

BIOGRAPHICAL SKETCH			
Provide the following information for the key personnel and other significant contributors in the order listed on Form Page 2. Follow this format for each person. DO NOT EXCEED FOUR PAGES.			
NAME Kenneth D. Poss, Ph.D.		POSITION TITLE	
eRA COMMONS USER NAME kennethposs		Associate Professor of Cell Biology	
EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	MM/YY	FIELD OF STUDY
Carleton College, Northfield, MN	B.A.	06/92	Biology
Massachusetts Institute of Technology, Cambridge, MA	Ph.D.	02/98	Biology
University of Utah, Salt Lake City, UT	Postdoctoral	08/00	Organ regeneration
Children's Hospital, Boston, MA	Postdoctoral	08/03	Organ regeneration

A. Personal Statement

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B. Positions and Honors

Positions

1993-1997 Graduate Student, Laboratory of Susumu Tonegawa, Department of Biology, Massachusetts Institute of Technology

1998-2000 Postdoctoral Fellow, Laboratory of Mark Keating, Department of Human Genetics, University of Utah

2000-2003 Postdoctoral Fellow, Laboratory of Mark Keating, Department of Cardiology, Children's Hospital

2003-2009 Assistant Professor, Department of Cell Biology, Duke University

2009- Associate Professor (with tenure), Department of Cell Biology, Duke University

2009- Early Career Scientist, Howard Hughes Medical Institute

Honors and Memberships

Development Traveling Fellowship (1998); Fellow, Helen Hay Whitney Foundation (1999); Whitehead Scholar, Duke University (2003); Scientist Development Award, American Heart Association (2004); Basil O'Connor Scholar Award, March of Dimes (2005); Pew Scholar in the Biomedical Sciences, Pew Charitable Trusts (2006); Established Investigator Award, American Heart Association (2007); Maren Fellow in Regenerative Biology, Mount Desert Island Biological Laboratory (2010); Julie Martin Mid-Career Award in Aging, American Federation for Aging Research (2010); *BMC Developmental Biology*, Deputy Section Editor and Associate Editor, (2010-present); Member, AHA Study Section (CV Development, Region II Consortium) (2008-2009); Member, NIH CDD Study Section (2011-2017); Ruth and A. Morris Williams Faculty Research Prize, Duke University (2011)

C. Selected Peer-reviewed Publications (from 50 peer-reviewed publications)

1. **Poss, K. D.**, Wilson, L. G., and Keating, M. T. Heart regeneration in zebrafish. (2002). *Science* 298, 2188-2190.
2. Lee, Y., Grill, S., Sanchez, A., Murphy-Ryan, M., and **Poss, K. D.** (2005). Fgf signaling instructs position-dependent growth rate during zebrafish fin regeneration. *Development* 132, 5173-5183.
3. Lepilina, A., Coon, A. N., Kikuchi, K., Holdway, J. E., Roberts, R. W., Burns, C. G., and **Poss, K. D.** (2006). A dynamic epicardial injury response supports progenitor cell activity during zebrafish heart regeneration. *Cell* 127, 607-619.
4. Wills, A. A., Holdway, J. E., Major, R. J., and **Poss, K. D.** (2008). Regulated addition of new myocardial and epicardial cells fosters homeostatic cardiac growth and maintenance in adult zebrafish. *Development* 135, 183-192.

5. Wills, A.A., Kidd, A.R., Lepilina, A., and **Poss, K. D.** (2008). Fgfs control homeostatic regeneration in adult zebrafish fins. *Development* 135, 3063-3070. [PMCID: 2748931](#)
6. Yin, V., Thompson, J. M., Thummel, R., Hyde, D., Hammond, S., and **Poss, K. D.** (2008). Fgf-dependent depletion of microRNA-133 promotes zebrafish appendage regeneration. *Genes and Development* 22, 728-733. [PMCID: 2275425](#)
7. Lee, Y., Hami, D., De Val, S., Kagermeier-Schenk, B., Wills, A. A., Black, B. L., Weidinger, G., and **Poss, K. D.** (2009). Maintenance of blastemal proliferation by functionally diverse epidermis in regenerating zebrafish fins. *Developmental Biology* 331, 270-280. [PMCID: 2821826](#)
8. Lee, Y., Nachtrab, G., Klinsawat, P. W., Hami, D., and **Poss, K. D.** (2010). Ras controls melanocyte expansion during zebrafish fin stripe regeneration. *Disease Models and Mechanisms* 3, 496-503. [PMCID: 2929184](#).
9. Kikuchi, K., Holdway, J. E., Werdich, A. A., Anderson, R. M., Fang, Y., Egnaczyk, G. F., Evans T., MacRae, C. A., Stainier, D. Y. R., and **Poss, K. D.** (2010). Primary contribution to zebrafish heart regeneration by *gata4*⁺ cardiomyocytes. *Nature* 464, 601-605. [PMCID: 3040215](#)
10. Yin, C., Kikuchi, K., Hochgreb, T., **Poss, K. D.**, and Stainier, D. Y. R. (2010). Hand2 regulates extracellular matrix remodeling essential for gut-looping morphogenesis in zebrafish. *Developmental Cell* 18, 973-984. [PMCID: 2908152](#)
11. **Poss, K. D.** (2010). Advances in understanding tissue regenerative capacity and mechanisms in animals. *Nature Reviews Genetics* 11, 710-722. [PMCID: 3069856](#)
12. Kikuchi, K., Holdway, J. E., Major, R. J., Blum, N., Dahn, R. D., Begemann, G., and **Poss, K. D.** (2011). Retinoic acid production by endocardium and epicardium is an injury response essential for zebrafish heart regeneration. *Developmental Cell* 20, 397-404. [PMCID: 3071981](#)
13. Kikuchi, K., Gupta, V., Wang, J., Holdway, J. E., Wills, A. A., Fang, Y., and **Poss, K. D.** (2011). *tcf21*⁺ epicardial cells adopt non-myocardial fates during zebrafish heart development and regeneration. *Development* 138, 2895-2902. [PMCID: 3119303](#)
14. Wang, J., Panáková, D., Kikuchi, K., Holdway, J. E., Gemberling, M., Burris, J. S., Singh, S. P., Dickson, A. L., Lin, Y. F., Sabeh, Werdich, A. A., Yelon, D., MacRae, C. A., and **Poss, K. D.** The regenerative capacity of zebrafish reverses cardiac failure caused by genetic cardiomyocyte depletion. (2011). *Development* 138, 3421-3430. [PMCID: 3143562](#)
15. Nachtrab, G., Czerwinski, M., and **Poss, K. D.** (2011). Sexually dimorphic fin regeneration in zebrafish controlled by androgen/GSK3 signaling. *Current Biology* 21, 1912-1917. [PMCID in progress](#)