



# MINIM



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## CHAIRMAN'S CORNER

### *Technology to Further Enhance Medical Education*

Written by Vikas Nanda

As many of you are aware, the Biochemical Basis of Nutrition course offered to second year medical students by our department was a huge success in 2005 due to a number of innovations by Barbara Brodsky and Yuh-Hwa Wang. For example, students were asked to keep track of their regular diet for a day and then an 'experimental' diet for a second day in order to see how well they were getting the recommended allotment of minerals, nutrients, protein, carbohydrates, etc. The students then analyzed these diets and presented them within small groups. Some of the more interesting cases were then selected for presentation in front of the full class. The course directors saw nutrition as a great way to get students interested in biochemistry because everybody has a personal stake in eating healthy.

This winter, Barbara Yuh-Hwa and I applied for a mini-grant (\$20K) from the Educational Technology Advisory Committee (ETAC) which is part of UMDNJ's Academic Information Technology Advisory Committee. This program, which has been around since 1996, funds projects that attempt to use technology (for example computer software, web sites, video conferencing) to improve medical school education at UMDNJ. We felt that an online resource on nutritional genomics would be a great resource for students in the nutrition course. Currently, there are very few resources in nutritional genomics available to medical schools, especially in the United States. Just as with the dietary analysis project, we felt that nutrition would be a great way to get medical students interested in emerging technologies in systems biology.



We successfully received funding for the development of six online modules written in Flash (a freely available program for creating interactive documents online) that cover topics ranging from a general background to the different 'omics' disciplines, to an overview of online databases for gene polymorphisms, protein expression, disease causing mutations to an in-depth discussion of how certain genetic profiles correlate with diet-related diseases such as diabetes and coronary heart disease. We hope to have students view these modules prior to a class on the topic. During the class, they will participate in a team-based learning exercise, followed by a general class discussion on nutritional genomics. By splitting the subject into smaller modules, we hope that these resources will be of use to other medical school courses that may want to discuss systems biology without the emphasis on nutrition.

If you are interested in the grant program, look at: <http://www.umdj.edu/minigweb/>

They have two grant cycles each year. The deadline for the next one will be sometime in January of 2007. Also on this site is a list of previously successful projects.

## Publications

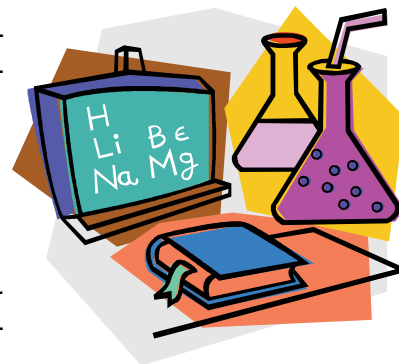
Bupp, K., Sarangi, A. and **Roth, M.J.** (2006) Selection of feline leukemia virus Envelope proteins from a library by functional association with a murine leukemia virus Envelope. *Virology*. **351**:340-348.

Falzon, L., Suzuki, M. and **Inouye, M.** (2006) Finding one of a kind: advances in single-protein production. *Curr. Opin. Biotechnol.* **17**(4):347-52.

Zaidi, M.R., Okada, Y. and **Chada, K.K.** (2006): Misexpression of full-length HMGA2 induces benign mesenchymal tumors in mice. *Cancer Res.* **66**(15):7453-9.

**Habas, R.** (2006): Canonical wnt signaling: an unexpected new player. *Dev. Cell.* **11**(2):138-9.

Ueki, T. and **Inouye, S.** (2006) A novel regulation on developmental gene expression of fruiting body formation in Myxobacteria. *Appl. Microbiol. Biotechnol.* **72**(1):21-9.



### In Press:

**Kozak, M.** (2006) Rethinking some mechanisms invoked to explain translational regulation in eukaryotes. *Gene*.

Hwang, J and **Inouye, M.** (2006) The tandem GTPase, Der, is essential for the biogenesis of 50S ribosomal subunits in *Escherichia coli*. *Mol. Microbiol.*

Donmez, I. and **Patel, S.S.** (2006) Mechanisms of a ring shaped helicase. *Nucleic Acids Res.*

## Departmental News

**Barbara Brodsky** was awarded the Thomas Alva Edison Patent Award from New Jersey Research & Development Council on her collagen matrix.

