

BIOGRAPHICAL SKETCH

NAME John H. Postlethwait	POSITION TITLE		
eRA COMMONS USER NAME JPOSTLETHWAIT	Professor of Biology		
EDUCATION/TRAINING			
INSTITUTION AND LOCATION	DEGREE <i>(if applicable)</i>	YEAR(s)	FIELD OF STUDY
Purdue University	B.A.	1966	Biology
Case Western Reserve University	Ph.D.	1970	Developmental Genetics
University of California, Irvine	Grad. Res	1968-1970	Developmental Genetics
Harvard University	Postdoc	1970-1971	Molecular Genetics

A. Positions and Honors

Research and Professional Experience

1971-1977 Assistant Professor of Biology, University of Oregon
 1977-1981 Associate Professor of Biology, University of Oregon
 1977-1978 Visiting Scientist, Institute/Molecular Biology, Austrian Acad. of Sciences, Salzburg, Austria
 1982-1983 Visiting Scientist, CNRS, Laboratory of Eucaryotic Molecular Genetics, Strasbourg, France
 1989-1990 Visiting Scientist, Imperial Cancer Research Fund, Oxford University, Oxford, Great Britain
 1981-present Professor of Biology, University of Oregon
 1987-present Affiliate, Institute of Molecular Biology, University of Oregon
 1990-present Member, Institute of Neuroscience, University of Oregon

Awards and Honors

1966 Phi Beta Kappa, Purdue University
 1974-1979 Research Career Development Award, National Institutes of Health
 1979 Recipient, Ersted Distinguished Teaching Award, University of Oregon
 1988 Fellow of the American Association for the Advancement of Science
 2000 Distinguished Alumnus Award, Purdue University
 2007 Oregon Discovers: Miracles in the Making Achievement Award
 2007 Medical Research Foundation Discovery Award

B. Peer-reviewed publications (36 of 174 total refereed publications)

Catchen, J. M., Conery, J. S., and Postlethwait, J. H. (2008) Inferring Ancestral Gene Order. In: Methods in Molecular Biology: Bioinformatics. Editor: Jonathan Keith. Humana Press, Totowa, New Jersey. In Press.

Eberhart, J. K., He, X., Swartz, M. E., Yan, Y.-L., Song, H., Boling, T. C., Kunerth, A. K., Walker, M. B., Kimmel, C. B., and Postlethwait, J. H. (2008) MicroRNA Mirn140 modulates Pdgf signaling during palatogenesis. *Nature Genetics* in press.

Cañestro, C., Yokoi, H., and John H. Postlethwait (2007) Evolutionary Developmental Biology and Genomics. *Nature Reviews Genetics*, (12): 932-42

Lewis, Z.R., McClellan, M.C., Postlethwait, J.H., Cresko, W., Kaplan, R. (2007) Female-specific increase in primordial germ cells marks sex differentiation in threespine stickleback (*Gasterosteus aculeatus*). *J. Morphol.* Published online Dec. 21 2007.

Cresko, W. A., McGuigan, K. L., Phillips, P. C. and Postlethwait, J. H. (2007) Studies of threespine stickleback developmental evolution: progress and promise. *Genetica* 129,105-26.

Jovelin, R., He, X., Amores, A., Yan, Y.-L., Shi, R., Qin, B., Roe, B., Cresko, W. A., and Postlethwait, J. H. (2007) Duplication and divergence of *fgf8* functions in teleost development and evolution. *J. Exper. Zool. (Mol. Dev. Evol.)* **308B**, 1-14.

Miller, M. R., Eames, B. F., Eberhart, J. K., Yan, Y.-L., Postlethwait, J. H. and Johnson, E. A. (2007) RAD marker microarrays enable rapid mapping of zebrafish mutations. *Gen. Biol.* in press.

- Catchen, J. M., Conery, J. S., and Postlethwait, J. H. (2007) Inferring Ancestral Gene Order. In: *Methods in Molecular Biology: Bioinformatics*. Editor: Jonathan Keith. Humana Press, Totowa, New Jersey. In Press.
- Cañestro, D. and Postlethwait, J. H. (2007) Development of a chordate anterior-posterior axis without classical retinoic acid signaling. *Dev. Biol.* **15**, 522-38.
- Sakata, S.I., Yan, Y., Satou, Y., Momoi, A., Ngo-Hazelett, P., Nozaki, M., Furutani-Seiki, M., Postlethwait, J. H., Yonehara, S., and Sakamaki, K. (2007) Conserved function of *caspase-8* in apoptosis during bony fish evolution. *Gene* **396**, 134-48.
- Sullivan, C., Lage, C., Millard, P., Postlethwait, J. H., and Kim, C. H. (2007). Evidence for evolving TICAM function in vertebrates. *Journal of Immunology* **178**, 4517-27.
- Nolte, C., Rastegar, M., Amores, A., Bouchard, M. Grote, D. Maas, R., Lovacs, E., Postlethwait, J., Rambaldi, I. Rowan, S., Yan, Y. L., Zhang, F. and Featherstone, F. (2006). Sterospecificity and PAX6 function and direct Hoxd4 neural enhancer activity along the antero-posterior axis. *Dev. Biol.* **299**, 582-93.
- Postlethwait, J. H. (2006). The zebrafish genome in context: Ohnologs gone missing. *Mol. Dev. Evol.* Published Online: 26 Oct 2006.
- Postlethwait, J. H. (2006). The zebrafish genome: A review and case study of *msx* genes. *Gen. Dyn.* **2**, 183-197.
- Cañestro, C., Postlethwait, J.H., Gonzalez-Duarte, R. and Albalat, R. (2006). Is retinoic acid genetic machinery a chordate innovation? *Evol. Development* **8**, 394-406.
- Titus, T., Selvig, D., Quin, B., Wilson, C., Starks, A., Roe, B. and Postlethwait, J. H. (2006). The Fanconi anemia gene network is conserved from zebrafish to human. *Gene* **371**, 211-223.
- Tallafuss, A., Hale, L. A., Yan, Y. L., Dudley, L., Eisen, J. S. and Postlethwait, J. H. (2006). Characterization of retinoid-X receptor genes *rxra*, *rxrba*, *rcrb* and *rxrg* during zebrafish development. *Gene Expr. Patterns* **6**, 556-65.
- Leveille, F., Ferrer, M., Medhurst, A., Laghmani, E., Rooimans, M., Bier, P., Steltenpool, J., Titus, T. A., Postlethwait, J. H., Hoatland, M., Joenje, H. and de Winter, J. (2006). The nuclear accumulation of the Fanconi anemia protein FANCE depends on FANCC. *DNA Repair* **5**, 556-65.
- Hale, L. A., Tallafuss, A., Yan, Y. L., Dudley, L., Eisen, J. S. and Postlethwait, J. H. (2006). Characterization of the retinoic acid receptor genes *raraa*, *rarab* and *rarg* during zebrafish development. *Gene Expr. Patterns* **6**, 546-55.
- Yan, Y. L., Willoughby, J., Liu, D., Crump, J. G., Wilson, C., Miller, C. T., Singer, A., Kimmel, C., Westerfield, M. and Postlethwait, J. H. (2005). A pair of Sox: distinct and overlapping functions of zebrafish *sox9* co-orthologs in craniofacial and pectoral fin development. *Development* **132**, 1069-83.
- Woods, I. G., Wilson, C., Friedlander, B., Chang, P., Reyes, D. K., Nix, R., Kelly, P. D., Chu, F., Postlethwait, J. H. and Talbot, W. S. (2005). The zebrafish gene map defines ancestral vertebrate chromosomes. *Genome Res.* **15**, 1307-14.
- Rodriguez-Mari, A., Yan, Y. L., Bremiller, R. A., Wilson, C., Canestro, C. and Postlethwait, J. H. (2005). Characterization and expression pattern of zebrafish Anti-Mullerian hormone (*Amh*) relative to *sox9a*, *sox9b*, and *cyp19a1a*, during gonad development. *Gene Expr. Patterns* **5**, 655-67.
- Lagerstron, M., Fredriksson, R., Bjarnadottir, T. K., Fridmanis, D., Homquist, T., Andersson, J., Yan, Y., Raudsepp, Zoorob, T., Kukkonen, J. P., Lundib, L., Klovins, J., Chowdhary, B. and Postlethwait, J. H. (2005). Origin of the prolactin-releasing hormone (PRLH) receptors: Evidence of coevolution between PRLH and a redundant neuropeptide Y receptor during vertebrate evolution. *Genomics* **85**, 688-703.
- Kuo, M. W., Lou, S. W., Postlethwait, J. and Chung, B. C. (2005). Chromosomal organization, evolutionary relationship, and expression of zebrafish GnRH family members. *J. Biomed. Sci.* **12**, 629-39.
- Kuo, M., Postlethwait, J., Lee, W., Lour, S., Chan, W. and Chung, B. (2005). Gene duplication gene loss and evolution of expression domains in the vertebrate nuclear receptor NR5A. *Biomed. Sci.* **389**, 19-26.
- Kimmel, C. B., Ullmann, B., Walker, C., Wilson, C., Currey, M., Phillips, P. C., Bell, M. A., Postlethwait, J. H. and Cresko, W. A. (2005). Evolution and development of facial bone morphology in threespine sticklebacks. *PNAS U S A* **102**, 5791-6.
- Gloriam, D. E., Bjarnadottir, T. K., Yan, Y. L., Postlethwait, J. H., Schioth, H. B. and Fredriksson, R. (2005). The repertoire of trace amine G-protein-coupled receptors: large expansion in zebrafish. *Mol. Phylogenet. Evol.* **35**, 470-82.
- Albertson, R. C., Payne-Ferreira, T. L., Postlethwait, J. and Yelick, P. C. (2005). Zebrafish *acvr2a* and *acvr2b* exhibit distinct roles in craniofacial development. *Dev. Dyn.* **233**, 1405-18.

- Flores, M. V., Tsang, V. W., Hu, W., Kalev-Zylinska, M., Postlethwait, J., Crosier, P., Crosier, K. and Fisher, S.** (2004). Duplicate zebrafish *runx2* orthologues are expressed in developing skeletal elements. *Gene Expr. Patterns* **4**, 573-81.
- Ruuskanen, J. O., Xhaard, H., Marjamaki, A., Salaneck, E., Salminen, T., Yan, Y. L., Postlethwait, J. H., Johnson, M. S., Larhammar, D. and Scheinin, M.** (2004). Identification of duplicated fourth alpha2-adrenergic receptor subtype by cloning and mapping of five receptor genes in zebrafish. *Mol. Biol. Evol.* **21**, 14-28.
- Papasani, M. R., Gensure, R. C., Yan, Y. L., Gunes, Y., Postlethwait, J. H., Ponugoti, B., John, M. R., Juppner, H. and Rubin, D. A.** (2004). Identification and characterization of the zebrafish and fugu genes encoding tuberoinfundibular peptide 39. *Endocrinology* **145**, 5294-304.
- Cresko, W. A., Yan, Y. L., Baltrus, D. A., Amores, A., Singer, A., Rodriguez-Mari, A. and Postlethwait, J. H.** (2003). Genome duplication, subfunction partitioning, and lineage divergence: Sox9 in stickleback and zebrafish. *Dev. Dyn.* **228**, 480-9.
- Liu, D., Chu, H., Maves, L., Yan, Y. L., Morcos, P. A., Postlethwait, J. H. and Westerfield, M.** (2003). Fgf3 and Fgf8 dependent and independent transcription factors are required for otic placode specification. *Development* **130**, 2213-24.
- Singer, A., Perlman, H., Yan, Y., Walker, C., Corley-Smith, G., Brandhorst, B. and Postlethwait, J.** (2002). Sex-specific recombination rates in zebrafish (*Danio rerio*). *Genetics* **160**, 649-57
- Yan, Y. L., Miller, C. T., Nissen, R. M., Singer, A., Liu, D., Kirn, A., Draper, B., Willoughby, J., Morcos, P. A., Amsterdam, A., Chung, B. C., Westerfield, M., Haffter, P., Hopkins, N., Kimmel, C. and Postlethwait, J. H.** (2002). A zebrafish *sox9* gene required for cartilage morphogenesis. *Development* **129**, 5065-79.
- Varga, Z. M., Amores, A., Lewis, K. E., Yan, Y. L., Postlethwait, J. H., Eisen, J. S. and Westerfield, M.** (2001). Zebrafish *smoothed* functions in ventral neural tube specification and axon tract formation. *Development* **128**, 3497-509.