June 18.
- 2005 Invited Speaker - Ontology and Biomedical Informatics Conference. Rome, Italy. Apr. 28 – May 2. Talk: *Beyond Data Integration: Data Management for Knowledge Discovery*.



- 2005 Invited Participant – Computable Semantics for Complex Biological Systems Workshop. Arlington VA. March 3-4. Talk: *Case Study GO: Challenges and Pitfalls in Ontology Development.*
- 2004 Invited Speaker –Standards and Ontologies for Functional Genomes Conference. Philadelphia, PA. October 23-26. Talk: *Functional Genome Annotation Using Controlled Vocabularies.*
- 2004 Invited Speaker – Genome Informatics Meeting, Wellcome Trust Genome Center, U.K. September 25. Talk: *Comparative Function Annotation and Analysis in Mouse.*
- 2004 Invited Participant - DARPA Workshop on Bio-Ontologies. February 3-5. College Park, MD.
- 2004 Invited Seminar Speaker - Oregon Sciences and Health University, Portland OR, February 20, Talk: *From Data to Knowledge in the Digital Age: Mouse Genome Informatics and the Gene Ontology.*
- 2003 Invited Speaker - NIH-BISTI Symposium 2003. 'Digital Biology: The Emerging Paradigm'. Bethesda, MD. November 6-7, 2003. Talk: *Scientific Data Integration.*
- 2003 Invited Speaker/Participant - Wellcome Trust Workshop on Informatics Resources for the Human Genome. Bethesda, MD. September 22-23. Talk: *The Gene Ontology: Tool for the Unification of Biology.*
- 2003 Invited Speaker/Participant - NSF and MITRE-sponsored workshop on 'Disease Modeling and Prediction'. Reston, VA. Talk: *Genome, Genotypes and Human Diseases: The Mouse Model.*
- 2003 Invited Speaker - Advances in Genome Biology and Technology Conference, Marcos Island, FL. February 5-9. Talk: *Ontology Development in Model Organism Database Systems: The Gene Ontology and the Mouse Genome Informatics System.*
- 2003 Invited Participant - Biomedical Information Science and Technology Initiative (BISTI) Consortium Planning Workshop, NIH, Bethesda, MD. January 15-16.
- 2003 Invited Panelist - Pacific Symposium on Biocomputing 2003, Lihue, Kauai, HI January 3-7. Session: 'Current work in linking Ontologies, Databases and Literature'. Talk: *Mouse Genome Informatics and Data Integration.*
- 2002 Invited Speaker - NCI Cancer Diagnosis Program - Director's Challenge Principal Investigators Meeting, Bethesda, MD. November 6-8. Talk: *The Gene Ontology Project: Towards a Common Understanding and a Shared Description of Molecular Biology.*
- 2002 Invited Speaker – Genome Informatics Meeting, Hinxton, U.K. September 4-8. Talk: *The Gene Ontology Project: Impacts on Model Organism Information Systems.*
- 2002 Invited Speaker – 5<sup>th</sup> Annual BioOntologies Meeting; Edmonton, Canada. August 8. Talk: *Ontology Development in model organism database systems: The Gene Ontology and the Mouse Genome Informatics System.*
- 2002 Invited Speaker – IBC Post-Genomic Bioinformatics Conference, San Francisco, CA. June 24-26. Talk: *Challenges and Problems in Functional Analysis.*
- 2002 Invited Speaker and Participant - Event- and Process-Based Data Integration for the Gulf of Maine. Campobello Island, New Brunswick, Canada. June 12-14. Funded by NSF.

- 2002 Invited Participant – Toxicogenomics Database Workshop. MDI Biological Laboratories, Bar Harbor, ME. May 3-4.
- 2002 Invited Participant – Model Organism Database Workshop. Bethesda, MD. April 29-30.
- 2002 Invited Speaker – Ontologies in Bioinformatics and Medical Informatics. Manchester, U.K., March 23-24. Talk: *Working in Real Time: Building Ontologies While Annotating the Mouse from Genotype to Phenotype.*
- 2002 Invited Speaker - Bates College, Lewiston, ME. March 13. Title: *Power and Promise of Comparative Genomics.*
- 2001 Invited Speaker - Ontologies in the Life Sciences, a symposium sponsored by Millennium Pharmaceuticals. August 10. Talk: *The Gene Ontology Project.*
- 2001 Invited Participant and Speaker - Enabling Technologies for Alzheimer's Disease Research - An Alzheimer Research Forum Foundation workshop. Bar Harbor, ME. August 2 - 4. Talk: *Mouse Genome Informatics.*
- 2001 Invited Speaker - 4<sup>th</sup> Annual Bio-Ontologies Meeting, Copenhagen, Demark. July 26. Talk: *Practical Tools for the Gene Ontology.*
- 2001 Invited Speaker - 11<sup>th</sup> Intl. Congr. on Genes, Gene Families and Isozymes. Stockholm, Sweden. June 30-July 5. Talk: *Gene Classification Systems and the Annotation of Gene Function and Process.*
- 2001 Invited Speaker - Conservation Genetics in the Age of Genomics - Spring Symposium of the American Museum of Natural History, NYC, NY. April 4-6. Talk: *Comparative Genomics and the Conservation of Biodiversity.*
- 2000 Invited Participant –Workshop on the Tree of Life Initiative, Austin, TX. December 3-4, 2000.
- 2000 Invited Participant - 'Functional Annotation of the Mouse' FANTOM Meeting. Tsukuba, Japan. August 28 - September 8.
- 2000 Invited Participant - Workshop on the Phylogenetics and Phyloinformatics to Assemble the Tree of Life, New Haven, CT. July 28-29.
- 2000 Invited Speaker - Genetic Resources for the New Century Meeting. San Diego, CA. May 7 -11. Title: *Impending Unification of Biological Information...The Mouse Model.*
- 2000 Invited Speaker - Conference on Bioinformatics of Genes and ESTs Relevant to Membrane and Cellular Toxicology. Bar Harbor, ME. April 28 –29. Title: *Nomenclature and Homologies: Strategies in the Formation of Specialized Gene Databases.*
- 2000 Invited Participant - Workshop on the Projected Use of Bioinformatics: Circuit Riders for the Computerization of Herbaria in the U.S.A. Lincoln, NE. April 6-9.
- 2000 Invited Speaker - International Rice Genome Meeting 2000, Tsukuba, Japan. Feb. 8 -10. Title: *Data Integration in the Mouse Genome Databases.*

- 1999 Invited Speaker - Workshop on Functional Genomics, Heidelberg, Germany. August 4–5. Title: *Annotation at The Jackson Laboratory; Mouse Genome Informatics, From Genotype to Phenotype*.
- 1999 Invited Speaker – 2<sup>nd</sup> International Nomenclature Workshop, Cambridge, United Kingdom. April 30–May 2. Title: *Gene Families, A Nomenclature Perspective*.
- 1998 Invited Speaker - Rat Genome Mapping Conference , Hannover, Germany. October 5-7. Title: *Rat and Mouse Informatics and Database Resources*.
- 1998 Invited Speaker - Biological Informatics Conference” Canberra, Australia. Title: *Molecular Maps of Chromosomes*. July 6-8.
- 1998 Invited Speaker- Genes and Polymorphisms in Drug Discovery Workshop. May 19. Welwyn, England. Title: *Database and Internet Resources of Genes and Molecular Polymorphisms*.
- 1998 Invited Speaker. 1<sup>st</sup> International Nomenclature Workshop, Bar Harbor, ME. April 30-May 3. Title: *Nomenclature for Gene Families*.
- 1996 Invited Participant - Workshop on Biodiversity Informatics. San Diego, CA February 15 - 18.
- 1995 Invited Speaker - International Symposium and Workshop on Conservation Biology. Kuching, Sarawak, Malaysia. November 19 –23. Title: *Molecular Sequences, Bioinformatics and Conservation Biology*.
- 1995 Invited Speaker - Molecular Approaches to Zoology and Evolution Symposium, Society of Integrative and Comparative Biology, St. Louis, MO. January 5 - 8. Title: *Biological Information in an Electronic Age: Access to and use of Biological Databases*.
- 1994 Invited Participant - Workshop on the Infrastructure Requirements and Design Considerations for a Federation of Botanical Specimen Databases". Berkeley, CA, June 9-12.
- 1992 Invited Participant -Workshop on the Computerization on Natural History Collections. University of Michigan, Ann Arbor, MI. November 13-18.

**Symposia/Workshops Organized:**

- 2014 Co-organizer, Phenotypes Workshop, International Society of Biocurators.
- 2013 Session Co-Chair, Ontologies and Standards. 6<sup>th</sup> International Biocuration Meeting. April 7-10, Cambridge, UK.
- 2012 Co-Organizer, Workshop on the Classification of Diseases for Curation of Animal Models. 5<sup>th</sup> International Biocuration Conference: April 2-4, 2012. Washington, D.C.
- 2010 Organizer, Intelligent Systems for Molecular Biology- Workshop on Evidence Codes; Assay Tracking, ECO and OBI. July 12, 2010. Boston, MA
- 2005 Bioinformatics Workshop Leader: Comparative Genomics Conference. “Using the Gene Ontology Resources in Biological Research” Boston, MA.

- 2004 Co-organizer, Conference on Standards and Ontologies for Functional Genomics 2, Philadelphia, PA. October 23 - 27. Funded by NHGRI/NCRR/NCI/NERC/GSK.
- 1999 Co-organizer, 2<sup>nd</sup> International Nomenclature Workshop, Cambridge, U.K. April 30 - May 2. Sponsored by The Sanger Center, EU (EMBL).
- 1997 Co-organizer, International Nomenclature Workshop, The Jackson Laboratory, Bar Harbor, ME. April 30 - May 4. Sponsored by NSF, DOE & the U.S. Dept. of Agriculture, NHGRI, The Jackson Laboratory, and Burroughs Wellcome, Inc.
- 1994 Co-organizer, Workshop on Database Interoperability, Gaithersburg, MD. June 26 - 28. Sponsored by The Institute for Genomic Research (TIGR), DOE, and MasPar Co.
- 1993 Co-organizer, 2nd International Meeting on Ancient DNA, Smithsonian Institution, Washington, D.C. October 24 - 26. Sponsored by the Smithsonian Institution and the Sloan Foundation.

**Community Service:**

- 2014 NIH BD2K special emphasis panel ZRG1 BST-N (50) Development of Software and Analysis Methods for Biomedical Big Data in Targeted Areas of High Need (U01)
- 2014 NIH NIGMS special emphasis panel P20:COBRE: Center of Biomedical Research Excellence
- 2014 – 2017 Chair: Public Affairs and Policy Committee, International Society for Computational Biology [ISCB]
- 2011-2017 ISCB voting representative to FASEB [Federation of American Societies for Experimental Biology] Board of Directors.
- 2010-2017 Board of Directors [Elected]. International Society for Computational Biology [ISCB]
- 2012-2017 Advisory Board. FORCE11:Future of Research Communication and e-Scholarship.
- 2006-2014 UniProt (Universal Protein Resource): External Scientific Advisory Board,
- 2013-2015 Senior Scientific Representative on Advisory Panel for new Nature Publishing Group publishing effort *Scientific Data*.
- 2014 IAR reviewer for NIH Special Emphasis Panel/Scientific Review Group 2014/10 ZGM1 TWD-6 (C1). COBRE grants.
- 2013 NIH NIDDK R13 Conference Grant reviewer
- 2012-2014 Guest Associate Editor: PLoS Computational Biology Journal.
- 2008-2012 CIHR (Canada Institutes of Health Research) External Scientific Advisory Board. "Model Organism Interactions and Human Diseases" project. (Member).
- 2003-present External Scientific Advisory Panel for the MDI-BL Toxicogenomics Database (NIEHS)
- 2008-present External Advisor: Phenoscape Project of the National Evolutionary Synthesis Center

2009-2011	External Scientific Advisor – Disease Ontology Project
2006-2009	Member: NIH Study Section: Genomics, Computational Biology, and Technology (GCAT).
2006	NHLBI Cardiovascular Strategic Planning Working Group #11 NIH BISTI meeting July 11-12, Washington, D.C.
2006-2009	External Scientific Advisory Panel, PharmacoGenetics KnowledgeBase (PharmaGKB)
2004-2008	TREC Genomics Track - Steering Committee (NIST)
2003-2008	External Scientific Advisory Board, <i>Saccharomyces</i> Genome Database (SGD) (NHGRI)
2005	Special Editor, PLOS Genetics: Fantom 3 issue.
2004	NIH: INBRE Review Panel
2004-2005	NIH <i>Ad Hoc</i> Study Section Member: Genomics, Computational Biology and Technology (GCAT).
2003-2005	External Scientific Panel for the Pharmacogenetics Research Network (PGRN) (NIGMS)
2003-2006	External Scientific Advisory Board, TIGR Rice Genome Annotation Project (NSF)
2001-2003	NIH - BISTI pre-National Programs of Excellence in Biomedical Computing (NPEBC) Advisory Panel.
1995-1997	NSF – Research Collections in Systematics and Ecology Advisory Panel

#### Program Committees

- ACM-BCB2013: ACM Conference on Bioinformatics, Computational Biology and Biomedical Informatics – 2013 Track Chair: Data and Knowledge Bases, Text Mining, and Ontologies.
- AMIA Summit on Translational Bioinformatics. 2011.
- BioCreAtIvE* (Critical Assessment of Information Extraction systems in Biology). 2012.
- Biological Data Visualization (BioVis 2012) IEEE Symposium on Biological Data Visualization.
- Bio-Ontologies Special Interest Group; ISMB meeting 2008 – 2011.
- Conference on Semantics in Healthcare and Life Sciences (CSHALS), 2014.
- Data Integration in the Life Sciences Meeting. 2005, 2011 - 2012.
- European Conference on Computational Biology. 2005, 2007, 2008, 2012-14.
- Gene Network and Pathway Generation and Analysis Workshop: ACM International Conference on Bioinformatics and Computational Biology (ACM-BCB). 2010
- Intelligent Systems for Molecular Biology (ISMB). 2005 – 2009, 2012-2013.
- International Conference on Data Integration in Life Sciences. 2012.
- International Conference on Biomedical Ontologies (ICBO), 2009, 2011, 2012, 2014.
- International Semantic Web Conference/Semantic Web Applications in Scientific Discourse. 2009.
- Pacific Symposium on Biocomputing. 2005.
- Symposium on Languages in Biology and Medicine. 2009, 2011, 2103
- Workshop on Gene Network and Pathway Generation and Analysis: in conjunction with ACM International Conference on Bioinformatics and Computational Biology (ACM-BCB). 2010.

Ad Hoc Paper Reviews, Program and Grant Reviews, and Book Proposal Reviews

AAAS Science  
 Advances in Bioinformatics  
 Bioinformatics  
 BMC Bioinformatics  
 Briefings in Bioinformatics  
 Fonds National de la Recherche, Luxemburg  
 Genomics  
 Genome Biology  
 Genome Research  
 Journal of Biomedical Semantics  
 Nature Review Genetics  
 Netherlands Commission on National Roadmap Large-scale Research Facilities  
 Nucleic Acid Research  
 PLoS Computational Biology  
 Trends in Bioinformatics  
 Wiley Publishing  
 Welcome Trust

The Jackson Laboratory**Faculty Advisor: Library Sciences (2013 – present)**

Controlled Vocabularies Steering Committee [CVS] (2007 – 2008)  
 Digital Asset Management Committee (2005)  
 Education and Training Committee (1996-1999)  
 Genetic Resources Committee (1999-2002)  
 Library Committee (2004- 2012)  
 Meetings Committee (2002-2003)  
 Promotions Committee (2011-2012)  
**Research Grants Committee (2004-present)**  
 Scientific Advisory Committee [SAC] (2007- 2009)  
 Seminar Committee (1999-2002)  
 Special Director of Development Recruitment Committee (2006-2007)  
 Web Governance Committee (2009-)

**Thesis Committees**

Karen Dowell    Graduate School of Biological Sciences, Univ. Maine, Orono, ME  
 Thesis: (pending-2013) "Exploring Pluripotent Stem Cell Self-Renewal and Cell Fate with Cell-Type-Specific Genomic Data Integration and Bayesian Network Machine Learning."

Jeremy Jay        Graduate School of Computer Sciences, Univ. Maine, Orono, ME  
 Thesis: (pending-2103) "Data Integration and Analysis Techniques for Cross-species Gene-Phenotype Relationship Elucidation."

**Students and Interns**

2014    Nikolai Renaldo, Tufts University, Medford, MA. TJL Summer Student Internship Program.  
*Developing computable models of metabolic processes for the Gene Ontology.*

2013    Joao Ascensao, Rice University, Houston, Texas. TJL Summer Student Internship Program.  
*Methodology for Inferring Gene Function from Phenotype Data.*



- 2012 Parirash Abdolhosseini, University of Washington, Seattle, WA TJL Summer Student Internship Program. *Investigating the genetic connection between autism and seizures through the RNA binding protein Celf4.*
- 2012/13 Aaron Kravens, Mount Desert Island High School, Bar Harbor, Local Internship. *Investigation Into Vertebrate and Mammalian Homologous Gene Sets Using Databases.*
- 2011 Krystal English, Amherst College, Amherst, MA TJL Summer Student Internship Program. *The Role of Developmental Processes in Interstitial Lung Diseases.*
- 2011 Michael O'Keefe, Rensselaer Polytechnic Institute. TJL Summer Student Internship Program. *MouseMine: a flexible storage and retrieval solution for Mus musculus biological data.*
- 2011 Danielle Penny, Needham High School, MA. TJL Summer Student Internship Program. *Using Spatial and Temporal Qualities of Gene Expression to Prioritize Autism Candidate Genes.*
- 2010/11 Christopher Carr, North Carolina State University. TJL Summer Internship Program. *Enhancing knowledge representation of Autism in mouse informatics resources.*
- 2009/10 Wade Vallieau, Mount Desert Island High School Intern. (Fall/Spring/Summer, 2009-2010). *Importing Neuroinformatics Framework resources into the Cell Ontology.*
- 2009/10 Morgan Hightshoe, North Carolina State University. TJL Summer Internship Program. *Development and Reconstruction of the Neuronal Cell Types in the Cell Ontology.*
- 2009 David Smith, Maine School of Science and Mathematics. TJL Summer Internship Program. *Building a Cell Cycle Ontology for Mouse based on Mouse Genome Informatics Database.*
- 2009 Daniel Hales, Mount Desert Island High School Intern. *Bioinformatics of Lung Diseases.*
- 2008 Karen Dowell, UMaine Graduate Program in Functional Genomics. Rotation Student in Bioinformatics (Fall, 2008).
- 2008 William Kornahrens, North Carolina School of Math and Science, TJL Summer Internship Program, *Complex Complexities.*
- 2007 Marianne Seto, UMaine Graduate Program in Functional Genomics. Rotation Student in Bioinformatics (Summer, 2007).
- 2007 Esther Uduehi Wells Scholar at Indiana University, TJL Summer Internship Program. *Ontological Modeling for Knowledge Representation of Lung Disease.*
- 2006 Curt Christian, St. Cloud College, TJL Summer Internship Program, *Integration of Gene Ontology and Human Disease.*
- 2006 Michael Petkov, Ellsworth High School, TJL Summer Internship Program, *Mining Metabolic Pathway Data From Gene Ontology Annotations.*
- 2005 Daniel Leiber, Princeton University, TJL Summer Internship Program. *Using Ontological Reasoning to Investigate Metabolic Diseases.*

- 2004 Megan Campbell, Gettysburg College, TJL Summer Internship Program. *Assessing Gene Ontology (GO) Annotation Consistency Between the Mouse and Rat Genomes.*
- 2003 David Haluska, Brewer High School, TJL Summer Internship Program. *Creating a web-accessible database resource linking mouse models, inbred strains, and human diseases.*
- 2001 Daniel Lawrence, Mt. Desert Island High School Intern. *Putting Lee Silver's Book 'Mouse Genetics' on the Web.*
- 2000 Kelly Tolle, Carleton College, TJL Summer Internship Program. *Integrating Existing On-line Databases: Creation and Implementation of a Controlled Vocabulary.*
- Robert Peliks, Lowell (CA) High School, TJL Summer Internship Program. *The Comparative Cancer Genetics Web Site.* Co-sponsored with Carol Bult and Janan Eppig.
- 1999 Winnie Liang, Carnegie Mellon University, TJL Summer Internship Program. *Development of a Mouse Trp53 Mutation Database.* Co-sponsored with Carol Bult and Janan Eppig.
- 1998 Margaret Douglass, Towson High School, TJL Summer Internship Program. *Graphical Representations of Conserved Regions between Mouse and Human Genomes.* Co-sponsored with Janan Eppig.
- 1998 Christina Hull, Trinity College, TJL Summer Internship Program. *Creating a Bioinformatics Resource: Problems and Promise.* Co-sponsored with Janan Eppig.
- 1997 Chris Tracey, Mt. Desert Island High School Intern. *A Typical Task in Bioinformatics.*

#### **Faculty Lectures/Tutorials**

- 2012, 2014 Tufts University – Jax Laboratory. Graduate Course 'Mammalian Genetics'.
- 2004-2012 Graduate Course in Functional Genomics. UMaine-Orono, Maine Medical Research Center, Portland, and The Jackson Laboratory, Bar Harbor, ME.
- 2011, 2012 Genomic and Proteomic Approaches to Complex Heart, Lung, Blood & Sleep Disorders September 8-16. The Jackson Laboratory.
- 2012 Short Course on Systems Genetics., The Jackson Laboratory
- 2007-2009 Mouse Models for Human Diseases. The Jackson Laboratory.
- 2006 Cold Spring Harbor Laboratory Course: Computational & Comparative Genomics, Cold Spring Harbor, NY.
- 2002-2006 Short Course on Genome Sequence Analysis: Theory and Practice. Co-sponsored by The Jackson Laboratory and NCBI. Bar Harbor, ME.
- 2002-2004 Short Course on Gene Microarray Development and Analysis: Approach to Heart, Lung, Blood and Sleep Disorders. Co-sponsored by The Jackson Laboratory and The Institute for Genomic Research, Bar Harbor, ME.
- 2003 Toxicogenomics. Gordon Research Conference. Bates College, Lewiston, ME.
- 2002, 2003 Advances in Genome Technology and Bioinformatics.  
Co-sponsored by the Marine Biological Laboratory and The Institute for Genomic Research (TIGR). Woods Hole, MA.
- 1996-2000 Instructor for Genetics Course offered by The Jackson Laboratory.  
Certified course for 3 credits with the University of Maine at Machias.

#### **Professional Societies:**

American Association for the Advancement of Science  
International Society for Computational Biology  
International Society for Biocuration