



Department of Physics

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Prof. Rob de Ruyter
Biocomplexity Institute
Indiana University
Swain Hall West 117
Bloomington, IN 47405-7105

Dear Prof. de Ruyter:

I am delighted to write in support of Dr. Ha Youn Lee's application for a faculty position. I believe she would be very well suited for such a position.

I originally got to know Ha Youn when she was a visiting scholar at Ohio State during the fall of 2002, where her husband was a postdoc. I was sufficiently impressed by her background and by her strong letters of recommendation that I nominated her for a prestigious University Postdoctoral Fellowship at Ohio State. She has held that position in my group since September, 2003.

During her time at Ohio State, I have been very impressed with Ha Youn's determination, independence, and high intelligence. She has chosen her own problems and has succeeded in making substantial progress. Our own collaboration has consisted of two pieces of work. The first is a model for T-cell proliferation in cytotoxic T lymphocytes, which has been submitted to Phys. Rev. E. This work is largely due to Ha Youn; my primary contribution has been to make suggestions about the presentation and organization. At present, we are also collaborating on another project on immune response - the goal here is to describe mathematically how immune cells can respond to different challenges from rapidly evolving viruses. My own background is primarily in condensed matter theory, so I have to rely on Ha Youn's ingenuity in developing these models. I have been impressed that she has been able to develop mathematical models which appear to describe the experimentally described responses.

Ha Youn's other work has already attracted substantial attention. For example, her work with M. Deem on sequence space localization in disease response has been the subject of interviews on both NBC and ABC. She has also collaborated extensively with Prof. M. Kardar at MIT, with many important results which are still continuing to emerge. She discussed some of this work (on selective response in a visual cortex) in a talk at Ohio State - I found this work fascinating, especially her ability to show that different artists (e. g. Monet and Seurat) produce mathematically different stimuli in the visual cortex.

Based on her achievements in research to date, and on my experience with her at Ohio State, I think that Ha Youn would make an excellent choice for a faculty appointment in theoretical biology or biophysics, and I am happy to recommend her very strongly.

Yours sincerely,

A handwritten signature in black ink that reads 'David G. Stroud'.

David G. Stroud
Professor of Physics