

UNIVERSITY OF CALIFORNIA, DAVIS

BERKELEY • DAVIS • IRVINE • LOS ANGELES • RIVERSIDE • SAN DIEGO • SAN FRANCISCO



SANTA BARBARA • SANTA CRUZ

COLLEGE OF ENGINEERING
DEPARTMENT OF APPLIED SCIENCE
OFFICE OF YIN YEHL
E-MAIL yeh@ucdavis.edu

ONE SHIELDS AVENUE
DAVIS, CALIFORNIA 95616
(530) 752-1924
FAX (530) 752-2444

October 18, 2005

Professor Yves Brun
Systems Biology/Microbiology Faculty Search
Department of Biology
Indiana University
Jordan Hall 142
1001 E 3rd Street
Bloomington, IN 47405-7005

Dear Professor Brun:

This letter is in strong support of Dr. Dat H. Nguyen's application for a faculty position in your department.

I have known Dat for about 9 years, ever since his senior undergraduate project under the direction of one of my colleagues in the Chemistry Department, W.H. Fink. That project was so overwhelmingly superior that Dat was awarded the Citation for the Most Meritorious Undergraduate Achievement in Chemistry in 1996. We presented a paper on that topic entitled, "Simulation Studies of the Dynamic Interface between Ice and a Solution of Antifreeze Glycoprotein." in the Proceedings of the International Symposium on Theoretical Biophysics and Biomathematics. ISTB-97: 100-107 in 1997.

When UCD was fortunately enough to keep Dat as a graduate student in the Chemistry Department, his brilliance further showed in his dissertation work, which is a masterful range of application of modern computational methods to the study of biochemical and biological problems. These works, published as a series of five papers touching on two fields, genomic structure and protein dynamics, span his versatility in computational biology. For that accomplishment, he was awarded the highly coveted Alfred P. Sloan Fellowship to do post-doctoral research under G.M. Church of Harvard.

My interaction with Dat has been exclusively in the area of the biomineralization project where antifreeze glycoprotein/protein functions to modify and limit the growth of ice crystal. In the weekly group meetings during the years of 1998 and 2002, we had many very lively exchanges between the experimentalists of the group and our theoreticians, always well represented by Dat. The key idea of Dat's hypothesis is that biomineralization processes such as AFP preventing ice growth are not exclusively the domain of enthalpic considerations, but that entropic contributions

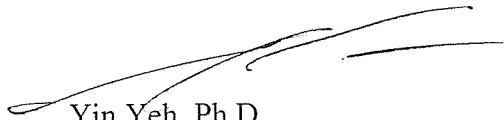
are indeed significant for functionality. This work was published recently (Biopolymers 75:109, 2004), and his fundamental idea is just beginning to be borne out in a number of newer studies. The ability of Dat to stay the course, to maintain his conviction, and to impress others that this new idea is based on sound physical reasoning, typifies the personality of Dat Nguyen.

Dat has sent me a copy of his project proposal accompanying his application for this faculty position. The hypothesis is that the production of transcript of a gene is controlled by motif set in its promoter as well as the transcription factors (TFs) present in the cell. This is again a very novel idea that Dat is exploring, and he aims to use his bioinformatics approach to reach some conclusions. Consistent with his personality, he has the determination to push the idea forward, to make the needed changes and to succeed in the end.

In summary, I believe Dr. Dat H. Nguyen will be an excellent addition to your department. His versatility in basic science and computational techniques, his outspokenness for innovative scientific ideas of his deep conviction, and his innate intelligence will shape his strong influence on all who encounter him. Younger students will also see in Dat someone who is all consuming in his effort to teach with patience and mentor with wisdom.

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

Sincerely yours,



Yin Yeh, Ph.D.

Professor, Department of Applied Science

Associate Director, NSF Center for Biophotonics Science and Technology