Few people have the singular vision to transform dreams into reality — to harness the power of ideas in service of creating something truly remarkable. At Keck Graduate Institute, we were fortunate to have among our ranks one such individual: the inimitable Henry “Hank” Riggs.

Hank’s contribution to KGI, the animating impulse behind our institution’s creation, was as simple as it was transformative: advancing the notion that educational programs and research could bridge theory and practice, translating the potential of the life sciences into tangible, real-world achievements. It was nothing less than a total rethinking of graduate education in the sciences, and Hank was the seasoned captain expertly steering the helm.

His life was a series of notable successes: Stanford professor and fundraiser, entrepreneurial trailblazer, president of Harvey Mudd College. Hank brought to his career a passion and dedication that distinguished him in everything he did. A man of immense talent, uncompromising integrity, and enormous generosity, he continually sought out challenges and repeatedly found new ways to advance our approach to the world.

As KGI’s founding and first president, Hank set an ambitious agenda that would help reshape how we train future leaders in the bioscience industry. Nearly two decades later, KGI has become an indispensable part of the life sciences landscape, and despite his recent passing, Hank’s voice and influence have never been stronger.
Innovation and Impact

By every measure, Keck Graduate Institute (KGI) is in a league of its own. Our faculty is world class. Our students are poised to become international leaders in their fields. Our programs are literally without peer — we remain, nearly two decades after our founding, the only professional graduate school dedicated to education and research in the life sciences.

Yet, what truly distinguishes KGI is a relentless focus on impact: a commitment to scientific innovation capable of strengthening communities and improving lives. With their native talent and the training they receive here, KGI students and alumni work at the intersection of science and business to harness such transformative possibilities as engineering solutions to global health challenges, bringing breakthrough drugs to market, and innovating approaches to reaching the underserved. At KGI, we leverage strategic thinking to expand our capacity for visionary change.

Over the past year, our unique programs continued to blaze an extraordinary trail. Students in our signature Master of Bioscience (MBS) program developed the tools they will need to take discoveries from the laboratory to the marketplace, integrating bioengineering with management, finance, and bioethics. Our innovative School of Pharmacy gave students a platform for active learning through hands-on, team-based classes and key access to industry stakeholders. KGI PhD candidates honed their expertise in research areas relevant to applied bioscience, empowering them to advance exciting new applications with broad social benefit. Our Postbaccalaureate Premedical Certificate program (PPC) solidified its exceptional track record for graduate placement: 81 percent of students completing the PPC gained admission to at least one medical school. Scientists and engineers in our Postdoctoral Professional Master's (PPM) program acquired the necessary business and management skills to pursue senior leadership positions within the life science industry or to launch entrepreneurial ventures geared toward commercializing new technologies. Through a new Master of Engineering Program (MEng) program to begin in fall 2016, students will deepen their understanding of molecular biology, biotechnology, and chemistry and how these subjects can be combined with creative, application-centered engineering.

Of course, none of this would have materialized without the foresight and drive of our founding president and esteemed colleague, the late Henry Riggs. Hank was a friend and an inspiration to so many in our community. His loss is profound, but his legacy stays with us, fueling even greater achievement in the years ahead.

Best,

Sheldon M. Schuster, PhD  
KGI President

Robert E. Curry, PhD  
Chairman of the Board of Trustees
A Word From Our Deans

STEVE CASPER
Dean of School of Applied Life Sciences

Over the past year, we experienced significant growth. Our flagship Master of Bioscience (MBS) program flourished: We had 69 new students in 2014 and the incoming 2015 class is even larger. Graduates of the program continued to find employment in leading biopharmaceutical companies and consultancies — over 90 percent have secured a job within six months of completing their degree.

Our Team Master’s Project (TMP) also continued to thrive. Well over 100 students participated in 25 corporate-sponsored projects, and we are expecting at least 28 new projects in the next academic year.

Expansion has been an important theme around KGI this year. Under the leadership of Amgen Bioprocessing Center Director Dr. Parviz Shamlou, our bioprocessing program is experiencing rapid growth. We are busy preparing to roll out a major new academic program, the Master of Engineering in Biopharmaceutical Processing. Our team launched a series of successful corporate education programs in bioprocessing, as well as a variant on our excellent MBS-PhD program. And we have grown our international programs: In partnership with the Biocon Academy, we are now teaching our fifth cohort of technical students in Bangalore, India.

Research has also exploded: This year, faculty members received new federal funding grants from the National Science Foundation and National Institutes of Health, and we continued to operate our extremely successful Summer Undergraduate Research Experience.

I applaud our students, faculty, and community partners for their tremendous work this year, and I look forward to seeing what the coming academic year will bring.

KATHY WEBSTER
Dean of School of Pharmacy

This year, a group of impressive students joined us as the School of Pharmacy’s “charter class.” Not only have they done well academically, but they have also become actively involved at KGI, in the local community, and within the pharmacy profession.

Recruiting for the 2015-2016 school year was quite successful, with significant increases in applications, interviews, and acceptances. We are currently at 78 students — the desired class size. Presidential and dean's scholarships are now being offered to help in the retention of high-quality and diverse applicants.

The school is continuing to attract an outstanding group of faculty. They are pushing their teaching skills to become experts at preparing “flip the classroom” online videos, developing hands-on in-class activities, and introducing essential cutting-edge professional skills early in the curriculum.

I am also pleased to report that we successfully navigated our way through another step of the accreditation process by achieving candidate status. We are expecting to receive full accreditation in 2018, when our first class graduates.

We are continuing to develop external partnerships with both the traditional areas of practice and industry opportunities. This year, all of our students spent two full weeks at an industry site with pharmacy mentors to learn about the potential roles for PharmD's, an experience that met with critical acclaim from both students and industry affiliates.

I am especially proud that the school has created a culture of assessment that continues to gather information on our outcomes and feedback from our stakeholders. This will help us reach even greater heights in the year ahead.
SOFIA TORO
Dean of Student Engagement and Enrollment Services

KGI is always a wonderful place to be, and this past year was no exception. Through both KGI and the Claremont consortium, students took advantage of a first-rate writing and tutoring center, directed career advising, supportive counseling and disabilities services, a superb fitness center, and more. Here, our students have access to the best of everything.

Of course, one of the strongest aspects of a KGI education is the exposure students get to resources beyond campus. This is a place where next-generation leaders build more than knowledge — they also tap into a remarkable trove of real-world experiences that helps prepare them for success in their professional lives. Whether it’s through our internship programs, our hands-on research opportunities, our connections to industry, or our capstone Team Master’s Project, KGI enables scholars, entrepreneurs, and scientists to hone their skills based on their specific programs and individual needs.

There is another element of our educational approach that distinguishes KGI: the unrivalled network we offer to students and graduates alike. It starts right away, with students reaching out to, and being mentored by, KGI alumni and other key influencers in the life sciences industry, who recognize talent and who know the value of a KGI degree.

I am proud of all we have achieved during these past 12 months and know that next year we will witness even more growth and accomplishment. At KGI, the future is looking bright!

LARRY GRILL
Dean of Research

We are steadily growing our research portfolio at KGI, and this past year saw a continuation of the trend. The school now has 20 "research-active" faculty, and their interests cover a wide array of disciplines.

A number of our scholars are investigating specific illnesses, from orphan diseases to the more common autoimmune, neurodegenerative, and heart diseases. Others are looking at methods for diagnosing and even preventing diseases, as well as strategies for targeting and delivering drugs. In addition, KGI faculty are pioneering pharmaceutical production methods (at low, moderate, or large-scale volumes) utilizing a broad range of cell types.

Out of 84 proposals submitted to external funding agencies last year, 11 received support — well above the national average for federal grant awards. As we have expanded our sources of funding, so too did we begin the process of expanding our labs: reconfiguring to add research space and renovating to facilitate interactive and collaborative projects. By removing a small dark room and an adjoining instrument room, we were able to optimize laboratory square footage, enabling us to accommodate a number of researchers from both Applied Life Sciences and the School of Pharmacy.

We are excited to implement more such changes in the year ahead, as we continue to develop and build a faculty that is truly world class.

STEPHEN M. KOSSLYN
Dean of Minerva School of Arts and Sciences

At the Minerva School of Arts and Sciences, all aspects of the curriculum flow from the goals we set for our students. We want them to have the intellectual tools to become successful leaders, innovators, broad thinkers, and global citizens.

Achieving these goals requires that students master several key competencies — thinking critically and creatively, communicating effectively, and interacting with others in positive and productive ways. Keeping this in mind, we designed the Minerva curriculum to teach specific habits of mind and foundational concepts that underlie each of these core competencies.

This is the KGI difference: customized curriculum that enables students to use habits of mind and foundational concepts in a variety of contexts, thus maximizing their value to employers and preparing students to excel when facing a wide range of professional challenges. At Minerva, our students focus on areas of study in arts and the humanities, business, computational science, natural science, and the social sciences. They take all their classes online, which allows them to join from anywhere in the world and to find the right balance between scholarship and experiential learning.

Throughout Minerva and across KGI, our students and faculty are doing amazing things. I encourage you to learn more about how they are making the most of their time here — it will fill you with inspiration and confidence about what is in store for the life sciences over the years and generations to come.

The Minerva Schools at KGI offers a unique undergraduate education that is deliberately designed to enhance students’ intellectual growth and prepare them for success in today’s rapidly changing global context.
A Different Type of School

Carlos Damas received his BS in biology, with a concentration in physiology, from San Francisco State University before attending Keck Graduate Institute, where he focused on bioprocessing and earned both an MS in applied life science and a certificate from the Postbaccalaureate Premedical Certificate program (PPC). At KGI, Damas served as chief editor of the PPC newsletter and as president of the Queer Graduate Union. He is currently attending medical school at Michigan State University and ultimately plans to leverage his training to advance healthcare policy on behalf of underserved minorities. He also hopes to pursue his interest in biotherapeutic consulting.

What drew you to KGI?

I was drawn to KGI because it was a different type of school. It starts with how KGI focuses science on real-world applications. The school also allows PPC students to stay a second year and finish a master's program. And KGI offers a small class size, so I knew I would get the individual attention I needed in order to succeed.

Has your experience matched your expectations?

My expectations have been exceeded! KGI pushed my growth on a professional, personal, and intellectual level. I believe those were really important factors in my admission to medical school. KGI gave me different perspectives on health care, enabling me to look at it through a science, biotechnology, and medical lens. Plus, KGI's focus on professional development improved my presentation, interview, and interpersonal communication skills. Group projects in every class gave me the opportunity to interact with a wide variety of people, from undergraduates to PhDs, deepening my understanding of how important human connections are and my appreciation for the power of networking.

What is your favorite thing about KGI?

The people! I was really able to bond with the students, administration, faculty, and staff, and the diversity of my mentors and peers really enhanced my experience. Another favorite thing was the support KGI offers, enabling its students to access and utilize resources in an effective and user-friendly way. I found the intimacy of the KGI community to be invaluable; it really empowered me to maximize my time there!

What do you see as KGI's greatest strengths?

The curriculum, which is rigorous and challenging but truly rewarding. The classes cover a wide range of topics in the life sciences, which are directly related to the medical field. KGI integrates cutting-edge science, technology, and business information into its courses, and that is something you don't get everywhere. I benefitted from a curriculum that takes all the theoretical science I had learned and applies it to the real world, which engaged me to think on a higher level.

How would you describe the typical KGI student?

Hard working! I had never been in the company of so many dedicated and driven people, all of them juggling multiple responsibilities. My colleagues were also fun to be with — everybody at KGI understands the value of a healthy work-life balance, and the school does a great job of communicating that sentiment to the students.

How has KGI helped advance your professional goals?

Without KGI, I would not have gotten into medical school. KGI as a whole has supported me as an individual and advanced my professional goals. You know how they say it takes a village to raise a child? I think it took all of KGI to get one student into medical school.
WHY KGI? A FACULTY MEMBER’S PERSPECTIVE

The Most Rewarding Job

An expert in healthcare informatics and information technology, Robert Stein, PharmD, JD, has over 37 years of experience as a pharmacist in a variety of clinical, management, and consulting roles. Dr. Stein practiced clinical pharmacy for 14 years in adult and neonatal critical care settings and has extensive experience in application development and design, implementation, training, optimization of applications, and automation related to medication management and electronic health records.

What brought you to KGI?
I first heard about KGI from a colleague. When I investigated the website, and especially after speaking with Dean Webster, school administration and faculty, and President Schuster, it was clear that KGI’s School of Pharmacy was unique in its vision. The quality of the faculty and staff, and the strong administrative support given to faculty, were truly palpable.

What were you doing prior to arriving here?
Immediately prior to coming to KGI, I was a manager at a national consulting firm working with health systems, hospitals, and clinics to foster clinician adoption of electronic health records. This included providing guidance in organizational psychology; clinician and ancillary staff workflows; potential quality, risk, and regulatory considerations; and creating tactical and strategic plans to effect needed changes.

What is your favorite thing about the school?
My fellow faculty, staff, administration, and students all make coming to work a joy. The unique approach to pharmacy education at the School of Pharmacy, along with its advantage of being a new school, promote innovations that result in more well-rounded, “future ready” clinicians.

What are your areas of specialty?
Pharmacy law and ethics, and clinical informatics/health information technology. I have been interested in computers and their application to healthcare since being exposed to an early clinical system that was, to put it kindly, “user unfriendly.” That began a journey working with clinicians and vendors to develop systems that integrated into natural workflows, so that clinicians didn’t feel they were “slaves to the computer.” While the industry has substantially improved systems’ designs, there is a long way to go before clinicians will want to use them, rather than be mandated to do so.

How would you describe KGI students?
The class of 2018 is composed of students from myriad backgrounds, but they all share two attributes: intelligence and passion for the profession. While some students were initially a bit unsure about the group they would remain with for their entire KGI stay, after the first year together, virtually every one of these groups has evolved into effective teams. Some teams have become inseparable, even outside of class. The camaraderie here is particularly strong.

In your view, what distinguishes KGI from other institutions?
The vision that President Schuster and Dean Webster have operationalized is unique. We prepare students for what the practice will be in the 2020s, not what practice looks like in 2015 or what it looked like in 1999.

What do you most enjoy about your work?
Watching students’ eyes as they grasp a concept and hearing from them that something I taught them became relevant and valuable to them during their internships. These are the things that make this the most rewarding job I’ve ever had.
Building a Career in the Life Sciences

After graduating with a degree in biological sciences from India’s prestigious Birla Institute of Technology and Science, Sri Yarlagadda completed his Master of Bioscience at KGI in 2010, with a focus on the business of bioscience and bioprocessing. Today, he is a competitive intelligence manager in the Oncology Business Unit at Amgen, with responsibilities including generating marketplace and competitor insights to influence the business unit and product-specific strategic and tactical decisions. Yarlagadda’s diverse interests span startups, public policy (especially as it pertains to clean drinking water and rural education in India), and mentoring. He hopes to combine his passion for business, the life sciences, and technology to build a consumer-health technology startup within the next five years.

**What drew you to KGI?**
There were three major factors that brought me here: KGI’s emphasis on hands-on learning, its small and intimate program, and its strong industry ties. It seemed like an ideal place to pursue my interest in the business of bioscience and bioprocessing. I was also able to take advantage of additional business courses at the Drucker School of Management.

**What do you see as KGI’s greatest strengths?**
Changing times and evolving industry trends mean that schools need to be flexible. KGI offers an adaptable curriculum that responds to industry and alumni feedback and therefore is better able to prepare current students for the challenges that lie ahead.

**How does a KGI education bridge classroom learning with hands-on experience?**
KGI has a real commitment to experiential learning — providing constant opportunities for assimilation and application and, in doing so, giving students the kind of real-world exposure that will get them ready to excel in the workplace and set them up for success throughout their careers. It also creates a very quick feedback loop, meaning that KGI can tweak its programs and offerings to make sure they’re delivering the education students really need. In addition, the school nurtures a team environment that stresses collaboration and gives students a taste of what to expect in the workplace by asking them to evaluate how their contributions can help the team perform better.

**What were your most memorable experiences during your time at KGI?**
Without a doubt, working on my Team Master's Project (TMP) with Illumina (a company that applies innovative technologies to the analysis of genetic variation and function), the camaraderie with fellow students throughout various projects, and brewing beer as part of my coursework!

**How has your degree from KGI helped advance your career?**
KGI was incredibly supportive of my career goals, and the school's training and curriculum have helped me stand out. KGI is an amazing place for quick learners who are open to new experiences and are willing to explore various career options. It also provides a platform for developing social capital: an ability to connect with classmates and take advantage of a tight-knit (and growing) alumni network. I came to KGI with the goal of building a career in the life sciences corporate world, and being in the program was a huge asset — helping me land my first job in management consulting and, eventually, enabling me to land at Amgen through solid peer connections.

**Do you continue to take advantage of KGI’s alumni network?**
Absolutely. I stay in touch with Amgen KGI alumni, and I participate in local alumni events. Going forward, I also plan to maintain close ties with KGI faculty, seeking out opportunities to connect with them for personal and professional development.
Helping Others Achieve Their Goals

Dennis Fenton, PhD, is the owner and chief executive officer of Fenton & Associates, LLC. He previously served as an executive vice president of operations and as a compliance officer at Amgen Inc., where he was responsible for worldwide operations, manufacturing, process development, and quality. As an Amgen research scientist, Dr. Fenton coordinated the design, construction, and expansion of manufacturing facilities for Epogen (R) (epoetin alfa) and Neupogen (R) (filgrastim). He is a member of the American Society for Microbiology, the Society for Industrial Microbiology, the American Chemical Society, and the Parental Drug Association. After receiving his BS in biology from Manhattan College, Dr. Fenton earned his PhD in microbiology from Rutgers University.

What prompted your interest in giving to KGI?
I was introduced to KGI by founding president Hank Riggs, who laid out a vision he had for a unique university solely focused on training students for leadership positions in the life sciences industry. I decided to provide financial support because the school’s mission to educate the next generation of biotechnology leaders was inspirational and because it aligned with my life’s work. I was blessed with a rewarding career in biotechnology, and I hoped to help others achieve their goals.

Which KGI initiative do you support financially?
Most of my support has been focused on the Amgen Bioprocessing Center. I worked in many facets of the biotech industry, but at my core I am a process development scientist. However, I also support several students in the MBS program who are pursuing other areas of interest.

Why is KGI an important part of your philanthropy?
KGI is a unique institution. Its focused mission to educate leaders in the life sciences industry allows me to channel my philanthropy into a specific area I am interested in supporting. Through my involvement, I also get to interact with the students, the faculty, and the distinguished members of the board of trustees, which I very much enjoy.

What do you see as the school’s greatest strengths?
KGI students are among the best and brightest I have ever met, and its faculty are truly interested in preparing KGI students for successful careers. People at KGI possess a remarkable intelligence, drive, and curiosity about the world around them.

Why is the life sciences industry so important — and how does KGI’s leadership in this area ultimately benefit society?
The life sciences industry is unraveling the mysteries of the living world around us. It is developing the cure for the diseases of today and for the ones we will encounter in the future. And it is working to lessen our impact on our planet through improved food production and the creation of carbon neutral fuel. These things are changing the way we live — enabling people in societies around the globe to lead richer, healthier, more fulfilling and productive lives. By playing a role at the forefront of this industry, KGI is making a tremendous difference for all of us.

Why would you encourage others to invest in KGI’s mission?
I would tell people that if they are interested in supporting the continued expansion of the life sciences industry and educating its future leaders, then KGI is a great place to put your resources to work.
Integrating biological sciences and bioengineering with management, finance, and ethics, KGI’s two-year MBS program uniquely prepares students to thrive in the life science industry by enabling them to focus on one (or a combination) of five concentrations: bioprocessing, the business of bioscience, clinical and regulatory affairs, medical devices and diagnostics, and pharmaceutical discovery and development.

MBS students develop a key facility for translating basic life sciences research into useful new products, processes, and services while giving them a vital window into how the bioscience industry operates, given the scientific, intellectual property, and regulatory issues that dominate the industry.

MBS students build a broad foundation of knowledge, combining scholarship in subjects like bioethics and bioprocessing with hands-on courses in marketing and strategy, accounting and finance, and organizational behavior.

The MBS degree stresses experiential learning — in the classroom, through a required paid internship at a bioscience company and as part of the yearlong, capstone Team Master’s Project (TMP), in which teams of three to six students work with sponsoring companies to solve actual corporate problems.

THE KGI DIFFERENCE

- KGI’s TMP fosters interdisciplinary problem solving, empowering MBS students to create project budgets, develop timelines, and describe deliverables. Throughout, they have access to faculty and industrial advisors who mentor them and assist with contract research.
- The MBS degree adds value to students’ technical expertise with an emphasis on the mastery of “soft” skills that are essential to the industry workplace — from public speaking and team leadership to project management.
- Graduates of the MBS program are leaders in consulting, research and development (R&D), bioprocess operations, project management, competitive intelligence, operations management, marketing and sales, business development, domestic regulatory compliance, and more.
- KGI’s MBS serves as the national model for Professional Science Master’s (PSM) degrees — programs that provide advanced training in science or math while simultaneously developing high-valued workplace skills. Today, PSM degrees are offered at more than 300 institutions around the country.

At KGI, our students learn the art of practical dreaming: how to leverage skill, savvy, and knowledge to create new possibilities in the bioscience industry. The Master of Bioscience (MBS) program puts the right tools at their disposal, sharpening their abilities while providing critical infrastructure to set them on the path to success. What they find here is community and camaraderie, mentoring and support, and the signature academic excellence for which KGI has come to be known. Armed with an MBS and the rich resources and experience it offers, our graduates are ready to tackle big challenges and to help reshape the field.
“KGI helped me to combine my engineering, science, and business knowledge into transferable skills. And the MBS program’s connections helped me secure my job with one of the biggest life science companies in California.”

Yashwanth Ravishankar, MBS class of 2015

QUICK FACTS

GENDER BREAKDOWN

- 55% female students
- 45% male students

PROGRAM ENROLLMENT AND ON-TIME GRADUATION RATES

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MBS BY THE NUMBERS

- Over 90% of MBS graduates have jobs in industry within 6 months of graduation
- 100% Percentage of MBS students who have paid internships
- Almost 400 one-on-one sessions with career services for MBS students

FIRST JOB BY FUNCTION

- 39% Business of Bioscience
- 25% Bioprocessing
- 23% Clinical and Regulatory Affairs
- 8% Pharmaceutical Discovery and Development
- 5% Medical Devices and Diagnostics

FACULTY PERSPECTIVES

Craig W. Adams, PhD, Research Associate Professor/Director, TMP Program/Associate Director, Center for Biomarker Discovery

“As KGI hosts its 200th Team Master’s Project, I can’t help but look back over the years and think about my own experience as a faculty advisor. Supply-chain benchmarking, cost-effectiveness models for oncology, lead candidates for antibody-drug conjugates, moisture analysis techniques for lyophilized biological drugs, marketing strategies for personalized drugs — interesting projects with important corporations in the biotech universe. But the best part of advising a TMP team is supporting and encouraging our KGI students as they transition from the student role to a life science professional. From my perspective, TMP provides the last “polishing step” in moving our students into the professional world of biotechnology. Summer internships, academic courses, and TMPs all provide our students with an outstanding breadth of knowledge. But the TMP program encourages our students to form real independent teams that often develop novel and creative approaches to the challenges of their TMP projects. Simply put — it’s great fun to be part of a high-caliber student-led TMP team working with comradery, independence, and teamwork.”
KGI School of Pharmacy positions students at the forefront of the revolution in pharmacy — preparing them to drive the future of novel drug delivery options and personalized care. Combining cutting-edge bioscience knowledge with innovative experiential learning options, the Doctor of Pharmacy (PharmD) degree equips student pharmacists with the essential tools to shape the profession. Through inter-professional collaboration, teamwork, specialized electives, and the mentoring necessary for success, students develop into resourceful, savvy, and highly adaptable professionals. Graduates leave KGI ready to fulfill a wide range of healthcare roles, from work in traditional retail settings to the development of next-generation life-saving drugs.

Above: KGI School of Pharmacy’s Intro to Industry course provides students with a two-week on-site experience in pharmaceutical companies such as Baxter Healthcare Corporation (pictured). Exposure to these companies and the opportunities for the PharmD ensures that students gain insight into the vital part that these companies play in the healthcare industry and potential career options.

THE KGI DIFFERENCE

- The education of innovative pharmacists is at the core of KGI’s Doctor of Pharmacy (PharmD) degree program. With the understanding that personalized, patient-centered care drives the profession, students receive a breadth of hands-on training options designed to enhance skills and knowledge while increasing competitiveness in the job market. The goal: to advance pharmacy education and enable graduates to take their practice to the next level.

- The traditional PharmD curriculum is taught at KGI in a more efficient manner, integrating subjects and preparing students for the extensive use of technology in the profession. The KGI PharmD education is enriched by incorporating inter-professional and teamwork experiences and leveraging the school’s close biotechnology and pharmaceutical industry ties with strengths in information technology and entrepreneurship.

- PharmD students delve deeply into the curriculum and supplement their learning by developing specialized skills that will ensure the best care is delivered efficiently. Students pursue a specialty by taking electives in one of four areas of concentration: medication therapy outcomes, healthcare management, clinical trials and regulatory affairs, and health information technology. Along with the PharmD degree, graduates receive a certificate in one of these specialties.

- Through experiential learning and industry partnerships, students are prepared for the diverse roles pharmacists play in providing care, from delivering therapies in retail or hospital settings to working at biotechnology companies or managing operations in large healthcare systems. They are provided with options to explore the full spectrum of career opportunities at the vanguard of the dynamic profession.

- KGI-trained pharmacists develop their fullest potential as part of a community of scientists, policymakers, and industry leaders. The PharmD training prepares them to translate their expertise into innovative solutions, such as the creation of new drug development and delivery options, the discovery of personalized therapies using advanced health information technology, the expediting of safe and effective products that can be delivered worldwide, and the integration of patient-centered care with ethical and economic demands of the marketplace.
“KGI is preparing me for a career at the leading edge of pharmacy practice. I am receiving training in the development of safe, effective and personalized solutions to support patient health.”

Wendy Su, PharmD Class of 2018

QUICK FACTS

KGI’s School of Pharmacy retained 94% of students from inaugural class

AVGARIABLE AGE OF STUDENTS

28 years (age range: 21-44)

GENDER BREAKDOWN

60% female students 40% male students

ETHNIC BREAKDOWN

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STATE OF RESIDENCE

76% IN-STATE 55 students 24% OUT OF STATE 17 students

KGI PHARMD CURRICULUM AND CERTIFICATE PROGRAM

FACULTY PERSPECTIVES

Julie Truong, PharmD, BCACP, Assistant Professor of Clinical Sciences and Care Transitions Pharmacist

“KGI brings the future of pharmacy practice to the present by solidifying the pathways to non-traditional pharmacy practice settings. By preparing the students to acquire the knowledge, attitude, and skills necessary to practice in a wide array of settings, opportunities will emerge in response to a new generation of pharmacists. KGI’s innovative program will yield professionals who will be competent, confident, and practice-ready pharmacists in any setting. KGI’s rigorous program includes advanced topics such as pharmacogenomics and genetic testing and provides hands-on learning experiences in non-traditional pharmacy settings such as the pharmaceutical industry. KGI equips students with the breadth and depth of knowledge and experiences needed to form a strong foundation. The faculty are committed to the development and transition of these bright and talented students to future pharmacists. Hence, it is an honor and privilege to be a facilitator of this journey.”
KGI’s PhD in applied life sciences motivates students to chart new territories in the applied biosciences. A core interdisciplinary educational foundation combined with extensive practical industry experience leads to the development of advanced and innovative scientists. Building on the rigorous Master of Biosciences (MBS) curriculum, PhD students develop a broad knowledge base and refine and focus their areas of interest. With KGI’s sustained and collaborative mentoring, supportive community, and intellectual leadership — and with the school’s critical tools and infrastructure at their disposal — graduates leave the program prepared to make a serious impact.

At the intersection of science and business, the KGI PhD in applied life sciences trains students to leverage strategic thinking in order to expand the transformative potential of the life sciences industry. By supplementing the unique interdisciplinary educational foundation afforded by the MBS curriculum, PhD students are deeply prepared for research and development positions in a variety of bioscience industrial or academic environments.

A key advantage of KGI’s PhD program is its emphasis on combining study with practical business training. Students acquire industry experience through paid summer internships and industry sponsored Team Master’s Projects (TMP), in which students work in teams with companies to develop strategies to address real-world corporate problems.

KGI encourages extensive collaboration and the development of critical leadership abilities, as well as an appreciation of the business, management, and ethical issues encountered in the life sciences. Students are afforded additional practical experience through commercialization activities such as writing business plans and conducting market research.

To further enhance the learning environment, students participate in weekly colloquia on current topics in applied sciences, partake in comprehensive reading of primary literature, and attend the KGI Fall Research Retreat, a full day of stimulating lectures and timely discussions. They grapple with the wide variety of issues encountered in practice, including handling regulatory hurdles, bringing new products to market, and ensuring intellectual property protection.

KGI PhD students conduct original research for a thesis under the supervision of a trained advisor, who provides additional exposure to rigorous research tools and new approaches that expand the student’s problem-solving abilities. The process allows students to become adept at translating discoveries into beneficial products and processes.

KGI’s distinct training prepares PhD graduates to successfully bridge the boundaries between the academic and corporate worlds, to utilize the power of the life sciences for the benefit of society, and to translate scientific skills into careers of influence.
“The KGI PhD program has equipped me with essential professional skills. I have learned how to ask the right questions, effectively manage multiple tasks, and creatively adapt to any circumstance.”

William Leonardi, PhD Student

FACULTY PERSPECTIVES

Anastasia Levitin, Research Assistant Professor and PhD Program Co-Director

“The KGI PhD program has been designed to prepare students for research and development positions in a variety of bioscience industrial or academic environments. This unique program builds on the interdisciplinary and applied education obtained during KGI Master of Bioscience (MBS) studies where the students are exposed to a wide variety of industry-related matters and applied problems through industry-sponsored Team Master’s Projects (TMPs) and summer internships. The PhD program enables the students to develop competence in methods of scientific inquiry, to use interdisciplinary tools and approaches to address scientific questions, and to advance new horizons in the applied biosciences with the motivation to translate the obtained knowledge to beneficial applications.”
The **KGI Postbaccalaureate Premedical Certificate** program offers future physicians a highly customized graduate educational experience designed to support their admission to, and success in, medical school. Following a personalized graduate-level curriculum in the applied life sciences, students expand the knowledge and skills they will need to excel as candidates for a medical degree and, ultimately, to thrive as physicians. Drawn by its rigorous, uniquely individualized approach, students from universities across the nation seek out KGI’s PPC program and go on to enjoy significant medical school admission rates.

**THE KGI DIFFERENCE**

- Students are selected through a holistic evaluation process that stresses academic discipline, personal integrity, strong clinical experience, appropriate interpersonal skills, and passions beyond medicine.

- Each component of the PPC Program is calibrated to distinguish the student from other medical school applicants. The program serves as an “academic enhancer” by identifying students’ strengths and areas for growth and then creating an opportunity for them to succeed in a rigorous graduate environment. Additionally, the program functions like a special master’s program by offering students the option to complete a master’s degree with an additional year of study.

- The program encompasses a comprehensive array of courses that includes molecular biotechnology, bioprocess engineering principles, pharmaceutical discovery and development, medical devices, organizational behavior, and bio-industry ethics.

- The program leverages KGI’s strong ties to the region’s most respected medical schools by offering networking opportunities with KGI alumni enrolled in medical schools and field trips to area medical schools.

- Every facet of the PPC program is infused with highly individualized support. The program’s director dedicates time to giving personalized assistance to students as they navigate the medical school admissions process by providing students with access to many advising sessions.

- PPC students are positioned for success with a course that is specifically designed to help them produce their best application for medical school. The course is informed by relevant concepts from educational psychology, such as learning strategies and theories of motivation.

- PPC students take part in exercises formulated to provide them with experiential preparation for the medical school application process, including simulated individual, group, and multi-mini interviews and an on-campus MCAT review course.

- Along with its rigorous academic elements, the PPC program places a high priority on engaging students in dynamic discussions about current issues in healthcare, such as the Patient Protection and Affordable Care Act and strategies to attract and retain the next generation of healthcare consumers.

- Students take part in a wide variety of co-curricular field learning activities, such as clinical shadowing, biomedical research assignments, writing and editing for Frontline Medical Communications, serving in nearby clinics in underserved communities, and engaging in non-medical volunteer opportunities in local communities.

- KGI works closely and on a continuous basis with medical schools throughout the United States to ensure PPC students are afforded optimal access to the most up-to-date information on admission criteria and requirements.

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**The PPC Class of 2015 visited eight different medical school campuses, one of which was the University of Arizona in Phoenix (pictured). PPC students, from left: Spencer Robertson, Bryant Kao, Jill Nicholas, Anthony Trinidad, Anthony Tran, and Divya Goel.**

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**PPC: The Future of Medicine**
“The focus on marketable skills and cross-disciplinary teamwork helps you stand out. Medical schools want students with genuinely unique perspectives, and that is exactly what the KGI PPC program offers.”

Joon Kim, EdD, Postbaccalaureate Premedical Certificate (PPC) Program Director and Instructor

“As a former premedical student myself, I am particularly grateful for the opportunity to work with our students in the Postbaccalaureate Premedical Certificate program. Despite my relatively short tenure at KGI, I’ve been fortunate to have worked with so many amazing students. As a pre-health educator, I find there is nothing more rewarding than to play a role in the growth and development of future physicians. The greatest satisfaction for me is not necessarily the percentage of our graduates getting into medical school, though that figure is nearly double that of the national average (AAMC 2015 Annual Report, p.5; ACOM 2014 Applicant & Matriculant Summary Report, p.3), but that our students will become significant contributors to our nation’s health, as well as to the future healthcare of other nations. Our program is the perfect fit for those looking for another opportunity to pursue medicine. I look forward to many more great years and memories at KGI.”

Charlie Tsouvalas, PPC Class of 2015

QUICK FACTS

STUDENT CAREER PATHS

- Medical School: 70%
- Other Health Programs (dentistry, podiatry, physician’s assistant): 15%
- Industry Jobs: 15%

GENDER BREAKDOWN

- Female students: 52%
- Male students: 48%

52% of students go on to complete a master’s degree (MS or MBS) after the PPC program

AVERAGE STUDENT EARNED GPA AT KGI

- 1.00
- 2.00
- 3.00
- 4.00

3.62

BEST MEDICAL SCHOOL ADMISSIONS COUNSELOR QUOTE:

“The KGI PPC program’s commitment to providing an education with real-world experience is impressive.”

FACULTY PERSPECTIVES

Joon Kim, EdD, Postbaccalaureate Premedical Certificate (PPC) Program Director and Instructor

BY THE NUMBERS

- Number of hours each student spends one on one with mentor throughout duration of program: +20
- Percentage of students in last cohort that entered into the MBS program: 53%
- Average number of med schools visited by students: 8
- Highest MCAT score: 36
- Student-to-mentor ratio: 20:1
- Number of applications received to PPC program: 200
PPM: Redefining Results

The KGI Postdoctoral Professional Master’s program equips gifted PhD scientists and engineers with the training to become accomplished entrepreneurs and business leaders. Through traditional coursework and specialized training, students learn the organizational and marketplace dynamics that drive the life sciences industry. Candidates acquire real-world skills ranging from business planning and competitive strategies to managerial, financial, and clinical-regulatory proficiencies. Our graduates are coached by alumni and industry mentors, and KGI’s robust corporate networks provide a bridge to private-sector opportunities. Through its unique continuum of education, training, mentoring, and industry networking, KGI’s PPM program prepares exceptional men and women for success in the contemporary bioscience business environment.

° The Team Master’s Project (TMP) tasks students with executing projects sponsored by major bioscience companies; students collaborate with company liaisons to create novel solutions to complex, real-world business and technical challenges.
° The PPM program prepares students to facilitate the fluid and effective communication between technical and business teams that is vital to the success of start-up enterprises and established companies in the bioscience industry.
° Elective courses enable students to acquire advanced knowledge in specialized areas of interest. Examples include business management and entrepreneurship, international drug discovery, bioprocessing, medical diagnostics, and clinical-regulatory affairs.
° Students deepen and refine skills that are integral to their success in the business environment, including interviewing in one-on-one and group settings, persuasive and compelling written and oral communication, and personal work habits that contribute to the effectiveness of high-functioning teams.
° Students enjoy frequent contact with industry leaders through KGI’s deep network of relationships in the biomedical community. Site visits to leading bioscience companies, roundtable discussions, and networking functions ensure that students maintain frequent and direct contact with influential industry professionals.
° Students who are preparing to launch their own businesses may enroll in courses on a variety of market-oriented competencies, including the creation of business plans for emerging life sciences companies, commercializing technologies developed in the laboratory, the impact of regulation and reimbursement on the viability of life science opportunities, and building and sustaining effective entrepreneurial teams.
° Mentoring serves as an essential component of the PPM program, ensuring that graduation marks the beginning of an enduring and productive relationship between the student and KGI. Each student has the opportunity to work with KGI’s Office of Career Services to identify a mentor who will be an ongoing, trusted source of career advice and industry contacts.
° Students may choose a full-time nine-month program, a part-time four-semester program, or a program combining full- and part-time study over the course of three semesters.
“I needed an effective route to a life sciences career. KGI impressed me with its business and regulatory coursework and corporate networking that offer a trajectory to leadership in industry.”

**Sarah Whittleton, Class of 2016**

**QUICK FACTS**

**STEPS TO INDUSTRY SUCCESS**

- **Get a PhD or MD**
- **Bioscience Management Courses at KGI**
  (Courses include: Introduction to Bioscience Industries, Finance and Accounting Principles, Corporate Finance, Professional Skills for Scientists, Bioscience Strategy)
- **Elective Business and Technical Courses + Industry-sponsored Capstone: Team Master’s Project (TMP) at KGI**
- **KGI Network**
  (On-campus Recruiting, Internships, TMP)

**PPM PROGRAM**

**8% RESEARCH & DEVELOPMENT**

**TRADITIONAL**

**ACADEMIC TENURE 15%**

**FACULTY PERSPECTIVES**

**James Sterling, Professor and Faculty Director of PSM National Office, Director of Postdoctoral Professional Master’s Program**

“We are extremely proud of our PPM graduates who are making a big impact in the life sciences industry. Data suggests about 62% of postdoctoral scientists would like to pursue academic careers. But we know that only around 12% actually obtain faculty positions. We provide postdocs with a clear picture of the careers that they can enter in the life sciences industry. These are not alternative careers; these are the careers that postdocs are prepared to enter that are commonplace. You certainly wouldn’t know this from the scientific educational community — academic PhD and postdoc advisors are simply not motivated, nor are they prepared, to educate their lab staff about these options. The PPM program at KGI provides students with the knowledge, experience, and networking to jump on a trajectory to rewarding industry careers. I enjoy working with these scientists to help them identify the best path forward, and I look forward to helping these professionals launch their careers via the PPM program at KGI.”

**CAREER OPTIONS FOR PPM GRADS**

- Operations
- Bioinformatics
- Marketing
- Finance
- Manufacturing
- Medical Affairs
- Bioprocessing
- Project Management
- Clinical Development
- Customer Relations
- Biostatistics
- Regulatory Affairs
- Legal & IP
- Business Development
- HR
- Sales/Sales Support
- Compliance
- Venture Capital
- Supply Chain Management
- Portfolio Management
With its two-year Master of Engineering in Biopharmaceutical Processing (MEng) program, KGI will train high-potential students for high-powered careers in biopharmaceutical processing and biomanufacturing. Through their work in the program, graduates will acquire technical and broad industry knowledge and experience, building expertise in design and technology development, product and process research, and operations involved in taking a potential new drug molecule from discovery to biopharmaceutical therapy. MEng is one of the nation’s preeminent platforms for providing scientists and engineers with the skills necessary to pioneer the next generation biomanufacturing platforms for 21st century medicine — students will leave KGI poised to make their mark, enhancing quality of life for people around the globe.

“The MEng program will bridge the gap between undergraduate degrees and the needs of biopharmaceutical industries. Courses will be delivered by industry professionals and academic experts through a combination of hands-on operations and conference-style presentations, seminars, and case studies.

**THE KGI DIFFERENCE**

- The MEng program will be tailored to students who have a life science-based undergraduate degree (biology, biochemistry, biotechnology); an undergraduate degree in a relevant-process engineering field (chemical and medical engineering); or an undergraduate degree in science and engineering augmented with industry practice in a bioprocessing or biomanufacturing setting.
- Over the course of four semesters, MEng students will deepen their understanding of quality-by-design, bioprocess engineering, biomanufacturing facilities and operation, validation, quality and regulatory, and supply-chain management to bridge the gap between traditional first-degree courses and the needs of biopharmaceutical industries.
- By participating in conference-style lectures, seminars, individual and teamwork assignments, and a capstone Team Design Project (TDP), students in the program will cultivate the ability to take potential drug molecules from discovery to commercial application.
- The program’s core courses will include molecular basis of disease and biologics development; molecular biology and biotechnology; Active (bio)Pharmaceutical Ingredients (API) and Drug Product (DP) processing operations; hands-on and team-based projects; Chemistry, Manufacturing & Control (CMC) regulatory and quality; cost analysis and intellectual property; and societal and professional trainings.

“Students who complete the KGI two-year MEng course program will emerge with the technical knowledge, skills, insights, and real-world experience needed for success in the biopharmaceutical industry.”

*Dr. Robert Baffi, Executive Vice President Technical Operations, BioMarin Pharmaceutical Inc.*

- MEng students will create a powerful network through personalized coaching and mentoring by senior academic and industry experts housed within KGI’s Amgen Bioprocessing Center.
- MEng will enable students to become skilled in key biomanufacturing areas. At the same time, it will enhance students’ professional skills and capacity for assuming leadership roles within the pharmaceutical industry.
In the second year, TDPs will offer the real-world experience of taking a drug-molecule candidate to a pharmaceutical therapy. Students will be involved in the conception, product, and process flowsheet from early phase to late-phase target deliverables and timelines; API and DP process development and scale-up; tech transfer and validation; economic analysis; facility design and raw material supply chain; and phase-appropriate CMC regulatory and quality considerations for Biologics License Application (BLA) submissions.

With opportunities to study abroad, participate in paid industry internships, and participate in cutting-edge research, the MEng degree will help students broaden their horizons and maximize their potential.

**QUICK FACTS**

**SUMMER (first year) OPTIONS**

- **INDUSTRY INTERNSHIP**
  - Paid Internship
  - Real hands-on industry experience

**STUDY ABROAD**

- As an example, students may work on a research project in the Department of Biochemical Engineering at University College London
- Results may be presented to University College London and KGI

**TEAM MASTER’S PROJECT**

- Co-developed industry-sponsored project
- Tackle real-life challenges through innovation and problem solving

**INDEPENDENT RESEARCH**

- Work closely with KGI faculty
- Hands-on research
- Work on an Industry/KGI-partnered project

**FACULTY PERSPECTIVES**

Parviz Shamlou, PhD, George B. and Joy Rathmann Professor, Director of Amgen Bioprocessing Center

“Biopharmaceutical process engineering is responsible for the translation of health science discoveries, from bench-scale experiments carried out in a laboratory to patients. Biopharmaceutical drugs, also known as biologics, are medicinal products produced from biological sources either by extraction or biosynthesized using recombinant DNA technology. The goal of the MEng program is to train the next generation of scientists and engineers for rewarding careers in the global and competitive biopharmaceutical and related industries. In order to meet these needs, the program will combine: bioprocessing engineering principles, health life sciences, drug development, quality and regulatory CMC, good manufacturing and laboratory practices and professional and personal skills. Additionally, the program will also allows students to interact closely and network with practicing scientists and engineers working in the biopharmaceutical industries. Another key component of the MEng course program includes the capstone Team Design Project (TDP), in which students are provided with the opportunity to bring together all the technical, economic, quality, and regulatory CMC elements in the course program and develop a commercial process for the manufacture of a biopharmaceutical product. Biopharmaceutical processing is the discipline that holistically combines all the components necessary to translate life science discoveries into commercial products, and this new MEng program promises to help students achieve the success they seek as professionals in this industry.”
Blazing a Trail

Research at KGI is cutting edge and always evolving. We now have 20 “research-active” faculty: 11 from the School of Applied Life Sciences (SALS) and nine from the School of Pharmacy (SOP). Whether they are looking at specific diseases (orphan, autoimmune, neurodegenerative, or heart), advancing methods for the targeting and delivery of drugs, emphasizing vaccines and prevention, or innovating in the area of pharmaceutical production, KGI faculty are breaking new ground every day.

ALEXANDER ZAMBON, PHD
Assistant Professor of Biopharmaceutical Sciences

Dr. Zambon’s research interests involve understanding how cell-signaling pathways and transcriptional circuits drive cardiovascular development and remodeling. The focus of his current work is in integrating molecular, pharmacological, and systems biology approaches to control cell-fate decisions both in vitro and in vivo for cardiac tissue engineering and repair. A recent discovery by Zambon and a multi-university team of researchers shed new light on the science of cardiac repair. They studied the heart’s development in higher vertebrates during the perinatal period to understand how the repair process occurs naturally at this time. Their discovery: a low-oxygen environment stimulates a well-known signaling pathway often seen in proliferating tumor cells. Over the long term, their goal is to leverage this finding to learn how to rewire cardiac muscle cells so they can regenerate the damaged human heart. Zambon received his PhD from the University of California, San Diego and completed his postdoctoral training at the Gladstone Institute of Cardiovascular Disease/UCSF, where he specialized in genomics and systems biology.

ANGELIKA NIEMZ, PHD
Arnold and Mabel Beckman Professor

Dr. Niemz’s path-breaking research includes multiple investigations into the properties and possibilities of nucleic acids. At KGI, she serves as the Arnold and Mabel Beckman Professor, teaching courses on medical diagnostics, high throughput technologies, and instrumentation development. For the past seven years, she has also taught short courses on IVD automation and nanobiotechnology. Niemz’s work has received funding from the National Science Foundation, the National Institutes of Health, and the Department of Defense. She is a member of the American Chemical Society, the American Association for Clinical Chemistry, and the Association for Laboratory Automation. Beyond her research and other scholarly activities, Niemz obtained funding for and organized a summer undergraduate research program at KGI for the past eight years. She has also coordinated K-12 outreach activities, including internship opportunities for high school teachers and students. She received her undergraduate degree in chemistry from the University of Konstanz in her native Germany and completed her PhD in chemistry at the University of Massachusetts Amherst.
LARRY GRILL, PHD
Dean of Research and Research Professor

Dr. Grill’s research focuses on utilizing plant viruses as expression vectors to produce human and animal therapeutics and vaccines. Currently, in collaboration with the University of Botswana, the Botswana Vaccine Institute, Kenya’s International Livestock Research Institute, the Grill and Martchenko labs at KGI, and the Pitzer College Vaccine Development Institute, Grill is working on developing low-cost vaccines for animal illnesses that are problematic in developing countries, such as foot-and-mouth disease, lumpy skin disease, East Coast fever, anthrax, and rabies. The first plant-produced vaccine for lumpy skin disease is currently in clinical trials. Grill was one of two founders who started Large Scale Biology Corporation (LSBC) a publicly held company that made therapeutic drugs, pharmaceuticals, and vaccines using a unique plant viral gene-expression technology. Grill has published over 25 scientific papers and is an inventor on more than 30 issued U.S. and international patents. He is the Dean of Research at KGI and also teaches at the graduate and undergraduate (through the Keck Science Department of The Claremont Colleges) levels. He received his PhD from the University of California, Riverside.

IAN PHILLIPS, PHD
Norris Professor of Applied Life Sciences
Director of the Center for Rare Disease Therapies
Faculty Director for the Postbaccalaureate Premedical Certificate (PPC) Program

Dr. Phillips’ most cited work is on the brain renin angiotensin system, an independent hormonal system that he co-discovered and which was relevant to the development of drugs to treat hypertension. More recently, he has postulated that the system is involved in Alzheimer’s disease. Dr. Phillips is working on new uses of anti-angiotensin drugs to slow memory loss. With his colleague Dr. Tang, Phillips discovered stem cells release hormones that account for the positive effects of stem cells in a potential therapy for heart attacks and recovery. And the Phillips lab has patented an automatic gene-vector hemostat based on genetic engineering of adeno-associated virus vector (AAV) to prolong stem-cell viability after transplantation. A frequently published and highly decorated scholar, Phillips has taught over 3,000 medical students and trained more than 40 PhD students and postdoctoral fellows. He received his PhD and DSc in pharmacology at the University of Birmingham in the United Kingdom and completed a postdoctoral fellowship at the University of Michigan.

MIKHAIL MARTCHENKO, PHD
Assistant Professor

Dr. Martchenko’s laboratory is using cell-based and biochemical multiplex approaches to screen a library of approved drugs for the ability to interfere with disparately acting pathogens. Martchenko and his team have developed a strategy for discovering broad-spectrum, host-oriented therapies against multiple pathogenic agents by multiplex screening of drugs for protection against the detrimental effects of multiple pathogens or toxins; identification of host-cell targets and pathways inhibited by the drug; and screening for effects of the therapy on other pathogens known to exploit the same protein or pathway. They recently discovered that amodiaquine, a compound used clinically as an antimalarial agent, inhibits both the detrimental effects of multiple bacterial toxins, such as anthrax toxins, and the propagation of Ebola and other viruses in host cells. The future goal is to continue discovering broadly acting anti-pathogen countermeasures that target host proteins exploited by pathogens. Martchenko received his BS in biochemistry from Concordia University and his PhD in biology from McGill University, both in Montreal, Canada. He completed his postdoctoral studies at Stanford University School of Medicine.
Year in Review

KGI is in the classroom, in the community, and in the field. Throughout the year, we foster connections among students, alumni, and industry; participate in grassroots advocacy to shape legislation that helps advance the healthcare industry; give back to others through involvement in vital nonprofit work; offer continuing education to leaders in the life sciences; forge partnerships with influential organizations; and invite local community members to get involved on campus. No matter the season, KGI is a destination for events and activities that are making a difference.

BIOCON
Amitava Saha, head of Human Resources for Biocon, visited our students to give them an introduction to Biocon and valuable information on careers in the Indian Biotech industry.

RARE DISEASE DAY
Keck Graduate Institute’s 6th Annual Rare Disease Day hosted by Stanley Crooke, founder and CEO of ISIS Pharmaceuticals. Rare Disease Day is an international advocacy day designed to bring widespread recognition of rare diseases as a global health challenge. Each year, KGI’s Center for Rare Disease Therapies recognizes the day with a speaker series, panel discussion, and the screening of a documentary film on an aspect of rare disease.

SCHOOL OF PHARMACY INTERNSHIP FAIR
This past February, KGI’s School of Pharmacy held its first Intern Fair. Students had an opportunity to meet with representatives from several pharmacies, as well as interview for summer internships. For many students this will be their first time working behind the counter, but for others this will expand their experience of working as student pharmacists.

SCHOOL OF PHARMACY LEGISLATIVE DAYS
On June 27, the California Pharmacists Association (CPhA) held its regional Legislative Days event at KGI. This year’s attendance included State Senator Connie Leyva (D-Chino) and Assemblyman Marc Steinorth (R-Rancho Cucamonga).

To view more photos, view KGI’s Flickr account at KGI.edu/flickr.
**PIP EVENT**

**November 2**

KGI’s PIP (Permanently Important People) reception was held on Sunday, November 2, 2014. The informal event was an opportunity for members of the Claremont community to visit campus, meet students and faculty, and learn more about KGI’s academic programs. More than 50 guests heard student presentations and had the chance to ask questions to KGI students, faculty, or staff.

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**UCR/KGI SUMMER PROGRAM**

A program designed for rising UCR sophomores that provides students with research experience in a lab and exposes them to biotech and agri-business industries.

---

**BPAT MAMMALIAN CELL CULTURE COURSE**

A three-day course designed specifically for industry scientists and engineers who are new to the discipline. The Bioprocessing Professional Advancement & Training (bPAT) Program provides basic training in the life sciences and bioprocessing that underpins the design of key unit operations for viral inactivation and clearance.

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**GRADUATION**

Commencement 2015 took place May 16 and was filled with excitement and anticipation, as family members and friends joined graduates in celebrating the completion of their KGI education.

---

**NEW STUDENT BBQ**

KGI held its new student BBQ on July 6, welcoming its newest family members to our campus. The event was an opportunity for students, staff, and faculty to socialize beyond the classroom.

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**ARTICULATION AGREEMENT WITH ULV**

In March 2015, Keck Graduate Institute and University of La Verne partnered to help students with the transition from undergraduate programs to graduate school. Students at the University of La Verne who meet specific requirements will be able to apply to KGI’s Master of Bioscience program without having to take a standardized test or pay an application fee.

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**SCHOOL OF PHARMACY BBQ**

School of Pharmacy students were treated to a fantastic school BBQ to kick off the year.

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**JUVENILE DIABETES RESEARCH FOUNDATION WALK TO CURE DIABETES**

In April 2015, KGI students volunteered and participated in the annual walk for Juvenile Diabetes Research Foundation.

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---

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**GRADUATION**

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# KGI by the Numbers

“We look for high-achieving risk takers—smart scientists ready for a new challenge.” 

**Shannon Braun, MBA, Director of Admissions, School of Applied Life Sciences**

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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Average age of KGI students</td>
<td>26</td>
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<tr>
<td>Average GPA of KGI students</td>
<td>3.2</td>
</tr>
<tr>
<td>KGI faculty-to-student ratio</td>
<td>9:1</td>
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**ETHNIC BREAKDOWN (domestic students only)**

- 41% Asian
- 23% White
- 12% Unknown
- 9% Hispanic
- 9% African American
- 6% Two or more

**GENDER BREAKDOWN**

- **Combined schools**
  - Women: 54%
  - Men: 46%
- **SOP**
  - Women: 63%
  - Men: 37%
- **SALS**
  - Women: 49%
  - Men: 51%

**UNDERGRADUATE MAJOR**

- 49% Biology/Microbiology
- 11% Biochemistry
- 8% Other non-science
- 8% Chemistry/Pharmaceutical Chemistry
- 5% Biotechnology
- 5% Neuroscience
- 4% Bioengineering
- 3% Health Sciences
- 3% Sociology
- 2% Psychology
- 2% Anthropology

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**VILMA HUERTA**

Future Goal: Regulation of devices and diagnostics
Program: Master of Bioscience

**KEVIN KELLER**

Future Goal: Clinical and regulatory affairs
Program: Postdoctoral Professional Master’s in Bioscience Management

**SONALI TALELE**

Future Goal: Systems biology researcher
Program: PhD in Applied Life Sciences
GEOGRAPHY: International Students
(only MBS and PPM programs accept international students)

ENROLLMENT GROWTH GRAPH

UNDERGRADUATE SCHOOLS

Overall
- 71% Public
- 22% Private
- 7% International

Location
- 69% California
- 22% Other states
- 9% International

California schools
- 61% UC
- 19% CSU
- 20% Other

Outside of CA schools
- 80% Public
- 20% Private

ANA MUSTAFA
Future Goal: Physician
Program: Postbaccalaureate Premedical Certificate Program

KEITH SUEHIRO
Future Goal: Hospital Pharmacy Industry
Program: PharmD

TUNGIE WILLIAMS
Future Goal: Clinical Pharmacy and Research
Program: PharmD

ANNA WILLIAMS
Future Goal: Systems biology researcher
Program: PhD in Applied Life Sciences

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TOP 2014-2015 SUMMER INTERNSHIPS
1. Amgen, Thousand Oaks, CA
2. City of Hope, Duarte, CA
3. Sarepta Therapeutics, Cambridge, MA
4. Illumina, San Diego, CA
5. Roche Molecular Systems, Pleasanton, CA
6. Boehringer Ingelheim, Fremont, CA
7. CareFusion, San Diego, CA
8. Covidien, Irvine, CA
9. DeciBio Consulting, Santa Monica, CA
10. Regeneron, Tarrytown, NY

TOP 10 EMPLOYERS OF ALUMNI
1. Amgen, Thousand Oaks, CA
2. Baxter, Thousand Oaks, CA
3. Campbell Alliance, Various
4. City of Hope, Duarte, CA
5. Genentech, Bay Area, CA
6. Gilead Sciences, Various
7. Illumina, San Diego, CA
8. LEK Consulting, Various
9. Regeneron, Tarrytown, NY
10. Thermo Fisher Scientific, San Diego, CA
KGI’s network spans the globe. From Thousand Oaks to Tarrytown...from Bangalore to Basel...KGI alumni, Advisory Council members, trustees, TMP sponsors, summer internship employers, and other corporate collaborators are the roadmap to Institute success.
KGI would like to thank all of our donors for their support. Your generosity has helped further KGI’s mission to educate the future leaders of the life sciences.

**FOUNDERS’ CIRCLE**
$1 MILLION+
Anonymous Donor

**CHAIRMAN’S CIRCLE**
$500,000–$999,999
Anonymous Donor

**LEADERSHIP CIRCLE**
$50,000–$99,999
The Alfred P. Sloan Foundation
Anonymous Donor
Dennis M. Fenton
Genentech Foundation

**PATRONS’ CIRCLE**
$25,000–$49,999
ASCB, The American Society For Cell Biology
Frank J. Biondi, Jr. and Carol O. Biondi

**PATRONS’ CIRCLE continued**
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2014-2015

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## Statements of Financial Position

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<thead>
<tr>
<th>ASSETS</th>
<th><strong>JUNE 30, 2015</strong>*</th>
<th><strong>JUNE 30, 2014</strong>*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and cash equivalents</td>
<td>$ 78,137</td>
<td>$ 165,630</td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>483,036</td>
<td>414,187</td>
</tr>
<tr>
<td>Prepaid expenses and deposits</td>
<td>685,204</td>
<td>704,826</td>
</tr>
<tr>
<td>Contributions receivable</td>
<td>6,146,237</td>
<td>6,813,891</td>
</tr>
<tr>
<td>Funds held in trust for others</td>
<td>237,971</td>
<td>212,136</td>
</tr>
<tr>
<td>Investments</td>
<td>58,442,525</td>
<td>62,353,877</td>
</tr>
<tr>
<td>Building investment, net</td>
<td>4,637,307</td>
<td>4,780,460</td>
</tr>
<tr>
<td>Buildings and equipment, net</td>
<td>13,663,508</td>
<td>12,677,547</td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td><strong>$ 84,373,925</strong></td>
<td><strong>$ 88,122,554</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LIABILITIES</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Accounts payable and accrued liabilities</td>
<td>$ 1,979,835</td>
<td>$ 1,712,230</td>
</tr>
<tr>
<td>Deposits and deferred revenues</td>
<td>156,000</td>
<td>101,860</td>
</tr>
<tr>
<td>Notes payable</td>
<td>31,835,700</td>
<td>32,105,780</td>
</tr>
<tr>
<td><strong>Total liabilities</strong></td>
<td><strong>33,971,535</strong></td>
<td><strong>33,919,870</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NET ASSETS</th>
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</tr>
</thead>
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<tr>
<td>Unrestricted</td>
<td>15,730,747</td>
<td>17,203,413</td>
</tr>
<tr>
<td>Temporarily restricted</td>
<td>14,533,769</td>
<td>16,862,231</td>
</tr>
<tr>
<td>Permanently restricted</td>
<td>20,137,874</td>
<td>20,137,040</td>
</tr>
<tr>
<td><strong>Total net assets</strong></td>
<td><strong>50,402,390</strong></td>
<td><strong>54,202,684</strong></td>
</tr>
<tr>
<td><strong>Total liabilities and net assets</strong></td>
<td><strong>$ 84,373,925</strong></td>
<td><strong>$ 88,122,554</strong></td>
</tr>
</tbody>
</table>

*Statement Regarding Unaudited Financial Information: The unaudited financial information set forth above is preliminary and subject to adjustments and modifications. Adjustments and modifications to the financial statements may be identified during the course of audit work, which could result in significant differences from this preliminary unaudited financial information.*
STATEMENT OF ACTIVITIES 2015*

**REVENUES**

Revenues and releases of net assets:

- Tuition and fees  $10,008,096
- Less tuition discount (1,490,646)
- Net tuition and fees revenues 8,517,450
- Private gifts and grants 5,591,227
- Private contracts 245,719
- Federal grants and contracts 851,846
- Investment income 3,637,775
- Other revenues 2,551,667

**Total revenues and releases of net assets**  $21,395,684

**EXPENSES**

- Instruction 7,981,888
- Research 1,769,168
- Academic support 3,195,876
- Student services 2,074,350
- Institutional support 6,501,806

**Total expenses**  $21,523,088

**Excess (deficiencies) of revenues (under) expenses**  ($127,404)

**OTHER CHANGES IN NET ASSETS**

- Actuarial adjustment 25,704
- Net realized and unrealized gains on investments (3,698,594)

**Change in net assets**  ($3,800,294)

| Net assets, beginning of year | 54,202,684 |
| Net assets, end of year | $50,402,390 |

**STATEMENT OF ACTIVITIES 2014**

**REVENUES**

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

**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

**Excess (deficiencies) of revenues (under) expenses**  ($2,205,305)

**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

| Net assets, beginning of year | 51,176,832 |
| Net assets, end of year | $54,202,684 |

**REVENUE**

- Tuition & fees  $8,517,450  40%
- Private gifts & grants 5,591,227  26%
- Investment income 3,637,775  17%
- Other revenues 2,551,667  12%
- Federal grants & contracts 851,846  4%
- Private contracts 245,719  1%

- Private gifts & grants 6,400,767  38%
- Tuition & fees 4,289,516  25%
- Investment income 3,389,461  20%
- Federal grants & contracts 1,343,512  8%
- Other revenue 1,286,321  8%
- Private contracts 174,361  1%
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