

The University of Kansas

COBRE Core C Protein Purification Group

Dr. Michail Alterman, Director

Mission

The KU Protein Purification Group (PPG) operates in parallel with the KU Biochemical Research Services Lab (BRS�) to provide a range of services related to protein expression, purification, analysis and characterization. Together, the BRS� and the PPG provide:

- Free consultation on protein-related research problems;
- Professional service by experienced staff;
- Instruction and access to well-maintained, state-of-the-art equipment for self-use.

Service Fees

At present the PPG is subsidized by the NIH COBRE Center in Protein Structure and Function (<http://www.medchem.ku.edu/COBRE/>). All users of the lab benefit from this subsidy. Investigators at COBRE partner institutions (KU, KUMC, KSU and WSU) are billed for direct costs, while investigators elsewhere are billed for direct plus indirect costs (45.5%).

Service fees are calculated based on three components: (1) consumables are billed at cost including shipping; (2) equipment and laboratory maintenance charges as detailed below; (3) professional staff time is billed at \$28/hour for smaller projects, or on a %-FTE basis for larger projects.

Costs for Protein Purification Services.

Since each case is unique, costs will be quoted individually, based on discussions with the client and the above general fee schedule. Please consult with Dr. Michail Alterman at the KU Structural Biology Center on West Campus, 2121 Simons Drive, Lawrence, KS 66047 (malterman@ku.edu; 785-864-4166).

Equipment Use and Maintenance Fees

1. Constant Systems Hydraulic Cell Disrupter. Like a French Press, only better (and easier to use). Use of this amazing appliance is FREE to all (after initial instruction in its use); costs are supported by COBRE-PSF.

2. ÅKTA FPLC and ÅKTA Purifier. Both systems perform fast, automated preparative-scale chromatography of proteins on a wide selection of support media with variable wavelength UV-Vis detection and continuous monitoring of pH and conductivity for gradient control. The Purifier system can also handle small scale analytical chromatography. (For even smaller scale protein mixture analysis the BRSL has very good HPLC instrumentation).

ÅKTA use fees: \$10.00/run or \$25/day if you provide your own columns; \$15.00/run or \$35/day if you use our columns. In the latter case the column will have been tested to demonstrate performance before you use it, and you must perform a similar test to demonstrate performance after you use it. You will be charged one run for this performance test unless the test fits in under the daily rate.

3. BiaCore 3000 surface plasmon resonance detector for protein-ligand interactions. This is a sensitive, sophisticated instrument for detecting and quantitating the binding of proteins to small molecules without using radioactivity or spectroscopy (in the ordinary sense). It is capable of furnishing on-rates, off-rates and equilibrium constants for reversible binding reactions.

BiaCore use fees. \$5.00/ hr for trained users through 6/30/05. \$10/hr after 7/1/05. User provides his/her own chips (or buys them through Core C).

BiaCore Training. The "Getting Started" kit from Biacore provides all the supplies for hands-on training of three individuals for \$1500. For one person the cost is \$500. In addition there is a staff time charge of \$100 per person for the training.

Acknowledgement of Support from COBRE and PPG Staff.

All users and clients of the COBRE Core C (PPG) facilities must agree to acknowledge in their publications and presentations the support of the NIH COBRE in Protein Structure and Function and NIH grant RR-017708. In addition, all users and clients agree to recognize appropriately the contributions of PPG staff (co-authorship or acknowledgement by name, depending on the nature of the contribution), in accordance with published policies of the KU-Molecular Structures Group. For details see the MSG website at www.msg.ku.edu/~msg/.