

**IIGB Forum: 6/14/07
Business Plan Key Elements**

Table A. 2006-07 Equipment/Maintenance:

Equipment	Initial Request	Consideration/ Review	Amount	IIGB Contribution	Purchase Date	PO #
A. Eppendorf Mastercycler Thermal Cycler (control panel incl.) (PCR)	Yoongi Choi	N. Raikhel	\$7,283.90	\$7,283.90	09/14/2006	NG10047449
B. Marine Reef International Hitachi Scanning Electron Tabletop Microscope (SEM)	David Carter	IIGB Faculty, N. Raikhel	\$64569.19	\$64569.19	10/27/06	OA10055131
C. Hoshizaki Ice Machine (replacing old and broken machine)	Yoongi Choi	N. Raikhel	\$3,225.26	\$3,225.26	10/27/2006	NG10055986
D. Eppendorf Mastercycler Gradient Cycler (PCR)	Yoongi Choi	N. Raikhel	\$5,536.89	\$5,536.89	11/07/2006	NG10057264
E. GenePix 4000 Scanner	Xuemei Chen/ Katherine Borkovich	IIGB Faculty	\$47,749.94	\$47,749.94	12/19/2006	NG10065745
F. Circular Dichroism Instrument	Cynthia Larive	N. Raikhel	\$80,000	\$10,775.00	2/7/2007	FC10075636
G. Affymetrix Malaria Mosquito Micro Array Machine	Peter Atkinson	IIGB Advisory Committee	\$240,000	\$20,000.00	3/15/2007	ITF
H. Refrigerator/Freezer; Fisher Isotemp Flammable-Materials storage	Yoongi Choi	N. Raikhel	\$1,849.70	\$1,849.70	03/21/2007	NG10082228
I. Labconco Purifier Horizontal Clean Bench; w/ Vibration Table	Yoongi Choi	N. Raikhel	\$6,004.76	\$6,004.76	03/21/07	NG10082228
J. Arcturus XP System: Laser Capture Micro-dissection Microscope	David Carter	IIGB Faculty	\$133,365.69	\$83,365.69	4/19/2007	NG10089409
Equipment Service Contracts/Repair:						
Steris Corporation Service Agreement-Autoclave (1yr)	Yoongi Choi	N. Raikhel	\$9,532.92	\$1,211.86	11/06/06	NG10057769
Service Agreement-Typhoon Microarray (1 yr)	Yoongi Choi	N. Raikhel	\$10,107.00	\$10,107.00	01/17/07	NG10069549
Service Agreement – GeneChip Scanner (3 yr)	Yoongi Choi	N. Raikhel	\$29,565.00	\$29,565.00	01/30/2007	NG10069614
Perkin Elmer Life & Analytical Sciences Multiprobe II Robot Service Contract (1 yr)	Yoongi Choi	N. Raikhel	\$9,564.00	\$9,564.00	2/16/2007	OA10076280
Multiprobe II Instrument Repair/Upgrade	Yoongi Choi	N. Raikhel	\$15,982.53	\$15,982.53	04/16/2007	NG10084495
Beckman Coulter Biomek Liquid Robot Service Contract: (1 yr)	David Carter	N. Raikhel	13,413.00	\$13,413.00	4/1720/07	NG10088821
TOTALS			\$688,216.86	\$328,991.86		

B. Pending Orders:

- a. Biacore X100: \$25k IIGB Contribution (total cost: \$143,725)

In response to faculty requests and upon consultation with the Advisory Committee, IIGB plans to contribute to the purchase of a new Surface Plasmon Resonance instrument, the Biacore X100, to be housed within the IIGB. The Biacore relies on real-time detection of protein interactions on a sensor chip, allowing sensitive measurements of protein and small molecule binding kinetics without the need for chemical conjugation of probes that might interfere with the function of the proteins being studied. In contrast to other more common instruments for measurements of molecule interactions that only measure equilibrium binding affinity, the Biacore is also able to measure distinct on- and off-rate kinetics, which provides much more detailed information on the interactions between molecules.

- b. Upgrade to QSTAR MS: est. \$50k

IIGB will upgrade the exciting QSTAR Mass Spectrometer (proteomics core) so that it can be used for LC-MS/MS experiments. These upgrades will require an HPLC, a new ionization source and software for processing the large datasets generated by LC-MS/MS experiments. The biological motivation for this upgrade stems from two main areas of interest: chemical genomics and metabolomics. Many labs have identified and are characterizing the effects of new biologically active small molecules and LC-MS/MS is currently the most sensitive method for unambiguously identify small molecules and their metabolites in biological specimens. When characterizing the effects of a molecule in new tissues or organisms, it is critical to know if the molecule is accumulating and is stable in these tissues. Without this data, interpretation of results is severely limited; LC-MS can be used to address this issue. Additionally, LC-MS/MS is invaluable for identifying the small-molecule metabolites and for characterizing the detoxification processes that often limit bioactivity of compounds that emerge from small molecule screens.

Another area of interest to many labs is the use metabolites as markers of biological processes (metabolomics). LC-MS/MS is the technical foundation of metabolomics. The software package that will be added onto the QSTAR is designed for metabolite identification and biomarker discovery and thus is critical to the applications of the LC-MS in both chemical genomic and metabolomic applications.

- c. Keen Hall Security System: est. \$20k

A proposal has been drafted in consultation with the UC Lock Shop and Police Department for two systems: a Hirsch door access entry system with card activated locks and a GE Storesafe digital recorder with 10 Sony camera surveillance systems. These systems will provide the appropriate balance of security, accessibility and coverage, enabling access to be controlled and a means of tracking when security has been breached.

C. Research and Training Awards

Type	Amount	Target	Review	Relevant Dates
Travel Awards	\$3,000/yr	Genetics, Genomics and Bioinformatics Graduate Students	N. Raikhel	Transferred March 2007 to GGB Graduate Program
CEPCEB Stipends for International IGERT Graduate Students	\$60,000/yr for two students for two years	International ChemGen IGERT Graduate Students	N. Raikhel	Start Date: Summer 2007; Recruitment underway for next year
Pilot Interdisciplinary Research Projects	\$150,000 (three awards at \$50k ea)	IIGB Faculty	IIGB Advisory Committee	Request for Proposals: 3/21/07; Proposals Due: July 2, 2007

D. Seminar Support

Type	Amount	Target	Review	Relevant Dates
24 th Symposium in Plant Biology: "Gene Silencing: The Biology of Small RNAs and the Epigenome"	\$5,151.37	IIGB Faculty, Postdocs and Graduate Students	N. Raikhel	Jan. 18-20, 2007
CDVR/Mir Mulla symposium	\$4,000	Campus and External researchers	N. Raikhel	May 29-31, 2007
CEPCEB Seminar: BPSC 252 - Special Topics in Botany	\$15,000*	CEPCEB Faculty, Postdocs and Students	N. Raikhel	Fridays at Noon
CDVR Seminars	\$8,000	CDVR Faculty, Postdocs and Students	N. Raikhel	Tuesdays at Noon
IIGB Distinguished Lecture	\$8,000	IIGB Faculty, Postdocs and Students	N. Raikhel	Fridays at Noon
*exception, normally \$8k				