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Education

2011	**Ph.D.** Bioinformatics, University of Edinburgh
1993	**BSc.** Artificial Intelligence and Computer Science, University of Edinburgh

Employment

2015-Present	**Staff Scientist** Environmental Genomics and Systems Biology Division, LBNL
2006-2015	**Staff Scientist** Genomics Division, LBNL
2001-2006	**Bioinformatics specialist** Howard Hughes Medical Institute, UC Berkeley
1999-2006	**Bioinformatician** Life Sciences Division, Lawrence Berkeley National Laboratory
1994-1999	**Bioinformatician** Roslin Institute, Edinburgh, UK

Publications

Refereed Journal Articles

2015

Mungall, C.J., Washington, N. L., Nguyen-Xuan, J., Condit, C., Smedley, D., Köhler, S., Groza, T., Shefchek, K., Hochheiser, H., Robinson, P. N., Lewis, S. E., and Haendel, M. A. (2015). Use of Model Organism and Disease Databases to Support Matchmaking for Human Disease Gene Discovery. *Human mutation*, 36(10):979–84

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2014   Huntley, R. P., Harris, M. A., Alam-Faruque, Y., Blake, J. A., Carbon, S., Dietze, H., Dimmer, E. C., Foulger, R. E., Hill, D. P., Khodiyar, V. K., Lock, A., Lomax, J., Lovering, R. C., Mutowo-Meullenet, P., Sawford, T., Van Auken, K., Wood, V., and **Mungall, C. J.** (2014). A method for increasing expressivity of Gene Ontology annotations using a compositional approach. *BMC Bioinformatics*, 15(1):155

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2010   Deegan, J., Dimmer, E., and **Mungall, C. J.** (2010). Formalization of taxon-based constraints to detect inconsistencies in annotation and ontology development. *BMC bioinformatics*, 11(1):530

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2009   **Mungall, C. J.**, Gkoutos, G., Smith, C., Haendel, M., Lewis, S., and Ashburner, M. (2010). Integrating phenotype ontologies across multiple species. *Genome Biology*, 11(1):R2

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2005 Smith, B., Ceusters, W., Kohler, J., Kumar, A., Lomax, J., **Mungall, C. J.**, Neuhaus, F., Rector, A., and Rosse, C. (2005). Relations in Biomedical Ontologies. *Genome Biology*, 6(5)

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2001   Hu, J., **Mungall, C. J.**, Law, A., Papworth, R., Nelson, J. P., Brown, A., Simpson, I., Leckie, S., Burt, D. W., Hillyard, A. L., and Archibald, A. L. (2001). The ARKdb: genome databases for farmed and other animals. *Nucleic Acids Res*, 29(1):106–110

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2000   Rubin, G. M., Yandell, M. D., Wortman, J. R., Miklos, G. L. G., Nelson, C. R., Hariharan, I. K., Fortini, M. E., Li, P. W., Apweiler, R., Fleischmann, W., Cherry, J. M., Henikoff, S., Skupski, M. P., Misra, S., Ashburner, M., Birney, E., Boguski, M. S., Brody, T., Brokstein, P., Celniker, S. E., Chervitz, S. A., Coates, D., Cravchik, A., Gabrielian, A., Galle, R. F., Gelbart, W. M., George, R. A., Goldstein, L. S., Gong, F., Guan, P., Harris, N. L., Hay, B. A., Hoskins, R. A., Li, J., Li, Z., Hynes, R. O., Jones, S. J., Kuehl, P. M., Lemaitre, B., Littleton, J. T., Morrison, D. K., **Mungall, C. J.**, O'Farrell, P. H., Pickeral, O. K., Shue, C., Vosshall, L. B., Zhang, J., Zhao, Q., Zheng, X. H., and Lewis, S. (2000). Comparative genomics of the eukaryotes. *Science*, 287(5461):2204–2215

1998   Hu, J., **Mungall, C. J.**, Nicholson, D., and Archibald, A. L. (1998). Design and implementation of a CORBA-based genome mapping system prototype. *Bioinformatics*, 14(2):112–120

Book Chapters

2007 | Haendel, M. A., Neuhaus, F., Osumi-Sutherland, D., Mabee, P. M., Mejino, J. L. J., **Mungall, C. J.** J., and Smith, B. (2007). CARO - The Common Anatomy Reference Ontology. In *Anatomy Ontologies for Bioinformatics, Principles and Practice*, volume Albert Burger, Duncan Davidson and Richard Baldock (Eds.). Springer

Conference Proceedings

2014 | **Mungall, C. J.**, Dietze, H., and Osumi-Sutherland, D. (2014). Use of OWL within the Gene Ontology. In Keet, M. and Tamma, V., editors, *Proceedings of the 11th International Workshop on OWL: Experiences and Directions (OWLED 2014)*, pages 25–36, Riva del Garda, Italy, October 17-18, 2014

2013 | Brush, M. H., **Mungall, C.J.**, Washington, N., and Haendel, M. A. (2013). What's in a Genotype ? An Ontological Characterization for Integration of Genetic Variation Data. In Dumontier, M., Hoehndorf, R., and Baker, C. J. O., editors, *Proceedings of the International Conference on Biomedical Ontology 2013, Montreal, Canada, July 7-12, 2013*, pages 105–108

2011 | **Mungall, C.** (2011). POSH: The Prolog OWL Shell. In Dumontier, M. and Courtot, M., editors, *Proceedings of the 8th International Workshop on OWL: Experiences and Directions (OWLED2011), San Francisco, USA. June 5-6, 2011*

2009 | **Mungall, C. J.** (2009). Experiences Using Logic Programming in Bioinformatics. In *Lecture notes in computer science*, volume Volume 564, pages 1–21. Springer

Vassiliadis, V., Wielemaker, J., and **Mungall, C. J.** (2009). Processing OWL2 ontologies using Thea: An application of logic programming. In *6th OWL Experiences and Directions Workshop (OWLED 2009)*

Gkoutos, G. V., **Mungall, C.J.**, Doelken, S., Ashburner, M., Lewis, S., Hancock, J., Schofield, P., Köhler, S., Robinson, P. N., Dolken, S., and Kohler, S. (2009). Entity/Quality-Based Logical Definitions for the Human Skeletal Phenome using PATO. In *Proceedings of the 31st Annual International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC 2009)*, volume 2009, pages 7069–72

2008 | Bada, M., **Mungall, C. J.**, and Hunter, L. (2008). A Call for an Abductive Reasoning Feature in OWL-Reasoning Tools toward Ontology Quality Control. In *5th OWL Experiences and Directions Workshop (OWLED 2008)*

2007 | **Mungall, C. J.**, Gkoutos, G., Washington, N., and Lewis, S. (2007b). Representing Phenotypes in OWL. In Golbreich, C., Kalyanpur, A., and Parsia, B., editors, *Proceedings of the OWLED 2007 Workshop on OWL: Experience and Directions*, Innsbruck, Austria

2003	Ashburner, M., **Mungall, C.J.**, and Lewis, S. (2003). Ontologies for biologists: a community model for the annotation of genomic data. In *Cold Spring Harbor symposia on quantitative biology*, volume 68, pages 227–235

Pre-prints

2015	Manda, P., Mungall, C., Balhoff, J., Lapp, H., and Vision, T. (2015). Investigating the importance of anatomical homology for cross-species phenotype comparisons using semantic similarity. Technical report
2014	**Mungall, C. J.** (2014). Formalization of Genome Interval Relations. *bioRxiv*
2014	Bolleman, J., **Mungall, C. J.**, Strozzi, F., Baran, J., Dumontier, M., Bonnal, R. J., Buels, R., Hoehndorf, R., Fujisawa, T., Katayama10, T., et al. (2014). Faldo: A semantic standard for describing the location of nucleotide and protein feature annotation. *bioRxiv*

Awards and Honors

2013	Encyclopedia of Life Rubenstein Fellowship award. Role: collaborator

Awarded Proposals

2012-2016	Semantic LAMHDI: Linking Diseases to Model Organism Resources. NIH. Role: Site PI
2016-2017	BD2K BioCADDIE Harvester: Enhancing metadata using GitHub, YAML and Markdown. NIH. Role: PI
2011-2016	Ontology-enabled reasoning across phenotypes from evolution and model organisms. NSF. Role: Consortium PI
2015-2017	cROP: Common Reference Ontologies and Applications for Plant Biology . NSF. Role: Consortium PI

Invited Talks

2015	Computing on phenotypes across scale and species - Association for Molecular Pathology Annual Meeting, Austin, November 2015

2015	Crossing the Species Divide - NIH Symposium: Linking Disease Model Phenotypes to Human Conditions, NIH, September 2015
2015	From Phenotype Ontologies to Phenotype Networks, Stanford, May 2015
2015	Describing samples using the Uberon anatomy ontology - Genomics Standards Workshop JGI, May 2015
2015	Towards Common Peer Based Standards Development - NIH BD2K Data Standards Workshop, Bethesda, February 2015
2014	Computing on the environment - NIEHS Workshop, NC State, September 2014
2013	Uberon : an integrative multi-species ontology - European Bioinformatics Institute Industry Workshop, Hinxton Genome Campus, April 2013
2013	Mapping Phenotype Ontologies for diabetes and obesity - European Bioinformatics Institute, Hinxton Genome Campus, April 2013
2012	Helping Machines to Help Us (Keynote) - Rocky Bioinformatics Summit, November 2012
2011	The Environment Ontology, Environmental Protection Agency offices, San Francisco, March 2011
2009	Logic Programming in Bioinformatics (Keynote) - International Conference on Logic Programming, Pasadena, July 2009
2007	Overview of the Open Biomedical Ontologies Foundry - Clinical Trial Ontology Workshop, NIH, Bethesda, May 2007
2006	Ontologies for Evo-Devo, National Evolutionary Synthesis Center, Nov 2006

Teaching Experience

2012	**Course organizer**. Developing ontologies in Protege/OWL, Hinxton, UK, January 2012
2011	**Tutorial organizer**. Developing ontologies in OBO and OWL, International Conference on Biomedical Ontologies, Buffalo, NY, 2009
2009	**Tutorial co-organizer**. Developing ontologies in OBO and OWL, International Conference on Biomedical Ontologies, Buffalo, NY, 2009
2001-2003	**Teaching assistant** Programming for biology. Cold Spring Harbor Laboratory

| 2001 | **Module Organizer**. Module corganizer. WHO International Training Course on Bioinformatics, FIOCRUZ, Rio de Janeiro, Brazil, May 21-June 15, 2001 |

Service

2015	**Working Group Member** National Center for Ecological Analysis and Synthesis Ontology WG
2015	**Program Committee Member** 4th Workshop on Knowledge Discovery and Data Mining Meets Linked Open Data
2014-Present	**Working Group Member** Global Alliance for Genomics and Health, Clinical Working Group
2014-Present	**Working Group Member** International Rare Diseases Consortium, Ontologies and rare disease prioritization WG
2014	**Program Committee Member** 10th Workshop on Constraint-Based Methods for Bioinformatics, September 8 2014, Lyon, France
2014-Present	**WG1 co-leader** Transcription Factor TG Consortium
2014	**Program Committee Member** 10th WCB- Workshop on Constraint-Based Methods for Bioinformatics at CP 2014 (Lyon, France, 8th Sept. 2014)
2014	**Program Committee Member, 6th Workshop on Formal Ontologies meet Industry**
2014	**Program Committee Member, PhenoDay** ISMB 2014
2012, 2014	**SBIR/STTR Reviewer**, Department of Energy
2004-Present	**Open Biological Ontologies Library Coordinator**
2009-2013	**Program Committee Member, Bio-Ontologies**
2011-2013	**Program Committee Member / Track Chair, International Conference on Biomedical Ontologies**
2011-2013	**Program Committee Member, Semantic Web Applications in the Life Sciences**
2011	**Program Committee Member, OWL: Experience and Directions**

2010-Present	**Program Committee Member, ISMB/ECCB**
2010, 2011	**Scientific Advisory Board Member, Disease Ontology**
2005-Present	**Reviewer** PLoS Genetics, PLoS Computational Biology, eLife, PLoS ONE, Nature Methods, Bioinformatics, Journal of Biomedical Informatics, Journal of Biomedical Semantics, Peer/J, Gigascience, Database, BMC Bioinformatics, Nucleic Acids Research

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