Claire de la Cova, PhD
University of Wisconsin-Milwaukee, PO Box 413, Milwaukee, WI 53201
Tel: (414) 229-4993, Email: delacova@uwm.edu

Education

Ph.D. (May 2008) Dept. of Genetics and Development, Columbia University, New York, NY

M.Phil. (Oct 2003) Dept. of Genetics and Development, Columbia University, New York, NY

M.A. (Oct 2001) Dept. of Genetics and Development, Columbia University, New York, NY

B.A. (May 1999) Dept. of Biology, Macalester College, Saint Paul, MN

Appointments

Assistant Professor, 2018 – present
Dept. of Biological Sciences, University of Wisconsin-Milwaukee, Milwaukee, WI

Training

Postdoctoral Training/Associate, 2008 – 2018
Dept. of Biological Sciences, Columbia University, New York, NY
Research mentor: Dr. Iva Greenwald

Graduate Training, 2000 – 2008
Dept. of Genetics, Columbia University Medical Center, New York, NY
Thesis mentor: Dr. Laura Johnston
Thesis title: Control of Growth and Cell Competition by dMyc in *Drosophila melanogaster*.

Research Support

R03, NIH/NCI R03CA248684, 2021 – 2023. PI: Claire de la Cova
Mechanisms of protein degradation that control signal transduction by Ras-Raf-MEK-ERK

Discovery and Innovation Grant, University of Wisconsin, 2020 – 2022. PI: Claire de la Cova
Investigation of UFD-2-mediated regulation of Ras/MAP kinase signaling

Awards and Honors

Cell, Molecular and Developmental Biology Training Fellowship, Institute of Cancer Genetics, Columbia University, 2002

Departmental Honors Award, Biology, Macalester College, 1999

HHMI Undergraduate Training Fellowship, Biology, Macalester College, 1996

Merit Scholarship, Macalester College, 1995

Teaching

Genetics of Development and Cancer (BIO SCI 498). Instructor. Dept. of Biological Sciences, UW Milwaukee, 2020 – present

Genetics (BIO SCI 325). Instructor. Dept. of Biological Sciences, UW Milwaukee, 2019 – present

Genetics (BIOL 3031). Co-instructor. Dept. of Biological Sciences, Columbia University, 2017 – 2018

Professional Organizations

Genetics Society of America, Member
Society of Developmental Biology, Member

Invited Seminars and Oral Presentations (2013 – present)

1. **Chicago Area Worm Meeting.** December 2021. Negative regulation of Raf signaling by the E3/E4 ubiquitin ligase UFD-2.
2. **Department of Biochemistry Seminar**. November 2020. Medical College of Wisconsin. Milwaukee, WI. Genetic and quantitative approaches to investigate Raf and MAP Kinase signaling in animal development.
3. **Department of Biological Sciences Scholl Seminar Series**. September 2019. Marquette University. Milwaukee, WI. Visualizing cell communication: Ras/MAP Kinase signaling in animal development.
4. **LOCI Group Seminar Series**. October 2018. University of Wisconsin-Madison. Madison, WI. Visualizing cell communication: An analysis of Ras/MAP Kinase signaling in animal development.
5. **Department of Biological Sciences Seminar**. March 2018. University of Wisconsin-Milwaukee. Milwaukee, WI. Visualizing cell communication: Genetic and quantitative analyses of Ras/MAP Kinase signaling in animal development.
6. **Department of Integrative Biology Seminar**. February 2018. University of Colorado Denver. Denver, CO. Visualizing cell communication: Genetic and quantitative analyses of Ras/MAP Kinase signaling in animal development.
7. **Department of Biological Sciences Seminar**. February 2018. University of Arkansas. Fayetteville, AR. Visualizing cell communication: Genetic and quantitative analyses of Ras/MAP Kinase signaling in animal development.
8. **21st International *C. elegans* Conference**. June 2017. A real-time biosensor for MPK-1/ERK activity reveals signaling dynamics during *C. elegans* cell fate specification.
9. **New York Area Worm Meeting**. January 2017. A real-time biosensor for ERK activity in multicellular organisms and its validation in *C. elegans*.
10. **20th International *C. elegans* Conference**. June 2015. The conserved kinases MPK-1, GSK-3, CDK-4 and CDK-2 promote LIN-45/Braf protein turnover in a dynamic spatial and temporal pattern.
11. **19th International *C. elegans* Conference.** June 2013. Identification of SEL-10/Fbw7 substrates regulated in cell fate patterning events via a conserved phosphodegron motif.

Publications

1. Townley R, Deniaud A, Stacy KS, Rodriguez Torres CS, Cheraghi F, Wicker NB, **de la Cova CC**. The E3/E4 ubiquitin ligase UFD-2 suppresses normal and oncogenic signaling mediated by a Raf ortholog in *Caenorhabditis elegans*. Sci Signal. 2023 Aug 29;16(800):eabq4355.
2. **de la Cova CC**. The highs and lows of FBXW7: New insights into substrate affinity in disease and development. Cells. 2023 Aug 24;12(17):2141. doi: 10.3390/cells12172141.
3. **de la Cova, CC,** Townley, R, Greenwald, I. Negative feedback by conserved kinases patterns the degradation of *Caenorhabditis elegans* Raf in vulval fate patterning. Development. 2020 Dec 23;147(24):dev195941.

4. Kodra, A, **de la Cova, C**, Gerhold, AR, Johnston, LA. Widely used mutants of *eiger*, encoding the *Drosophila* Tumor Necrosis Factor, carry additional mutations in the NimrodC1 phagocytosis receptor. G3 (Bethesda). 2020 Dec 3;10(12):4707-4712.
5. **de la Cova, C**, Townley, R, Regot, S, and Greenwald, I. A real-time biosensor for ERK activity reveals signaling dynamics during *C. elegans* cell fate specification. Developmental Cell. 2017 Vol. 42(5):542-553.
6. Meyer, SN, Amoyel, M, Bergantiños, C, **de la Cova, C,** Schertel, C, Basler, K, Johnston, LA. An ancient defense system eliminates unfit cells from developing tissues during cell competition. Science. 2014 Vol. 346(6214):1258236.
7. **de la Cova, C,** Senoo-Matsuda, N, Ziosi, M, Wu, DC, Bellosta, P, Quinzii, CM, Johnston, LA. Supercompetitor status of *Drosophila* Myc cells requires p53 as a fitness sensor to reprogram metabolism and promote viability. Cell Metabolism. 2014 Vol. 19(3):470-483.
8. **de la Cova, C** and Greenwald, I. SEL-10/Fbw7-dependent negative feedback regulation of LIN-45/Braf signaling in *C. elegans* via a conserved phosphodegron. Genes and Development. 2012 Vol. 26(22):2524-2535.
9. **de la Cova, C** and Johnston, LA. Myc in model organisms: a view from the flyroom. Seminars in Cancer Biology. 2006 Vol. 16 (4): 303-312.
10. **de la Cova, C,** Abril, M, Bellosta, P, Gallant, P, Johnston, LA. *Drosophila* Myc regulates organ size by inducing cell competition. 2004 Cell. Vol. 117(1):107-116.