

M R B NEWS

Featured Faculty: Dr. Ilya Vakser, Ph.D.

Academic Areas:

Bioinformatics/Computational Biology

Research Interests

Modeling protein interactions and structural descriptions of genomes

Educational

Background:

Dr. Vakser earned his PhD in biophysics at Moscow State University in 1989 and received further training at the Weizmann Institute, Washington University, and the Rockefeller University. He served on the faculty of the Medical University of South Carolina as an assistant and associate professor and SUNY Stony Brook as an associate professor. Dr. Vakser joins KU as a full professor, with a joint appointment in the Department of Molecular Biosciences.

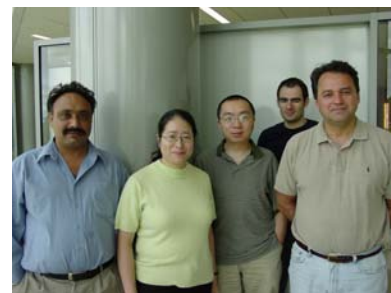
The Center for Bioinformatics carries out fundamental research in the life sciences, develops computer modeling tools, fosters community-wide activities in bioinformatics, and provides education for the new generation of researchers. The research in Dr. Vakser's laboratory focuses on molecular modeling in the context of structural genomics and bioinformatics. The major goals are to develop approaches to the modeling of protein interactions and to design procedures for reconstruction of the network of connections between proteins in a genome. The number of protein-protein interactions in a genome is significantly larger than the number of individual proteins. Moreover, most protein structures will be models of limited accuracy. Thus the structure-based methods for building this network have to be (a) fast, and (b) insensitive to significant inaccuracies of modeled structures. The precision of these methods may be correlated with the precision of the protein structures—lower for less accurate models and higher for more exact models.

The Center for Bio-

informatics long-term goals are to understand the fundamental principles of protein interaction and to create a structure-based description of genomes. The primary current objectives are: development of methodology for an accurate prediction of the structure of protein complexes, docking in genome-wide databases of model protein structures, and development of the integrated environment for docking studies.

Dr. Vakser is an internationally recognized expert in bioinformatics and computational biology and a leader in the field of modeling protein interactions and structural descriptions of genomes. He is the author of many scientific papers resulting from research funded by the National Institutes of Health, National Science Foundation, and other funding agencies. Dr. Vakser combines his research with scientific community-wide activities as an organizer of international conferences and a member of many advisory and steering committees. He is the Director for the Center for Bioinformatics. In addition to Dr. Vakser, Dr. Wonpil Im and Dr. Yang Zhang have joined the

Bioinformatics team. Dr. Wonpil Im of the Scripps Research Institute came to KU in August, 2005. He is an outstanding researcher with top-level credentials in modeling of membrane proteins and physicochemical aspects of molecular biology. He has unique expertise in this critical area of structural bioinformatics and computational biology. Dr. Yang Zhang is a world-class expert in large scale high-throughput protein modeling and structural aspects of protein interactions, his strength in this strategic research area. Dr. Zhang has a joint appointment in the Dept of Molecular Biosciences.



Pictured above: Dr. Vakser's Group

Pictured below: Poster Session

MEET THE POST DOC



Name: Celina (left) and Marina (right) Suarez

Lab Group: Gonzalez Lab

Field of Study: Celina—Paleoecology and Geo Chemistry; Marina—Paleoclimateology

Time at KU: 1 year

Hobbies: Running, Rock Climbing, Biking

Home Town: San Antonio, Texas

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MRB Help Desk 4-1959 or

A Special Thank You to all the Researchers and Staff for making our Poster Session/Ice Cream Social a huge success. It was a great event!

Teri

MRB TIDBITS

SUMMER BUILDING HOURS: For the summer, the front doors will lock at 5:00 p.m.

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**Ann, Carla and Teri all have KUCR credit cards. If you wish to place orders online using any KUCR grants we would be happy to assist you!**  
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Please help our janitors by emptying all liquid out of containers before throwing them in the trash. *This includes soft drinks.*
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Park and Ride should be operational in August. We will **discontinue** our taxi service at that time. If you'd like to know more about schedules and routes, see Teri.  
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When borrowing the MRB cart and/or dolly, please return it as soon as you possibly can to the dock area. Many building occupants utilize these carts for picking up shipments.
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**Lost ID Cards:** If you lose your student ID, go to the **KYOU Portal** and indicate a lost card. **This will instantly prevent your card from being used anywhere including MRB. Replacement cards can be obtained at the card center on the 4th floor of the Kansas Union.**  
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What would you like to see in the newsletter? E-mail your comments to teriherb@ku.edu.
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**We have found someone to take our wooden pallets. Please don't throw them in the trash...the city charges us extra for that.**  
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If you plan to have visitors for a period of time, you can purchase temporary parking permits from parking services.
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KUCR provides travel funds of up to \$750 annually for faculty and staff trips to visit sponsors to discuss funding opportunities. See Teri for details.  
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Congratulations to those of you cheering for Italy in the World Cup!

