FACULTY OF CHEMISTRY
WARSAW UNIVERSITY
Pasteura 1, 02-093 Warsaw, Poland

<div align="right">Warsaw, December 10, 2003</div>

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

Dear Professor Steveninck,

It is my pleasure to write this letter of reference on behalf of Dr. Marcos Ruben Betancourt who is applying for the tenure-track Assistant Professor position in your Institute. I had the opportunity to follow his work on an everyday basis during his stay in Dr. Jeffrey Skolnick's Laboratory of Structural Genomics of Donald Danforth Plant Science Center in Saint Louis and in SUNY University at Buffalo Center of Excellence in Bioinformatics, where he was employed as a Research Assistant Professor.

During his college education, postgraduate work and junior faculty appointments Dr. Betancourt acquired a very broad knowledge of physics, biophysics, bioinformatics and molecular modeling of biological systems. He is familiar with all types of contemporary computational tools of computational biology, and masters in number of them. Certainly, his knowledge and experience in theoretical biophysics and structural genomics/proteomics are exceptional.

Dr. Betancourt is an author or co-author of 14 publications, majority of them appearing in the high-impact journals. Additional 4 papers are in the final stage of preparation for publication. It is worth to note that these publications reflect Dr. Betancourt participation in several different scientific projects. Dr. Betancourt contributions to these works were always significant, and he played a leading role in most of them. For example, using simplified models of proteins, he provided a very elegant explanation of a chaperon-assisted folding and proposed a systematic framework for computer-aided protein design. His clustering algorithm for analysis of folding trajectories was a mayor component of the unified methodology for protein structure prediction developed in Donald Danforth Plant Science Center and UB Center of Excellence in Bioinformatics. Predictive power of this methodology was successfully tested during the CASP (Critical Assessment of protein Structure Prediction) experiment.

Recently, Dr. Betancourt developed a very innovative intermediate-resolution model of protein structure, intra-protein interactions and dynamics. This model provides an excellent framework for the future research in the area of computer-aided protein design, protein folding kinetics and thermodynamics. The model could be also used as a tool for the *ab initio* protein structure prediction.
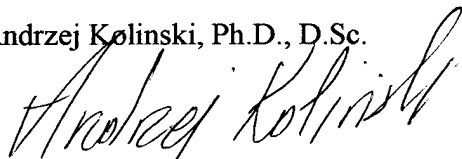
I have no doubt, that Dr. Betancourt is capable to conduct a vigorous, independent, and cutting-edge research in the area of theoretical biophysics and computational biology.

Collaboration and communication skills of Dr. Betancourt are excellent. His scientific presentations are always very clear, easy to understand and interesting. I expect him to be a very good and efficient teacher.

On more personal level Marcos is a joy to work with. Thanks to his knowledge, hard work, and exceptional social skills, his relations with co-workers and collaborators are very good and certainly facilitate the rapid progress of his projects.

I highly support Dr. Betancourt application for the above mentioned faculty position. I hope this letter proves helpful in your evaluation of Dr. Betancourt skills, knowledge and experience. Please, do not hesitate to contact me for any additional assistance in this matter.

Andrzej Kolinski, Ph.D., D.Sc.

Professor of Chemistry
Laboratory of Theory of Biopolymers
(Director)