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Biocomplexity Faculty Search Committee,
c/o Prof. Rob de Ruyter van Steveninck,
Biocomplexity Institute, Indiana University,
Swain Hall West 117, Bloomington, IN 47405-7105

8th December 2003.

Dear Dr.de Ruyter van Steveninck:

It is my pleasure to write this letter of support for Dr. Vlad Toronov, who is applying for a faculty position at your institute. Dr.Toronov had been a postdoc in my laboratory for two years, in charge of our multi-modal imaging project involving functional magnetic resonance imaging and near infrared spectroscopy. This is a relatively new, though rapidly expanding, area of research and I have been very fortunate in having Dr. Toronov spearheading this effort. Most recently, Dr.Toronov has been promoted to a Senior Research Scientist position at the Beckman Institute's Biomedical Imaging Center. He is funded by an NIH RO1 grant, of which he wrote the great majority, and is an excellent grant writer in general. In addition to his knowledge of functional magnetic resonance, Dr. Toronov has an extremely rigorous and thorough knowledge of optical imaging through his previous training with Professor Enrico Gratton. During his time in my group he has supplemented this by learning many of the intricacies of magnetic resonance imaging and the physiology of brain function. The combined skill-set has allowed him to perform some truly unique experiments.

Dr. Toronov has presented his work at a variety of conferences around the country, and the work is always well received. He has a number of peer-reviewed publications which form well-established milestones in our ultimate goal of understanding neurovascular coupling mechanisms during brain activation. This goal requires the use of more than one imaging modality, and Dr. Toronov's recent work has shown that existing models of the fMRI signal can be simplified considerably based on data acquired simultaneously using optical imaging. In particular he has developed an integrated optical sensor that can be used within the magnet, has written a number of software packages that are used to extract different hemodynamic parameters based on both fMRI and optical data, and has used these data to measure a number of hemodynamic parameters during cognitive tasks.

Dr. Toronov has been very active in presenting his data to the functional imaging group at UIUC as a whole, and in volunteering his time to discuss and help out with many of the more technical details. His presentations are well thought-out, clearly presented, and pertinent. He has no trouble accepting suggestions or discussing alternative approaches to those he has proposed. He has also taken responsibility for supervising undergraduate research students within my laboratory.

Dr. Toronov has also been active in grant writing, essentially preparing RO1's and similar grants on his own initiative, and being part of a successful SBIR Phase II proposal with a local company. His writing is of a high standard, and the grants have been cohesive and well-argued. As mentioned earlier, he was the primary contributor to a recent successful three-year NIH RO1 award.

In summary, I believe that Dr. Toronov has all the intrinsic skills and talents to be a successful faculty member. He is intellectually very talented, is enthusiastic in teaching others, and is able to formulate his ideas and results well in the form of papers and grants. His knowledge of basic physics and applied physiology is a rare combination indeed. Please let me know if I can supply any further details,

Sincerely,

A handwritten signature in black ink that reads "A.G. Webb". The letters are cursive and fluid, with a distinct loop for the 'A' and a long tail for the 'b'.

Andrew Webb
Professor