

PART I. GENERAL INFORMATION

Name Cassandra G. M. Extavour

Office Address Department of Organismic and Evolutionary Biology
16 Divinity Avenue
BioLabs Building 4103
Cambridge, MA 02138
Office (617)-496-1935
Laboratory (617)-496-1949/1200
Fax (617)-496-9507

Email extavour@oeb.harvard.edu
Website <http://www.extavourlab.com>

A. Education

1995 - 2000 Ph.D., Department of Molecular Biology,
Universidad Autónoma de Madrid, Madrid, Spain
Graduate Thesis Advisor: Prof. A. García Bellido
Topic: Germ Cell Selection in Genetic Mosaics in *Drosophila melanogaster*

1991 - 1995 Honors B.Sc., Molecular Biology and Molecular Genetics
University of Toronto, Toronto, Ontario, Canada
Specialist Program: Molecular Biology and Molecular Genetics
Major: Mathematics
Minor: Spanish

B. Postdoctoral Training

2002 - 2007 University of Cambridge, Cambridge, UK
Advisor: Prof. M. Akam
Topic: Comparative Germ Cell Specification in Arthropods

2001 Institute for Molecular Biology and Biotechnology (IMBB-FORTH), Crete, Greece
Advisor: Dr. M. Averof
Topic: Germ cell origin and migration in *Artemia franciscana*

2000 - 2001 Universidad Autónoma de Madrid, Madrid, Spain
Advisor: Prof. A. García Bellido
Topic: Germ Cell Selection in Genetic Mosaics in *Drosophila melanogaster*

C. Academic Appointments and Affiliations at Harvard University

2007 - present Assistant Professor, Department of Organismic and Evolutionary Biology

PART II: PUBLICATIONS AND OTHER DOCUMENTATION OF RESEARCH ACTIVITY

A. Peer-Reviewed Articles

1. Modrell, M. S., Price, A. L., Havemann, J., **Extavour, C.**, Gerberding, M. and Patel, N. H. Germline replacement following ablation of the primordial germ cells in *Parhyale hawaiiensis*. *Science* (**submitted**) (2009)
2. Ewen-Campen, B., Schwager, E. E. and **Extavour, C.** The Molecular Machinery of Germ Cell Specification. *Molecular Reproduction and Development* **77** (1): 3-18 (2009) (**peer-reviewed solicited submission**)
3. Abzhanov, A., **Extavour, C.**, Groover, A., Hodges, S., Hoekstra, H., Kramer, E. M., and Monteiro, A. Are We There Yet? Tracking the Development of New Model Systems. *Trends in Genetics* **24** (7): 353-360 (2008)
4. Voronina, E., Lopez, M., Juliano, C. E., Gustafson, E., Song, J. L., **Extavour, C.**, George, S., Oliveri, P., McClay, D., and Wessel, G. Vasa protein expression is restricted to the small micromeres of the sea urchin, but is inducible in other lineages early in development. *Developmental Biology* **314** (2): 276-286 (2008)
5. **Extavour, C.** Evolution of the bilaterian germ line: lineage origin and modulation of specification mechanisms. *Integrative and Comparative Biology*. **47** (5): 770-785 (2007)
6. **Extavour, C.** Gray Anatomy: phylogenetic patterns of somatic gonad structures and reproductive strategies across the Bilateria. *Integrative and Comparative Biology* **47** (3): 420-426 (2007)
7. **Extavour, C.**, Pang, K., Matus, D. Q. and Martindale, M. Q. *vasa* and *nanos* expression patterns in a sea anemone and the evolution of bilaterian germ cell specification mechanisms *Evolution and Development* **7** (3): 201-215 (2005) (**nominated as a "must read" on the Faculty of 1000**)
8. **Extavour, C.** The fate of isolated blastomeres and formation of germ cells in the amphipod crustacean *Parhyale hawaiiensis*. *Developmental Biology* **277** (2): 387-402 (2005) (**cover article**)
9. **Extavour, C.** and Akam, M. Mechanisms of germ cell specification across the metazoans: epigenesis and preformation. *Development* **130** (24): 5869-5884 (2003) (**peer-reviewed solicited submission**)
10. **Extavour, C.** and García-Bellido, A. Germ cell selection in genetic mosaics in *Drosophila melanogaster*. *P.N.A.S.* **98** (20): 11341-11346 (2001)

B. Invited Reviews

1. **Extavour, C.** Oogenesis: Making the Mos of Meiosis. *Current Biology* **19** (12): R489-R491 (2009)
2. **Extavour, C.** Hold the germ cells, I'm on duty (*on germ cell specification and caste determination in a polyembryonic wasp*). *BioEssays* **26** (12): 1263-1267 (2004) (**invited review**)
3. **Extavour, C.** Not just a tasty snack: review of Evolutionary Developmental Biology of Crustacea, ed. G. Scholtz. *BioEssays* **26** (11): 1256-1258 (2004) (**invited review**)

C. Books and Book Chapters

1. Srouji, J. R. and **Extavour, C.** Redefining stem cells and assembling germ plasm: key transitions in the evolution of the germ line. In Key Innovations in Animal Evolution, ed. R. DeSalle and B. Schierwater. Science Publishers (2010) (**invited contribution – submitted**)
2. **Extavour, C.** Urbisexuality: the evolution of bilaterian germ cell specification. Chapter 17, pp.321-342 in Evolving Pathways: Key Themes in Evolutionary Developmental Biology, ed. A. Minelli and G. Fusco. Cambridge University Press (2008) (**invited contribution**)

D. News Features – Research Focus

1. Science Friday. CreatureCast: Why Cells Cooperate. **November 6** (2009)
<http://www.sciencefriday.com/videos/watch/10252>
2. Travis, J. A Close Look at Urbisexuality. *Science* **316** (5823): 391-391 (2007) (**news feature**)

- Hines, P. J. and Kadereit, S. Topic of the Month: Asymmetric Cell Division. *International Society for Stem Cell Research* **January 2004**: 1-3 (2004)

E. News Features – Career Focus

- Knoth, P. D. Rising Star Professors. *Fifteen Minutes: The weekend magazine of the Harvard Crimson* **Late April/Early May issue** (2009)
- Dolgin, E. Management for Beginners: So you're a principal investigator – now what? *The Scientist* **22 (7)**: 75-77 (2008)
- Bjorn, G. Ready, Set, Hire. *Nature* **451 (7179)**: 740-741 (2008)

PART III. ACTIVITIES AND CONTRIBUTIONS

A. Invited Speaker: Seminars (Since 2004)

- 2010 Brown U; U. of Miami; Duke U.; Massachusetts Institute of Technology, Whitehead Institute
 2009 Bowdoin College; U. of Arizona; U. of Chicago; Andalusian Center for Dev. Biol. (CABD), Seville; Spain; Center for Mol. Biol. (CBM), Madrid, Spain
 2008 California Institute of Technology; U. of Massachusetts, Amherst; Kewalo Marine Laboratory, Hawaii
 2007 U. of Nottingham, Institute of Genetics; UK
 2005 Max Planck Institute for Dev. Biol., Tübingen; Germany; Humboldt U. of Berlin, Germany
 2004 Harvard University

B. Invited Speaker: Conferences and Meetings

- 2010 Santa Cruz Developmental Biology Meeting
 2008 World Congress of Reproductive Biology; Society for Developmental Biology (SDB) Northeast Regional Meeting; SDB Northwest Regional Meeting; Germ Cells Meeting, Cold Spring Harbor, NY
 2007 Society for Integrative and Comparative Biology
 2006 VIII European Congress of Entomology, Izmir, Turkey; Evolution and Development Symposium, U. Oxford, UK; Gordon Research Conference on Molecular Evolution, Ventura, CA; 52nd National Institute for Basic Biology Conference: Reproductive Strategies, Okazaki, Japan
 2005 Evolutionary Inferences from Phylogenetic Trees: Natural History Museum, London, UK
 2004 XXII International Congress of Entomology, Brisbane, Australia; Comparative Developmental Biology: Insight into Embryos, Cells and Evolution, Friday Harbor Laboratories, San Juan, WA

C. Teaching

At Harvard

- 2008 - present MCB291 Fundamentals in Genetics, Genomics and Evolution (graduate course)
 2009 – present OEB51 The Biology and Evolution of Invertebrate Animals (undergraduate course)
 2009 BBS Developmental Mechanisms of Evolutionary Change (graduate nanocourse)

Outside of Harvard

- 2003 - present **MBL Embryology Course**. *Marine Biological Laboratory, Woods Hole, MA*
 2003 - 2007 Supervisions, **Cell and Developmental Biology course**. *U. of Cambridge, UK*
 2001 - 2006 Practical lab, **Evolution and Behavior course**. *U. of Cambridge, UK*