KECK GRADUATE INSTITUTE
of Applied Life Sciences

Team Masters Project Presentations

May 4, 2011
8:00 a.m.–5:00 p.m.

Team Masters Project Presentations

The Team Masters Project (TMP) is the capstone activity for KGI second-year students in the Master of Bioscience program and for students in the Postdoctoral Professional Master of Bioscience Management program. Interdisciplinary teams of three to five students work with sponsoring companies to address company objectives. The extended team consists of a liaison from the sponsoring firm as well as a KGI faculty advisor. Projects replace the Masters thesis work required in traditional programs. The TMP program also benefits from involvement of students and faculty from other colleges. This year, students from the Claremont Colleges' Joint Sciences Department contributed as TMP members in lieu of writing a senior thesis. This composition of MBS, PPM, and undergraduate students working with the corporate liaison and faculty advisor provides each team with a rich and diverse set of skills, backgrounds, and roles. In this way, KGI students have a real-world experience in project work.

TMP activities emphasize problem-solving, project management, productive teamwork, and effective communications: skills that will be critically important to KGI graduates as they pursue careers in the bioscience industry. Representing about 35 percent of their academic work, these projects are designed to produce specific sets of deliverables for the sponsoring companies.

Program

8:00–8:15 a.m.	**Continental Breakfast**
8:15–8:30 a.m.	**Introductions**
8:30–9:00 a.m.	**Celgene Cellular Therapeutics**
9:00–9:30 a.m.	**LifeCell/KCI**
9:30–10:00 a.m.	**Claremont BioSolutions**
10:00–10:30 a.m.	**Abbott Nutrition**
10:30–11:00 a.m.	**Allergan**
11:00–11:30 a.m.	**Tecan**
11:30 a.m.–Noon	**BioMarin Pharmaceuticals Inc.**
Noon–1:00 p.m.	**Lunch in Founders Room and Alumni Patio**
1:00–1:30 p.m.	**Corporate Liaison Meeting in Building 517 Room 147**
1:30–2:00 p.m.	**Beckman Coulter**
2:00–2:30 p.m.	**Life Technologies—Digital PCR**
2:30–3:00 p.m.	**MediciNova Inc.**
3:00–3:30 p.m.	**Life Technologies—Transgenics**
3:30–4:00 p.m.	**Veracyte**
4:00–4:30 p.m.	**Gilead Sciences**
4:30–5:00 p.m.	**Eli Lilly**

Market Analysis, Experimental Design and Testing of a Novel Cellular Therapeutic

Sponsor Company

Corporate Liaisons:
Brooke Raphael
Sascha Abramson
Brian Murphy

Faculty Advisor:
Matt Croughan

Students: *Mona Chughtai, Ryan LaRanger, Marc Pollack, and Daniel Segal*

Celgene Cellular Therapeutics is a biopharmaceutical company focused on discovering, developing, and commercializing new therapies to improve patients' lives worldwide. In recent years, the company has performed ground-breaking research into clinical applications of human placental-derived stem cells. This TMP was contracted to design and develop an injectable cellular therapeutic utilizing these cells, with final recommendations for a delivery system, formulation of cells, and disease indications accompanied by supporting results and models.

The goals of the TMP were divided into three phases. In phase I, the team performed a market and competitive analysis for current cellular therapies. A database and companion report were produced to address key indicators, which encompassed disease indication, competitors, clinical trials, cell source, autologous vs. allogeneic, and delivery mechanisms. A major highlight was the creation of the Decision Rubric, a mathematical program that utilizes selected criteria to rank top disease markets for cellular therapies.

In phase II, the team switched focus to the technical side by researching formulations and delivery designs. Final recommendations addressed trophic support, excipients, antioxidants, cryopreservation, and stem cell delivery systems. In phase III, the team identified a specific cell targeting agent for experimental testing. The team's sampling of experiments included viability, cell attachment, and agitation studies. To support their research, the team constructed a mathematical model to determine optimal conditions for viability and cell attachment.

Analyzing and Aggregating Technologies That Prevent and/or Kill Bacterial Infections

Sponsor Company

Corporate Liaisons:
Sy Griffey
Rick Owens

Faculty Advisor:
Gail Baura

Students: *Bobby Ethel, Tyson Fetzer, Bahman Sadeghi, Chance Scott, and Devin VonStade*

Kinetic Concepts (KCI) was established in 1976 with the mission of improving the quality of life for immobilized patients and preventing skin breakdown in disabled patients. Today, KCI is a global leader in medical technology and a leading international manufacturer of a diverse portfolio of proprietary products. In 2008, KCI acquired LifeCell for their technology in tissue regeneration products. LifeCell's advanced biologic products, Alloderm® and Strattice™, are used in a number of operations to provide enhanced support and accelerated tissue growth.

The KCI/LifeCell team was tasked with conducting a global platform review to identify current and future technology innovations and biosurgical techniques that will impact how at-risk wounds and infected wounds are treated. This information will then be compared to the current and planned product portfolios of the KCI divisions (Active Healing Solutions [AHS], Regenerative Medicine [LifeCell] and Therapeutic Support Systems [TSS]), to identify synergies and new product opportunities. To aggregate this information the team formulated a database for classifying and scoring the technologies. Construction of this database required a useable interface and features that enable KCI and LifeCell to score, filter, sort, and save the information pertaining to the technologies. In addition, the team was asked to create technology summaries for ease of review. The team conducted interviews with key opinion leaders to provide supplemental information for the database and to gain a new perspective on problems that bacterial infections cause and how they are currently treated. Finally, the team analyzed the business and technical risks for KCI and LifeCell with the adoption of a new technology.

Development and Commercialization of a Novel, Disposable, Integrated Cartridge for the Rapid Detection of Organisms Associated with Hospital Acquired Infections

Sponsor Company

ClaremontBio Solutions

Corporate Liaison:
Bruce Irvine

Faculty Advisor:
Barbara Erwin

Students: *Ivan Ban, Mark Brown, Farhan Bukhari, Boris Gites, and Dipika Tuteja Shringarpure*

Claremont BioSolutions (CBS) was established in 2006 as a spin-off from Keck Graduate Institute of Applied Sciences (KGI). CBS has developed a technology to purify DNA by mechanical lysis of micro-organisms prevalent in hospital acquired infections (HAIs). One of their products is the PureLyse™ device which is designed to purify PCR grade DNA within a short span of 3 to 5 minutes. In 2009, the Centers for Disease Control (CDC) estimated the direct medical costs from HAIs to be between $28-45 billion in the US alone. In fact, the leading causative agent, *Clostridium difficile*, causes annual hospital costs of nearly $4 billion annually. CBS is focused on providing a rapid, point-of-care (POC) integrated device that can be used in hospitals for rapid, accurate and immediate screening of *Clostridium difficile*. The CBS TMP had two major deliverables. The first deliverable was to conduct wet lab experiments which showed the feasibility of PureLyse™ to produce sufficiently purified clinical samples. The second deliverable was to develop a commercialization plan for the PureLyse™-integrated cartridge.

Due to biosafety concerns, the CBS TMP worked with *Bacillus subtilis* and synthetic stool rather than *Clostridium difficile* and potentially infectious stool samples. Medical swab experiments were completed which compared the PureLyse™ technique with standard hospital techniques. Finally, the CBS TMP team performed studies which compared the PureLyse™ technique with a leading market competitor. In total, the Team ran approximately 35 experiments. For the business portion of the project, the TMP focused on a commercialization plan which included: market assessment, production and a marketing plan for the PureLyse™-integrated cartridge. The Team determined the market size, the competitive landscape, customer characteristics, regulatory pathway and barriers to entry. Finally, the team provided recommendations for product distribution and a strategy to support future revenue goals.

Intellectual Property Dynamics in the U.S. Infant Formula Industry

Sponsor Company

Abbott Nutrition

Corporate Liaison:
Donald L. Sgontz

Faculty Advisor:
Randy Berholtz

Students: *Christina T. Lai, Arvind Kothandaraman, Ian T. Foti-Landis, Nicolas A. Kampff, Yeshwant S. Rane*

Abbott Nutrition is a division of Abbott, the global, broad-based health care company. Abbott Nutrition envisions being the trusted worldwide leader in providing innovative and superior nutrition products that advance the quality of life for people of all ages. Their strength lies in their ability to create nutritional products backed by clinical results to address the dietary needs of infants and adults with special nutritional requirements. Abbott Nutrition's recognized brands include Similac® (for infants), Ensure® (for active adults), and EAS® (for athletes and fitness enthusiasts).

This TMP revolves around issues relating to Intellectual Property (IP) valuation in the U.S. infant formula industry. At present, there is a dearth of tools that enable accurate valuation of IP built around infant formula products.

The team created a tool to enable Abbott Nutrition to increase accuracy in valuation of IP in infant formula products. This model based on existing mathematical methods was designed for use by Abbott Nutrition's strategic decision-making team to account for various market factors that influence the value of monetary investments made in establishing IP.

Creating a Biologics Development Outsourcing Program for Allergan

Sponsor Company

ALLERGAN

Corporate Liaisons:

Fauad Hasan

Dennis Huang

Faculty Advisor:

Daniel Byrd

Students: *Dilshad Contractor, Corey Kuruma, Michelle Pesce, Anusha Shanker, and Chandana Thorat*

Allergan is a multi-specialty company that develops and commercializes biologics, pharmaceuticals and medical devices. Their leading products include BOTOX® (onabotulinumtoxinA), RESTASIS® (cyclosporine ophthalmic emulsion), LUMIGAN® (bimatoprost ophthalmic solution), BOTOX® Cosmetic (onabotulinumtoxinA), the JUVÉDERM® family of dermal fillers, and the LAP-BAND® Adjustable Gastric Banding System. This is the second TMP that Allergan has sponsored with KGI.

Currently, Allergan's Biologics product pipeline is constrained at the development phase of the product lifecycle. To confront this constraint, the Allergan TMP was tasked with the goal of developing an outsourcing program which would support Allergans capacity planning efforts. This outsourcing program complements last year's TMP which focused on identifying internal capacity remedies using a modeling tool. The key deliverables for this year's project were: 1, a vetted list of contract manufacturing organizations (CMOs) that can be used to match vendors with the project requirements; 2, a business process to guide the selection, evaluation and management of CMOs; and 3, a strategy for optimizing internal vs. external developmental activities.

Investigation of Markets for a Novel Point of Care Device

Sponsor Company

TECAN.

Corporate Liaisons:

Marc Feiglin

Tony Mamone

Faculty Advisor:

Craig Adams

Students: *Jessica Chang, Neelima Kumar, Alice Lai, Jessica Lin, Sergio Sanchez, and Jeffrey Weiss*

Tecan Group Ltd. (Tecan) is a leading global supplier of laboratory instruments and automated workflow solutions for laboratories in the life science industry. Founded in 1980, Tecan has become a market leader in supplying OEM (Original Equipment Manufacturer) instruments and components that are then distributed through partner companies. As a vendor and OEM manufacturer, Tecan serves three primary markets: biopharmaceuticals, clinical diagnostics, and forensics.

Tecan is in the process of developing a point of care (PoC) testing device. An initial launch market for this device has been identified and product development is underway. The technical characteristics and flexibility of Tecan's technology demand exploration of additional applications and commercial opportunities.

The TMP team was tasked with identification of alternative PoC testing market opportunities where introduction of Tecan's technology and derivative product(s) could provide the company with a primary or secondary global leadership position. To accomplish this objective, the team identified current and emerging markets, defined market gaps/issues alleviated by PoC testing, and provided a clear approach by which Tecan's technology and resulting devices would address and satisfy current market needs. In addition, the team stratified market opportunities by testing category and geographic region. Upon completion of this project, Tecan will be able to prioritize markets with the most commercial potential to develop plans for market entry.

Development of a Higher-Titer Fed-Batch Cell Culture Process

Sponsor Company

BIOMARIN

Corporate Liaisons:

Jim Michaels
Yvette Tang

Faculty Advisors:

David Vetterlein
Matt Croughan

Students: *Scott Cooper, Michael De La Cruz, Rahul Shah, and Linda Soo Hoo*

Founded in 1997, BioMarin Pharmaceuticals is a biotechnology company specializing in treatments for orphan diseases. With over 900 employees worldwide, the company currently has four products on the market, two of which are biologics: Aldurazyme, a recombinant form of alpha-L-iduronidase, is used as an enzyme replacement therapy for patients diagnosed with mucopolysaccharidosis I (MPS I) and Naglazyme®, a recombinant form of N-acetylalactosamine-4-sulfatase, is used to treat the lysomal storage disorder MPS VI. A third, N-acetylgalactosamine-6-sulfatase is in Phase 3 clinical trials for patients diagnosed with MPS IVA. BioMarin is currently expanding into another lysosomal storage disease, Pompe disease, with their recent acquisition of Zystor Therapeutics.

The focus of the BioMarin Team Masters Project was to develop a new fed-batch mammalian cell culture process. This is an experimental project designed to optimize process conditions to maximize cell growth and, hopefully thereby, the titer of a Phase I/II clinical trial product, with a goal of increasing the titer by two-fold. To accomplish this, the team has leveraged the expertise at the Amgen Bioprocessing Center at KGI, including the Center's new lactate-adaptation technology. This lactate–adaptation technology has been shown to improve process performance by reducing lactic acid production, minimizing the need for base addition for pH control, keeping osmolality low, and allowing for the use of concentrated media for the support of high density CHO (Chinese hamster ovary) cultures. The team performed a series of experiments in shake flasks and bioreactors, testing a variety of process parameters. Variables such as cell age, medium composition, and process parameters (pH, temperature, and pCO2) were explored. To determine product titer, a spectrophotmetric assay developed at BioMarin was performed. The team successfully adapted the cell line to grow to higher cell densities in a chemically defined media. The lactate adaptation strategy was evaluated for the BioMarin cell line and compared to our other fed-batch technologies. Specific challenges included cell line stability as well as balancing cell growth and specific productivity. Additionally, an exploration of nutrient additives known to increase productivity in CHO was conducted.

Improving the Decline Phase of Project Lifecycle Management at Beckman Coulter

Sponsor Company

BECKMAN COULTER

Corporate Liaisons:

David Heibel
Marie McClung

Faculty Advisor:

David Margolese

Students: *Daniel Lev, Bandish Momin, Adam Calvert, and Li Liang*

Beckman Coulter develops, manufactures and markets products that simplify, automate and innovate complex biomedical testing. The company's diagnostic systems are found in hospitals and other critical care settings around the world and produce information used by physicians to diagnose disease, make treatment decisions and monitor patients. Scientists use Beckman Coulter's life science research instruments to study complex biological problems including causes of disease and potential new therapies or drugs.

The Beckman Coulter team has created a method for effectively managing Product Lifecycle Management strategies for Obsolescence and Discontinuance of Chemistry Systems. Product Life Cycle Management has been identified as a crucial focus for Beckman Coulter. The Product Life Cycle ends with the Decline Phase, which covers Obsolescence and Discontinuance (O/D). Two main drivers of O/D are (1) market needs and (2) operations, including Supply Chain Management, Current Product Engineering and Field Service. Both drivers present complex issues that need to be addressed to effectively manage O/D. The deliverable will provide understanding of the crucial questions that need to be raised and how to obtain the answers for successful O/D. The team is also responsible for creating an execution plan for the global Discontinuance of the CX product line. The plan will address the issues specific to this product line and describe the path for replacing the current fielded base while considering the manufacturing and installation capacity.

Strategies for Digital PCR Market Access

Sponsor Company

Corporate Liaison:
Gordon Janaway

Faculty Advisor:
Jim Sterling

Students: *Brad Davis, Juan Pablo MacDonald, Sri Ramya Maddilate, and Vikram Khanna*

Life Technologies was created through a merger of Invitrogen and Applied Biosystems in 2008, and has established itself as the market leader in research tools for the life sciences. Life Tech has built its core competencies around the flagship qPCR business and has leveraged the synergies of the two parent companies to sustain its vertical and horizontal differentiation. The company strives to 'make life better' for stakeholders across the board by driving product development through its User Centered Innovation (UCI) process.

The Life Tech-KGI TMP was tasked with interweaving UCI into strategies for navigating the relatively untested waters of the emerging digital PCR market. The absolute quantitation and highly specific capabilities of digital PCR offer incremental advancement by removing the need for the standardization and normalization associated with traditional PCR methods. This new methodology is expected to open new research applications and offer new methods to improve on existing research applications. As Life Technologies diversifies into this space to tap into the increased customer base, the role of the KGI-TMP was to document the technical and market requirements that meet the present and future PCR-related needs specifically pertaining to cancer researchers.

The team has achieved an in-depth technical characterization of the commercial digital PCR offerings as well as the academic and non-commercial versions. Conferences and a focus group discussion involving cancer researchers at a renowned medical facility helped define the specifications required for research purposes, and a nationwide survey established the perceived order of importance of these specifications. A choice based conjoint analysis completed the UCI process as the team generated utility curves and trade off limits for the different specifications. The market was segmented according to applications and the commercial and non-commercial platforms were scored based off of the combined user feedback. The result was a comprehensive matrix which serves as a qualitative and quantitative tool for Life Technologies to tailor the specifications in their next commercial digital PCR release. A set of short-term and long-term strategic recommendations was provided as a resource for the company to evaluate organic as well as external growth opportunities.

Market Analysis and Valuation of Portfolio Assets to Support Near Term Business Development

Sponsor Company

Corporate Liaison:
Mark Johnson

Faculty Advisor:
David Slade

Students: *Jacob Graham, Shefali Nagrani, Corey Ozar, Trevor Sell, and Justin Shin*

MediciNova, Inc, a San Diego based biopharmaceutical company, was founded with the goal of acquiring and accelerating the global development and commercialization of innovative pharmaceutical products, with a focus on the U.S. market. Since its inception in 2000, and IPO on the Osaka Securities Exchange in 2005 and NASDAQ in 2006, the company has successfully in-licensed six clinical stage compounds. The company has focused its development efforts on two core assets, MN-221 for exacerbations of asthma and COPD, and MN-166 for neuropathic pain, drug addiction, and progressive multiple sclerosis.

The MediciNova TMP was tasked with assisting the company's business development team in furthering the development of core and non-core assets. This has been accomplished through conducting thorough market analyses for specific assets, including the current competitive landscape, conducting KOL surveys, identifying clinical differentiation parameters, developing revenue forecasts and financial models, and providing insight into the current market opportunities for the compounds of interest. Deliverables from the TMP will be used in MediciNova's near term efforts to out-license and partner these assets for continued development.

Simplifying Transgenic Animal Development – Market Opportunities for New Stem Cell Lines and Cloning

Sponsor Company

life technologies

Corporate Liaisons:

Vicki Singer
Rodney Turner
Jon Chesnut

Faculty Advisor:

Larry Grill

Students: *Sarab Khandpur, Kapil Rohra, Guan-Ting Chen, and Purusothaman Dhanraj*

Life Technologies Corporation, a global biotechnology tools company, was formed by the merger of Invitrogen Corporation and Applied Biosystems, Inc. in 2008. The company is dedicated to improving human conditions and continues to drive innovation across various disciplines, from personalized medicine to environmental research and 21st century forensics by providing user-friendly and efficient systems, consumables, and services to its customers.

The aim of the TMP was to assess the relative value of new tools in Life Technologies' product pipeline that could potentially simplify the development of transgenic animals. This project was designed to guide Life Technologies in the development of a multi-year plan to leverage its portfolio of cloning tools and stem cell lines for the development of such animals. In phase one, the team interviewed KOLs from both academia and pharmaceutical companies to assess their current methods and processes, and identify potential market opportunities. In the second phase of this project, we conducted surveys to verify our findings and hypothesis from phase one and further identify the desired target market segments and desired characteristics required for successful new products for transgenic animal market.

New Product Launch Strategy and Market Opportunities.

Sponsor Company

veracyte

Corporate Liaison:

Brooke LeVasseur

Faculty Advisor:

Steven Casper

Students: *Thomas K. Bane, Virryan Banzon, Khushnuma Bhesania, James Kwok, Cindy Cordova, and Jennifer Woo*

Veracyte is a private molecular diagnostics company pioneering the emerging field of molecular cytology. The company is developing molecular tests designed to improve the diagnostic accuracy of cytology samples, thereby helping to increase the utility of these minimally invasive procedures as an alternative to surgical biopsy. In late 2010, Veracyte launched the Afirma™ Thyroid FNA Analysis for thyroid nodule assessment. Veracyte has sponsored 3 TMPs to date.

This year's TMP was divided into two related projects focused on the diagnosis of suspicious lung nodules. In the fall semester the team developed a detailed clinical flow model highlighting the role of the different physicians from the time of initial diagnosis to treatment. Interviews with key opinion leaders and a market survey provided the team with valuable data which was used to validate a clinical flow model.

In the second semester, the team helped Veracyte create an economic model to estimate the value of a potential lung cancer diagnostic test. The team also performed due diligence of the various competitors in the lung cancer diagnostic space, and conducted primary and secondary research to provide Veracyte with actionable information on this market's attractiveness.

Evaluation of an Alternative Moisture Analysis Technique for Lyophilized Cakes of Cayston®

Sponsor Company

GILEAD

Corporate Liaisons:

Gerald Jensen
Linda SooHoo
Tarquinus Bunch
Jack Kennavane
Catherine Kuo

Faculty Advisors:

Craig Adams
Phil Barnett

Students: *Nick Carman, John Zhang, Biranchi Patra, Ying Lu, and Laurie Zelby*

Gilead Sciences, Inc. is a worldwide pharmaceuticals company that discovers, develops and commercializes innovative medicines in areas of unmet need. One important Gilead product is Cayston® (aztreonam), a monobactam antibiotic. This antibiotic is used in cystic fibrosis patients with respiratory problems resulting from *Pseudomonas aeruginosa* infections. Cayston® is supplied as a lyophilized cake which must be resuspended in saline and administered through a nebulizer. In order to reliably manufacture Cayston®, it is critical that moisture levels be held below 3%. This TMP project revolved around the development and implementation of a new method to determine the moisture content for Cayston®.

The current "gold standard" method for measuring moisture content in lyophilized cakes is the Karl Fischer (KF) titration method. Unfortunately, the KF method is a difficult assay to perform and destroys the sample being tested. An alternative method uses NIR (near-infrared spectroscopy). The goal of this project was to conduct pre-validation studies in support of Gilead's plans to demonstrate to the FDA that an NIR-based method demonstrates analytical equivalence to the established KF method.

In support of that goal, the team examined rotational and temperature effects as well as precision, repeatability, and robustness using lyophilized cakes of Cayston®. Finally, the team developed a standard curve and examined the accuracy of the NIRS assay compared to the "gold standard" KF assay.

The results of these studies will be used to write an SOP (standard operating procedure) for the operation of the NIR instrument as well as the detailed instructions for Cayston® sample analysis. This work will be used to provide the framework for a formal study Gilead will perform to demonstrate that NIR spectroscopy is an acceptable substitute to the KF method for the accurate measurement of percent moisture in lyophilized cakes of Cayston®.

Forecasting the Future Environment of Personalized Medicine

Sponsor Company

Lilly

Corporate Liaison:

William Macias

Faculty Advisor:

John Milton

Students: *Rachel Knight, Joshua Manohar, Silviya Meletath, Tony Sanchez, Sameer Sivaamnuaiphorn, and Wah Yan*

Eli Lilly and Company was incorporated in 1901 in Indiana by Colonel Eli Lilly, to discover, develop, manufacture, and sell pharmaceutical products. The company's mission is to make medicines that help people live longer, healthier, more active lives. Therapeutic areas include neuroscience, endocrinology, oncology, cardiovascular and animal health. Eli Lilly's products are sold in approximately 125 countries and include the blockbusters Zyprexa®, Cymbalta®, Alimta®, Humalog®, Cialis®, Gemzar®, Humulin® and Evista®.

The focus of the TMP was to forecast the future practice of personalized medicine and the use of tailored therapeutics in the U.S. as well as to develop potential marketing and sales strategies that might be employed within this environment. The project consisted of two phases. In the fall semester the team first defined "personalized medicine," to better understand trends in healthcare in 2010, and their impact on the future practice of medicine. These were expanded into distinct scenarios which projected the landscape of healthcare in 2015 and 2020.

In the spring semester, the team selected one scenario from those outlined in the fall and projected how a major pharmaceutical company might market a tailored therapeutic within this potential environment.

This project was a forward-looking, hypothetical exercise representing the work product of the KGI team and does not reflect the opinions of any pharmaceutical company, including Eli Lilly.

Notes

Sponsors

Keck Graduate Institute would like to thank all our sponsors for their generous support of the Team Masters Project.

Abbott Nutrition
AlleCure
Allergan
Amgen
Amylin
Applied Biosystems
Beckman Coulter
Biocatalytics
BioHelix
BioMarin
Bristol-Myers Squibb
Celgene Cellular Therapeutics
Ceres
Childrens Hospital of Los Angeles
Claremont BioSolutions
Clear Springs Land Company
Dow AgroSciences
Eli Lilly
Genomatica
Genentech
Gilead Sciences
Health IQ
Illumina
Invitrogen
Kinetic Concepts
KGI/Sun Micro Systems
LifeCell/KCI
Life Technologies, Inc.
Lnx Research
MediciNova
Nanostream
Navigant Biotechnologies
Northrup Grumman
Ortho Clinical Diagnostics
PBS Biotech
Pioneer Hi-Bred International
Sigma-Tau
Syngenta
Tecan
Theravance
UVP
Veracyte
Waters

Mission

Keck Graduate Institute is dedicated to education and research aimed at translating into practice, for the benefit of society, the power and potential of the life sciences.

Culture

KGI seeks to sustain an inter-disciplinary and entrepreneurial culture, working in partnership with industry to develop leaders for the biosciences, while promoting academic freedom and the highest ethical standards.

Core Values

- Entrepreneurial and Reflective
- Ethical and Responsible
- Collaborative and Independent
- Interdisciplinary and Applied

For more information about TMPs contact Diana Bartlett at Diana_Bartlett@kgi.edu, (909) 607-9864

535 Watson Drive • Claremont, CA 91711 • (909) 607-0121