



2013/2014



MESSAGE FROM THE CHAIRMAN OF THE BOARD OF TRUSTEES & THE PRESIDENT:

A YEAR TO REMEMBER

This past year at KGI has been a remarkable one, and one during which we have seen years of hard work and planning begin to yield results. The most prominent example of our planning is the founding of the School of Pharmacy (SoP). Establishing a new school is quite a challenge, especially a school developing an innovative new program to train a new generation of healthcare professionals in the rapidly changing field of pharmacy.

We are very fortunate to have a highly qualified and resourceful dean in Dr. Kathy Webster. Dean Webster has skillfully guided the SoP through the accreditation process, and we were delighted to learn over the summer that the School of Pharmacy had been granted Precandidate accreditation status by the Accreditation Council for Pharmacy Education (ACPE). Dean Webster has engaged dynamic and talented faculty and staff members. Thanks to their hard work, we successfully recruited an inaugural class of 73 outstanding PharmD students, some of whom you will have an opportunity to “meet” in the pages of this report (pg. 23). The inaugural class was welcomed into the KGI community and into the pharmacy profession at a traditional White Coat ceremony on August 23 2014 (pg. 18).

Meanwhile, developments at the School of Applied Life Sciences (SALS) have been equally impressive. Dr. Jim Sterling, who served as dean of the School of Applied Life Sciences and KGI vice president of academic affairs since 2009, has stepped down to take on new responsibilities at the Minerva Schools at KGI. He will serve as the interim dean of Minerva’s College of Natural Sciences and the director of Minerva Labs while continuing as a professor at KGI’s main campus. Jim will continue to oversee the Professional Science Master’s affiliation process from the PSM office here on campus.

Dr. Steve Casper, a long-standing member of the KGI faculty, has been appointed the new dean of the School of Applied Life Sciences. Serving as interim dean since December 2013, Dr. Casper has brought great energy and a renewed sense of mission to the dean’s office. Steve has not only helped ensure the continued success of existing programs but has also worked with SALS faculty and staff to create innovative program offerings that introduce KGI to new audiences. Several of these new programs, such as the Summer Undergraduate Research Experience (SURE) and the mammalian cell culture intensive course for industry professionals, took place over the summer, making KGI’s campus a busy place where undergraduate science students as well as seasoned professionals from the life science industry honed their skills and learned about bioscience innovation (pg. 30).

Both Deans Casper and Webster will be offering their own take on developments at their respective schools in their deans’ messages (pg. 4)—a new addition in this year’s annual report. Meanwhile, in early September, the Minerva Schools at KGI convened its founding class consisting of 30 students from 14 countries and territories. In his message, Dr. Stephen Kosslyn, a world-renowned educator and dean of the Minerva Schools at KGI, will describe the four “cornerstone courses” that all students at the Minerva Schools are required to take. These courses, as Dr. Kosslyn writes, are designed to help students learn to ‘think critically, think creatively, and communicate effectively.’ As a result, Minerva students will have a framework from which to analyze complex material and find synergies between many different subject areas.

As always, we are thrilled to share the stories of our incredible alumni, ranging from our most recent graduates who are just launching their careers in the life sciences (pg. 7) to some of our earliest alumni whose careers are thriving and who are assuming positions of leadership within their respective companies (pg. 10). Without the support of our generous donors and corporate partners, we would not have been able to offer these remarkable individuals such a unique and unparalleled education in the life sciences.

Finally, we would like to thank our friend and longtime KGI supporter, Jim Widergren, for the time and energy he has devoted to the institute. Jim temporarily stepped down from KGI’s board of trustees last year to serve as special advisor to the president. His sage counsel and extraordinary business acumen have been instrumental in helping us ensure that KGI stays on a path to sustainable growth and financial stability. We’re happy to report that Jim has returned to serving as a trustee. As chair of the budget and finance committee, he will be working closely with our new Vice President of Finance and Business Services Michael Jones.

While we’ve worked very hard to get to this turning point in KGI’s institutional history, we know there will always be more work to do. We are very much looking forward to continuing the journey, and, with your help, we have no doubt that we will succeed.



Robert E. Curry

Robert E. Curry, PhD / Chairman of the Board

Sheldon M. Schuster

Sheldon M. Schuster, PhD / President

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DR. STEVEN CASPER
SCHOOL OF APPLIED LIFE SCIENCES

The 2013-2014 academic year has been an exciting one. I was honored to be asked to become the school's third dean back in November of 2013, and I look forward to collaborating with SALS faculty, staff, and students to continue developing our existing world-class programs and translational research. And at the same time, we'll explore new opportunities to expand our research and impact. Accordingly, I'm happy to report that our flagship MBS program has continued to expand its offerings, as this past year a record 24 companies sponsored Team Masters Projects (TMPs). In addition, we were able to offer project-based learning in new technology areas impacting the biomedical industries, such as 3D printing. An MBS alumni survey revealed that over 95 percent of MBS graduates have secured jobs in industry within six months of graduation, and that 70 percent of these jobs were located through the KGI network. This network continues to expand: our Advisory Council now includes senior managers from over 50 life science companies, and in the last academic year close to 90 networking or corporate-related events were held on campus.

Our newer programs continue to grow and prosper. The Postbac Premedical Certificate (PPC) program has developed an enviable record of preparing students for careers in medicine, with our medical school acceptance rate for PPC students climbing to 83 percent. Our first-in-class Postdoctoral Professional Masters in Bioscience Management (PPM) program has been strengthened by new corporate partnerships, such as a corporate residency program with Regeneron Pharmaceuticals. We also partnered with the American Society for Cell Biology (ASCB) and EMD Millipore to offer a successful two-week summer program aimed at preparing PhD level scientists for careers in industry. This past year we also launched our first ever online program, a 16-week certificate program sponsored by Biocon, a leading Indian pharmaceutical company, focused on training young Indian scientists for technical careers in industry.

Our faculty continue to pursue research projects with the potential to impact society and have secured funding from government agencies, such as the National Institutes of Health (NIH) and the National Science Foundation (NSF), as well as from a variety of private and corporate foundations. A goal of our school is to integrate research with teaching. To further this aim, we have expanded our PhD program and introduced a successful undergraduate summer research program in which 21 students took part this past year.

We, the SALS faculty and staff, welcome the new challenges and opportunities that are bound to arise in the upcoming year, and we are looking forward to working with our counterparts at the School of Pharmacy. On behalf of the school, I would like to thank our broad network of supporters, including donors, corporate partners and our increasing network of alumni. Without the resources you provide, we could not succeed.

DR. KATHY WEBSTER
SCHOOL OF PHARMACY

On August 18, we reached a milestone at the School of Pharmacy as we welcomed 73 students into the Class of 2018. While we're still continuing to develop the school, what has been accomplished to date is truly amazing. We continue to integrate with the School of Applied Life Sciences (SALS) and are learning to work together to find new ways to capitalize on our different approaches and student populations. KGI received approval from WASC for both a structural and a substantive change in our accreditation to allow us to offer a PharmD degree. We were able to move through the first step of pharmacy school accreditation to achieve Precandidate status.

Our admissions group and faculty have worked very hard to recruit quality students. We had limited access to the national student application pool, yet we received almost 500 applications and interviewed 153 students. Our innovative and thorough interview process really helped to solidify the KGI-student relationship which resulted in a high acceptance rate from students who were offered admission.

We have added seven new faculty members to help teach courses in the second year of the pharmacy program: Dr. David Ha, clinical faculty in infectious disease; Dr. Connie Kang, clinical skills faculty; Dr. Robert Stein, law and informatics; Dr. Armen Simonian, informatics; Dr. Rachita Sumbria, biostatistics and pharmacokinetics; Dr. Ken Wong, health economics; and Dr. Alex Zambon, pharmacogenetics and bioinformatics. These faculty members join the six administrators, eight faculty and four staff members who were hired in the first two years of the program. Working with this highly qualified, diverse and enthusiastic group is truly a joy.

We have developed drafts for most of the syllabi that will be used in the curriculum over the four years of the program. Our faculty are implementing the first-year curriculum with "flipped classroom" and active learning techniques.

We also continue to establish relationships with our academic and clinic partners. Interprofessional education activities are planned with both the University of California Riverside (UCR) School of Medicine and Claremont Graduate University (CGU) public health students and faculty. We have signed affiliation agreements with most of the facilities we need to train our students over the next four years and have started placing faculty and residents with some of our health systems partners. We couldn't be more excited to start our first academic year and are looking forward to the day in 2018 when we graduate our first class!

DR. STEPHEN M. KOSSLYN
MINERVA SCHOOLS AT KGI

The Foundation of a Minerva Schools Education

A Minerva Schools at KGI education begins with four year-long “cornerstone courses.” These courses differ from standard university core requirements in several ways. First, each course is designed to help students learn to think critically, think creatively, and communicate effectively. This is the primary goal, as opposed to a subordinate goal taught through the focus on a particular subject matter. Second, courses illustrate these skills with a wide range of content, drawn from multiple traditional disciplines. The range of content helps students to learn the material at the same time they become familiar with possible majors and concentrations. Third, each cornerstone course—like all other Minerva Schools courses—is a seminar. As such, it relies on active learning, not passive reception of information.

The four cornerstones focus on:

- Formal analyses, which involves learning advanced concepts in math, computer science, statistics, and logic. Students will learn to use such tools to formulate, analyze, and solve problems. The subject matter used to illustrate this material typically is drawn from computer science, statistics, mathematics, analytic philosophy, and engineering.
- Empirical analyses, which involves learning to use the scientific method to frame problems, formulate hypotheses, test hypotheses, and engage in informed conjecture. The subject matter used to illustrate this material typically is drawn from the natural sciences.
- Complex systems, which involves helping students to develop skills in understanding complex systems such as economic and social systems. The subject matter used to illustrate this material typically is drawn from the social sciences.
- Multimodal communications, which involves learning to read, write, and speak effectively at a high level, visual communication, aesthetics, design, ethics, artistic expression, leadership, formal debate and negotiation. The subject matter used to illustrate this material typically is drawn from the arts and humanities.

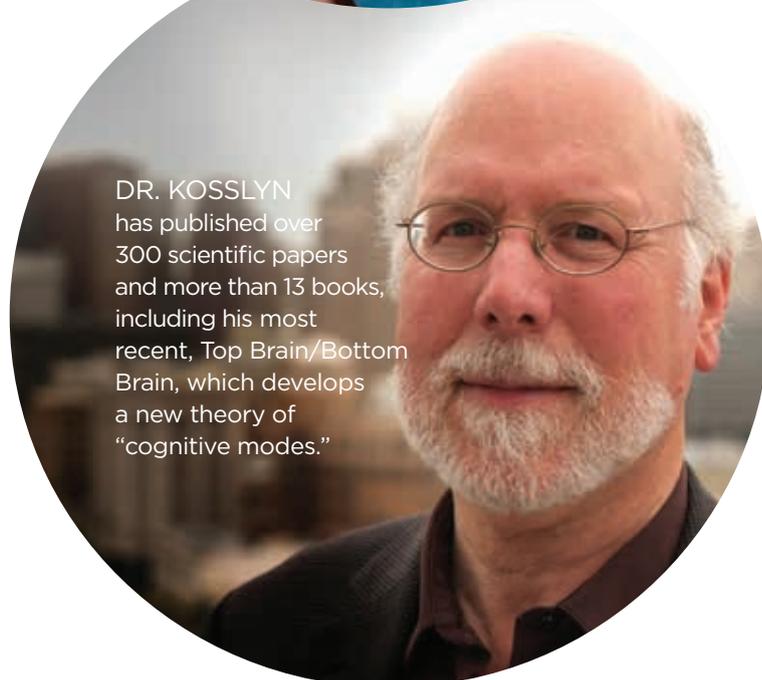
The four cornerstone courses are coordinated, so that students see how the subject matter in each course bears on the subject matter in the other courses. The same case studies are used in all four courses, which will help the students learn how the concepts they learn can be used synergistically.



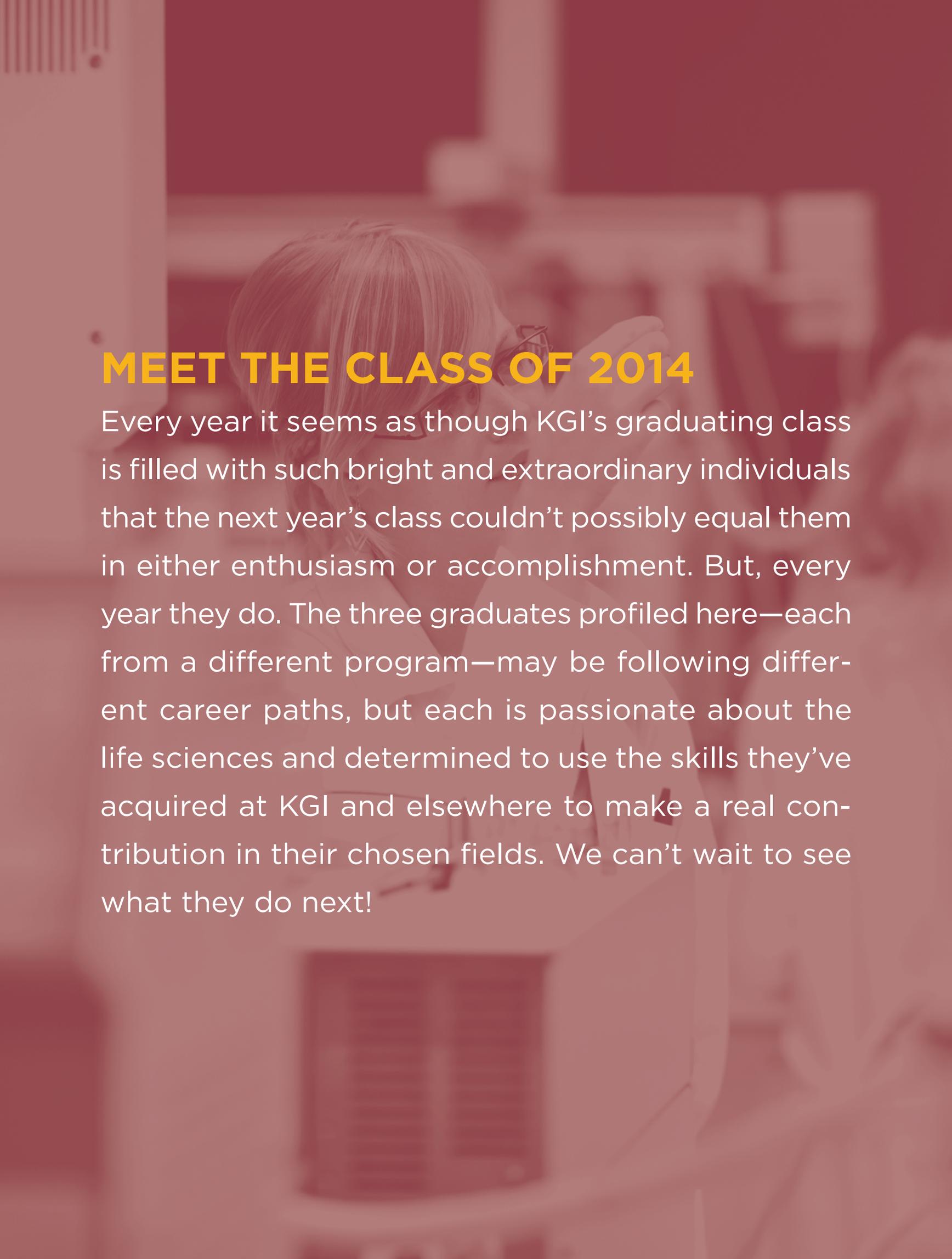
DR. CASPER is a leading expert on the “business of science” and has studied the success and failure of bioscience hubs around the world.



DR. WEBSTER has extensive experience helping to establish and working with new schools of pharmacy, including University of Maryland Eastern Shore School of Pharmacy.



DR. KOSSLYN has published over 300 scientific papers and more than 13 books, including his most recent, *Top Brain/Bottom Brain*, which develops a new theory of “cognitive modes.”

A woman with blonde hair, wearing safety glasses and a white lab coat, is shown in profile, looking down at something in her hands. The background is a blurred laboratory setting. The entire image has a semi-transparent red overlay.

MEET THE CLASS OF 2014

Every year it seems as though KGI's graduating class is filled with such bright and extraordinary individuals that the next year's class couldn't possibly equal them in either enthusiasm or accomplishment. But, every year they do. The three graduates profiled here—each from a different program—may be following different career paths, but each is passionate about the life sciences and determined to use the skills they've acquired at KGI and elsewhere to make a real contribution in their chosen fields. We can't wait to see what they do next!

THE BUSINESS-MINDED SCIENTIST

JOANNA NAYMARK, MBS '14

Joanna Naymark has been running genetic testing since she was a junior in high school. That same year, she landed an internship at the NASA Ames Research Center, working alongside a biologist who was studying cyanobacteria, the first known life on earth.

“It was such an important experience working in a lab at NASA and experiencing real work in a biology lab, and it shaped my life-long passion for this area,” says Naymark, who admits she preferred Erector sets to dolls when she was a young girl. Over the years, she’s found inspiration from the likes of Elon Musk and others who have made impacts in the field of science.

With a passion for the future of biotechnology, Naymark looked for a university program that combined business and science. Although she considered programs that would allow her to earn a combination Master of Science and MBA, she found KGI’s approach much more valuable to her long-term career.

“I’ve learned how much scientific decisions are affected by the context of the business reality and vice versa,” Naymark says. “Thinking about each in isolation will lead to failed projects and dead ends, even with the smartest people working on a problem.”

Speaking of decisions, from Day 1, Naymark made the decision to put every second of her time at KGI to good use. The results were obvious. She won the KGI Mission Award, given to the student who best exemplifies the school’s mission and demonstrates the highest qualities of leadership, academic achievement and character. She also served as president of the Southern California student chapter of the Parenteral Drug Association, the largest professional club on campus. Naymark even landed in a New York Times story, “A Degree Where Techie Meets Business Smarts” (March 17, 2014). In the article, she discussed her experiences at KGI working “on teams doing projects in pharma and biotech, including a project with City of Hope National Medical Center to look for a commercial path for an oncology treatment.”

The City of Hope project was part of Naymark’s Team Master’s Project (TMP). She also participated in a TMP for Meditope Biosciences, in which her team created a decision-making tool to allow the client to select the most attractive corporate partners in order to bring an antibody-drug conjugate product to market.

“KGI has been great preparation for my career, and the fact that I worked a few years between undergrad and grad school makes me confident of that,” says Naymark, noting that the teamwork aspect of the program helped her hone communication, project management and leadership skills.



“With digital health growing faster than any other healthcare sector, I think the knowledge and connections I’m acquiring in this role will be very valuable going forward. KGI was the perfect blend of all the experiences I wanted to gain out of graduate school.”

Just a month after graduating from KGI, Naymark started using her knowledge of medical devices on a daily basis as part of her fellowship position in business development at a San Francisco digital health incubator called Rock Health.

“I chose to work with this organization because of the innovative work they are doing in the rapidly growing digital health sector, and because of the inspiring portfolio of companies they support,” Naymark says. “With digital health growing faster than any other healthcare sector, I think the knowledge and connections I’m acquiring in this role will be very valuable going forward. KGI was the perfect blend of all the experiences I wanted to gain out of graduate school.”

FROM ATHLETE TO MD

COURTNEY HANLON, PPC '14

Courtney Hanlon wasn't one of those kindergarteners who set up a makeshift science lab in their mother's kitchen. In fact, she was more interested in athletics than science until around middle school.

That's when she saw the connection between sports medicine and nutrition and her brainy wheels started spinning. Of course, you might say it was an inevitable revelation. Scientists run in the family.

"My mother is a health science teacher with a background in public health, and my father studied biology as a premedical student," Hanlon says. "In a tangential way, I think many of the athletic trainers I've had over the years have fueled a desire to learn cellular functions and human biology as they apply to physiology."

In the end, Hanlon's love for science "outran" her love for athletics and she decided to pursue a career in medicine. After exploring her options, Hanlon enrolled in KGI's postbaccalaureate premedical certificate (PPC) program. From her perspective, the curriculum and opportunity for close faculty mentorships were equal draws.

"In a tangential way, I think many of the athletic trainers I've had over the years have fueled a desire to learn cellular functions and human biology as they apply to physiology."

"Unlike other pre-medical post-bac programs, KGI's unique courses are not offered in undergrad and are not likely to be taught in medical school," Hanlon says. "Also, the students benefit from KGI's very interprofessional atmosphere. The school year is spent surrounded by colleagues with a wide range of skills and career goals, all driven to impact the life sciences industry."

During her time at KGI, Hanlon learned to engineer medical diagnostics, evaluate current medical technologies to propose real-world improvements, and identify unmet clinical needs in a global marketplace. She was also one of only three students in the nation awarded a 2014 Donald A. King Summer Research Fellowship. The purpose of the fellowship program is two-fold: to attract the brightest young scientists into the field of Huntington's disease (HD) research and to facilitate meaningful HD research to clarify the biological mechanisms underlying HD pathology.

Hanlon's Team Master's Project Presentation (TMP) involved helping Sigma-Tau Pharmaceuticals gain an in-depth understanding of the epidemiology of its rare disease product profile for cerebrotendinous xanthomatosis (CTX) and generate a road map for the possible adoption and implementation of a test for CTX in the existing newborn screening panel.

"KGI's emphasis on interdisciplinary learning will prove very valuable to me as a medical student," Hanlon says. "Understanding the nuances of bioengineering, bioethics, and business management will help me to better navigate their interface as a physician."

Hanlon says an important discovery in her graduate coursework has been her interest in the processes through which new therapies are devised and tested. In this context, she has decided to continue at KGI to earn a Master of Science degree in Pharmaceutical Discovery and Development.

"My goal is to foster this new interest during medical school through research projects," Hanlon says. "I am currently applying to medical school and hope to matriculate in the fall of 2015."



THE RISK-TAKING BIOSCIENTIST

ABASI ENE-OBONG, PPM '14

Abasi Ene-Obong always knew he wanted to be a scientist. In fact, he figures he was born with a bent toward the discipline. His father is a botanist, geneticist and biotechnologist. “As a child, I had an active mind and always questioned people and nature,” recalls Ene-Obong. “I spent a lot of time in my father’s office. I would take my friends to his office after school and we used some of his gadgets to play.” But, regardless of his father’s success as a scientist, Ene-Obong had to set his own career path. That path started at a London university and later landed him in Southern California.

Ene-Obong earned a PhD in cancer biology from the University of London at age 28. But like many who graduate with PhDs, Ene-Obong discovered he missed out on the experiential learning that would ultimately help him follow in his father’s footsteps. So he enrolled in KGI’s one-year Postgraduate Professional Masters in Bioscience Management (PPM). “California, in my opinion, is one of the most entrepreneurial places on earth and I wanted to be there,” says Ene-Obong. “KGI also offered a most unique program that merged science and business education with experiential learning. I felt that my scientific experience and successes would be understood and recognized.”

After the time and expense of earning a PhD, enrolling in a post-graduate program is a big step for anyone—but it was an even a bigger step for Ene-Obong. He moved his wife and infant daughter from London to California to follow his dreams. It was a risk he believed was worth taking because the payoff would mean career-launch connections and ultimately an industry job. “It is always risky moving from one country to another,” says Ene-Obong. “Leaving the comforts of England to build a new life in the States was not easy. But I had the support of my wife and that meant everything.”



“It was a bit of upheaval but definitely worth it. It was the goal I had in mind when I came to KGI. I’m getting the chance to work with clients in pharmaceutical and biotechnology companies, financial houses, governmental agencies, healthcare payers and providers.”

As Ene-Obong sees it, spending another year in school to pursue the PPM—and moving to another continent with a young family—was definitely worth the risk. He says the degree program offered him what he lacked in business skills and helped him connect with a strong network of talented people. “It is hardly ever one thing that makes all the difference but rather a combination of things,” Ene-Obong says. “I am hopeful that my KGI experience will be one of the significant factors that helped make a difference.”

Ene-Obong started making a difference even during his time at KGI. His Team Master’s Project (TMP) involved creating a business process to enable the planning, management, monitoring and evaluation of all capital projects at Gilead’s 200,000-square-foot manufacturing site in San Dimas, California. The San Dimas site supports manufacturing, packaging and labelling for a number of products, representing over 70 percent of the company’s products destined for delivery in the American continent. The TMP was a great learning experience, he says, and it was interesting to watch Gilead’s dramatic growth throughout the duration of the project.

His own ‘big’ but calculated risk started to pay off before commencement. In April, IMS Health, a leading provider of data, technology, consulting and services to the healthcare industry, offered Ene-Obong a job as a consultant in their Philadelphia office— meaning yet another big change for the young family. Ene-Obong’s wife and daughter have temporarily returned to London but will be joining him in the U.S. soon. In the meantime, he says that “every once in a while (they) meet up to spend time as a family” and he shared a photo taken during a recent trip to New York City. “It was a bit of upheaval but definitely worth it. It was the goal I had in mind when I came to KGI. I’m getting the chance to work with clients in pharmaceutical and biotechnology companies, financial houses, governmental agencies, healthcare payers and providers,” he says. “My career goals moving forward are just to keep on working and succeeding—and working.”

KGI LEADERSHIP PROFILES:

Janelle (Grimes) Fluharty, MBS '06
and Ravneesh Sachdev, MBS '06

“KGI was the best choice for me for two key reasons: the MBS degree was innovative and the first of its kind and KGI’s network of connections within the life sciences industry was extensive.”

It takes only a brief conversation with Janelle Fluharty and Ravneesh Sachdev to understand why they’ve attained leadership positions in the biotech industry. Both have worked exceptionally hard, have acquired the best education, and clearly grasp that everything they do involves and impacts people. “I work with people in functions all across the company, including legal, medical, commercial and other stakeholders,” says Fluharty, who, as director of regulatory affairs for Amgen works with colleagues throughout the company to ensure all product communications are compliant with FDA regulations. “My team must interpret the regulations and then communicate them clearly and concisely to a variety of people at different levels of understanding. It’s our job to do that in a way that is meaningful to them.”

In a similar fashion, Sachdev, a senior director of global business development at UCB Pharma based in London, engages with a variety of functional experts within and outside business development to successfully evaluate, negotiate and close business deals. “Once you’ve found a potential asset to license or acquire, you collaborate with R&D on robust ways to develop it. You partner with finance to determine the relevant development costs, and you discuss with manufacturing about how you’re going to make the asset once you bring it in-house,” Sachdev says. “Finally, you team up with legal to ensure the final contract is accurate and comprehensive. Overall, it’s my responsibility to integrate all these critical opinions to make sure that we close the best deal possible for both parties involved.”

After graduating with a bachelor’s degree in molecular neuroscience from Claremont McKenna College, Sachdev’s first professional work experience was at Ionian Technologies, a small KGI biotech spin-off. Although his primary responsibilities were in scientific research, the small company culture enabled him to productively contribute to investor relations, marketing, operations and other business functions. When the startup moved to San Diego, Sachdev opted to return to academia rather than relocate. He spent a year doing genomics research at Loma Linda University Medical Center, and then decided to enroll in graduate school.



RAVNEESH SACHDEV, MBS '06

“I missed working on the business side of the industry and realized that I wanted a career that combined science and business in a meaningful way,” he says. “KGI was the best choice for me for two key reasons: the MBS degree was innovative and the first of its kind and KGI’s network of connections within the life sciences industry was extensive.”

A career in regulatory affairs wasn’t even on Fluharty’s radar as an undergrad studying biology at Westminister College in New Wilmington, Pennsylvania. Instead, after graduation she began working in clinical research at the Henry M. Jackson Foundation and later at West Virginia University. Five years into her career, she realized she needed an advanced degree if she wanted to progress. KGI’s MBS program intrigued her. “The more I looked into KGI’s program, the more it opened my eyes to career opportunities in industry where I could apply my science background,” she says. “It also has this wonderful faculty who bring industry experience with them.”

A KGI pharmaceutical development class taught by Karen Moynihan ignited Fluharty’s interest in regulatory affairs, and it was Moynihan who put her on the path toward her current career. Both Fluharty and Sachdev also credit their Team Master’s Projects (TMPs) with helping them build skills they still apply today. Working on a TMP for Amylin Pharmaceuticals not only bolstered Fluharty’s knowledge of regulatory affairs but also furthered her understanding of how her work interacted with the cross-functional roles of her team members.

“What we work on every day affects patients. It can help them understand their medications better, help with their discussions with their doctors and help in a variety of other ways. That opportunity to see such a discrete and poignant impact is very motivating.”

That same people interaction still motivates Fluharty in her work at Amgen, as does the impact she and her team have on the lives of others. “What we work on every day affects patients. It can help them understand their medications better, help with their discussions with their doctors and help in a variety of other ways. That opportunity to see such a discrete and poignant impact is very motivating.”

Sachdev’s role as the team leader on his TMP for Beckman Coulter allowed him to experience what it was like to analyze, synthesize and present a well-thought-out recommendation on whether the company should commercialize a particular asset. It also provided him the opportunity to lead a diverse team of his fellow students. Today at UCB, Sachdev still leverages the skills he acquired during his TMP: the ability to do a robust analysis, to both collaborate and lead effectively, and to make an impactful presentation.

As for his success, he points to two key things: “Attending KGI changed the course of my career. I learned to be aware of my strengths and weaknesses and became adept at recognizing and creating opportunities for professional advancement. Consequently, I grew both as a person and as a professional in the life sciences industry. The other is the unwavering support of my wife, Asavari. Without those two things, I truly don’t believe I would have made it as far as I have.”



**JANELLE FLUHARTY, MBS '06,
WITH HER DAUGHTER
AISLYN FLUHARTY**



GO WEST, YOUNG SCIENTIST

**DR. PARVIZ SHAMLOU, DIRECTOR OF AMGEN BIOPROCESSING CENTER
AND GEORGE B. AND JOY RATHMANN PROFESSOR**

Dr. Parviz Shamlou, new director of KGI's Amgen Bioprocessing Center, talks about his 40-year journey across the three continents and two 'worlds'—and, of course, about his plans for ABC moving forward

For the past 40 years, Dr. Parviz Shamlou has been slowly migrating west. "It's true: I was born in Iran, grew up and was educated in Europe, and matured in the U.S.," says Shamlou with a ready smile that makes it easy to see why he was voted the most entertaining faculty member by the 2014 graduating class. "I always say the two commonalities throughout my life are the fact that I have steadily drifted west across three continents and my love of science and engineering." More specifically, it is the love of practical application—taking discoveries made by life scientists in a lab and turning them into products that can help patients—that first started Shamlou on a career path which traversed not only three continents but the two separate worlds of academia and industry. It is also what informs his plans for the Amgen Bioprocessing Center moving forward. "I think our role here at ABC and KGI in general is to remain close to industry," Shamlou explains. "That is how we help to make discoveries in the lab matter and that is how we give our students the education they deserve."

When it comes to industry partnerships, flexibility and adaptability are critical; a one-size-fit all approach doesn't cut it, he adds. "In my 30 years of experience working closely with biotech companies, one thing I've learned is that the needs of a small company are very different from those of a large company," Shamlou explains. "For a smaller company that has developed a new drug therapy, for example, they may not be able to afford a proof of concept demonstration. That's where working with an academic research center like ABC can really benefit them. On the other hand, a large company can benefit from having a direct pipeline to the next generation of scientists, engineers and managers who are not only superbly trained but could also be some of the next generation's visionaries." In order to keep that connection with industry fresh, Shamlou and his team are making changes to the composition and structure of the Amgen Bioprocessing Center's Advisory Board (ABCAB) with Biomarin Executive Vice President of Technical Operations Robert Baffi serving as chair.

In addition, Shamlou is working with the other members of the ABC team—Program Director of the MBS in Bioprocessing Jennifer Ton and Director of Bioprocess Engineering Operations KiriLynn Svay Hedberg, along with KGI Research Dean Dr. Larry Grill—to enhance and improve courses in bioprocessing. He also has plans to develop a two-track option for bioprocessing majors. A more technical track in bioprocess design and development will be added to the traditional track leading to careers in manufacturing operations, supply chain, project management and related functions. "Our job is to listen to the voice of our customers. Our customers are not just industry but also our students," Shamlou says. "Industry says that there is a shortage of employees with technical training in bioprocessing and at the same time students want more options and choices."

Dual 'citizenship'

Shamlou's own journey from academia to industry and back again (and again) started at the University of Bradford in West Yorkshire, England, where he earned his PhD in chemical engineering. He then went to work in industry in chemical processing for a few years. However, a love of research and publication drew him back to academia. For the next two decades, as a professor and then head of department of Biochemical Engineering at University College London (UCL), Shamlou was involved in building not only a department but, in many ways, a different model for collaboration between academia and industry. "Research at UCL really mushroomed because of the excitement surrounding biochemical engineering and bioprocessing. Remember: this was in the mid '80's—the time when Lilly first used recombinant DNA to manufacture synthetic insulin and then human growth hormones a couple of years later," Shamlou says.

In 1998, UCL made the decision to create a formal new department in Biochemical Engineering. As its deputy head, Shamlou was responsible for recruiting 50 students for the new department. Not only did the department meet their goal but, by approaching students who had been locked out of medical school due to government quotas on med school admissions, they also managed to recruit 50 of the "brightest and best-qualified" students to the first cohort in the new department of biochemical engineering. "It was an amazing achievement and one of the things I'm most proud of in my career. It was really something new, not only at UCL, but in academia in England at the time—a break from tradition in the best sense," he says.



Right to left:
KiriLynn Svay Hedberg, director of Bioprocess Engineering Operations, Amgen Bioprocessing Center; Dr. Parviz Shamlou; PhD student Elizabeth Henderson; and Ricardo Kim, MBS '14

In 2003, after 20 years at UCL, Shamlou decided to leave academia for a job in industry at Eli Lilly and Co. headquarters in Indianapolis, Indiana, thereby continuing his westward journey. Why make such an unexpected transition, when, as Shamlou points out, many scientists and researchers go in the reverse direction at that stage of their careers and accept positions in academia after years of working in industry? "At the time, there was a lot of excitement in terms of bioprocessing and biochemical engineering in the U.S. Major biotechs were making and producing new drug discoveries at a rapid rate, and I wanted to go where the excitement was happening," Shamlou's original plan was to work in industry for five years to "recalibrate" his senses, but he ended up staying at Lilly for 11, working on multiple projects aimed at treating a number of diseases from cancer to Alzheimer's. "Even though about 80 percent of our research at UCL was industry-funded, we still didn't have to be concerned about regulatory or other mass production issues," Shamlou explains. "There's no substitute for being in that environment where you are responsible for producing deliverables in a way that's cost-effective and basically flawless, day in and day out."

“There’s no substitute for being in that environment where you are responsible for producing deliverables in a way that’s cost-effective and basically flawless, day in and day out.”

After all, Shamlou adds, you can have the most sophisticated biotech process in the world, but if it doesn't make medicine that patients need and can afford, no one is going to invest and it's never going to get into the marketplace. "Translation of discoveries in life sciences to practical outcome is highly interdisciplinary," he explains. "That's why regulatory, quality, entrepreneurial and the business classes at KGI are such an important part of the training our MBS students receive. They connect the work of the Amgen Bioprocessing Center with patient safety, clinical and the kind of financial knowledge and awareness that are needed to make a successful outcome."

As for continuing his own westward journey and between the two worlds of academia and industry, Shamlou says that SoCal is as far west as he wants to go. "I'm very happy here at KGI and in California. So I think I'll stop here," he adds with a fairly big smile.

OPERATION EXCELLENT!

KGI graduates are proving their worth and launching their careers at highly competitive operations rotations programs offered by leading life sciences companies such as Baxter, Genentech and Gilead.



Baxter Operations Development Program Associates
Drew Vo and Chris Cantrell, both MBS '13

It's a pretty well-established fact that KGI students do well when they leave here securing great jobs, often before graduation, and advancing quickly at life sciences companies around the world.

One of the ways they do it is by winning coveted spots at the highly competitive operations rotations programs offered by leading life sciences companies such as Baxter, Genentech and Gilead. Although each company's program is different, they generally involve rotating through a series of 6-9 month assignments at a company's various U.S. manufacturing sites. Graduates of the rotations programs gain unparalleled exposure to various functions and divisions within the company, not to mention coaching and career development advice from assigned mentors and managers.

It's pretty much a win-win situation, according to Drew Vo, MBS '13, who is currently an associate at Baxter Bioscience's Operations Development Program (ODP). "[A rotations program] gives you something you don't get anywhere else: a full-time job that allows you to develop experience in multiple areas, while focusing on your leadership skills," Vo said. "It's really a unique opportunity that gives you the kind of experience you don't generally get until you become a manager in five or six years." Vo's decision to apply to Baxter's ODP was made even easier after speaking to several of his fellow alumni who had completed the program: "KGI has such a strong presence at Baxter and in the program, that I was able to talk with many of my fellow alumni who told me how much the ODP had helped them in their careers." For a small school, KGI attracts representatives from a wide array of life science companies, many of whom come to discuss opportunities in their rotations programs, according to KGI Director of Career Services Angela Cossey.

"I think it speaks to the quality of our graduates and how well they perform professionally," Cossey said. "Word of mouth is still very important when it comes to recruitment, and many of these companies have had very positive experiences hiring KGI alumni."

Technical, Man

Word of mouth played a key role in Chris Cantrell's decision to apply to Baxter's ODP. During Cantrell's second year in KGI's Master of Bioscience (MBS) program, conversations with fellow KGI'ers who were going through the ODP got him excited about Baxter and the opportunities the program provided to hone both his manufacturing and leadership skills. Cantrell, MBS '13, describes himself a "technical" man. He graduated from Georgia Institute of Technology with a B.S. in biochemistry and worked in a lab there for a year before he decided to apply to KGI.

"I love science but lab work started to wear on me. I decided I need more of a blend of science and other disciplines so I decided to go into industry," added Cantrell, who first learned about KGI from one of his former biochemistry professors. Once enrolled, KGI business classes specifically tailored to the life science industry and multiple networking opportunities reinforced Cantrell's decision to "veer away from a purely academic research track to a more hybrid career." "When I heard the ODP's talk," Cantrell said, "I thought that's what I want. It offers me a chance to get my hands dirty with manufacturing but at a higher level, as a project manager. I don't like to do the same thing every day. I like to stretch myself and at Baxter in the ODP, I definitely get that chance." *In the spring of 2014, Cantrell was just beginning his second rotation as a manufacturing supervisor at Baxter's operations in St. Paul, Minnesota. His responsibilities involved supervising the first phase of a chemical treatment process on the pericardium sacks of cow hearts that will be used in surgical procedures thanks to advances in tissue engineering.

"The steering committee within Baxter really helps guide your first rotation," Cantrell said. "I think based on the fact that my answers were maybe more 'nerdy' than the other ODPers I ended up in technical services, which is fine by me. Personally, I'm very interested in operational excellence. It's what gets me excited. But, at a company like Baxter you don't have to be technically working in operational excellence to do it. Everyone is focused on continuous improvement."

A fortunate 'fluke'

Shrina Shah, MBS '13, landed in a regulatory affairs rotational program, "almost as a fluke." But, being hired into Gilead's highly selective rotational program in regulatory affairs has given her entrée to the biotech leader and helped her deepen her knowledge in a number of areas including compliance and regulatory project management. "Actually, I first heard about Gilead's rotational program when I sat next to David Pizzuti (vice president of Regulatory Affairs at Gilead) at KGI's annual Fellowship Dinner," Shah explained. "Later that week I attended the information sessions on campus and applied through a resume drop."

Shah says she has a natural enthusiasm and felt confident answering questions in interviews thanks to the presentation skills she polished at KGI and during her summer internship at Roche. Students in KGI's two-year MBS program are required to complete a summer internship at a life sciences company. As a global marketing intern at Roche Molecular Diagnostics (RMD) in Pleasanton, California, Shah got the opportunity to perform competitor intelligence, write review papers, and present competitor product comparisons to senior staff.

"It's really a unique situation where you are a full-time employee, yet, at the same time, you are encouraged to soak up as much information as you can by being emerged in different environments within the company. I think a lot of professionals, even those several years into their careers, would like to have that chance."

As an associate in the regulatory affairs rotational program, Shah says she is getting a fantastic opportunity to continue a career track that began when, as an undergraduate majoring in molecular biology at UC Berkeley, she decided she "didn't want to go to medical school." KGI business classes were a "selling point" for Shah who knew she wanted to "get out of the research world and into industry." At the same time, with a minor in public policy, she wanted to learn more about health policy.

At the time of this interview, Shah was completing the second of four rotations in Chemistry Manufacturing and Control (CMC), Compliance, Therapeutic Area Liaison, and Regulatory Project Management, respectively. During her rotation in compliance, she helped to keep clinical teams on track and prepare for future inspections, among other responsibilities. Erin Watson, a senior manager in regulatory affairs at Gilead and Shah's supervisor during the CMC rotation, says the program provides an enviable career-launching mechanism.

"It's really a unique situation where you are a full-time employee, yet, at the same time, you are encouraged to soak up as much information as you can by being emerged in different environments within the company. I think a lot of professionals, even those several years into their careers, would like to have that chance," Watson said.

Relationship Redux

Candice Lo, MBS '12, agrees and says it's hard to imagine a better place to start building a career in the life sciences industry than Genentech's Operations Rotation Development Program (ORDP). Genentech's ORDP spans over a two-year period and consists of four six-month rotation assignments within the organization, including global supply chain, global engineering, technical development, quality, regulatory and operational excellence, to name a few. "I think very few people come to KGI knowing exactly what they want to do. The rotation program allows you to explore and develop your skills, and I've been able to apply many aspects of what I learned at KGI in my ORDP rotations particularly on the soft skills side," Lo said, adding that at Genentech there's a "very strong emphasis on relationship building."

And, speaking of those relationships, Lo also added: "At KGI, I had the opportunity to work with many bright people. But when I started working at Genentech, I was blown away by the impressive backgrounds and caliber of my peers. Being surrounded by so many bright people really motivates me."

BIOCON & KGI

The first batch of Biocon Academy students celebrated their success at a certification ceremony held at Biocon Park in Bangalore, India, on May 28.

“Biocon Academy is the realization of my dream to enable and energize the younger generation to pursue a career in biotechnology, a field with the potential to bring transformative change.”

Biocon founder and managing director Kiran Mazumdar-Shaw established Biocon Academy in order to train highly skilled professionals for the biopharma sector. The Academy's flagship program, the Biocon- KGI Certificate Program in Biosciences, uses a “flipped” curriculum and is taught both by faculty in Bangalore and remotely by KGI faculty in Claremont, California.

“Biocon Academy is the realization of my dream to enable and energize the younger generation to pursue a career in biotechnology, a field with the potential to bring transformative change,” Mazumdar-Shaw said. “The graduation of the first batch of the Biocon-KGI program sets the benchmark for a very valuable and impactful partnership. It is a partnership between two organizations committed to the business of science, a partnership between academia and industry, a partnership between the faculty and students and, finally, the coming together of the entire biotech sector to give young minds the opportunity to partake in the journey of transforming India through the power of biotechnology.”

The 16-week intensive program, which began on January 10, 2014, offers hands-on professional training in diverse areas like molecular biotechnology, biopharma quality assurance and control, CMC regulations, pharmaceutical development, mammalian cell biotechnology and professional skills development. Students also had the opportunity to get hands-on experience at various facilities at Biocon.

“I particularly liked the holistic approach of the course that is focused on enhancing knowledge in biosciences, with practical industry exposure and developing professional management skills. We had functional visits three times a week to institutions like SIT, IBAB and Biocon Research Centre which provided us hands-on experience of working in the labs and manufacturing facilities,” said program graduate Poonam Mathur. All the students in the first batch have been hired by various companies, including Biocon, for different functions, such as production, quality assurance, regulatory affairs, research & development and marketing. Classes for the second batch of students enrolled in the Biocon-KGI Certificate Program in Biosciences began in June and the third batch started on October 15, 2014.



Left to right: Biocon Academy graduates Poonam Mathur, Yunoal D'souza, Ritu Bharadwaj, Sherwin Madtha, Jannet Dianna and Priyanka Sampath

INTRIGUED BY THE INTERSECTION OF SCIENCE AND LAW

Christine Chen is the first KGI graduate to receive the Certificate of Bioscience Industry Law and Practice.

Christine Chen, MBS '14, celebrates the fact that she works at the intersection of bioscience and law. As a patent technical consultant for Alleman, Hall, McCoy, Russell and Tuttle, LLP, an intellectual property law firm in Portland, Oregon, she helps draft applications that secure patents for clients' new inventions. "I get to see cutting-edge science every day," Chen says. "This is the stuff that nobody else can see, because its all highly proprietary. Viewing these new inventions firsthand is one of the most thrilling parts of my job."

It's a career made possible, in part, by an innovative certificate program KGI launched last year in partnership with Southwestern Law School in Los Angeles. The program gives students at both institutions the opportunity to acquire the business and intellectual property rights skills coveted by leading companies in the bioscience industry.

In May, Chen became the first KGI student to receive the program's Bioscience Industry Law and Practice Certificate. Each year the program accepts about two to four students from each school. Qualified KGI students can

take courses at Southwestern in intellectual property law, patent and trademark law, and regulatory law. Southwestern students accepted into the program can take KGI courses in technology management, entrepreneurship and bioscience-related industry dynamics.

For Chen, the certificate program provided a path to a career option she discovered during an internship the summer after her first year at KGI. Working in the technology transfer division at Los Alamos National Lab in New Mexico, she observed that technology licensing involved the transfer of intellectual property rights. "Looking at the work they were doing, I saw it took science—which is my passion—and combined it with law," Chen says. "KGI combines life sciences with business. The certificate program connects life science and law, and that really interested me."

In her consultant position, she revels daily in the innovative science that continually crosses her desk. She also ponders the next step in her career and hasn't ruled out the idea of becoming a patent attorney.

"I get to see cutting-edge science every day. This is the stuff that nobody else can see, because its all highly proprietary. Viewing these new inventions first hand is one of the most thrilling parts of my job."



Left to right: KGI BOT Chairman Robert Curry; Christine Chen, MBS '14; KGI President Sheldon Schuster; and Dr. Steve Casper, dean of the School of Applied Life Sciences

IT'S OFFICIAL! AND THEY HAVE THE WHITE COATS TO PROVE IT!

Meet the KGI School of Pharmacy's Founding Class



Top row (L-R)

- Junel Tagayuna
- Anthony Costy
- Jesse Perez
- Sagar Bhakta
- Antonio Silva
- Alex Rosales
- Obed Belony
- Ricardo Arechiga
- William Cunningham
- Sungil Ho
- Patel Viraj
- Rajan Vaidya
- Hera Kasparian
- Kevin Lien
- Michael Soliman
- Heather Hassan
- Udi Nassar

3rd Row (L-R)

- Maya Maaz
- Inet Amirian
- Chandni Patel
- Valerie Moise
- Ibrahim Monika
- Arsineh Mesrkhani
- Claudia Lekhac
- Carolyn Woodside
- Taylor Walker
- Kevin Vannukal
- Stacey Van
- Christian Thompson
- Sunny Patel
- Allen Chung
- Susan Lee
- Katelyn Ortega
- Natalia Kettoola
- Guatam Salva

2nd Row (L-R)

- Tiffany Orteza
- Ashna Ramanlal
- Christina Assadvazadorian
- Shirley Tsai
- Wendy Su
- Michelle Lam
- Daniel Chinchilla
- Maliha Noamani
- Nguyen, Trinh
- Peter Tran
- Marina Dominguez
- Jason Cao
- Halleh Mahmoudnejad
- Laureen Nguyen
- Armando Cortes
- Sukhjit Kaur
- Caroline Kim
- Ariana Ayon-Verduzco

Bottom Row (L-R)

- Shaida Abbas
- Thi Ngo
- Stephanie Nguyen
- Delinna Huyhnh
- Beth Le
- Tricia Tran
- Anderson Van
- Emily Truong
- Ngoc Lien Nguyen
- Daniel Abro
- Thuy-Vi Nguyen
- Christine Nguyen
- Amanda Wong
- Flavia Nagujja
- Tuyet "Stephanie" Phan
- Michelle Mimay
- Joana Kozeli
- Kim Nguyen





Junel Tagayuna may only have walked a few feet across a stage, but when he sat back down wearing that white coat worn by generations of pharmacists and healthcare professionals before him everything “felt different.”

“Receiving my white coat was a long-awaited moment for me—one that literally brought tears of joy to my eyes. I felt a big sense of relief, but an even bigger sense of responsibility.”

Receiving my white coat was a long-awaited moment for me one that literally brought tears of joy to my eyes,” Tagayuna said. “I felt a big sense of relief, but an even bigger sense of responsibility. To me, personally, that white coat represents a continuing commitment to become the kind of pharmacist I had always envisioned” Tagayuna was one of 73 members of the founding class of the KGI School of Pharmacy (SoP) to take part in a White Coat Ceremony on Saturday, August 23, 2014. Students entering a four-year PharmD program traditionally receive white coats, a symbol of clinical service and care, to welcome them into the pharmacy profession. At the beginning of the ceremony, held at Garrison Theater at Scripps College, KGI President Shelly Schuster also presented white coats and ‘traditional’ KGI teal sunglasses to several members of the KGI community who were instrumental in establishing the School of Pharmacy, including KGI Board Chairman Robert Curry and Trustee Dan Bradbury.



Members of the KGI School of Pharmacy Class of 2018
left to right: Guatam Salva, Sagar Bhakta, Sunny Patel and Viraj Patel

Dr. Arcelia M. Johnson-Fannin, founding dean of the Feik School of Pharmacy at University of the Incarnate Word in San Antonio, Texas, was the keynote speaker. Dr. Johnson-Fannin also served as founding dean at Hampton University School of Pharmacy in Hampton, Virginia, making her the first woman and the first African-American to be the founding dean at two new pharmacy schools. In 1999, she was named one of the 50 most influential pharmacists in the country by American Druggist magazine.

In addition to President Schuster, speakers included SoP Dean Dr. Kathy Webster, Chairman Curry, Mr. Bradbury; Dr. Kathy Besinque, president of the Board of Trustees of the California Pharmacists Association; and Dr. Trevor Paymer, district manager of Walgreen's Stores in Southern California. Walgreen's generously provided funding for the white coats the students received and provided other sponsorship in support of the ceremony.

State Sen. Ed Hernandez (D-West Covina) also spoke briefly about how he worked closely with The California Pharmacists Association and the California Society of Health Systems Pharmacists to craft legislation, SB 493, which broadened the scope of practice for pharmacists in the state of California. After being formally cloaked with their white coats by Dean Webster and members of the SoP faculty or a pharmacist parent, Assistant Professor of Clinical Sciences Dr. Julie Truong led the students in reciting the Pledge of Professionalism.

"The Pledge of Professionalism is a promise you make to yourself, your colleagues and your community to uphold the values and principles expected of a pharmacy professional. It was an honor to recite this promise with the Class of 2018. It served as a reminder to me about why I chose to enter the profession and all the things I love about it," Truong said.



GRADUATE INSTITUTE

MEET THE KGI SCHOOL OF PHARMACY CLASS OF 2018!

These three young people are representative of the spirit of our founding Pharmacy class. They are determined, committed and not averse to taking risks. And, they have each overcome significant obstacles along the way, whether it was surviving a near fatal childhood illness, bucking family tradition or traveling half way around the world in pursuit of a lifelong goal. We can't wait to introduce you to their 70 new classmates!

“There’s a huge gap in health literacy and healthcare outcomes in the Hispanic community. I’m hoping I can contribute and help make it smaller.”

A PROUD FAMILY MAN AND MARINE

ANTONIO “JUAN” SILVA '18

Pharmacy is not Juan Silva’s first career, but he is certain it will be his last. In the past, the 34-year-old Texas native has served in the U.S. Marine Corps and owned and operated his own small business. However, he could never forget what he was really passionate about: science, medicine and, most importantly, helping sick people feel better. “My uncle is diabetic,” Silva explains. “When I was younger, I would translate for him, explain what the doctors and nurses were saying, and help him get the tools and resources that he needed to manage his diabetes.” Although Silva says the experience of watching his uncle struggle with diabetes left him with an intense interest in health care, he didn’t immediately pursue it as a career path. Instead, he enlisted in the Marines upon graduating from high school and was sent to Camp Pendleton in San Diego.



Being a Marine, Silva says, quite simply changed his life. “I wouldn’t trade my experience in the military for anything,” he explains. “The discipline it teaches you; that alone is invaluable. Then there’s the professionalism and the leadership skills. The traits I developed in the Marines are traits you can take with you everywhere. I relied on them when starting my business and I plan to bring them with me to the practice of pharmacy.” When Silva’s enlistment was up, he and his wife Carmen, whom he’d met in San Diego, decided a life in the military was not for them. So they returned to Silva’s home in Brownsville, Texas, where Silva quickly followed in his father’s footsteps as a business owner in the transportation industry. “My dad really pushed the business end,” Silva says. “We clashed a lot when I was younger because he had a set plan for me. The business and home, everything was very close together, and he couldn’t understand why I was interested in something different.”

It was Silva’s mother, Norma Alvarez, who eventually convinced him that it was time to make a change and do what he really wanted with his life. She had recently been diagnosed as pre-diabetic and got valuable information from her local pharmacist about how to manage the condition. “She knew that’s what I wanted to do, and she told me the time to do it was now. I couldn’t just hope to please my dad,” Silva says, adding that, as the father of three young children, the decision to commit to a four-year intensive program was still a tough one. “I want my kids to know that education is very important and that you have to work hard to reach your goals. Even though it will be difficult over the next four years, in the end it’s worth it.” A sense of camaraderie with his fellow students is one of the things Silva says he is most looking forward to during the four years he will spend in the PharmD program.

“It kind of reminds me of the military,” he says. “You have the opportunity, in a different setting, to be part of a team. The more you work together, the more you’ll learn, and the better your chances of success.” And among those rooting for Silva’s success will be his father Antonio, who is recovering from a recent heart attack. “My father is a proud Mexican who never went to the doctor in his life, but now he has more of an appreciation for what medicine can do,” says Silva, who has been helping to make sure his father gets the right medication and sticks to a healthy regimen. “There’s a huge gap in health literacy and healthcare outcomes in the Hispanic community,” he adds. “I’m hoping I can contribute and help make it smaller.”

A CHAMPION ON ANY OBSTACLE COURSE

FLAVIA NAGUJJA '18

To the outsider, the chances of Flavia Nagujja receiving an education, let alone an advanced degree in pharmacy, were about as great as those of snow falling in the Sembabule District of central Uganda where she was born and raised. “I was always interested in science but where I grew up many people see the education of a girl as a waste of time and resources,” Nagujja says. “Girls in the Sembabule District are only expected to know how to perform domestic work and tend to the fields.” Luckily for Flavia, her family didn’t share this view. But, still, there were major obstacles working against her, not the least of which was a lack of resources and an unforgiving geography. “When I finished middle school, I wanted to go to a high school that offered science courses, but in Uganda only certain schools offer sciences and the closest one to our village was 80 miles away,” she explains. “I am one of 20 children so my parents did not have the resources to pay for me to attend the school that offered science courses. This was difficult for me because without taking the science classes in high school I could not major in chemistry or biology in college as I had planned.”



“I used to think I was stupid for not being able to do what all people do without thinking: talk. But, I have learned not to let stuttering define who I am and not to let it stop me from achieving my goals.”

But, then everything changed thanks to a persistent elder brother who encouraged her to enter a lottery for a permanent residency visa to work and study in the United States. Ironically, her brother didn’t win a slot, but Flavia did. “My dream came to life again when I learned that in the United States I still had the opportunity to become a pharmacist if I worked hard,” Nagujja says, adding that her passion for pharmacy stemmed, in part, from an early experience with poorly administered medication that left her temporarily paralyzed. “When I was 9 years old, my leg was paralyzed because I was given the wrong dosage of an injection,” she explains. “It only took a few minutes before I could not walk or feel my leg on the side the injection was given. It took two years of therapy to be able to walk again.”

“It is a problem in my country, and others, where people who are not qualified pharmacists dispense medicine,” she says. “It has led to much suffering. It is sad and frustrating to see a fellow human being die or be disabled because either the medicine is defective or has been administered improperly.” Once in the U.S., 21-year-old Flavia experienced a severe case of culture shock.

Dealing with unfamiliar food, “weird” weather and differences in interpersonal communication weren’t easy. The latter was particularly difficult for Nagujja due to a stutter that had plagued her since early childhood. “I used to think I was stupid for not being able to do what all people do without thinking: talk. But, I have learned not to let stuttering to define who I am and not let it stop me from achieving my goals,” she says. And, it hasn’t. After receiving a B.S. in chemistry from the University of Wisconsin River Falls while working full time as a nursing assistant, Flavia entered the KGI School of Pharmacy this fall as a member of its inaugural class. She says she chose KGI because the opportunity to be part of a new school with an innovative, highly specialized program appealed to her.

Geography, gender stereotypes, scant resources, a speech disorder, cultural differences... each of these obstacles has proved no match for a determined young woman from the Sembabule District of Central Uganda with a dream of becoming a pharmacist. “Despite the obstacles I’ve had to overcome, I want a rewarding career where I will have an opportunity to have a meaningful impact on peoples’ lives,” she says simply.

A TRUE SURVIVOR

CAROLINE KIM '18

As a young girl, Caroline (Jeong-Eun) Kim remembers being curious about a scar on her neck. She noticed that none of her friends at school had similar scars. So she began to question her parents about it. Finally, when her mother thought she was old enough, she brought out an old newspaper story about a 6-month-old baby who came down with Reye's syndrome after being given aspirin to combat a viral infection. Reye's syndrome is a rare and serious condition linked with aspirin use in children that can cause swelling in the liver and brain. "I was absolutely stunned because I always underestimated how serious my condition had been until my mom began to unveil the details," Kim said. "I realized that mine was a real survival story." In fact, at the time, Kim's condition was so serious that she lapsed into a coma for several days after being admitted to Han Yang University Hospital in Korea. As a result, she was put on a respirator via a tube put down her throat. The tube damaged her windpipe, and the scarring ultimately caused it to constrict from the size of a half dollar to an opening about the size of a tip of a pencil.

"Looking back, I'm really thankful for the people I've met. I don't know if it's purely a coincidence, but I feel like I've always been blessed to meet such wonderful and inspiring people," Kim says. Once she was ready to pursue her PharmD degree, Kim visited several pharmacy schools, but believed KGI was the right choice for her. She particularly liked that the program requires students to develop a specific expertise and she is interested in pursuing a specialization in medical therapy outcomes. "Because my passion is to ensure the safe delivery of aspirin and other medication to children, I appreciate the opportunity to focus on medical therapy management and to work on detection of adverse drug events in the human body," she says, adding that although she knows what her ultimate aim is she doesn't want to stick to one way of achieving it because she knows "there are numerous options out there" for her, both as a pharmacist and a true survivor.

"I was absolutely stunned because I always underestimated how serious my condition had been until my mom began to unveil the details. I realized that mine was a real survival story."

She was only able to breath normally again—without the aid of suction machines and an artificial windpipe—after she traveled to Children's Hospital in Pittsburgh for surgery to reconstruct her windpipe. Without the surgery, Kim risked dying either from an infection or choking to death if the tube became blocked or dislodged. Her parents had looked for two years to find a surgeon who could perform the complicated reconstructive surgery. That revealing conversation with her mother sparked Kim's interest in medicine and particularly the study of pharmacy. "I became passionate about it because of my own experience. My parents were not warned of the risk involved in giving me aspirin as a baby," said Kim, who volunteers for the National Reye's Syndrome Foundation to raise awareness about the condition in her own Korean-American community. "The first time I had to speak in front of a group of people I was very nervous," she added. "But my father told me I was the best person to tell this story." While volunteering at a hospital, Kim met a pharmacist who encouraged her to pursue her studies despite the fact that her family was going through some difficult times.

In preparation and to see if she liked the retail environment, Kim began working as a technician at a WalMart pharmacy in Tucson, Arizona, where her family now calls home. There, she would spend each shift inputting prescriptions into the computer and helping to fill them.



MEET THE FOUNDING CLASS OF THE MINERVA SCHOOLS AT KGI

Established in 2013 in partnership with the San Francisco-based Minerva Project, the Minerva Schools at KGI offer a reinvented university experience for the brightest, most motivated students from around the world. Minerva's founding class matriculated in the fall of 2014 and includes 30 students from 14 countries and territories.



A DO-GOODER WITH A FUTURE IN GENETICS

JUSTINE DE CAIRES '18

At first glance, Justine De Caires seems like your average teenager. She loves the Harry Potter series, plays in a band, and enjoys baking her signature chocolate chip cookies. But De Caires' plans for the future are anything but average. This fall, back home in Port-of-Spain, Trinidad, her friends will enter sixth form. Meanwhile, De Caires will embark on an unusual journey, joining the Founding Class of the Minerva Schools at KGI.

At just 16 years old, De Caires hopes the undergraduate program—formed through an alliance between KGI and San Francisco-based Minerva Project—will help her one day become a biochemical engineer.

The Minerva Schools Founding Class, which will convene for the first time this September, consists of 30 students from 14 countries and territories. After a first year in San Francisco, Minerva undergraduates will spend every subsequent semester in a different city, including Berlin, Buenos Aires, Mumbai, Hong Kong, New York and London. All courses will be completed via immersive online seminars and the students will use the city as their campus.

The only Trinidadian student in Minerva's Founding Class, De Caires has spent most of her life in Port-of-Spain and traveled very little. The program's international travel component initially piqued her interest in Minerva, she said.

"I will get to do higher education while I travel the world," she said. "That's really unusual."

In high school, De Caires was focused on making her community a better place. Along with several friends, she designed a fan out of recyclable materials that could more effectively cool classrooms in their school. Using Styrofoam, tissue paper, and a plastic bottle, they designed a cost-effective and environ-

mentally-friendly model that could cool buildings in the tropical Trinidadian climate. The fan won prizes for Best Product Design and Best Innovation in the local science fair.

De Caires also worked with underprivileged children at the Princess Elizabeth Centre in Port-of-Spain, a haven for low-income families. Along with a group of friends and the assistance of some of their teachers and those at the Centre, they threw a Christmas party, decorating the venue and then running games and food stalls for the kids who attended.

"I did it because the fun of childhood should never be directly related to how much money you have or how privileged you are," she said.

Going into college, De Caires believes she can contribute two things to Minerva's Founding Class: her sense of adventure and her love of genetics.

"I am interested in the genetics of cancers, as well as AIDS, because the mechanisms are really intelligent," she said. "If nature can create something so smart and magnificent, I want to see how we as humans can beat it."

While her academic focus is the sciences, De Caires also cares deeply about social issues and believes the largest issue facing the world today is widespread poverty. In fact, her interest in "doing good" in the world played a major role in De Caires' decision to enroll in Minerva where the curriculum focuses heavily on experiential learning.

"It's not just 'remember this—don't use it, just remember it,'" De Caires said. "I think Minerva will teach us so that we learn to make the world a better place by doing."

The background of the page features a teal-tinted photograph of two men in business attire. The man on the left is seen in profile, wearing glasses and a light-colored shirt. The man on the right is facing him, also wearing glasses and a suit with a striped tie. They appear to be in conversation. In the bottom left corner, a portion of the KGI logo is visible, showing the text 'KATE INSTITUTE' around a circular emblem with vertical lines.

KGI EVENTS

Each year, we host a number of events to help us stay in touch with alumni, donors and corporate partners—or to introduce KGI to new audiences. Sometimes we stay at home; other times we hit the road. But, no matter what the occasion, a good and informative time is had by all, and we like to think that guests leave feeling excited about the institute and its mission.





1. Left to right: Kyle Mak, MBS '13 and Amgen supply chain manager, KGI President Sheldon Schuster, and Bill Rich, Amgen VP of International Supply Chain and KGI Advisory Council member, at the third annual KGI-Amgen reception held at Amgen's Thousand Oaks headquarters on March 5

2. Chairman of the KGI Board of Trustees Robert Curry (left) and Trustee Dennis Fenton at the Sixth Annual Fellowship Dinner/Simon Ramo Distinguished Lecture held on February 5 at the Sheraton Fairplex Conference Center in Pomona

3. Left to right: William Leonardi, PhD '14, George Savage, Simon Ramo Distinguished Lecturer and co-founder and chief medical officer of Proteus Digital Health, and KGI President Sheldon Schuster at the Sixth Annual Fellowship Dinner

4. Isaac Middendorf, MBS '08, (left) and Dr. Steve Casper, dean of KGI's School of Applied Life Sciences, at an alumni mixer at Genentech's South San Francisco headquarters on February 26

5. Biocon Founder and Managing Director Kiran Mazumdar-Shaw (center) with KGI students at a Q&A session held on campus on January 9

6. David Swenson, vice president of marketing and product management at CareFusion and KGI School of Pharmacy advisory board member, gives alumni and students a tour of the global medical technology company's San Diego headquarters during an alumni mixer on July 24.

7. Students from MacArthur Junior High School in Santa Ana, California, try on lab gear during a visit to KGI's campus on July 17. (The 7th and 8th graders, who were enrolled in a summer school program focused on science, got to take part in some interactive experiments demonstrating the power of the life sciences.)

8. Sarah Arien, MBS '10, Joanna Kang, MBS '08, Corey Ozar, MBS '11, and Chivas Wakuta, MBS '10, at an alumni mixer at Pfizer's New York City headquarters on June 12

9. Left to right at the KGI School of Pharmacy White Coat Ceremony: President Schuster, Dr. Arcelia Johnson-Fannin, featured speaker and founding dean, Feik School of Pharmacy at University of the Incarnate Word; Dr. Kathy Webster, founding dean, KGI School of Pharmacy; Dr. Kathy Besinque, president, Board of Trustees, California Pharmacists Association; Robert Curry, chairman, KGI Board of Trustees

10. The Second Annual East Coast Update Luncheon was held at the IBM Client Center in New York City on July 13. Left to right: KGI President Sheldon Schuster, George Ohrstom, The Ohrstrom Foundation, Kathy Webster, founding dean, KGI School of Pharmacy; Thomas Campbell Jackson, venture partner, Easton Capital Investment Group; Dr. Roslyn Schneider, senior director of medical strategy, Pfizer; Stephen Kosslyn, dean of faculty, Minerva Schools at KGI; Alice Kane, KGI trustee and partner, Duane Morris LLP; Dwayne Wylie, retired professor of biology and biomedical Sciences, University of Nebraska; Dr. Stephen Schoenbaum, special advisor to the president, Josiah Macy, Jr. Foundation; Chivas Wakuta, MBS'10, senior project associate, Regeneron Pharmaceuticals; Robert Kerrey, executive chair, Minerva Institute and former U.S. senator and governor of Nebraska; Alice Huang, KGI trustee emerita and senior councilor for external relations and faculty associate in biology and biological engineering, California Institute of Technology; Russell Teagarden, senior vice president, medical and scientific affairs, National Organization for Rare Disorders (NORD); Lilian Wu, KGI trustee and chair, program executive, Global University Programs, IBM; Bernard Kury, KGI trustee and former vice president and general counsel, Guidant Corporation; Leonard Lee, industry portfolio manager, healthcare, life sciences, and defense, IBM Software; and Naren Vinayak, MBS'14, associate global product manager, Terumo BCT

11. KGI President Sheldon Schuster and Trustee Dan Bradbury (receiving his honorary white coat and KGI teal sunglasses) at the White Coat Ceremony for the founding class of the KGI School of Pharmacy on August 23

KGI SUMMER PROGRAMS Boost Career Readiness and Offer Training to Both Undergrads and Industry Professionals



1. Forty PhDs and post-docs from around the world participated in a two-week intensive, 'Managing Science in the Biotech Industry,' offered June 6-27 by KGI and the American Society for Cell Biology (ASCB).

2. Dr. Parviz Shamlou (center) converses with participants in the Mammalian Cell Culture Intensive Course held on KGI's campus July 21-24.

3. SURE participants Eungi Choi (Claremont McKenna College) and Moriah Lerner (Scripps College)

4. Students in the Summer Undergraduate Research (SURE) program included, (front row, left to right): Sydney Pong (Chapman University), Jason Kerr (UCLA), Ruaab Patel (UC Berkeley), Dr. Anastasia Levitin (KGI Research Assistant Professor), Bryce Ito (University of California Riverside), Brent Chamberlain (University of La Verne), Kyle Gilbert (Cal Poly San Luis Obispo) Back row: Takahiro Yamane (Cal State University, Monterey Bay), Mathew Smith (Cal State University, Stanislaus)

The KGI campus was particularly busy this summer with several new program offerings and the return of an “old” favorite. Available courses ranged from undergraduate research opportunities and life science classes to programs that helped industry professionals update their skills and expand their knowledge of biotech innovation.

MANAGING SCIENCE IN THE BIOTECH INDUSTRY

Based on the success of last year’s “Bridging the Gap” Bioscience Management Bootcamp, KGI offered the program again this summer. This time, the institute partnered with the American Society for Cell Biology (ASCB) to present the two-week intensive renamed “Managing Science in the Biotech Industry—An Intensive Course for Students and Postdocs.”

Funded by EMD Millipore, the program is modeled after KGI’s successful one-year Postdoctoral Professional Masters (PPM) in Bioscience Management, in which PhDs and post-docs spend a year at KGI acquiring the management skills needed to pursue senior management positions within the life sciences industry or embark on entrepreneurial ventures intended to commercialize technologies developed in laboratories. From June 16-27, the two-week intensive course immersed participants in the culture and organizational structure of life science companies through case-based teaching, professional development workshops, career panels and a team project.

Participant Rose Li says she particularly appreciated learning about career options in the life sciences and how best to pursue them.

“Having aspired to pursue an academic career as a physician-scientist since I was in middle school, I never had the opportunity to explore career alternatives because I was so focused on making it through the many hoops it takes to tread this path,” says Li, an MD/PhD candidate at the University of Pennsylvania Perelman School of Medicine in Philadelphia. “KGI provided an opportunity to explore career options, to build lifelong connections and to identify careers where I can utilize my talents to make a difference in the future of medicine and biomedical research.”

SUMMER UNDERGRADUATE RESEARCH EXPERIENCE (SURE)

Twenty-five students participated in the 10-week Summer Undergraduate Research Experience program. The SURE program, held on KGI’s campus from June 9 to August 15, 2014, attracted students from 19 institutions, including Cornell University, Harvard University, Brown University and The Claremont Colleges. Students worked on a variety of projects, involving drug discovery and development, computational and systems biology, medical diagnostics and devices, cancer therapeutics, market analysis and governance of university-industry partnerships. They conducted lab research and attended guest lectures, career workshops and sessions on developing their presentation and writing skills.

“The SURE program’s greatest value is that students get a chance to do applied and translational research under the close mentorship of KGI faculty,” says KGI Research Assistant Professor Anastasia Levitin. “There were multiple successful projects including one supervised by Assistant Professor of Biopharmaceutical Sciences Dr. Vivek Gupta in which students tested the efficacy of drug molecules for treatment of symptoms of pulmonary arterial hypertension (PAH). Two of the molecules tested have shown immense potential for development as PAH therapies, and are being considered for an invention disclosure. These drugs were previously FDA approved for other disorders, and thus their safety in humans has already been established.”

Andrew Vo, a biochemistry major from Chapman University, worked on a SURE project that explored a potential breast cancer treatment. For the project, he studied the metabolic reprogramming of mitochondria—which can either prompt the growth or death—of cancer cells known as MCF-7.

“The SURE program was an opportunity for me to experience the research side of science,” Vo says. “The fact that I didn’t have to worry about studying for any classes at the same time allowed me to focus on my project and to put myself in a scientist’s shoes for a short period of time.”

ANATOMY, PHYSIOLOGY AND BIOCHEMISTRY

This year KGI provided summer courses in anatomy, physiology and biochemistry for students who didn’t have access to these prerequisites prior to admission. All three courses utilized online technology such as pre-recorded videos that participants viewed outside of class hours. On-campus lab sessions for both anatomy and physiology reinforced the lessons and included novel technologies such as 3D holographic images in place of cadavers in the anatomy lab. Student engagement was further boosted in the biochemistry course through weekly online question and answer sessions with Derick Han, assistant professor of biopharmaceutical sciences.

MAMMALIAN CELL CULTURE INTENSIVE COURSE

An intensive lecture and lab course held July 21-24 brought professional scientists and engineers to campus to update their mammalian cell biotechnology knowledge. Led by a team of senior industry and academic experts, the course enriched participants’ skills in upstream functional areas including cell culture and primary recovery. Activities included the setup, operation and analysis of data from high-density, fed-batch cultures in lab scale Applikon bioreactors.

“Participants asked if we could run the course again this year so they could recommend it to their colleagues,” says Dr. Parviz Shamlou, director of the Amgen Bioprocessing Center, who led lectures on engineering design and modeling of cell culture bioreactors.

The Mammalian Cell Culture Intensive course is the first in a series of courses for industry professionals planned for 2014-15 as part of the Amgen Bioprocessing Center’s Bioprocessing Professional Advancement and Training (®PAT) program.



ALL OF THESE INDIVIDUALS HAVE ACHIEVED GREAT SUCCESS IN THEIR OWN CAREERS WHILE MAKING SUBSTANTIAL CONTRIBUTIONS TO THEIR RESPECTIVE FIELDS AND COMMUNITIES. FORTUNATELY, THEY HAVE CHOSEN TO DEVOTE SOME OF THEIR VALUABLE TIME AND TALENT TO ENSURING KGI'S FUTURE SUCCESS. AND, WE COULDN'T BE HAPPIER ABOUT IT.

FRANÇOIS FERRÉ, PHD

A leader in gene quantification and biomarker development, Dr. Ferré is the co-chairman and co-founder of AltheaDX, a privately held company and spinoff of Althea Technologies focusing on development of companion diagnostics in oncology. He served as company's CEO from 2010 to 2013. Prior to AltheaDX, Dr. Ferré co-founded Althea Technologies and served as co-CEO from 1998 until 2008. He was a director of Althea Technologies until April 2013 and has recently been appointed a director of Ajinomoto-Althea after the acquisition of the company by Ajinomoto. He also serves on the board of a number of private companies: Algebraix Data, Biomatrix, Biological Dynamics (chairman) and Portable Genomics. He is co-chairman of the Advisory Board of MD Revolution. Dr. Ferré was the winner of the 2005 E&Y Entrepreneur of the Year award in the Life Sciences category. He received his PhD in molecular oncology from the Pasteur Institute, France, and did his post-doctoral training at the University of California, San Diego.



GEORGE GOLUMBESKI, PHD

Dr. Golumbeski brings a wealth of experience in R&D and business development to the Board of Trustees. In his most current position, as senior vice president of business development for Celgene Corporation, he is responsible for the full array of business development activities, including identification and evaluation of opportunities, structuring and negotiating, in-licensing, M&A, outlicensing and alliance management. At Celgene, these activities are focused within the therapeutic areas of oncology and inflammation. Prior to Celgene, Dr. Golumbeski served as vice president of business development, licensing and strategy for Novartis-Oncology. During his tenure at Novartis, his group closed a significant number of collaboration agreements which bolstered the development pipeline. Earlier in his career, Dr. Golumbeski held senior positions at Elan Pharmaceuticals and at Schwartz Pharmaceuticals. Dr. Golumbeski holds a B.A. in biology from the University of Virginia and a PhD in genetics from the University of Wisconsin-Madison. He is a frequent speaker at industry conferences and leading business schools on a variety of topics related to collaborations within the pharmaceutical industry.





JEEREDI PRASAD, MD

Dr. Prasad has served as president of ProMed Health Care Administrators and ProMed Health Network, a large IPA in California's Inland Empire, since 1994. Dr. Prasad is also the founder and president of Chaparral Medical Group (CMG) a large multiple specialty group in Pomona, CA. He serves as a member of the board of directors at Prospect Medical Holdings, Inc., a healthcare company that owns hospitals and medical groups. Dr. Prasad has extensive experience in managed care and all aspects of health-care delivery. He is actively involved in Inter Valley Health Plan (a Federally Qualified HMO) where he is chairman of the board. Dr. Prasad has been a practicing endocrinologist for more than 30 years. He is a Fellow of both the American College of Physicians and American College of Endocrinologists.



ALEXANDER B. SUH

Alex Suh is a founding managing director with California Technology Ventures, LLC, a Southern California venture capital firm that focuses its investments in the life sciences and information technology. Mr. Suh is also a founding managing director with J.J. Jacobs Enterprises, LLC and Jacobs Capital Group, LLC, both Pasadena-based venture capital and fund-of-fund firms. Before co-founding these firms, Mr. Suh was an entrepreneur, starting several businesses. He helped to develop the first small business incubator in the San Gabriel Valley, managed several small business lending programs, consulted with nonprofits and cities on economic development projects and taught college courses in entrepreneurship, business and management. His community involvement includes serving as a past chairman to Villa Esperanza, a school for developmentally challenged persons; distinguished president for Kiwanis; and as an advisory board member for Women at Work and the Crippled Children's Society, among other nonprofit organizations. In 2009, he was honored with an Outstanding 50 Asian Americans in Business Award, while California Technology Ventures was named Technology Investor of the Year (North America) by ACQ Finance Magazine. Mr. Suh received a BS/BA from the University of Denver.



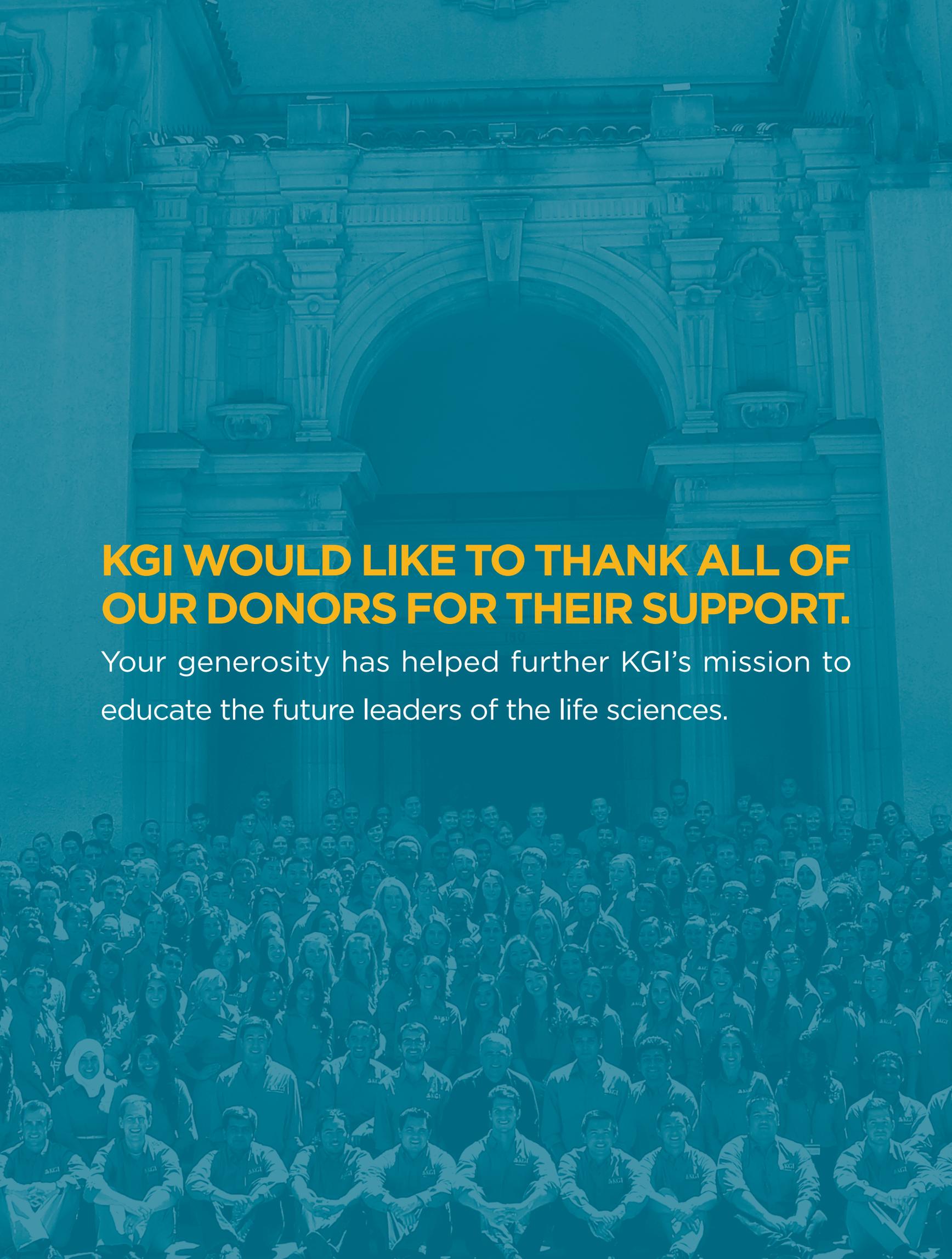
RONALD T. VERA, JD

Ronald Vera is a partner with the Law Firm of Vera & Barbosa. He has been in private practice since 1987, with offices in Claremont, California. Prior to starting his private practice, he was with two nationally recognized public interest law firms where, for 14 years, he litigated seminal cases in the field of civil rights and education. He now advises a number of education foundations and major nonprofit corporations, including serving as chief legal counsel to the University of La Verne, the San Gabriel Valley Civic Alliance, Orange County Conservation Corps and the Los Angeles County Online High School. He also serves on the board of directors for the California Community Foundation and the Pomona Valley Hospital Medical Center. In addition, Mr. Vera has been the recipient of a National Endowment for the Humanities Fellowship, served as a visiting scholar at UC Berkeley and Claremont Graduate University, and was a visiting and adjunct professor for seven years at Loyola Law School, teaching, among other courses, the Education and Law seminar each year. He earned a Bachelor of Science degree from Michigan State University and a Juris Doctor from UCLA.





KGI students, faculty and staff are pictured in front of Pomona College's "Little Bridges" at Convocation 2014. PhRMA President and CEO John J. Castellani gave the keynote speech.

A large group of students, many wearing KGI jackets, are posed in front of a grand, classical building entrance with a large archway. The entire image has a blue color overlay.

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Latterell Venture Partners

Daniel Darvish, MD

Co-Founder, ARM & Founder
HIBM Research Group

Diane Dorman

Vice President, Public Policy
National Organization for Rare Disorders

Dennis M. Fenton, PhD

Principal
Fenton & Associates, LLC

Chris Garabedian

President & CEO
Sarepta Therapeutics

Stephen C. Groft, PharmD

Retired Director of Rare Diseases Research
National Institutes of Health

Marlene E. Haffner, MD, MPH

President & CEO
Haffner Associates, LLC

Richard Haas, MD

Professor of Neurosciences and Pediatrics
UCSD Medical Center

Peter Barton Hutt, JD

Senior Counsel
Covington & Burling, LLP

Gregg A. Lapointe

CEO
Cerium Pharmaceuticals

Ian Phillips, PhD, DSc

Norris Professor of Applied Life Sciences
Keck Graduate Institute School of Applied
Life Sciences

Peter Saltonstall, PhD

President & CEO
National Organization for Rare Disorders

Sheldon M. Schuster, PhD

President
Keck Graduate Institute

Barbara Wuebbels, RN

Associate Director Patient Advocacy
& Investigator Relations
BioMarin Pharmaceutical, Inc.

FINANCES

STATEMENT OF FINANCIAL POSITION 2013 & 2014 STATEMENTS OF ACTIVITIES AND REVENUE SOURCES

STATEMENTS OF FINANCIAL POSITION

ASSETS	JUNE 30, 2014	JUNE 30, 2013
Cash and cash equivalents	\$165,630	\$139,516
Accounts receivable	414,187	398,326
Prepaid expenses and deposits	704,826	673,691
Contributions receivable	6,813,891	2,899,084
Funds held in trust for others	212,136	201,682
Investments	62,353,877	49,563,319
Building investment, net	4,780,460	4,866,930
Buildings and equipment, net	12,677,547	12,764,409
Total assets	\$88,122,554	\$71,506,957
LIABILITIES		
Accounts payable and accrued liabilities	\$1,712,230	\$1,630,328
Deposits and deferred revenues	101,860	84,845
Notes payable and capital lease obligations	32,105,780	10,719,695
Bonds payable		7,895,257
Total liabilities	33,919,870	20,330,125
NET ASSETS		
Unrestricted	17,203,413	20,126,537
Temporarily restricted	16,862,231	9,580,515
Permanently restricted	20,137,040	21,469,780
Total net assets	54,202,684	51,176,832
Total liabilities and net assets	\$88,122,554	\$71,506,957

2014 STATEMENTS OF ACTIVITIES & REVENUE SOURCES

STATEMENTS OF ACTIVITIES 2014

REVENUES

TOTAL

Revenues and releases of net assets:	
Tuition and fees	\$5,790,734
Less tuition discount	(1,501,218)
Net tuition and fees revenues	4,289,516

Private gifts and grants	6,400,767
Private contracts	174,361
Federal grants and contracts	1,343,512
Investment income	3,389,461
Other revenues	1,286,321

Total revenues and releases of net assets	16,883,938
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EXPENSES

Instruction	4,314,692
Research	2,279,101
Academic support	5,329,941
Student services	1,926,698
Institutional support	5,238,811

Total expenses	19,089,243
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Excess (deficiencies) of revenues (under) expenses	(2,205,305)
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OTHER CHANGES IN NET ASSETS

Actuarial adjustment	15,755
Adjustments to contributions receivable	(2,500)
Net realized and unrealized gains on investments	6,043,917
Loss on bond defeasance	(826,015)

Change in net assets	3,025,852
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Net assets, beginning of year	51,176,832
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Net assets, end of year	\$54,202,684
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TUITION AND FEES	\$4,289,516	25%
PRIVATE GIFTS AND GRANTS	\$6,400,767	38%
PRIVATE CONTRACTS	\$174,361	1%
FEDERAL GRANTS & CONTRACTS	\$1,343,512	8%
INVESTMENT INCOME	\$3,389,461	20%
OTHER REVENUE	\$1,286,321	8%

STATEMENTS OF ACTIVITIES 2013

REVENUES

	TOTAL
Revenues and releases of net assets:	
Tuition and fees	\$5,386,893
Less tuition discount	<u>(1,813,049)</u>
Net tuition and fees revenues	3,573,844
Private gifts and grants	1,613,013
Private contracts	291,861
Federal grants and contracts	1,197,677
Investment income	3,084,710
Other revenues	1,199,904
Total revenues and releases of net assets	10,961,009

EXPENSES

Instruction	3,651,513
Research	2,068,497
Academic support	3,230,188
Student services	1,674,856
Institutional support	4,843,581
Total expenses	15,468,635
Excess (deficiencies) of revenues (under) expenses	(4,507,626)

OTHER CHANGES IN NET ASSETS

Actuarial adjustment	2,187
Adjustments to contributions receivable	(22,500)
Net realized and unrealized gains on investments	3,592,375
Change in net assets	(935,564)
Net assets, beginning of year	52,112,396
Net assets, end of year	\$51,176,832

2013 STATEMENTS OF ACTIVITIES & REVENUE SOURCES



■ TUITION AND FEES	\$3,573,844	33%
■ PRIVATE GIFTS AND GRANTS	\$1,613,013	15%
■ PRIVATE CONTRACTS	\$291,861	3%
■ FEDERAL GRANTS & CONTRACTS	\$1,197,677	11%
■ INVESTMENT INCOME	\$3,084,710	28%
■ OTHER REVENUE	\$1,199,904	11%

