

BIOGRAPHICAL SKETCH

Provide the following information for the key personnel in the order listed for Form Page 2.
Follow the sample format for each person. **DO NOT EXCEED FOUR PAGES.**

NAME Downs, Karen M., PhD.		POSITION TITLE	
eRA COMMONS USER NAME Karen_Downs		Professor	
EDUCATION/TRAINING (<i>Begin with baccalaureate or other initial professional education, such as nursing, and include postdoctoral training.</i>)			
INSTITUTION AND LOCATION	DEGREE (if applicable)	YEAR(s)	FIELD OF STUDY
University of Illinois/Chicago	B.S.	1978	Biology
University of Illinois/Chicago	MS, Ph.D	1980,1984	Genetics
University of California/San Francisco	Post-Doc	1984-1988	Molecular Biology
University of Oxford, England	Post-Doc	1989-1993	Mouse Embryology

A. Positions and Honors

1994-2000 **Assistant Professor**
Department of Anatomy
University of Wisconsin-Madison School of Medicine and Public Health

2001-2006 **Associate Professor**
Department of Anatomy
University of Wisconsin-Madison School of Medicine and Public Health

2007-present **Professor**
Department of Anatomy
University of Wisconsin-Madison School of Medicine and Public Health

1984-1987 NIH Postdoctoral Fellowship

1989-1992 Imperial Cancer Research Postdoctoral Fellowship

1990-1991 EMBO Short-Term Fellowship

1992-1993 Fellow, Sir Edward Abraham Cephalosporin Foundation

1993-1994 The British Council Award for Collaborative Research in The Netherlands

2003-2007 Member, NIH Cell and Molecular Integrated Reproduction (CMIR) Study Section

2009-2013 Advisory Board, March of Dimes

B. Select Peer Review Publications

Downs, K.M., Martin, G.M., and Bishop, J.M. (1989). Contrasting patterns of *myc* and N-*myc* expression during gastrulation of the mouse embryo. *Genes Dev.* 3: 860-869.

Downs, K.M. and Davies, T. (1993). Staging of gastrulation in mouse embryos by morphological landmarks in the dissection microscope. *Development* 118, 1255-1266.

Downs, K. M. and Gardner, R. L. (1995). An investigation into early placental ontogeny: allantoic attachment to the chorion is selective and developmentally-regulated. *Development* 121, 407-416.

Downs, K. M. and Harmann, C. (1997). Developmental potency of the murine allantois. *Development* 124, 2769-2780.

Downs, K. M., Gifford, S., Blahnik, M. and Gardner, R. L. (1998). Vascularization in the murine allantois occurs by vasculogenesis without accompanying erythropoiesis. *Development* 125, 4507-4520.

Downs, K. M., Temkin, R., Gifford, S. and McHugh, J. (2001). Study of the murine allantois by allantoic explants. *Dev. Biol.* 233, 347-364.

- Inman, K. E. and **Downs, K. M.** (2006). Brachyury is required for elongation and vasculogenesis in the murine allantois.. *Development* **133**, 2947-2959.
- Ziegler, B. M., Sugiyama, D., Chen, M., Guo, Y., **Downs, K. M., and Speck, N. A. (co-corresponding authors)** (2006). The allantois and chorion, isolated before circulation or chorio-allantoic fusion, have hematopoietic potential. *Development* **133**, 4183-4192.
- Downs, K. M.** (2008). Systematic localization of Oct-3/4 (Pou5f1) to the gastrulating mouse conceptus suggests manifold roles for Oct-3/4 in mammalian development. *Dev. Dyn.*, **237**, 464-474.
- Downs, K. M.**, Inman, K. E., Jin, D. X., and Enders, A. C. (2009). The Allantoic Core Domain (ACD): New insights into development of the murine allantois and its relation to the primitive streak. *Dev. Dyn.* **238**, 532-553.
- Downs, K. M.** (2009) Invited Peer-Reviewed Hypothesis: The enigmatic primitive streak: Prevailing notions and challenges concerning the embryonic body axis. *BioEssays* **31**, 892-902.
- Daane, J. S., Enders, A. C., and **Downs, K. M.** (2010). Mesothelium of the murine allantois exhibits distinct regional properties. *J. Morph.*, in press.

C. Current Research Support.

Feb. 15, 2008-Jan. 31, 2013 RO1 HD 042706 (K. Downs, PI)

"Morphogenesis of the chorio-allantoic placenta II: The Allantoic Core Domain"

June 1, 2009-May 31, 2012 March of Dimes (K. Downs, PI)

"Role of Cuboidal Mesothelium in Formation of the Umbilical Vasculature and Amnion in the Mouse"