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Prof. Rob de Ruyter van Stevenick
Biocomplexity Search Committee
Department of Physics, Swain West 165
Indiana University
Bloomington IN

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Dear Members of the Search Committee:

I am pleased to write in support of **Dr. Dorjsuren Battogtokh**, who has applied for a tenure-track position in Biocomplexity at Indiana University Bloomington.

Dr. Battogtokh joined my research group in November 2002. Since I spent the Spring Semester, 2003, on sabbatical in Budapest, Dr. Battogtokh was left on his own to begin mastering the research we do on eukaryotic cell cycle control. Without much help from me, he carried out a nice bifurcation analysis of a model of cell cycle regulation in budding yeast. At present we are trying to extend this work to a more general model of eukaryotic cell cycle control. I believe we will be successful and that this work will result in a very influential paper.

In addition, Dr. Battogtokh is working on a research project of his own devising that relates to a more general question of the "robustness" of biochemical control systems. His analysis is based on the Monte Carlo search methods for parameter identification that he developed in collaboration with Arnold and Schutler at the University of Georgia before coming to work for me. This work also promises to develop into a novel and groundbreaking paper.

Before Georgia, Dr. Battogtokh was trained deeply in the field of coupled nonlinear oscillators by two giants in that field, A. Mikhailov and Y. Kuramoto. The significance of this field of study is very nicely explained in Steve Strogatz's popular book *Sync* (Hyperion, 2003).

Dr. Battogtokh is an intelligent, creative and independent mathematical physicist. His expertise is quite relevant to the nascent field of Biocomplexity, but he is still in the process of mastering the details of modern molecular/cell biology. His spoken English is fine: he has a good vocabulary and a logical mind, but his accent sometimes gets in the way of easy communication. His written English is also quite good, considering that the English language is so far removed from his mother tongue. In fact, of all my grad students and postdocs who are non-native English speakers, he is one of the better writers of scientific prose.

I do not have enough evidence to comment on Dr. Battogtokh's teaching abilities or his ability to win external funding. Those necessary components of a successful academic career he would have to establish during the tenure-track probationary period. He would need some help from the Department of Physics to get off to a good start in both areas.

We are currently searching to fill two positions in computational molecular/cell biology at Virginia Tech. From my experience on that search committee, I would say that Dr. Battogtokh is a competitive candidate for a position called Biocomplexity. There are actually very few people with extensive experience in this field, and those few will be in high demand. To get started in the field, some Universities will have to take a risk on scientists like Dr. Battogtokh, whose records have obvious plusses and minuses. Given his background and interests, I think Dr. Battogtokh will fit more comfortably and successfully in a Physics Department than in a Biology Department.

Very truly yours,

John J. Tyson
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Co-chief Editor, *Journal of Theoretical Biology*
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