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December 16, 2003

Biocomplexity Faculty Search Committee
c/o Prof. Rob de Ruyter
Department of Physics
Swain West 117
727 East Third Street
Indiana University
Bloomington, IN 47405-7105
USA

RE: Letter of Recommendation
Sergej V. Aksenov

Dear Prof. de Ruyter:

This letter is in support of an application from Dr. Sergej V. Aksenov for a position in your institution. Sergej work in my group for three years (1999-2002) as a postdoctoral scholar. After exploring several potential topics, he focused his research effort on the mathematical analysis of two-component signal transduction mechanisms in bacteria.

In his attempts to classify and to compare alternative biological designs for these systems, he encountered some ambiguities that depend on the criteria used for the comparisons and the distribution of parameter values. He attempted to resolve these ambiguities with a statistical analysis of the parameters that characterize these systems. As part of this effort, he became very interested in problems of statistical modeling and parameter estimation. One manuscript representing this effort has been published. He planned to apply these statistical approaches to characterize the distribution of kinetic parameters in chemical and biochemical reactions, and then develop a controlled mathematical comparison of alternative designs for the signal transduction cascades.

Before this plan could be executed he had the opportunity to join Dennis Bray's group in England and to explore the modeling of two-component systems involved in bacterial chemotaxis. As often happens, the work on the manuscripts we were writing has slowed considerable as Sergej's move and current work made demands on his time. I have not followed his current work, but I am sure that his references from Cambridge can address this.

Prof. de Ruyter
December 16, 2003
Page 2

Sergej is a bright, hard-working and thoughtful colleague. The problems he picked turned out to be difficult, but he persisted and found new approaches to them. Sergej has a breadth of experience and training that includes mathematics, physics and biology, and his English is excellent. When he left my group he was still a bit unsure of himself, but with the additional postdoctoral experience he has had, I would expect Sergej to develop into a more mature investigator. Again, I am sure that his references from Cambridge can better address this issue.

On a more personal level, Sergej has an excellent sense of humor and he got along with everyone in the laboratory and in the department. He is stable, reliable and scrupulously honest.

If I can be of any further assistance, please do not hesitate to contact me.

Sincerely yours,

Michael A. Savageau

MAS/mmo