

THE SCRIPPS RESEARCH INSTITUTE

SKAGGS INSTITUTE FOR CHEMICAL BIOLOGY

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9 November 2005

Yves Brun
Systems Biology/Microbiology Faculty Search
Department of Biology
Indiana University
Jordan Hall 142
101 E. 3rd Street
Bloomington, IN 47405-7005

RE: Jamie Bacher as candidate for an assistant professorship

Dear Committee:

I am recommending with enthusiasm Jamie Bacher for a faculty position designed for a young person with interests, accomplishments, and education in evolutionary genetics. Jamie came to my laboratory at The Scripps after completing a Ph.D. with Andy Ellington in Austin and an industrial, biotechnology-related postdoctoral year with Maxygen in California. At Austin he published a series of papers with Ellington on adaptation of unnatural amino acids, evolution of new genetic codes, and nucleic acid selections. At Maxygen he worked on genomic shuffling for adaptation of organisms to new environments, and wrote a number of grant applications for the company. After that, he wanted to explore genetic code ambiguity with our laboratory. Here he focused on the editing domain of aminoacyl tRNA synthetases (enzymes that establish the rules of the genetic code through aminoacylation reactions) and showed that editing-defective strains of bacteria introduce genetic code ambiguity that, in turn, creates global defects in protein function. This work was published in *Proc. Natl. Acad. Sci. USA* with Jamie as first author. The paper received quite a bit of attention, and stimulated discussions with Leslie Orgel at The Salk Institute who was particularly struck by the work described in the paper. He also participated in a large project demonstrating the power and ease of genetic manipulations and engineering in *Acinetobacter* sp. ADP1. This work was recently published. Further, he more recently designed a set of experiments to either expand or shrink the genetic code through manipulations of tRNA synthetases.

Jamie is full of ideas, energy, and commitment to science. He engages people in wonderful conversations about their work, is always helpful and thoughtful to his coworkers, and presents a fine seminar. At least two potential collaborators in Europe have recently contacted him and Jamie immediately tied into their interests and projects, dreaming up new experiments that could be done as a joint efforts. With his background and achievements, and capacity for scientific discussion and collaboration, I think he would be a terrific addition to the faculty of many excellent universities.

Sincerely,

