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

To the Search Committee:

It is my pleasure to write in behalf of Dr. Richard Henchman who has applied for a faculty position with the Biocomplexity Institute at Indiana University. Richard is currently a postdoctoral fellow and research scientist in Dr. Andy McCammon's laboratory. Our two laboratories work on common recognition systems involved in cholinergic neurotransmission. I first met Richard and learned of his interests in the nicotinic receptor a little over two years ago. Since that time our contacts have become increasingly frequent as his analysis of nicotinic receptor dynamics has increased in its complexity.

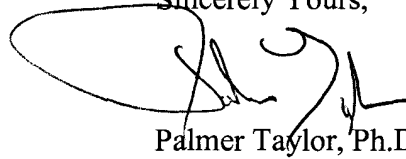
I believe Richard is onto a most interesting problem that may be unique to oligomeric proteins that form ring-like structures around a single axis of symmetry. Using the crystal structure of the pentameric acetylcholine binding protein as a starting template for both the binding protein and the alpha7 receptor, Richard has shown coupled relaxation modes when the original five-fold symmetry is lost, through disparate movements of the individual subunits. The individual subunit interfaces no longer are identical, and this may account for an inequivalence in the five interfacial ligand binding sites. Richard's studies will be an important component in understanding how structural fluctuations govern ion channel and related protein function. Molecular dynamics can now be extended into the same time frame as decay of fluorescence anisotropy and nuclear magnetic resonance relaxation providing essential experimental touchstones in the analysis.

As computational studies extend beyond the bookkeeping aspects of genomics into understanding function of the gene product (the proteome), Richard is well positioned to be a leader in this emerging field. He is very bright and carries his computational studies to a high level of sophistication. In my view, there is also another feature that distinguishes Richard from many other computationalists or bioinformaticians. He is not one of those investigators that approaches the field with sweeping generalizations and computes only to generate numbers. Rather, he takes the time to learn the intimate biology of the system and interacts with the wet bench scientists on the other side of the endeavor. The entire academic unit, extending from students to senior faculty,

profits from this inclusive approach.

In short, I think you will find Richard to be an excellent addition to your program. He is well positioned to interact with several investigators and add an additional dimension to programs of interacting faculty in the biological sciences.

Sincerely Yours,

A handwritten signature in black ink, appearing to be 'Palmer Taylor', written over a large, light-colored oval scribble.

Palmer Taylor, Ph.D.

Sandra & Monroe Trout Chair in Pharmacology  
Dean, School of Pharmacy and Pharmaceutical Sciences  
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