



UNIVERSITY OF OREGON

28 November 2005

Dr. Yves Brun, Chair
Systems Biology Faculty Search
Department of Biology, Indiana University
Jordan Hall 142 Street
Bloomington, IN 47405-7107

Dear Dr. Brun,

It is a great pleasure for me to recommend Elizabeth Morin-Kensicki for a position in your Department. I have known Beth since 1988, when she joined the University of Oregon Institute of Neuroscience graduate program and began her work as a student in my lab. Beth was a terrific graduate student, creative, insightful and hard-working, who thought critically both about her work and about the work of others. She was undaunted by technically difficult problems, but rather designed experiments that got directly to the heart of an issue. That she has continued to express these attributes is evident from the new directions she has taken in her postdoctoral work, first in the Magnuson lab and more recently in the Milgram lab.

The main focus of Beth's graduate studies was to understand segmental patterning during embryogenesis of the zebrafish. When she first started in my lab, Beth was interested in whether a specific portion of the somite, the sclerotome, patterned the positions of motor nerves and sensory ganglia, as it has been reported to do in avian embryos. To address this question, Beth first had to understand early development of zebrafish sclerotome, including learning its origin, following the lineages and migration patterns of individual cells, and learning the structures to which those cells contributed. Her superb anatomical studies, at the single cell level, revealed novel features not previously described. For example, she found that single cells within the region giving rise to sclerotome can produce both sclerotome and muscle progeny, and a single sclerotomal cell can contribute progeny to the positions of two adjacent vertebrae. Her exciting experimental studies revealed significant differences in the importance of zebrafish and avian sclerotome in patterning the peripheral nervous system. Beth's studies set a new standard for analysis of the relationship between sclerotome and other cell types and provided new insights into comparative vertebrate embryology. The importance of this work has been recognized by an extremely complimentary review by Faculty of 1000 (<http://www.facultyof1000.com/article/12135923/evaluation>), a world wide web based forum in which practicing scientists evaluate and make recommendations about the current literature.

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For her postdoctoral studies, Beth focused her efforts on understanding the genetic basis of cell fate decisions and patterning during mouse embryogenesis, with a particular emphasis on early cardiovascular development. She isolated a transcriptional regulator/scaffold protein called YAP and she now proposes to tackle its role in development of the cardiovascular system and placenta using the mouse model. For these studies, Beth had to learn an entirely new system, mouse genetics, as well as moving from the kinds of cellular experiments she did in my lab into cutting-edge molecular biology. That she has successfully made this transition is not at all surprising given Beth's prowess in the lab, and particularly evident from her ability to secure independent grant support from the National American Heart Association.

In addition to her expertise in research, Beth is also a fine individual. She was a model lab citizen and extremely well-liked by members of my lab and other closely associated labs. As a graduate student, Beth gave terrific presentations, and I am sure that she will be an outstanding teacher, especially since she has gained significant teaching experience during her tenure as a postdoctoral fellow. I am also certain that Beth will bring to her new position the same excitement, creativity, and insights she brought to her graduate studies. I feel strongly that she has a great future ahead of her in science and I urge you to give her application your most serious consideration.

Sincerely,

A handwritten signature in black ink, appearing to read "J. S. Eisen", with a long horizontal flourish extending to the right.

Judith S. Eisen
Professor of Biology
Director, Institute of Neuroscience