

INSTRUCTIONS: Please submit four (4) copies of this review to the UCR Office of Research, University Office Building Room 200 and (1) copy to the College Dean as appropriate. For information about the process for preparing an annual report, please contact the Office of the Vice Chancellor for Research at 951.827.5535.

A1. GENERAL NARRATIVE: Please provide a short statement highlighting the main activities in which the center has engaged during the review period and how they relate to the mission, goals and objectives of the research center and to the challenges/issues/problems central to the work of the research center. How did the center contribute to UCR's graduate and undergraduate teaching programs? What activities did the center provide to UCR's external communities?

MAIN ACTIVITIES RELATED TO MISSION, GOALS, AND OBJECTIVES:

Instrumentation Facilities at Keen Hall – Workshops:

The IIGB is a virtual Institute organized around four functional Core Facilities that provide services in the areas of Genomics, Microscopy, Proteomics and Bioinformatics. These facilities are housed in close proximity within the same building, and are spearheaded by qualified Academic Coordinators. This arrangement provides researchers with the ability to access diverse technologies and expertise at one location which serves to foster interdisciplinary research. The arrangement also allows for broader coordination of instrumentation and expertise maximizing synergism while minimizing duplication of resources on campus. Of the 120 labs utilizing the Core Facilities, a significant proportion utilize the services of at least two Cores. The anticipated completion of a new Genomics building in February 2009 and the move of the Bioinformatics division will help to enhance the infrastructure necessary to continue to promote interdisciplinary research.

Workshops in all four instrumentation facilities are conducted regularly and are typically free of charge. All workshops and training sessions are advertised on the IIGB homepage and under their respective areas under the homepage calendar at: <http://genomics.ucr.edu/>. During fiscal year 2007-08, the following number of workshops was held:

Microscopy: 18 Workshops

Training is available regularly and on demand to students, postdocs, technicians and faculty members who want to use the resources of the Microscopy Core in their research. Training is sufficient to get new users started on using the featured equipment; refresher tips are provided at no extra charge to trained users. Sessions typically run for three hours and involve both a theory presentation and hands-on demonstration. Class sizes are kept between 4 and 10 to allow sufficient hands-on activity. Participants are encouraged to bring examples of their own experimental needs, to discuss the feasibility of different approaches, and to note any particular experimental problems or questions they would like addressed.

Bioinformatics: 6 Workshops

The bioinformatics core runs a very successful bioinformatics workshop program on the analysis of genomes, array data, programming in R, clustering, data mining, cheminformatics, and parallel computing on clusters. These events are attended by students and researchers from all life science, statistic, computer science and engineering departments at UCR. About 10% of the participants are from external universities and biotech companies across California. Frequently, the facility receives requests to teach these courses in other states in the US or in Europe. The extensive online material for these courses has been downloaded by several thousand scientists from international locations, and the instructors have even received an offer to publish this material in an educational book series. The online manuals for these courses can be downloaded from this site: <http://faculty.ucr.edu/tgirke/manuals.htm>. In addition to the IIGB homepage, the Bioinformatics workshop schedule is available at: <http://faculty.ucr.edu/tgirke/Workshops.htm>.

Proteomics: 9 Workshops

A free monthly one-day workshop is available on the first Tuesday of each month to students, postdocs, technicians and faculty members, and includes a general lecture, an operational demonstration and time for individual practice on the equipment. Session topics cover the proteomics applications of the MALDI-MS/MS system (Q-STAR, ABI). Enrollment is restricted to four people per session to allow sufficient hands-on activity. Trainees gain operational skills in using the MALDI-MS/MS and database-dependent tools to study cellular proteins with both PMF and MS/MS analyses of proteolytic peptides. In addition to the usage in protein identification, the Q-STAR system can also be a choice for studies of protein complexes, protein modifications, and protein-protein interactions. This workshop is intended to help trainees become independent experimentalists using the proteomics approach. Postdocs and students that have been trained through workshop have increased 50% from year-to-year.

Genomics: 8Workshops

Although high throughput tasks such as DNA sequencing, Affymetrix services, and FACSaria are offered as services only, the Genomics Core offers expertise in experimental design and trouble-shooting as necessary. Free organized training is available for qPCR, which is utilized broadly, two to three times per year or as needed depending upon demand. The Genomics Core also conducts training on microsatellite marker analysis and new Affymetrix products and services. In preparation of, and upon delivery of, the new Illumina (Solexa) Genome Analyzer II DNA Sequencer, training was conducted both individually and in an introductory workshop presented to IIGB researchers. Individuals may reserve time with Core personnel for specific problems or more in-depth training, typically free of charge. For instruments with a lower rate of usage (VersArray, QPix, Luminometer, Hydroshear), or are simple to operate (Nanodrop) or have many legacy users (Typhoon), training is available on an individual basis.

External IIGB Scientific Advisory Board (SAB): Established 2007; First Site Visit 11/2/07

The Institute for Integrative Genome Biology (IIGB) established a Scientific Advisory Board in 2007 of four members charged with providing advice and scientific expertise to the IIGB Director. The focus for the 2007-08 year was a review of the IIGB Core Facilities, and the first SAB members (below) were selected based on their expertise in bioinformatics, microscopy, proteomics, and genomics technologies.

- Jose Luis Riechmann – California Institute of Technology
- Joseph A. Loo – University of California, Los Angeles
- Dave Ehrhardt – Carnegie Institution of Washington
- Joseph R. Ecker – The Salk Institute for Biological Studies

Background statistics and information of Core Facilities usage, training, personnel and resources covering a two-year period was provided to the SAB. The site visit was held November 2, 2007, and the report can be accessed on the IIGB website at: http://genomics.ucr.edu/about/reports/IIGB-SAB_Report_final.pdf. The following IIGB researchers and students were involved in presentations regarding the facilities (tours) or research projects utilizing the facilities' instrumentation and/or services:

SAB TOURS:

Genomics Core: Glenn Hicks – IIGB Academic Administrator/Professional Researcher, Botany & Plant Sciences
Barbara Walter (Affy, FACS) – Staff Research Associate

Robotics: Andrew Defries – Graduate Student, Plant Biology (ChemGen IGERT Program)

Bioinformatics: Thomas Girke – Director of Bioinformatics Facilities, Asst. Researcher, Botany & Plant Sciences

Proteomics: Songqin Pan – Academic Coordinator, Center for Plant Cell Biology
Georgia Drakakaki – Visiting Asst. Researcher, Botany & Plant Sciences

Microscopy: David Carter – Academic Coordinator, Center for Plant Cell Biology
Michelle Brown (SEM) – Cell, Molecular & Dev Biology Graduate Student (ChemGen IGERT Program)
April Agee (Atto) – Laboratory Asst., Botany & Plant Sciences

SAB SPEAKERS:

Bioinformatics: Sean Cutler – Asst. Professor, Botany & Plant Sciences
Julia Bailey-Serres – Professor, Botany & Plant Sciences
Cynthia Larive – Professor, Chemistry

Proteomics: Ernesto Martinez – Assoc. Professor, Biochemistry
Yinsheng Wang – Assoc. Professor, Chemistry

Microscopy: Zhenbiao Yang – Professor, Botany & Plant Sciences
Glenn Hicks – IIGB Academic Administrator/Professional Researcher, Botany & Plant Sciences

Genomics: Venugopala Reddy – Asst. Professor, Botany & Plant Sciences
Timothy Close – Professor, Botany & Plant Sciences
Jing-Kang Zhu – Professor, Botany & Plant Sciences

IIGB Forums (1/25/07, 6/14/07, 12/13/07, 5/29/08) [see Attachment A]:

The IIGB Director has worked to stimulate and maintain interest in the Institute by regularly providing a format for the collective exchange of ideas and concerns, and by involving members in activities integral to IIGB's mission. Upon assuming her role as IIGB Director, Dr. Raikhel decided to hold forums open to all IIGB faculty, and it was determined by faculty at the first IIGB Forum held on January 25, 2007 that these meetings for all IIGB members would be scheduled twice a year. The first forum was widely attended by IIGB members and the format was informal to welcome and encourage discussion. The second meeting was Thursday, June 14, 2007. At that meeting discussions covered a range of topics from maintenance of current genomics sequencing services (a Specialist in the Genomics Core moved to UC Berkeley) to new sequencing technologies (Illumina and 454). As a follow-through from that meeting, a series of seminars by companies marketing these parallel sequencing technologies was organized by the IIGB Academic Administrator to educate, discuss and coordinate faculty interests toward technologies of value at UCR. A forum was held December 13, 2007 covering the results of these informative sessions, as well as the Interdisciplinary Grants requested and awarded to PIs within the Institute, the Scientific Advisory Board site visit held November 2, 2007 and subsequent report, and pending recruitments. At this forum it was determined by the 43 IIGB faculty present that the Institute should pursue avenues for acquiring one of these new technologies [Illumina (Solexa), Roche (454) and ABI (SOLID)] in order to maintain and excel in the fields of genomics, bioinformatics, and systems biology as well as to recruit high caliber faculty to initiate a competitive medical school at UCR. Funds were subsequently obtained for the purchase of an Illumina (Solexa) Genome Analyzer II DNA Sequencer (\$500,000) and two 1.0 FTE bioinformatics programmer/analysts for two-years to assist faculty in the interpretation and analysis of sequencing data output. On May 29, 2008 an IIGB Forum was held to overview planned services, the anticipated launch timeframe and prices related to the Illumina Genome Analyzer and to provide a platform for discussion and suggestions.

Seminar Activities:

The Institute allocated \$8k/yr in 2007-08 to each of the IIGB-affiliated Centers below for seminar-related expenses with the purpose of stimulating the research environment. In order to attract the best attendance, secure optimal venues, and promote maximal educational/research benefits, IIGB, CEPCEB and IGERT seminars were scheduled on a rotating basis on Fridays. In this manner, the chances of inundating campus researchers and students with several seminars throughout a given week are minimized. All seminar activities below are advertised on the IIGB website (www.genomics.ucr.edu). The following faculty members coordinated seminar activities within the Institute during 2007-08:

IIGB Seminar Committee

IIGB seminars are devoted to systems biology and high-throughput genomics across all organisms. This seminar series features prominent speakers in the field and is often announced, when appropriate, as an IIGB Distinguished Lecture.
Frances Sladek - (Chair) Dept. of Cell Biology and Neuroscience
Larry Li - Dept. of Botany and Plant Sciences
Jiayu Liao - Dept. of Bioengineering

CEPCEB Seminar Committee

Established in 2002, the CEPCEB seminar series (BPSC252: Special Topics in Botany) allows prominent speakers as well as internal faculty and postdocs the opportunity to present and discuss noteworthy research discoveries in the fields of plant cell and molecular biology and genomics.
Xuemei Chen (Chair) - Dept. of Botany and Plant Sciences
Venu Reddy - Dept. of Botany and Plant Sciences
Tao Jiang - Computer Science and Engineering Dept.

CEPCEB Noel T. Keen Lecture and Award Committee

Established in 2002, the Center for Plant Cell Biology (CEPCEB) scholarship award fund sponsors an annual Special Lecture and Awards Ceremony where an invited leading scientist presents his or her work and where postdocs, graduate students and undergraduate students receive public recognition of their accomplishments. The Noel T. Keen Lecture has become a top-notch lecture series. Previous lecturers have included: Fred Ausubel (Harvard), Jeffrey Dangl (University of North Carolina at Chapel Hill), Chris Somerville (Stanford), Joanne Chory (Salk Institute), Bernhard Palsson (University of California, San Diego) and Gloria Coruzzi (New York University).
Harley Smith (Award Committee Chair) – Dept. of Botany and Plant Sciences

Institute for Integrative Genome Biology
Fiscal Year 2007-08

Xinping Cui -Dept. of Statistics
Yinsheng Wang - Dept. of Chemistry
David Carter - CEPCEB Microscopy Core
Marc Surpin – Dept. of Botany & Plant Sciences (Assoc. Research Plant Cell Biologist)
James Kim -Cell, Molecular and Developmental Biology Graduate Student/IGERT Student

CDVR Seminar Committee

Started in 2005, the Center for Disease Vector Research (CDVR) continues to bring leading as well as young researchers together to discuss seminal discoveries related to molecular biology and the genomics of disease vectors.

Peter Atkinson - (Chair) Dept of Entomology
Karine Le Roch - Dept. of Cell Biology and Neuroscience
Shou-wei Ding - Dept. of Plant Pathology

Faculty Luncheon Committees

Early in 2006, CEPCEB initiated a program of quarterly luncheons for principal investigators within the Center for the purpose of learning more about each other's research interests and promoting interdisciplinary interaction. Each quarter, a different member presents a talk about his/her research, which is followed by discussion regarding potentially interesting and novel collaborations. Turnout has consistently been high for these meetings.

Due to the success of CEPCEB Luncheons, the CDVR introduced their own luncheon meetings in 2007. Below are the individuals coordinating both Luncheons, which are funded by the Institute.

CEPCEB PI Luncheon Committee:
Zhenbiao Yang – Dept. of Botany & Plant Sciences

CDVR PI Luncheon Committee:
Peter Atkinson – Dept. of Entomology

IIGB Interdisciplinary Research and Training Awards

To foster interdisciplinary collaborations within the Institute and develop promising technologies that could subsequently enable private sector development by licensing or the establishment of start-up companies, IIGB offered limited project support to 2-3 projects at \$50,000 each to groups of at least two IIGB members. An odd-numbered review committee was appointed by the IIGB Director and proposals were evaluated on the basis of:

- the quality of science
- the multi- and inter-disciplinary nature of the proposed work
- the combination of basic and translational science
- the possibility of translating the innovation to an application within a reasonable time

The Request for Proposals was emailed March 21, 2007 to all IIGB investigators with a due date of July 2, 2007. In addition to the internal panel, all proposals were reviewed by external and internal reviewers. On September 26, 2007, the following three projects were funded at the level of \$50,000 each, with funds available effective November 1, 2007:

1. Wenwan Zhong (Asst. Professor, Chemistry) and Hailing Jin (Asst. Professor, Plant Pathology & Microbiology)
Title of Project: High-throughput Screening of siRNA Expression Using Rolling Circle Amplification

2. Sean Cutler (Asst. Professor, Botany and Plant Science) and Michael Pirrung (Professor, Chemistry)
Title of Project: Enlightening Chemical Genetics with Libraries of Fluorescently Tagged Small Molecules

3. Frances Sladek (Professor, Cell Biology) and Tao Jiang (Professor, Computer Science & Engineering)
Title of Project: Development of a High Throughput Assay for Transcription Factor Binding

The IIGB Interdisciplinary Research & Training Award Review Panel consisted of the following:

Bailey-Serres, Julia – Professor, Botany & Plant Sciences
Chen, Xuemei – Assoc. Professor, Botany & Plant Sciences
Ethell, Iryna – Assoc. Professor, Biomedical Sciences
Hicks, Glenn – Academic Administrator, Inst. For Integrative Genome Biology
Liu, Xuan – Professor, Biochemistry

In addition to external reviewers, participating internal IIGB reviewers were:

Atkinson, Peter – Professor, Entomology
Borkovich, Katherine – Professor, Plant Pathology & Microbiology
Carson, Monica – Assoc. Professor, Biomedical Sciences
Cheng, Quan (Jason) – Asst. Professor, Chemistry
Ding, Shou-Wei – Professor, Plant Pathology & Microbiology
Eulgem, Thomas – Asst. Professor, Botany & Plant Sciences
Federici, Brian – Professor, Entomology
Gill, Sarjeet – Professor, Cell Biology & Neuroscience
Larive, Cynthia – Professor, Chemistry
Rodgers, Victor – Professor, Bioengineering
Spindler, Stephen – Professor, Biochemistry
Springer, Patricia – Assoc. Professor, Botany & Plant Sciences
Traugh, Jolinda – Professor, Biochemistry
Yang, Zhenbiao – Professor, Botany & Plant Sciences

CENTER'S CONTRIBUTIONS TO UCR'S GRADUATE AND UNDERGRADUATE TEACHING PROGRAMS:

Genetics, Genomics, and Bioinformatics (GGB) Graduate Student Travel Awards

In 2007 and 2008, the Institute for Integrative Genome Biology allocated to the Genetics, Genomics and Bioinformatics Graduate Program \$3,000 of IIGB funds towards graduate student travel to conferences or other scientific meetings. Students who were presenting posters or talks were eligible, and the three recipients of this award are listed below. Meeting announcements, posters, abstracts and letters of support from thesis directors were submitted by students vying for consideration of these awards.

GGB Travel Award Recipients:

Eugene Bolotin
Robert Hannon
Janet Garcia
Hagop Atamian

Proposed Business Track in Science Graduate Programs

Under the leadership of the Director, the Institute for Integrative Genome Biology is currently exploring the development of a business component to the graduate programs in the biological sciences in order to prepare our students for more successful careers and make UCR's PhD program(s) more attractive and competitive. This new track is in collaboration with the Anderson Graduate School of Management (AGSM), and AGSM Dean Stewart is excited and committed to this prospect. A pilot program will start by offering a total of two MBA courses in Marketing and Finance, in Winter and Fall 2009. The graduate programs in Genetics, Genomics and Bioinformatics (GGB) and Plant Biology have been selected to participate in this pilot program.

Over the past few months, GGB and Plant Biology students were surveyed for their interest in the joint business/science program. Overwhelming support for the program was received from both groups of graduate students. A student application form to participate in the program has been distributed explaining the criteria for the selection. A total of six students (three from each graduate program) will be selected to participate this year. Once the program is developed, AGSM will offer a certificate program to participating students.

OUTREACH ACTIVITIES:

IIGB Facilities Tours:

In an effort to showcase Keen Hall's advanced tools in bioinformatics, microscopy and imaging, proteomics and genomics and potentially assist in recruitment efforts of top-notch faculty and graduate students, IIGB's academic staff regularly participates in conducting tours to a wide range of groups. During fiscal year 2007-08, 19 tours (for 150 individuals) were conducted of the core facilities.

New IIGB Website (March 2008):

The importance of advertising IIGB activities, accomplishments and services through a user-friendly website was identified among IIGB faculty as a priority at the IIGB Forum held January 25, 2007. A new site, spearheaded by Jocelyn Brimo with the assistance of a part-time programmer, was launched in March 2008 with the goal of serving the interests and needs of faculty, students, and other users who were represented in IIGB-related websites. The website contains current information regarding the Institute and offers the following features:

- allows viewers to browse faculty and academics by name, research area, college/division, department, and/or center/institute, promoting interdisciplinary activity and easy accessibility to research interests
- provides HubMed link to members' publications, which can be exported directly to EndNote and other bibliographic programs
- allows viewers to submit events directly onto the site for posting on the IIGB homepage (pending editor approval)
- provides in-depth information regarding instruments and services offered at Keen Hall, increasing usage of core facilities and expertise, as well as information for proposal submissions
- provides comprehensive list of resources related to research interests, IIGB, UCR and the UC system

IIGB Folders/Brochures:

In addition to a renovated IIGB website, a large fold-out brochure with a pocket for inserting fact sheets, business cards and postcards was developed. The brochure/folder contains general information about each of the Core Facilities and IIGB-related Centers, with a pocket for obtaining current information on relevant Centers, programs and announcements of interest. To reduce costs and maintain currency, the fact sheets, business cards and postcards can be updated continuously and reinserted. The folder has been broadly used for advertising and recruitment purposes.

A2. RESEARCH NARRATIVE: Please summarize any significant trends (new research directions, significant increases or decreases in sponsored funding, changes in outreach efforts, etc.) during the review period.

The acquisition of the following instruments by IIGB has vastly changed the nature of research being conducted at UCR.

Illumina (Solexa) Genome Analyzer II DNA Sequencer (\$70,000 funded by IIGB) and HP Server

In order to compete and excel in the fields of genomics, bioinformatics, and systems biology as well as to recruit high caliber faculty to initiate a competitive medical school at UCR, faculty at the IIGB Forum on December 13, 2007 unanimously expressed the need for new cutting-edge sequencing capabilities on campus. Since UCR scientists outsource this work to other institutions or the instrument manufacturers themselves, the dollar costs for these services are very high and the waiting period prolonged (3 months or more). In addition, although UCR is known for its strength in the area of small RNA biology, for instance, research in this field as well as others are handicapped since this sequencing technology is absolutely critical for new discoveries and funding. In response to multiple inquiries by UCR faculty regarding the possibility of acquiring this technology in-house, IIGB distributed questionnaires to identify potential usage. A significant number of faculty responded that they would utilize this platform to support their research. The inaugural 2007-08 Scientific Advisory Board also clearly documented the need for this technology in their site visit report evaluating the Core facilities on November 2, 2007. Based on discussions stemming from the December 13, 2007 IIGB Forum, a petition was signed by 37 IIGB faculty and sent to our administration requesting advanced sequencing technology as well as two bioinformaticians to interpret the huge volume of data generated. On Jan 17, 2008, the IIGB Director met with administrators and obtained a very generous \$500,000 toward the purchase

Institute for Integrative Genome Biology
Fiscal Year 2007-08

and \$177,772 towards support for 2.0 FTE informaticians for 2 years. In addition to the Genome Analyzer, an HP Server was also purchased for analysis of the huge volume of data produced.

Committees were formed on January 18, 2008 to secure grant funding for a second next generation sequencing instrument and to develop a plan for continued funding of the informatics positions. The following individuals are in charge of targeting faculty on campus to benefit from and use deep sequencing technology, and writing a grant to secure funds for the purchase of a complementary second instrument with different capabilities:

Peter Atkinson – Professor, Entomology
Xuemei Chen – Associate Professor, Botany & Plant Sciences
Timothy Close – Professor, Botany & Plant Sciences
Sarjeet Gill – Professor and Chair, Cell Biology & Neuroscience
Len Nunney – Professor, Biology

This will be accomplished during the next year or so. The following group will work to identify long-term strategies for funding the programmer positions after the initial two-year period.

Thomas Girke – Assistant Professor and Director of Bioinformatics Facilities, Botany & Plant Sciences
Stefano Lonardi – Associate Professor, Computer Science & Engineering
Morris Maduro – Assistant Professor, Biology
Jian-Kang Zhu – Professor, Botany & Plant Sciences

The Illumina sequencer is a highly advanced next generation sequencer that permits billions of bases of DNA sequence to be obtained from a single experiment versus current technologies that permit only thousands of bases per run. It is permitting scientists worldwide to sequence complete genomes quickly, leading to nothing short of a revolution in the ability to understand gene expression and global changes in chromatin modifications. The scientific literature in very high profile journals (Science, Nature, Cell, etc.) documents this explosion of knowledge. These new sequencing technologies have crucial applications in the discovery of disease mechanisms, the establishment of new diagnostics as well as broad applications in the plant sciences and agriculture.

The number of deep-sequencing projects has continued to increase almost exponentially in the past 12 months. Thus, the purchase of a deep-sequencing machine by IIGB was a wise decision.

Supercomputer in Bioinformatics Core (funded by IIGB and IIGB Bioinformaticians)

In Spring 2008, the Bioinformatics Instrumentation Core Facility switched from a single 64 CPU cluster to two clusters: a new one with 256 CPUs and the old one with 64 CPUs. The new system, named “Biocluster,” is currently the most powerful supercomputer available at UCR. Purchased for \$280,000, this resource is available to campus researchers, allowing computationally-intensive research projects to be conducted on campus that previously could not be considered. With this system, the computing time of large-scale genome analysis, drug discovery and simulation studies for many research projects is significantly reduced.

With the new bioinformatics faculty hires and the purchase of a new cluster, the Bioinformatics Core is now experiencing a 400% increase in CPU usage on their clusters. During the week, the CPU usage of these clusters is between 80-100%. This increase can be attributed to the fact that their system can now easily compete - based on its per CPU performance - with national supercomputing facilities. This allows UCR researchers to conduct research much faster because they can avoid the long waiting time on national systems. In addition, the system is highly customized for the specific research needs at UCR. There is an increased number of researchers utilizing small molecule and molecular modeling applications on these clusters. Two of the power labs, working in this area, are from the chemistry department.

Biacore X100 (\$25,000 funded by IIGB; additional IIGB Faculty and Grant from Norris Foundation)

A Biacore X100 system was added to the Proteomics Core Facility March 2008. It has been used by several labs on campus to study protein-protein and ligand-receptor interactions with real-time kinetics. It has shown great applications particularly in peptide-induced immune responses in mammalian systems as well as toxin-receptor binding kinetics related to vector-borne infection diseases. It is expected to soon find applications in other areas such as chemical

Institute for Integrative Genome Biology
Fiscal Year 2007-08

biology and plant stress/defense responses when the time comes to screen small chemical ligands and effectors of signaling pathways. It will be also useful in the work of protein engineering.

Institute for Integrative Genome Biology
Fiscal Year 2007-08

A3. ORGANIZATIONAL AND MANAGEMENT STRUCTURE: Have any changes been made to the organizational or management structure of the center during the review period? If so, please describe.

New Members:

Anandasankar, Ray – Entomology
Bazhenov, Maksim – Cell Biology & Neuroscience
Chang, Chia-en Angelina – Chemistry
Deolalikar, Anil – Economics
Ethell, Iryna – Biomedical Sciences
Liu, Renyi – Botany & Plant Sciences
Mueller, Leonard – Chemistry
Lyubovitsky, Julia – Bioengineering
Roy-Chowdhury, Amit K. – Electrical Engineering
Zandi, Roya – Physics & Astronomy

Academic Administrator (eff. 6/07):

To increase coordination and oversight of the Cores, an Academic Administrator, Glenn Hicks was hired (effective June 1, 2007; salary mostly funded by the College). This position, along with two Ph.D.-level Academic Coordinators in microscopy and proteomics, one Assistant Professor/Facility Director in Bioinformatics, the technical staff in the Genomics Core, and the IIGB Director, investigate and encourage interdisciplinary research and training opportunities.

External IIGB Scientific Advisory Board (SAB)

In 2007 the Institute for Integrative Genome Biology (IIGB) established a Scientific Advisory Board consisting of four to five members whose membership is initiated and/or renewed annually based upon specific aspects of the Institute selected for review. The role of the IIGB Scientific Advisory Board (SAB) is to meet annually and provide advice and scientific expertise to the IIGB Director. The SAB will be informed of changes in the Institute, the progress of IIGB's research and pilot projects and be asked to provide feedback and ideas intended to critically and constructively evaluate and accelerate achievements as they relate to IIGB objectives.

The focus for the 2007-08 year was a review of the IIGB Core Facilities, and the first SAB members (below) were selected based on their expertise in bioinformatics, microscopy, proteomics, and genomics technologies.

- Jose Luis Riechmann – California Institute of Technology
- Joseph A. Loo – University of California, Los Angeles
- Dave Ehrhardt – Carnegie Institution of Washington
- Joseph R. Ecker – The Salk Institute for Biological Studies

The site visit was held November 2, 2007, and the report can be accessed on the IIGB website at:
http://genomics.ucr.edu/about/reports/IIGB-SAB_Report_final.pdf.

Three (2) Faculty Positions in Bioinformatics/Computational Biology:

Recruitment for three faculty members specializing in Bioinformatics and Computational Biology was approved September 2006 and completed April 2008. The first candidate, Chia-en (Angelina) Chang from the Howard Hughes Medical Institute at UC San Diego, accepted an offer and started January 2008 in the Chemistry department. Dr. Chang is interested in developing visualization softwares for analyzing genomic data, cluster analysis of co-regulated genes and microarray analysis of alternatively spliced transcripts. A second successful faculty recruit was Maksim Bazhenov from The Salk Institute for Biological Studies in San Diego, who started July 2008. Dr. Bazhenov works on neuro-physiological data modeling and will be part of the Cell Biology & Neuroscience department. Jason Stajich, a Miller Research Fellow from UC Berkeley, will start his appointment in the Plant Pathology & Microbiology department. The new hires will move to the new Genomics Building in February 2009.

.50 FTE Bioinformatics Programmer/Analyst [funded by IIGB]:

At the request of faculty attending the IIGB Forum dated June 15, 2007, a half-time Bioinformatics Programmer/Analyst was hired and funded by IIGB to assist PIs in the analysis of expression array data and other bioinformatics needs on a fee basis. This position was filled by Junmei Liu from 12/4/07 through 3/31/08.

1.0 FTE Laboratory Assistant [funded by IIGB Sales/Service revenue]

A lab assistant was recruited in the IIGB Genomics Core to provide research support in the areas of genomics and gene

Institute for Integrative Genome Biology
Fiscal Year 2007-08

expression by assisting in plasmid prep and DNA sequencing projects. This position is supported by sales and service income. Clay Clark was hired eff. 6/25/07.

1.0 FTE Academic Specialist (replacement):

As a replacement for Yoon Gi Choi who departed 7/1/07, a college-search was conducted for an Academic Specialist in the IIGB Genomics Core to oversee and conduct day-to-day sequencing, gene expression services, and training and to work with the Academic Administrator to enhance services. David Fang was hired eff. 2/19/08.

Institute for Integrative Genome Biology
FY 2007-08

B.1: PARTICIPATING PERSONNEL								
UCR FACULTY (Senate Members)			Type of Participation (check all that apply)					
Name	Payroll Title	Affiliation	PI/Co-PI on Center Sponsored Award	IIGB Advisory Committee Member	Speaker at Center Event	Author on Center Publication	Other	(Description of Other)
Adams, Michael E.	Professor	Entomology/Cell Biology and Neuroscience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Equipment CMTE
Allen, Michael F.	Professor, Chair	Plant Pathology and Microbiology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Atkinson, Peter W.	Professor, CDVR Director	Entomology	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	CDVR Dir; IIGB Proposal Reviewer; College Search Cmte Chair-IIGB Spec; IIGB Forum Participant
Bailey-Serres, Julia	Professor	Botany & Plant Sciences	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	SAB Site Visit Speaker; IIGB Proposal Panel Reviewer; IIGB Forums
Beckage, Nancy E.	Professor	Entomology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Borkovich, Katherine	Professor	Plant Pathology & Microbiology	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Proposal Reviewer, REU Speaker, CEPCEB PI Luncheons; IIGB Forum Participant
Borneman, James	Professor	Plant Pathology and Microbiology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Carson, Monica J.	Assoc. Professor	Biomedical Sciences	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Proposal Reviewer
Chen, Wilfred	Professor	Chemical & Env Engineering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Chen, Xuemei	Assoc. Professor	Botany & Plant Sciences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Grant Sequencer Cmte; IIGB Proposal Panel Reviewer; IIGB Spec Search Cmte; IIGB Forums
Cheng, Quan	Asst. Professor	Chemistry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	IIGB Proposal Reviewer
Close, Timothy	Professor	Botany & Plant Sciences	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	SAB Speaker; Grant Sequencer Cmte; SAB Site Visit Speaker
Cooksey, Donald A.	Donald A.	Plant Pathology and Microbiology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cui, Xinping	Asst. Professor	Statistics	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Member, Oral Cmte
Cutler, Sean	Asst. Professor	Botany & Plant Sciences	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	ChemGen IGERT Assoc Dir, Speaker Host; IIGB Interdisc. Award
DeFea, Kathryn	Asst. Professor	Biomedical Sciences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Ding, Shou-Wei	Professor	Plant Pathology and Microbiology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Proposal Reviewer; IIGB Forum Participant
Ellstrand, Norman C.	Professor, BIC Director	Botany & Plant Sciences	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	BIC Dir,
Ethell, Iryna	Assoc. Professor	Biomedical Sciences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Proposal Panel Reviewer
Eulgem, Thomas	Asst. Professor	Botany & Plant Sciences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Proposal Reviewer
Federici, Brian A.	Professor	Entomology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Proposal Reviewer

Institute for Integrative Genome Biology
Fiscal Year 2007-08

UCR FACULTY (Senate Members)			Type of Participation (check all that apply)					
LName	FName	Affiliation	PI/Co-PI on Center Sponsored Award	IIGB Advisory Committee Member	Speaker at Center Event	Author on Center Publication	Other	(Description of Other)
Ghosh, Subir	Professor	Statistics	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	College Search Cmte, Bioinf.
Gill, Sarjeet S.	Professor	Cell Biology & Neuroscience	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Proposal Reviewer; IIGB Forums
Girke, Thomas	Asst. Professor, Dir of Bioinformatics Facilities	Botany & Plant Sciences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Hayashi, Cheryl Y.	Assoc. Professor	Biology	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Jiang, Tao	Professor	Computer Science & Eng	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	PhD Guidance Cmte of GGB students (w/IIGB advisors); IIGB Interdisc. Award
Jin, Hailing	Asst. Professor	Plant Pathology & Microbiology	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	IIGB Interdisc. Award; IIGB Forums
Judelson, Howard S.	Professor	Plant Pathology and Microbiology	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	IIGB Forums
Kaloshian, Isgouhi	Assoc. Professor	Nematology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	GGB Graduate Program
Larive, Cynthia	Professor	Chemistry	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	IIGB Proposal Reviewer; SAB Site Visit Speaker; IIGB Forums
Le Roch, Karine	Asst. Professor	Cell Biology & Neuroscience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Li, Bai-lian (Larry)	Professor	Botany & Plant Sciences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	College Search Cmte Chair, Bioinformatics
Liao, Jiayu	Asst. Professor	Bioengineering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Liu, Xuan	Professor	Biochemistry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Proposal Panel Reviewer
Lo, David	Professor	Biomedical Sciences	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	PI for Biacore Instrument Grant-Awarded by Norris Foundation
Lonardi, Stefano	Assoc. Professor	Computer Science & Engineering	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Lord, Elizabeth M.	Professor	Botany & Plant Sciences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Lyubovitsky, Julia G.	Asst. Professor	Bioengineering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Martinez, Ernest	Assoc. Professor	Biochemistry	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	SAB Site Visit Speaker; IIGB Forums
Maslov, Dmitri	Assoc. Professor	Biology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Morikis, Dimitrios	Professor	Bioengineering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Morton, Thomas	Thomas	Chemistry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Mulchandani, Ashok	Professor	Chemical & Environmental Engineering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Ng, James	Asst. Professor	Plant Pathology and Microbiology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Norman, Anthony W.	Presidential Chair, Distinguished Professor	Biochemistry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Nothnagel, Eugene A.	Professor	Botany & Plant Sciences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Nunney, Leonard	Professor	Biology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Grant Sequencer Cmte.

Institute for Integrative Genome Biology
Fiscal Year 2007-08

UCR FACULTY (Senate Members)			Type of Participation (check all that apply)					(Description of Other)
LName	FName	Affiliation	PI/Co-PI on Center Sponsored Award	IIGB Advisory Committee Member	Speaker at Center Event	Author on Center Publication	Other	
Ozkan, Mihri	Assoc. Professor	Electrical Engineering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Pirrung, Michael	Professor, Presidential Chair	Chemistry	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	IIGB Interdisc. Award
Raikhel, Alexander S.	Professor	Entomology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Raikhel, Natasha V.	Dist. Professor, IIGB/CEPCEB Dir.	Botany & Plant Sciences	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Dir, IIGB and CEPCEB
Rao, A.L.N.	Professor	Plant Pathology and Microbiology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Reddy, Venugopala G.	Asst. Professor	Botany & Plant Sciences	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Ray, Anandasankar	Asst. Professor	Entomology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Rodgers, Victor	Professor	Bioengineering	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Proposal Reviewer
Roose, Mikeal L.	Professor, Divisional Dean of Agriculture and Natural Sciences	Botany & Plant Sciences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Participant, interdisc grant; IIGB Forums
Roy-Chowdhury, Amit	Asst. Professor	Electrical Engineering	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Schultz, Jerome	Dist. Professor, Chair	Chemical/Env Engineering	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Sladek, Frances	Professor	Cell Biology & Neuroscience	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Seminar Cmte. Chair; IIGB Interdisc. Award; IIGB Forums
Spindler, Spindler	Professor	Biochemistry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Proposal Reviewer
Springer, Patricia S.	Assoc. Professor	Botany & Plant Sciences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	REU Program Dir, IIGB Proposal Reviewer
Stouthamer, Richard	Professor	Entomology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Sutch, Richard	Dist. Professor, BIC Assoc. Dir.	Economics	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	BIC Assoc. Director
Talbot, Prudent	Professor	Cell Biology & Neuroscience	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Traugh, Jolinda A.	Professor	Biochemistry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Proposal Reviewer
Walker, Sharon	Asst. Professor	Chemical/Environmental Engineering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Walling, Linda	Professor, Divisional Dean of Life Sciences	Botany & Plant Sciences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	College Searches, Bioinf/IIGB Specialist; IIGB Forums
Walton, William	Professor	Entomology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Wang, Yinsheng	Assoc. Professor	Chemistry	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SAB Site Visit Speaker
Xu, Guanshui	Professor	Mechanical Engineering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Xu, Shizhong	Professor	Botany & Plant Sciences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Yang, Zhenbiao	Professor	Botany & Plant Sciences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Proposal Reviewer
Zandi, Roya	Asst. Professor	Physics and Astronomy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Zhong, Wenwan	Asst. Professor	Chemistry	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	IIGB Interdisc. Award
Zhu, Jian-Kang	Professor	Botany & Plant Sciences	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Speaker Host; SAB Site visit Speaker; IIGB Forums

Institute for Integrative Genome Biology
Fiscal Year 2007-08

For Other Academics: Please list professional researchers, post-docs, visiting scholars, adjunct professors, academic specialists, research associates, academic coordinators, and academic CE appointees who actively participated in Center activities, e.g., PI on a sponsored project administered by the Center, member of a Research Team, speaker at a Center Conference/Event, author on a Center publication, etc.

OTHER ACADEMICS		Type of Participation (check all that apply)						(Description of Other)
Name	Payroll Title	Affiliation	PI/Co PI on Center Sponsored Award	Center Advisory Committee Member	Speaker at Center Event	Author on Center Publication		
Bhat, Prasanna	Postdoc	Botany & Plant Sciences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Bromley, Robin	Staff Research Associate	Entomology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Carter, David	Academic Coordinator, Microscopy	Center for Plant Cell Biology	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Equipment Committee; IIGB Forum Participant
Choi, Yoongi	Specialist	Inst. For Integrative Genome Biol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Clark, Clay	Laboratory Assistant	Inst. For Integrative Genome Biol	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Fang, David	Specialist	Inst. For Integrative Genome Biol	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Hicks, Glenn	Academic Administrator	Inst. for Integrative Genome Biology/Botany & Plant Sciences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Search Cmte, IIGB Grant Panel Reviewer
Hsiung, Bor-Kai	Postdoc	Biomedical Sciences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Li, Liande	Postdoc	Plant Pathology & Microbiology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Pan, Songqin	Academic Coordinator, Proteomics	Center for Plant Cell Biology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Park, Gyungsoon	Asst. Specialist	Plant Pathology & Microbiology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Rugman-Jones, Paul	Postdoc	Entomology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Stevenson, Rebecca	Staff Research Associate	Botany & Plant Sciences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Yuan, Xiaoli	Postdoc	Entomology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
Zaragoza, Melinda	Postdoc	Botany & Plant Sciences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	IIGB Forums
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Institute for Integrative Genome Biology
Fiscal Year 2007-08

ADVISORY COMMITTEE MEMBERS

For Advisory Committee members, please indicate name, title, and affiliation. Below the table, list dates of meetings held for the period under review and attach a copy of the agenda for each meeting listed.

2007-08 Internal IIGB Advisory Committee:

Formulated in 2006, the IIGB Advisory Committee is comprised of faculty representing each of the major research areas within the Institute (vector biology, mammalian biology, plant biology, biology, bioengineering, social/ethical considerations). The IIGB Advisory Committee serves as the primary consultative body for the director and provides input regarding daily operational issues, expenditures exceeding \$60k and the short- and long-term goals of the Institute. Committee members are approached on a regular basis by the director and have agreed to respond to all general and pressing issues within 12 hours via email whenever possible. The committee also meets on an as-needed basis, as determined by the Director or advisory committee members.

<i>Name</i>	<i>Title</i>	<i>Affiliation</i>	<i>Period of Service on Advisory Committee</i>
Atkinson, Peter	Professor	Entomology	2006-08
Borkovich, Katherine	Professor	Plant Pathology & Microbiology	2006-08
Carson, Monica	Assoc. Professor	Division of Biomedical Sciences	2006-08
Gill, Sarjeet	Professor, Chair	Cell Biology & Neuroscience	2006-08
Hayashi, Cheryl	Assoc. Professor	Biology	2006-08
Schultz, Jerome	Distinguished Professor	Bioengineering	2006-08
Sutch, Richard	Distinguished Professor	Economics	2006-08

2007-08 External IIGB Scientific Advisory Board:

<i>Name</i>	<i>Title</i>	<i>Affiliation</i>	<i>Period of Service on Advisory Committee</i>
Ecker, Joseph R.	Staff Member	The Salk Institute for Biological Studies	1 year
Ehrhardt, Dave	Professor	Carnegie Institution of Washington, Stanford University	1 year
Loo, Joseph A.	Professor	Dept. of Biology Chemistry, UCLA	1 year
Reichmann, Jose Luis	Senior Research Associate in Biology Director, Millard and Muriel Jacobs Genetics and Genomics Laboratory	California Institute of Technology	1 year

B.2: IIGB PUBLICATIONS

No maximum page limit. Provide information only for fiscal year under review. List only those publications resulting from programs administered through the Center and those authored jointly as a result of collaborations between or among Center participants. Use suggested format below. Use full citation and arrange alphabetically by author under the Center's major research programs.

AGRICULTURAL GENOMICS:

Walia, H., Wilson, C., Condamine, P., Ismail, A.M., Xu, J., **Cui, X., Close, T.J.** (2007) Array-Based genotyping and expression analysis of barley cv. maythorpe and salt-tolerant golden promise. *BMC GENOMICS*. 8:87.

Bhat, P., Lukaszewski, A., **Cui, X.,** Xu, J., Wanamaker, S., Svensson, J.T., Wanamaker, S., **Waines, G., Close, T** (2007) Mapping translocation breakpoints using a wheat microarray. *Nucleic Acids Research*. 35(9), 2936-2943.

Das, S., **Bhat, P.,** Sudhakar, C., Ehlers, J., Wanamaker, S., **Roberts, P., Cui, X., Close, T.J.** (2008) Detection and validation of single feature polymorphisms in cowpea (*Vigna unguiculata* L.Walp) using a soybean genome array. Accepted on February 21, 2008 by BMC Genomics. 14 msp

BIO/CHEMINFORMATICS:

Fu, Q., P. Ruegger, E. Bent, M. Chrobak, and **J. Borneman** (2007) PRISE (PRImer SElector): Software for Designing Sequence-Selective PCR Primers. *Journal of Microbiological Methods* 72:263-267.

Y.Wu, L.Liu, **T.Close, S.Lonardi**, "Deconvoluting BAC-gene relationships using a physical map", *Journal of Bioinformatics and Computational Biology*, vol.6, no.3, pp.603-622, 2008.

Y. Wu, P. Bhat, **T. J. Close, S. Lonardi**, "Efficient and accurate construction of genetic linkage maps from the minimum spanning tree of a graph", *PLOS Genetics*, 2008 (in press)

GENE REGULATION:

C. Yang, E. Bolotin, T. Jiang, F.M. Sladek, and E. Martinez (2007) Prevalence of the initiator over the TATA box in human and yeast genes and identification of DNA motifs enriched in human TATA-less core promoters. *Gene* 389, pp. 52-65.

F. Faiola, Y. Wu, **S. Pan, K. Zhang**, A. Farina, **E. Martinez** (2007). Max is acetylated by p300 at several nuclear localization residues. *Biochemical Journal* 403(3):397-407.

MAMMALIAN SIGNALING:

Sun, K., V. Montana, K. Chellappa, Y. Breliet, D. Moras, Y. Maeda, V. Parpura, B.M. Paschal, **F.M. Sladek** (2007) Phosphorylation of a conserved serine in the nuclear receptor DNA binding domain alters intracellular localization *Molecular Endocrinology*, 21: 1297-1311.

Y. Maeda, T. Suzuki, X. Pan, G. Chen, **S. Pan**, T. Bartman, J.A. Whitsett (2008). Cul2 is required for the activity of hypoxia-inducible factor and vasculogenesis. *JBC* 283(23):16084-16092.

PLANT CELL BIOLOGY:

Chary SN, **Hicks GR, Choi YG**, Carter D, and **Raikhel NV** (2007) Trehalose-6-phosphate synthase/phosphatase regulates cell shape and plant architecture in Arabidopsis. *Plant Physiol* 146: 97-107.

PLANT DISEASE RESISTANCE:

Bhattacharai KK, Xie QG, Mantelin S, Bishnoi U, **Girke T**, Navarre DA, **Kaloshian I** (2008) Tomato susceptibility to root-knot nematodes requires an intact jasmonic Acid signaling pathway. *Mol Plant Microbe Interact*: 21, 1205-1214.

PROTEIN BIOCHEMISTRY:

Ling, J., Liao, H., Clark, R., Wong, M.S.M., and **Lo, D.D.**, Structural constraints for the binding of short peptides to Claudin-4 revealed by Surface Plasmon Resonance. *J. Biol Chem.*, ePub September 9, 2008.

B.4: EVENTS SPONSORED BY CENTER

Please list events sponsored by Center during the period under review.

EVENTS SPONSORED BY CENTER					
Title of Event	Type of Event	Date of Event	Number of Attendees	Names of Featured Speakers	Title and Affiliation of Featured Speakers
Inaugural IIGB SAB Meeting	IIGB/CEPCEB Instrumentation Facilities Site Visit/Speaker Symposium	November 2, 2007	15	<p>TOURS: Genomics Core: Glenn Hicks/Barbara Walter (Affy, FACS) Robotics: Andrew Defries (IGERT Program) Bioinformatics: Thomas Girke Proteomics: Songqin Pan, Georgia Drakakaki Microscopy: David Carter/Michelle Brown (SEM); April Agee (Atto)</p> <p>SPEAKERS: Bioinformatics: Sean Cutler/Julia Bailey-Serres, Cynthia Larive Proteomics: Ernesto Martinez, Yinsheng Wang Microscopy: Zhenbiao Yang/Glenn Hicks Genomics: Venugopala Reddy/Timothy Close/Jing-Kang Zhu</p>	IIGB Faculty, Technical Staff and Graduate Students
IIGB Seminars	Seminars		~25	See Attachment B	
IIGB Forums	Forums	December 13, 2007 May 29, 2008	~40	Natasha Raikhel Glenn Hicks David Fang	IIGB/CEPCEB Director IIGB Academic Administrator IIGB Genomics Core Specialist
CDVR PI Luncheons	Meetings	Please see CDVR Annual Report			
5th International Workshop on Insect Transgenesis and Genomics (CDVR)	Symposium (CDVR)	June 15-19, 2008		<p>Organizers: Peter Atkinson (IIGB) Alfred M. Handler David O'Brochta Sarjeet Gill (IIGB)</p>	<p>Professor, Entomology, UCR UCSA Agricultural Research Service University of Maryland Biotechnology Institute Professor, Cell Biology & Neuroscience, UCR</p>

B.5: SPACE UTILIZED BY CENTER

Fiscal Year Period:

Center Name:

Please provide explanations or descriptions as required. Changes to number of square feet, space configuration, or space use should be described.

Space Description	Square Feet
Meeting Space	285 (2018 Keen Hall)
Office Support	451*
Research	3891**
Special Use	
Miscellaneous	
Total Assigned Space	2830

* Offices assigned to IIGB/CEPCEB

** Core Instrumentation Facilities: Lab/Offices belonging to Genomics.

B.6: SPONSORED FUNDING PROPOSALS AND AWARDS

Fiscal Year Period:

Center Name:

On the first table below, please list all current (new and continuing) awards for the fiscal year under review. This list should include only those projects where the intellectual content was a result of Center collaborations, not awards that were made possible simply because of the availability of Center facilities and/or equipment.

Current Awards

Proposal Title	PI	Co-PIs	Funding Agency	Period of Funding	Total Award	1 st year Award
DNA Demethylation and Transcriptional Gene Silencing	Jian-Kang Zhu		NIH	5/1/2008-4/30/2012	\$1,456,495	\$301,229
Calcium Signaling and Ion Homeostasis Regulation	Jian-Kang Zhu		NIH	5/1/2008-4/30/2012	\$1,401,157	\$301,638
BE/CNH: Spatiotemporal Dynamics of Engineered Crop Genes: Natural and Human Constraints and Consequences	Norm Ellstrand	Bai-Lain Larry Lee; Alan McHughen; Richard Sutch	NSF	9/1/2004-8/31/2009	\$1,545,268	\$1,545,268
Enlightening Chemical Genetics with Libraries of Fluorescently Tagged Small Molecules	Sean Cutler	Michael Pirrung	IIGB	11/1/2007-10/31/2008	\$50,000	\$50,000
High-throughput Screening of siRNA Expression Using Rolling Circle Amplification	Wenwan Zhong	Hailing Jin	IIGB	11/1/2007-10/31/2008	\$50,000	\$50,000
Development of a High Throughput Assay for Transcription Factor Binding	Frances Sladek	Tao Jiang	IIGB	11/1/2007-10/31/2008	\$50,000	\$50,000

Institute for Integrative Genome Biology

Fiscal Year 2007-08

B.7: NON-SPONSORED RESOURCES

Fiscal Year Period:

Center Name:

Sources of Funding	Amount
Funding Provided by UCR Institutional Sources	\$332,771
	\$25,290
Funding Provided by UC System Sources	
Funding from Endowments or Gifts	\$775
Funding from Other Sources (Please List)	\$500,000
	\$95
	\$858,931

IIGB Forum
June 15, 2007: 1:00pm
Bourns A265

–AGENDA–

I. IIGB Business Plan [N. Raikhel]

Approved by IIGB Advisory Committee

Submitted May 15, 2007 to CNAS Interim Dean Don Cooksey

Purpose – describe the following for the next two years:

- Goals and objectives;
- How Institute making strides to reduce carry forward;
- Management structure;
- Methods of generating funds to conduct a first-class operation.

Key elements to be displayed on IIGB website

Key Elements (see attached)

Equipment

Purchases Maintenance Agreements

Pending Orders

Training underway for new instruments; see David Carter

New Services

Chemical Genomics

Proposal to provide access to chemical library screening; rate structure being investigated

Research and Training Awards

Special notes:

IIGB Pilot Interdisciplinary Research Projects

Request for Proposals on IIGB website

Deadline for submissions – 7/2/07

CEPCEB Stipends for International IGERT Graduate Students

Student recruitment currently underway for next year

Seminar Support

Special notes:

CEPCEB Special Award Ceremony and Noel Keen Lecture

2/9/2007: Featured Speaker: Bernard Palsson, Professor of Bioengineering and Adjunct Professor of Medicine at UCSD

1/18/08: Speaker: Gloria Coruzzi, Carroll and Milton Petrie Professor, Dept of Biology at New York University

CEPCEB PI Luncheons: Quarterly

Purpose: To learn more about members' research interests and promote interdisciplinary interaction and collaboration

CDVR Seminar Series:

Active: Seven speakers in 2007

Focus: Malaria, virus pathogenesis and transmission

CDVR Monthly PI Luncheons

Underway eff. May 2007

Symposium on Vector Biology, Ecology and Control: Celebration of 50 Years of Research, Teaching and Service of Professor Mir S. Mulla

5/29 – 6/1/2007: at downtown Mission Inn

Helped launch CDVR and IIGB

II. Recruitments/Hires: [N. Raikhel

Bioinformatics and Computational Biology (3 positions)

Scope: 93 Applicants, 9 interviewed

Status:

Xiaohui Xie, Broad Institute of MIT and Harvard University

DECLINED: Accepted another position

Angelina Chang, UCSB Howard Hughes Medical Institute

PENDING: Negotiations underway: Chemistry

Haixu Tang, Indiana University-Bloomington

PENDING: Negotiations underway: Biochemistry and Botany & Plant Sciences

Maxim Bazhenov, The Salk Institute for Biological Studies

PENDING: Negotiations underway: Cell Biology & Neuroscience

Position Requests:

Cluster of 4 Recruitments in Systems Biology

Academic Administrator

HIRED: Glenn Hicks, eff. 5/1/07

Role: Oversee Core facilities, especially Genomics Core.

IIGB Genomics Core Specialist

Yoon Gi Choi leaving eff. 7/1/07 – spread word to anyone interested in applying

Position Announcement: Distributed

Search Committee Chair: Peter Atkinson

IIGB Genomics Core Lab Assistant III:

HIRED: Clay Clark, eff. 6/25/07

III. Marketing

IIGB Folders: newly printed

Folders advertise core instrumentation services/facilities and have pockets and slots for fact sheets and business cards. Folders designed generically to last indefinitely; fact sheets provide more specific information on Centers and Programs and can be modified regularly.

IV. Committees:

External Scientific Advisory Board

Yearly membership of 4-5 people

Focus for first year: Evaluation of Core facilities

Membership renewed/determined by review needs of Institute

Will help advertise IIGB

Natasha will work on SAB member selection and invitations

V. Questions/Concerns/Comments

Julia Bailey Serres:

Inquired about possibility of IIGB establishing an Internal Core Review Committee. Natasha would like to start with External Scientific Advisory Board first and determine need for internal committee based on their recommendations.

Sarjeet Gill:

Expressed concern over changing genomics technologies and advocated purchase of 454 sequencer. Some members indicated need to hire bioinformatics person to assist with analysis of data; others mentioned the high maintenance costs for equipment and for running experiments. Natasha will investigate potential interest/usage of instrumentation.

Peter Atkinson:

Commented that the Genomics Building is slated for completion February 2009, and that miniature lab models will be available Sept/Oct 2007.

V. Next Forum Date?

IIGB Forum
December 13, 2007: 2:00pm
Bourns A265

–AGENDA–

I. IIGB Interdisciplinary Research Awards

Purpose: To foster interdisciplinary collaborations within the Institute and develop promising technologies

Criteria:

- the quality of the science
- the multi- and inter-disciplinary nature of the proposed work
- the combination of basic and translational science
- the possibility of translating the innovation to an application within a reasonable timeframe

Request for Proposals: March 21, 2007

Due Date for Submission: July 2, 2007

Internal Review Panel Meeting: September 17, 2007 (reviews by Internal and External Reviewers)

Project Period: 11/1/07 – 10/31/08

Award Amount: \$50K for each Project

Recipients:

1. **PIs:** Wenwan Zhong (Assistant Professor, Chemistry) and Hailing Jin (Assistant Professor, Plant Pathology)
Title of Project: High-throughput Screening of siRNA Expression Using Rolling Circle Amplification
2. **PIs:** Sean Cutler (Assistant Professor, Botany and Plant Science) and Michael Pirrung (Professor, Chemistry)
Title of Project: Enlightening Chemical Genetics with Libraries of Fluorescently Tagged Small Molecules
3. **PIs:** Frances Sladek (Professor, Cell Biology) and Tao Jiang (Professor, Computer Science)
Title of Project: Development of a High Throughput Assay for Transcription Factor Binding

II. Scientific Advisory Board Meeting/Report

Established: 2007

Role: Meet regularly and provide advice and scientific expertise to the IIGB Director

2007-08 Assignment: Evaluation of IIGB Core Suite of Instrumentation Facilities at Keen Hall

2007-08 SAB Members:

- Joseph R. Ecker – The Salk Institute [Genomics]
- David W. Ehrhardt – Carnegie Institution of Science, Stanford University [Microscopy]
- Joseph A. Loo – University of California, Los Angeles [Proteomics]
- José Luis Riechmann – California Institute of Technology [Bioinformatics]

First Meeting: November 2, 2007

2007-08 Report Submitted: November 7, 2007

Report Access: http://genomics.ucr.edu/news/IIGB-SAB_Report_final.pdf

(please turn over)

III. Recruitments/Hires: [N. Raikhel

Bioinformatics and Computational Biology (3 positions)

Scope: 93 Applicants, 9 interviewed

Status (2 HIRED):

Angelina Chang, UCSB Howard Hughes Medical Institute

Home Department: Chemistry

Start Date: 1/2/08

Maxim Bazhenov, The Salk Institute for Biological Studies

Negotiating with Cell Biology & Neuroscience

Readvertised for 3rd Position: 10/30/07

Review of Applications: 1/1/08

Scope as of 12/10/07: 31 Applications

IIGB Genomics Core Specialist

OFFERED: **David Fang**, DNA Analysis Laboratory Manager

Monsanto Company, MS

Bioinformatics Programmer/Analyst III (.50 FTE for 1 yr):

HIRED: **Junmei Liu**, MS and PhD in Applied Statistics (2007), UCR

Start Date: 12/5/07

IV. Upcoming Events

January 18, 2008, 2-4pm: CEPCEB Award Ceremony

Noel Keen Special Lecturer: Gloria Coruzzi, a Carroll and Milton Petrie Professor and Chair of the Department of Biology at New York University

February 22-23, 2008 in Riverside, CA: Center for Biological Sciences and Biotechnology (Developing IIGB Center)

Description:

Cooperative effort between UCR and the China Agricultural University (CAU), located in Beijing.

Goal:

Encourage participation of CAU faculty from broad agro-biotechnology disciplines with a focus on those areas that are strongly represented at UCR in order to facilitate future collaborations in such areas as gene silencing, plant biology, fungal biology (oomycetes & neuropora), insect immunity and virology.

Director: Jian-Kang Zhu

First Meeting: 10 Principal Investigators each from UCR and CAU to present

V. Next Generation Sequencing (and Discussion):

Education: Seminars by Illumina, Roche and ABI were hosted by IIGB during the Fall.

SAB recommendations: Upon review the SAB recommended that we add next generation sequencing to our core capabilities in addition to Bioinformatics support.

The relative strengths/weaknesses of the instruments to be summarized.

Results of IIGB survey (12 respondents) indicate broad applications by potential users.

VI. Next Forum Date?

IIGB Forum
May 29, 2008: 3:00pm
Science Library, Rm 240

–AGENDA–

**I. Overview of Illumina (Solexa) Genome Analyzer II DNA Sequencer, Planned Services and Timing
(Presenter: Glenn Hicks)**

Background to Acquisition of Solexa Genome Analyzer

Solexa Technology

Chemical Library Preparation (Library Kits for different applications)

- DNA library
- Chromatin Immunoprecipitation (ChIP) sequencing
- Small RNA (tag profiling)
- Gene expression (tag profiling)

Cluster Generation

Sequencing

Basic Data Analysis

Applications

Genomic DNA: Whole Genome Resequencing and Targeted Resequencing

RNA: Digital Expression, Transcriptome Sequencing

Gene Regulation: chIP Sequencing, Small RNA, Sequencing Bisulfite-treated DNA, DNaseI Hypersensitivity

Overview of IIGB Service (Genomics and Bioinformatics)

Estimated Timeline

Sequencer Delivery: July 08; Launch: Aug/Sept 08

Pricing and Comparative Pricing

II. Discussion and Suggestions



CEPCEB/IGERT/IIGB/CDVR SEMINARS (FY 2007-08)
Location: Science Library, Room 240; *1104 Batchelor Hall
Time: 12:10 pm Every Friday
Location: Science Library, Room 240
Time: 12:10pm Every Tuesday

DATE	SPEAKER	TITLE	HOST
July '07			
(Friday) Internal	6 Ying Fu Botany & Plant Sciences	"A ROP GTPase signaling network in the control of plant cell morphogenesis"	Zhenbiao Yang
CEPCEB (Friday)	13 Cathie Martin John Innes Center, UK Cell and Development Biology	"Designed for attraction: the specialization of petal cells for pollinator attraction"	Hailing Jin
CEPCEB (Friday)	20 Mark Bachman The Henry Samueli School of Engineering UC, Irvine	"LifeChips: Convergence of Microelectronics and Life Science"	Julia Bailey Serres
CEPCEB (Friday)	27 John Fowler Department of Botany & Plant Pathology Oregon State University	"ROP GTPases and the Exocyst Complex: Developmental Roles in Two Model Plants"	Zhenbiao Yang
August '07			
CEPCEB* (Friday) (Internal)	3 Colleen Knoth Botany and Plant Sciences	"Function and regulation of genes showing late/sustained up-regulation in response to Peronospora"	Eulgem Lab
CEPCEB (Friday) (Internal)	10 Andrew Defries Botany and Plant Sciences	"LATCA, a Library of Biologically Active Small Molecules for Plant Chemical Genomics"	Sean Cutler
(Friday) Keen Hall Lobby	17 REU poster session- Per Dr. Springer	REU POSTER SYMPOSIUM	Patricia Springer
CEPCEB (Friday) Internal	24 Ruth Chang Botany and Plant Science	"MAPK activation in response to oxygen deprivation and re-oxygenation in Arabidopsis thaliana seedlings"	Julia Bailey Serres
CEPCEB (Friday) Internal	31 Keun Chae Botany and Plant Science	"Role of Adhesion Molecules in Plant Reproduction"	Elizabeth Lord
Sept '07			
CEPCEB (Friday) Internal	7 Fan Yang Botany and Plant Science	"Investigation of ROP Function in Auxin and ABA Signaling"	Zhenbiao Yang
IGERT (Friday)	14 Charlie Boone Terrence Donnelly Centre for Cellular and Biomolecular Research University of Toronto, Canada	"Large-scale Mapping of Genetic and Chemical-genetic Interactions in yeast"	Sean Cutler
CEPCEB (Friday)	21 Zheng-hua Ye University of Georgia	"Genomic Analysis of Secondary Wall Biosynthesis"	Zhenbiao Yang
CEPCEB (Friday) (Internal)	28 Jason Wilson Statistics Department	"An alternative framework for approaching high dimensional data problems in bioinformatics"	Cui Lab
Oct '07			
IIGB (Friday)	5 Joe Thornton Center for Ecology and Evolutionary Biology University of Oregon	<i>The Evolution of Molecular Complexity: Structure -Function Evolution of Steroid Hormone Receptors</i>	Frances Sladek
IGERT (Friday)	12 No Seminar scheduled per Carolina 10/11/07	NO SEMINAR	

DATE	SPEAKER	TITLE	HOST
CEPCEB (Friday) 19	Eliot Herman Lead Scientist and Member Plant Genetics Research Unit USDA-ARS	"Altering soybean seed protein, its biology, its rules, and its opportunities"	Natasha Raikhel
CEPCEB (Friday) 26	Qijun Xiang Plant Pathology & Microbiology Department	"The identification of cis- and trans-elements involved in spore-specific gene expression in <i>Phytophthora infestans</i> "	Howard Judelson
Nov '07			
IGERT (Friday-Sunday) 2-4	IGERT RETREAT	IGERT Retreat with UCSD IGERT Group: San Diego County	
CDVR (Tuesday) 6	Richard Carthew Department of Biochemistry & Molecular & Cell Biology Northwestern University, IL	"Mechanism and Biology of RNAi"	Peter Atkinson
CEPCEB (Friday) 9	Scott Peck Department of Biochemistry University of Missouri- Columbia	"Phosphoproteomics Reveals New Insights into Plant-Microbe Interactions"	Natasha Raikhel
CEPCEB (Monday) 12	Tsutomu Kawasaki Laboratory of Plant Molecular Genetics / Nara Institute of Science and Technology in Japan	"G protein-mediated immunity response in rice"	Thomas Eulgem
IIGB (Friday) 16	Hong Wu Dept. of Molecular and Medical Pharmacology University of California, Los Angeles- Speaker cancelled, Dr. Li, notified and trying to fill in with another speaker	CANCELLED	Larry Li
(Friday) 23	Holiday		
IIGB (Friday) 30	Raymond St Leger Entomology Department University of Maryland	"Using genomics, the insect immune system and a scorpion neurotoxin to make entomopathogenic fungi hypervirulent to insects"	Brian Federici
Dec '07			
CEPCEB (Friday) 7	David Ehrhardt Department of Plant Biology Carnegie Institution of Washington	"Molecular dynamics of plant cell morphogenesis".	Zhenbiao Yang
IGERT (Friday) 7	Paul Hergenrother [IGERT] Department of Chemistry University of Illinois	Using Small Molecules to Identify Novel Anti-Cancer Targets	Michael Pirrung
CEPCEB (Friday) 14	Michael Hasegawa Horticulture & Landscape Architecture Purdue University	TBA	Jian-Kang Zhu
CEPCEB (Friday) 17-	Carolyn Schultz School of agriculture, Food and Wine The University of Adelaide Australia	FASCICLIN-LIKE-ARABINOGALACTAN-PROTEINS: Turgor sensing and regulation in the plant cell wall-plasma membrane-cytoskeleton continuum	Natasha Raikhel
(Friday) 28	Holiday		
January '08			
(Friday) 4	NO SEMINAR		
CEPCEB (Friday) 11	Mark Estelle Miller Chair in Plant Developmental Biology Indiana University, Bloomington	"Genetic and Biochemical Studies of the Auxin Receptor Reveal a Novel Mechanism of Hormone Perception"	Zhenbiao Yang
CEPCEB 15	Yang Do Choi	"Crop Functional Genomics Program in	Jian-Kang Zhu

DATE	SPEAKER	TITLE	HOST
(Tuesday)	Crop Functional Genomics Center Seoul National University	<i>Korea and Rice Genomics Data "</i>	
CDVR (Tuesday) 15	Jose Ribiero National Institutes of Health	TBA	Peter Atkinson
CEPCEB (Friday) 25	Gloria Coruzzi 2008 Noel Keen Lecturer CEPCEB CEREMONY AWARD Biology Department New York University	<i>"A systems approach to nitrogen regulatory networks and the Virtual Plant"</i> Science Library 240	Natasha Raikhel
February '08			
CEPCEB (Friday) 1	Elaine Tobin Department of Molecular, Cell and Developmental Biology UC, Los Angeles	<i>"The Central Oscillator of the Arabidopsis Circadian Clock"</i>	Natasha Raikhel
CEPCEB (Friday) 6	Jiri Friml Department of Plant Systems Biology VIB / Universiteit Gent Belgium	<i>"Auxin Transport – Connecting Polarity and Patterning"</i>	Natasha Raikhel
CEPCEB (Friday) 6	Eva Benkova Department of Plant Systems Biology VIB / Universiteit Gent Belgium	<i>"Interplay of Auxin – Cytokinin and Ethylene in root development"</i>	Natasha Raikhel
CEPCEB (Friday) 8	Keiko Sugimoto Group Leader, Cell & Developmental Biology Dept, John Innes Centre	<i>"Control of Plant Cell Size and Its Link to Ploidy"</i>	Natasha Raikhel
CEPCEB (Friday) 8	Eugenia Russinova Department of Plant Systems Biology VIB / Universiteit Gent Belgium	<i>"Chemical Approaches to Brassinosteroid Signaling"</i>	Natasha Raikhel
IGERT (Friday) 15	Sue Abrams NRS Plant Biotechnology Institute in Saskatoon	<i>"Chemical approaches to study ABA perception and metabolism in plants"</i>	Julia Bailey-Serres
(Friday) CANCELLED 22	UCR/ CHINA Agricultural Annual Mtg	TBA	Jian-Kang Zhu and Sho-Wei Ding
CDVR (Tuesday) 26	Bruce Hay Caltech	<i>"Medea Systems in Insects"</i>	Peter Atkinson
CEPCEB (Tuesday) 26	Sheila McCormick Plant Molecular Geneticist USDA Plant Gene Expression Ctr UC Berkeley	<i>"Signaling in Pollen"</i>	Zhenbiao Yang
IIGB (Friday) 29	Eddy Rubin Genomics Sciences Department Ernest Orlando Lawrence Berkeley National Laboratory	<i>"Genomes Decoded: Microbes to Hominids "</i>	Frances Sladek
March '08			
IIGB (Friday) 7	Bruce Lahn Department of Human Genetics University of Chicago Howard Hughes Medical Institute	<i>"Probing the Genetic Basis of Human Brain Evolution"</i>	Frances Sladek
IGERT (Friday) CANCELLED 7	Peter McCourt Department of Botany University of Toronto	CANCELLED	Julia Bailey-Serres

DATE	SPEAKER	TITLE	HOST
CDVR (Tuesday) 11	Michael Ferdig Notre Dame University	<i>"Applying whole genome information to connect genotype with phenotype"</i>	Peter Atkinson
IGERT (Friday) CANCELLED 14	Joseph Noel The Salk Institute for Biological Studies	<i>"Quantitative exploration of the catalytic landscape separating divergent plant sesquiterpene syntheses"</i>	Julia Bailey-Serres
CEPCEB (Friday) CANCELLED 21	Patricia Zambryski Plant & Microbial Biology UC, Berkeley May 13 or 20 th per Dr Raikhel-1/22	CANCELLED	Natasha Raikhel
CEPCEB (Friday) 28	HOLIDAY		
April '08			
CEPCEB (Friday) 4	NO SEMINAR		
IGERT (Friday) 11	Jon Thorson School of Pharmacy University of Wisconsin, Madison	<i>Natural Product Glycosylation: Challenges and Opportunities</i>	Sean Cutler
CEPCEB (Friday) 18	Renee Sung Department of Plant and Microbial Biology UC Berkeley	<i>Epigenetic mechanism mediating vegetative development in Arabidopsis</i>	Xuemei Chen
CDVR (Tuesday) 22	James McKerrow Sandler Center for Basic Research in Parasitic Diseases UCSF	<i>Proteases of plants, pests, and parasites: lessons in biochemistry and drug design</i>	Peter Atkinson
CEPCEB (Friday) 25	Wendy Boss Department of Plant Biology NC State University	<i>Regulation of PtdInsP₂ Biosynthesis: Altering Second Messengers and Plant Responses to Stress</i>	Zhenbiao Yang
May '08			
IGERT (Friday) 2	Brian Shoichet Department of Pharmaceutical Chemistry University of California, San Francisco	<i>Forward & Reverse Chemical Information in Biology</i>	Thomas Girke
9			
CEPCEB (Friday) 16	Sue Wessler Regents Professor Dept. of Plant Biology University of Georgia	<i>"Understanding the Other Big Bang: How Transposable Elements Amplify Throughout Genomes"</i>	Jian-Kang Zhu
(Friday) 23			
CEPCEB/ (Friday) 30	Clinton Chapple Department of Biochemistry Purdue University	<i>"Developing a toolbox for the modification of plant cell biosynthesis"</i>	Sean Cutler
June '08			
(Friday) 6			
(Friday) **Internal Speaker 13	Angelika Mustroph Botany and Plant Sciences	<i>"Isolation of cell-type specific mRNA populations of Arabidopsis: Microgenomics of the hypoxia response"</i>	Julia Bailey-Serres
(Friday) ** Internal Speaker 20	Wenxue Li Botany and Plant Sciences	<i>"Transcriptional And Posttranscriptional Regulation of NFYA5, A CCAAT Binding Transcription Factor Important for Drought</i>	Jian-Kang Zhu

DATE	SPEAKER	TITLE	HOST
		<i>Resistance in Arabidopsis</i>	
(Friday) 27 **Internal Speaker	Serdar Bozdog Computer Science & Engineering Department	<i>"Combinatorial Approaches to the Physical Mapping Problem"</i>	Stefano Lonardi

LEGEND:

CEPCEB (BPSC 252) Seminars: Special Topics on Botany

IGERT Seminars

CDVR Seminars

IIGB Seminars