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Liam Holt, Ph.D.
Bowes Fellow
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CONTACT INFORMATION

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EDUCATION AND TRAINING

2010-present	Independent Bowes Research Fellow University of California, Berkeley, Department of Molecular and Cell Biology
2009-2010	Postdoctoral Fellow in the laboratories of Wendell Lim and David Morgan, UCSF
2002-2008	Ph. D. studies in Biochemistry and Cell Biology with David Morgan, UCSF Tetrad program Thesis title: *"Combinatorial Control of the Cell Cycle"*
2001-2002	Research Associate in the laboratory of Rosemary Akhurst, UCSF Cancer Center
2000-2001	Pre-doctoral fellowship in the laboratory of Amparo Cano, IIB Alberto Sols Cancer Center, Madrid, Spain
1999-2000	Internship in the laboratory of Rosemary Akhurst, UCSF Cancer Center
1998-1999	Internship in the laboratory of Peter Palese, Mount Sinai Medical Center, New York
1996-2000	Masters in Biochemistry, University of Bath, England

AWARDS AND SCHOLARSHIPS

2014	HHMI and Gordon and Betty Moore Foundation Advanced Imaging Center access grant
2010-present	Bowes Research Fellowship Grant, $1,250,000
2011	UC Berkeley Biology Faculty Research Fund $60,000
2005-2007	National Science Foundation Graduate Research Fellowship
2005	Benjamin Kaminer, Mountain Memorial and Bruce and Betty Alberts Scholarships
2002-2003	Regents Fellowship (UCSF)
2000-2001	Pre-doctoral fellowship (Consejo Superior de Investigaciones Cientificas/British Council)

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TEACHING EXPERIENCE

Spring 2014	UC Berkeley MCB 130 Cell and Systems Biology Advanced undergraduate class. 50 students. Bistability and switches. Signaling in three dimensions. Trigger waves. Turing reaction diffusion systems and pattern generation.
Fall 2011	UC Berkeley MCB 230 Advanced Cell Biology Graduate class. 30 Students. Principles of chromosome segregation from the Par system to spindles. Building switches in biology – bistability, ultrasensitivity and signaling dynamics.
2007	UCSF Anti-Medical School I helped Marc Shuman, clinical head of QB3, to organize a lecture series aimed at making basic scientists aware of outstanding clinical issues that we currently don't understand. This was a 6 lecture course. The course has now expanded and is taught at UC Berkeley: http://www.qb3.org/education/ams
2005	UCSF Tetrad Graduate Program Bioregulatory Regulatory Mechanisms (TA) The course covered the central principles of molecular biology: DNA replication, transcription, and translation.

MENTORING

2010-present	UC Berkeley MCB Graduate Program, I currently mentor one Ph. D. student: Juan Ignacio Gutierrez, a fellow of the Becas Chile research program
2010-present	UC Berkeley Undergraduate Research Apprentice Program I have mentored 14 students to date: Conor Howard (Now accepted to the UCSF Tetrad Ph. D. program), Shyam Bhatka, Jonathan Kim, Hairan Zhu (Now in the St. Jude Pediatric Oncology Education Program), Nicholas Luther, Yusuf Chao (Now at Northwestern University Feinberg School of Medicine), Xiaoli Yang, Adrian Arrieta (Now in the San Diego State University MCB graduate program), Haoyu Sun and Nicholas Raj Snyder, Chaaru Dingankar, Kevin Li, Seung Joo Lee and Benson Ma
Summer 2011	UC Berkeley Amgen Summer Research Program Jonathan Hibshman (Gettysburg University, now a graduate student at Duke University)

INVITED TALKS

December 2014	Stanford Department of Biology (Friday Research Lectures), Palo Alto, CA
October 2014	Transcriptional Imaging Consortium Meeting, Janelia Research Campus, Ashford, VA
June 2014	Gordon Research Conference on Kinases and G-protein signaling, Biddeford ME
January 2013	MIT Koch Institute of Integrative Cancer Research Departmental Seminar, Cambridge MA
January 2013	Pharmacology Seminar Series at Yale School of Medicine, New Haven CT
September 2012	Northwestern University Department of Molecular Biosciences Seminar, Evanston IL
June 2012	University of North Carolina at Chapel Hill Department of Biology Seminar, Chapel Hill NC
November 2009	Joining Forces Symposium, ETH Zurich, Switzerland
September 2009	FEBS Protein Modules Meeting, Seefeld, Austria

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COMMUNITY AND OUTREACH

2014	Founder of the UC Berkeley Scientific Community Initiative: http://sci.berkeley.edu/
2009, 2013, 2014	Conference organizer “Let’s Have an Awesome Time Doing Science” http://sci.berkeley.edu/ A Symposium on maintaining happiness in a challenging career.
2011 - 2014	“Ignite” General science outreach lectures to the community: 2014 “Resurrection of Ancestral Proteins” http://www.ignitesanfrancisco.com/ignitesf9/liam-holt-resurrection-of-ancient-proteins/ 2012 and 2013 “How Viruses Shape the World” 2011 “The Evolution of Animals”
2008 UCSF	2008 student invitation seminars: Joe Thornton (U Oregon) & Richard Axel (Columbia).
2009 - present	Reviewer PNAS, MBoC, J Cell Bio, Mol Cell

PUBLICATIONS

2014 eLife	Howard C, Hanson-Smith V, Kennedy KJ, Miller CJ, Lou HJ, Johnson AD, Turk BE and **Holt LJ**: Ancestral resurrection reveals evolutionary mechanisms of kinase plasticity eLIFE. Oct 13;3.
2013 PNAS	Miao Y, Wong CCL, Menella V, Michelot A, Agard DA, **Holt LJ**, Yates JR, Drubin DG: Cell cycle regulation of formin-mediated actin cable assembly PNAS, 2013 Oct 16 PMID: 24133141
2013 J Cell Sci	Gourguechon S, **Holt LJ**, Cande WZ: The Giardia cell cycle progresses independently of the anaphase-promoting complex. J Cell Sci. 2013 May 15;126(Pt 10):2246-55. doi: 10.1242/jcs.121632. PMID: 23525017
2011 PNAS	Gong YU, Killian CE, Olson IC, Appathurai NP, Amasino AL, Martin MC, **Holt LJ**, Wilt FH, Gilbert PU: Phase transitions in biogenic amorphous calcium carbonate. PNAS 2012 Apr 17;109(16):6088-93. Epub 2012 Apr 4. PMID: 22492931
2009 Science	**Holt, LJ**, Tuch, BB, Villén, J, Johnson, AD, Gygi, SP & Morgan, DO: Global analysis of Cdk1 substrate phosphorylation sites provides insights into evolution Science, 2009 Sep 25;325(5948):1682-6 PMID: 19779198
2009 J Cell Sci	Sobrado VR, Moreno-Bueno G, Cubillo E, **Holt LJ**, Nieto MA, Portillo F, Cano A: The class I bHLH factors E2-2A and E2-2B regulate EMT. J Cell Sci. 2009 Apr 1;122(Pt 7):1014-24 PMID: 19295128
2008 Nature	**Holt LJ**, Krutchinsky, AN, Morgan, DO: Positive Feedback Sharpens the Anaphase Switch. Nature, 454(7202):353-7 PMID: 18552837
2008 Mol Cell Biol	Sullivan, MJ, **Holt, LJ**, Morgan, DO: Cyclin-specific control of rDNA segregation Mol Cell Biol 10.1128/MCB.00235-08 PMID: 18591250
2007 Mol Cell	**Holt LJ**, Hutti, J, Cantley, L, Morgan, DO: Evolution of Ime2 phosphorylation sites on Cdk1 substrates provides a mechanism to limit the effects of the phosphatase Cdc14 in meiosis. Mol Cell. 2007 Mar 9;25(5):689-702 PMID: 17349956

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2005 Genomics — Tang Y, Sook Lee K, Yang H, Logan DW, Wang S, McKinnon ML, **Holt LJ**, Condie A, Luu MT, Akhurst RJ: Epistatic interactions between modifier genes confer strain-specific redundancy for Tgfb1 in developmental angiogenesis. Genomics. 2005 Jan;85(1):60-70. PMID: 15607422

REVIEWS

2012 FEBS letters — **Holt LJ**: Regulatory modules: Coupling protein stability to phopshoregulation during cell division FEBS letters 2012 Aug 14;586(17):2773-2777

REFERENCES

Available upon request