

S P E C I A L E D I T I O N

SAINT JOSEPH'S

JUNE 2022

UNIVERSITY MAGAZINE



TODAY

A historic moment. A new era.

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JUNE 2022

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Left: Research Day 2022 at the University of the Sciences in the Athletic Recreation Center (ARC).

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Saint Joseph's University Magazine is distributed to alumni, friends, faculty, staff and peer institutions.



From the PRESIDENT

As you read the pages of this special issue of *Saint Joseph's University Magazine*, it is apparent how truly unique and exceptional this moment is. When the University of the Sciences approached me about a potential agreement, the possibilities were immediately evident. Expansion into high-demand health and sciences fields aligned perfectly with our strategic plans. Saint Joseph's will now steward a 200-year history of excellence and innovation in these fields, allowing for evolution and growth. We also have an alumni network expanded by the nearly 20,000 University of the Sciences graduates we have welcomed. At a time when higher education is all over the news, our headline is one of enduring relevance and agile adaptation.

On the cover of this issue, the word TODAY heralds a new era, one that is ripe with opportunities and avenues. The addition of the University of the Sciences' professional programs and acclaimed faculty strengthen our educational mission, widen our scope of impact and attract a new pool of students who will be transformed as Hawks.

But for all that is new, additive, evolving and possible, there is an equal if not greater amount that is constant.

Saint Joseph's University will continue to do exactly what it has always done since 1851 — offer a Jesuit educational experience that touches every facet of our students' lives and yields professionals and citizens prepared and passionate about building a better tomorrow. Our mission is more alive than ever and our academic excellence continues to rise.

Over the years, I have heard countless stories of lives changed by professors, friendships, scholarships, service trips, research experiences — you name it. I've cut ribbons on new ventures and spaces, toasted remarkable alumni, greeted noteworthy politicians and scholars, and yes, even shook hands with Pope Francis. As I, along with my colleagues, our students and our alumni, welcome the University of the Sciences community, I wish to pay homage to their rich history, brimming with stories, milestones and memories like these. I am grateful that our histories paved paths that brought us to this moment and look ahead with great excitement to our future.

Mark C. Reed, EdD



Create an institution of transformative knowledge: that's what Felix Barbelin, S.J., set out to do when he founded Saint Joseph's College in 1851. Though much has changed in the University's 171-year history — campus expansions, new facilities, student growth, a historic merger — Saint Joseph's student-centric educational mission has remained unwavering.

What started as a college of just 36 students has evolved into the ninth largest Jesuit university in the country, spreading across two locations and enrolling nearly 9,000 undergraduate and graduate students combined. At its core is the pursuit of lifelong learning, a commitment to critical thinking and a passion to employ education for the greater good. The University's outcomes echo these values — Saint Joseph's is among the top 2.5% of institutions for post-graduate and lifelong earnings, and impressive numbers of alumni go on to prestigious service and research programs.

"I believe we can thank our Jesuit tradition for our success," says Cheryl A. McConnell, PhD, provost and senior vice president for academic affairs. "The skills we instill in our students — ethical decision-making, contemplation in action, people with and for others, the ability to act and flourish in the face of uncertainty — are rooted in 500 years of history."

Today, with its robust portfolio of health, science, business and education programs grounded in a liberal arts core, the University empowers its students to transform communities, build better businesses, educate future generations and make life-altering scientific discoveries. And with more programs, more research opportunities and more facilities than ever, Saint Joseph's exemplifies its founder's vision to transform the world through knowledge.

By Diane Holliday

**MORE PROGRAMS,
MORE LOCATIONS,
MORE THAN EVER.**

S A I N T J O S E P H ' S

COLLEGE OF Arts and Sciences

Readying Students to Make Their Mark on the World

At the core of a Saint Joseph’s education is the College of Arts and Sciences, which every undergraduate student — regardless of major — will experience through the general education program. Rigorous academic training and a curriculum rooted in the liberal arts means that students don’t just become experts in a field — they also gain the breadth and depth of knowledge to adapt and lead by example in an ever-changing world.

“We train students with a broad education that prepares them for a whole host of careers; the data shows people change their careers multiple times,” says Dean James Carter, PhD. “But then we also prepare them with a specific set of skills that will enable them to go into the career they’ve chosen.”

Opportunities abound in the natural sciences: genomics and cancer biology; in the social sciences: economics and political science; and in the humanities: English and music — to name only a handful. There are also cross-college collaborations in the works to address nationwide teacher shortages and to prepare students in numerous programs to run their own businesses.

And with ample research experiences, internships and co-ops, and service learning opportunities, students leave with the experience necessary to excel in whatever field they choose.



FAST FACTS

- Top employers of College of Arts and Sciences graduates include **Children's Hospital of Philadelphia, Chubb, Disney, Independence Blue Cross** and **Vanguard**.
- Academic programming aligned with **U.S. News & World Report's 100 Best Jobs of 2022**, including information security analyst (No. 1), software developer (No. 5), data scientist (No. 6), lawyer (No. 9) and actuary (No. 20).
- Home to the **Institute for Jewish-Catholic Relations**, which seeks to increase knowledge and deepen understanding between the Jewish and Catholic communities; the **Institute for Environmental Stewardship**, which promotes socially, economically and ethically responsible environmental stewardship on campus and in the community; and the **Institute of Clinical Bioethics**, which develops and promotes interdisciplinary research projects, educational programs, academic courses, clinical consultation and policy development services in the field of bioethics.
- Featuring community-based partnerships such as **GeoKids LINKS**, an initiative to engage elementary school students in hands-on science learning, and **Global Smarts**, a program in which undergraduates mentor elementary and middle school students to compete in the Junior Model UN Conference.

Dean Spotlight



JAMES CARTER, PHD, a historian, author and celebrated scholar on China’s modern history, has served in numerous leadership roles since joining the University in 1999: director of the Nealis Program in Asian Studies, chair of the history department and director of the international relations program.

As a member of the faculty, he’s been recognized for his excellence in teaching, research and service, including the prestigious Tengelmann Award for Distinguished Teaching and Research. Teaching with purpose, he says, is what sets the college apart.

“It comes back to the mission,” says Carter, speaking to the University’s charge to prepare students for engaged citizenship and professional success. “Our new programs, faculty and students are going to strengthen who we are. We already do a great job teaching, but now we’re going to have more resources, more faculty, more programs, more facilities.”

KEY PROGRAMS

Neuroscience (BS)

Majors study the structure and function of the nervous system across theoretical and clinical contexts within three tracks — molecular and medicinal, clinical health, and theoretical neuroscience.

COMPLEMENTARY PROGRAMS: PSYCHOLOGY, BIOLOGY, COMPUTER SCIENCE

Criminal Justice (BS, MS)

With established industry connections, this program helps students understand the complex causes of crime and equips them with practical skills necessary to forge careers dedicated to helping others.

COMPLEMENTARY PROGRAMS: POLITICAL SCIENCE, ECONOMICS, CYBER INTELLIGENCE

Environmental Science (BS)

Students develop skills in data collection and reduction, experimental design, scientific presentations and more to tackle our planet’s greatest environmental perils.

COMPLEMENTARY PROGRAMS: BIOLOGY, HEALTH STUDIES, BUSINESS ADMINISTRATION

Brewing Science Certificate

Bringing together programs in fermentation and brewing sciences, this certificate equips graduates with the science and math skills needed for success in the competitive microbrewing arena.

COMPLEMENTARY PROGRAMS: FOOD MARKETING; BUSINESS ADMINISTRATION; LEADERSHIP, ETHICS AND ORGANIZATIONAL SUSTAINABILITY

Public Policy (BA)

Students not only learn how to address issues affecting the public through laws and regulations, but also gain an understanding of the entities that impact the policymaking process.

COMPLEMENTARY PROGRAMS: SOCIOLOGY, ECONOMICS, BUSINESS INTELLIGENCE AND ANALYTICS



ERIVAN K.
Haub School
of Business

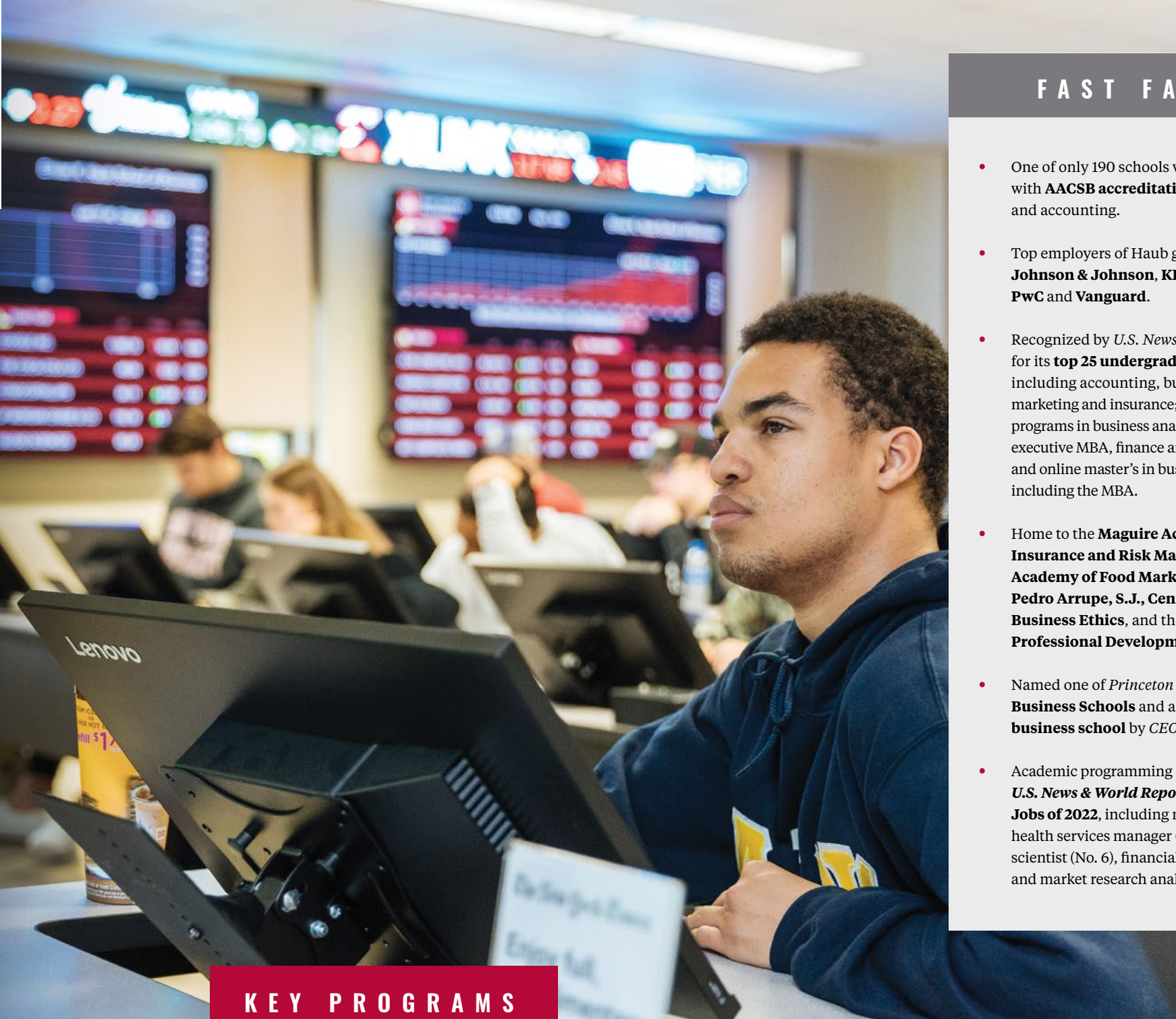
Educating Students for the Future of Business

The Haub School prepares students for the future of business by teaching them the critical thinking and lifelong learning skills necessary to remain agile in the face of change.

“The one thing that stays constant is the importance of a liberal arts foundation,” says Dean Joseph A. DiAngelo, EdD ’70. “Corporations hire our students because of their writing and critical thinking skills; they have a robust foundation in the business disciplines and a strong moral compass.”

Combined with a competitive cooperative education program, innovative degrees and connections to global companies, Haub is preparing its graduates for careers that don’t even exist yet, says DiAngelo.

“We’ve always taught healthcare and pharmaceuticals, but now we’re not just talking about the marketing or branding — now we can get into the development of products,” DiAngelo explains. “The merger also has implications for disciplines like data analytics and health informatics; it’s opening up a whole new horizon for our programs.”



FAST FACTS

- One of only 190 schools worldwide with **AACSB accreditation** in business and accounting.
- Top employers of Haub graduates include **Johnson & Johnson, KPMG, PepsiCo, PwC and Vanguard.**
- Recognized by *U.S. News & World Report* for its **top 25 undergraduate program**, including accounting, business analytics, marketing and insurance; graduate programs in business analytics, executive MBA, finance and marketing; and online master’s in business programs including the MBA.
- Home to the **Maguire Academy of Insurance and Risk Management, Academy of Food Marketing, Pedro Arrupe, S.J., Center for Business Ethics**, and the **Center for Professional Development.**
- Named one of *Princeton Review’s Best Business Schools* and a **tier-one business school** by *CEO Magazine.*
- Academic programming aligned with *U.S. News & World Report’s 100 Best Jobs of 2022*, including medical and health services manager (No. 4), data scientist (No. 6), financial manager (No. 8) and market research analyst (No. 14).

Dean Spotlight



Saint Joseph’s-educated Dean **JOSEPH A. DIANGELO, EDD ’70** has been at the helm of the Haub School of Business since 2000. Under his leadership, the school has doubled its enrollment over the last two decades, making Haub the largest Jesuit business school in the country with more than 2,600 undergraduates and 1,300 graduates and ranking the college among top business schools worldwide.

For DiAngelo, the accolades ultimately boil down to student outcomes.

“Our students are smart, they’re inquisitive, they’re hardworking. At the end of the day, it’s their success, the impact they make in their careers and their contributions to society — that’s what makes me proud,” he says.

DiAngelo serves on the board of the Faith in the Future Foundation, with oversight of the high schools in the Archdiocese of Philadelphia. Previously, he was chair of the AACSB board of directors — the second-ever Jesuit dean in the role — and served as a board member on the Pennsylvania Intergovernmental Cooperation Authority. A professor of management and expert in human resource management, DiAngelo’s research has been published in numerous management and HR journals.

KEY PROGRAMS

Food Marketing (BS, MS, MBA)

Haub’s renowned food marketing program prepares students to be leaders in the food and beverage sector, capitalizing on strong industry ties and faculty experts in the field.

COMPLEMENTARY PROGRAMS: BREWING SCIENCES, COMMUNICATION STUDIES, ENGLISH

Health Administration (MHA)

This graduate degree delivers the management and administrative skills necessary to succeed in the health system, from operations and organization development to health policy and status assessment.

COMPLEMENTARY PROGRAMS: BIOLOGY, HEALTH INFORMATICS, PHARMACEUTICAL & HEALTHCARE MARKETING

Business Intelligence and Analytics (BS, MS)

Data technology transforms businesses and powers our world. Students in this program learn to harness data to help businesses make strategic decisions and advance critical decision making.

COMPLEMENTARY PROGRAMS: COMPUTER SCIENCE, MARKETING, MATHEMATICS

Pharmaceutical & Healthcare Marketing (BS, BBA, MBA)

Taught by faculty with industry experience, this program equips students to oversee efficient clinical research and manage complex healthcare costs that are challenging the industry.

COMPLEMENTARY PROGRAMS: BIOLOGY, INTERNATIONAL BUSINESS, PHARMACEUTICAL SCIENCES



SCHOOL OF
Health Professions

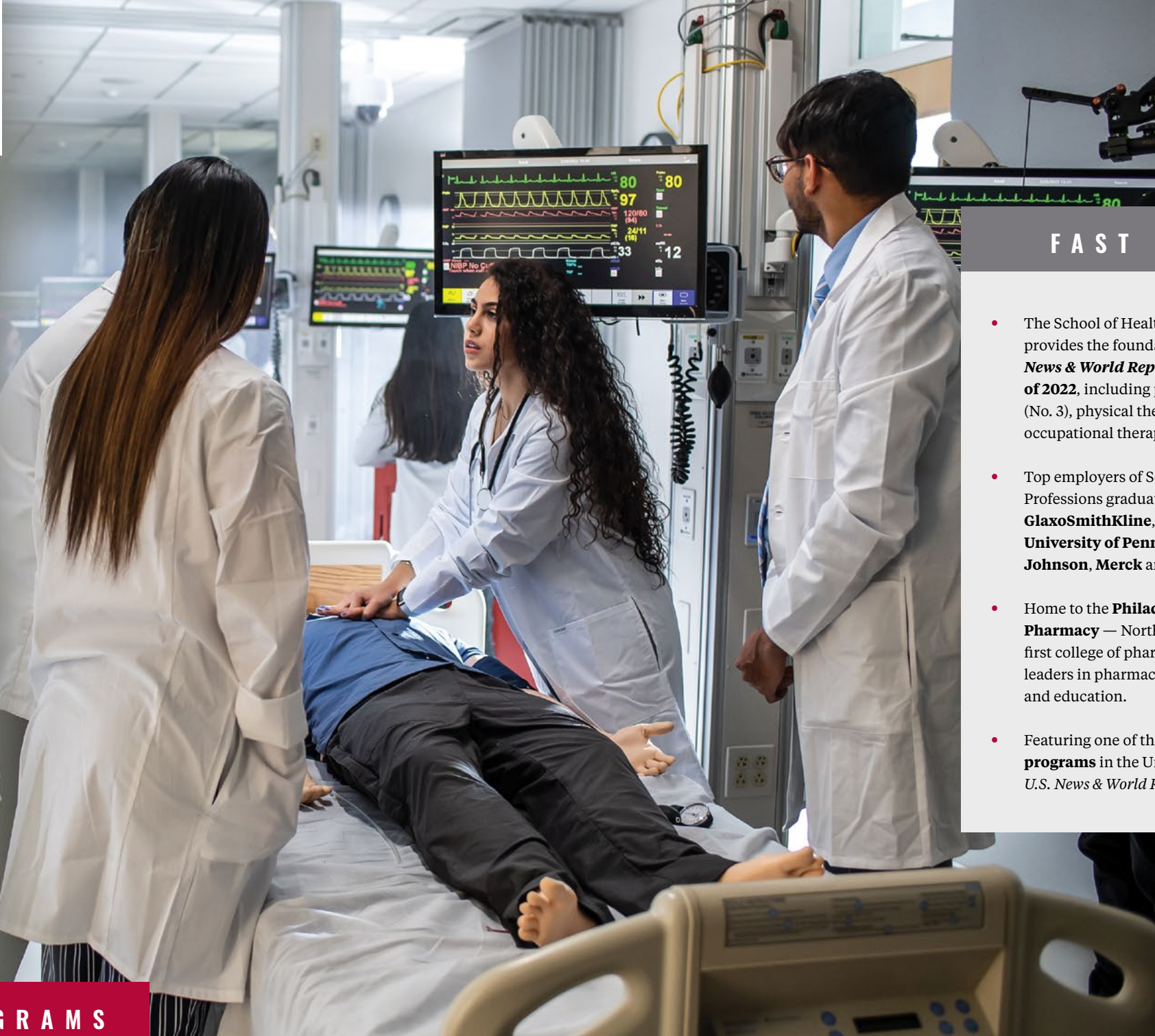
Preparing Compassionate Healthcare Providers

The mission of the School of Health Professions is simple: prepare future leaders, innovators and skilled practitioners in healthcare and science.

Through the skills they acquire in programs like occupational and physical therapy, physician assistant studies, health science, and pharmacy, students address pressing healthcare needs — from helping to improve cognitive function in stroke patients to delivering medications to vulnerable populations.

Students are trained using state-of-the-art equipment, honing their skills in the country's best medical and rehabilitation centers and clinics. They not only have the opportunity to interface with healthcare organizations during their studies, but they're also able to work collaboratively with students and faculty outside of their discipline.

"We've already begun developing interdisciplinary courses and experiential opportunities in collaboration with the School of Education and Human Development," says Dean Sinclair Smith, ScD. "There are countless opportunities for research, teaching and service across Saint Joseph's, and I'm excited for the possibilities."



FAST FACTS

- The School of Health Professions provides the foundation for some of **U.S. News & World Report's 100 Best Jobs of 2022**, including physician assistant (No. 3), physical therapist (No. 28) and occupational therapist (No. 31).
- Top employers of School of Health Professions graduates include **GlaxoSmithKline, Hospital of the University of Pennsylvania, Johnson & Johnson, Merck** and **MossRehab**.
- Home to the **Philadelphia College of Pharmacy** — North America's first college of pharmacy — training leaders in pharmacy practice, research and education.
- Featuring one of the **top 50 pharmacy programs** in the United States, ranked by *U.S. News & World Report*.

Dean Spotlight



SINCLAIR SMITH, SCD, brings more than 25 years of experience in higher education leadership, teaching and research to his role as dean of SJU's School of Health Professions. Most recently, he was dean of the University of the Sciences' Samson College of Health Sciences.

With a doctor of science in applied anatomy and physiology, Smith has published more than 100 peer-reviewed articles, presentations and book chapters, and mentored over 50 graduate student research projects.

"Mentoring the next generation of healthcare professionals has been a highlight of my career," he says. "I am so impressed by their adeptness and drive to improve society."

Smith and Associate Dean Carol Maritz, PhD, have also overseen the growth of an on-campus, pro-bono clinic providing free physical and occupational therapy services to the West Philadelphia community.

"The clinic allows students to work directly with patients, grow their skill sets and serve the community," Smith says. "We hope to incorporate pharmacy, physician assistant studies and behavioral health in the future."

KEY PROGRAMS

Pharmacy (PharmD)

Housed in the Philadelphia College of Pharmacy, the doctoral program prepares students to become practice-ready pharmacists with a competency-driven curriculum and training in 400+ sites worldwide.

COMPLEMENTARY PROGRAMS: PHARMACEUTICAL & HEALTHCARE MARKETING MBA, BUSINESS ADMINISTRATION

Occupational Therapy (MOT, Drot)

This program prepares students for careers helping others engage in meaningful and goal-directed activities regardless of their disability or non-disability needs.

COMPLEMENTARY PROGRAMS: HEALTH SCIENCE, APPLIED BEHAVIORAL ANALYSIS, MBA

Physical Therapy (DPT)

Under the direction of faculty experts including board-certified specialists, students study evidence-based techniques to assess and treat the body, and work as part of an interprofessional healthcare team during clinical experiences.

COMPLEMENTARY PROGRAMS: HEALTHCARE MANAGEMENT, BUSINESS ADMINISTRATION, LEADERSHIP CERTIFICATE

Physician Assistant Studies (MSPAS)

Students take courses in state-of-the-art learning facilities and complete nine clinical rotations, most of which are offered in the Philadelphia region.

COMPLEMENTARY PROGRAMS: HEALTHCARE MANAGEMENT, BUSINESS ADMINISTRATION, LEADERSHIP CERTIFICATE

Exercise Physiology (BS)

Through a science-based curriculum and hands-on practice, students learn the science of movement and the multidimensional nature of wellness.

COMPLEMENTARY PROGRAMS: BIOLOGY, HEALTH SCIENCE, NEUROSCIENCE, OCCUPATIONAL AND PHYSICAL THERAPY



SCHOOL OF
Education and
Human Development

Cultivating Change Agents to Shape Future Generations

The School of Education and Human Development is where students who are committed to making a positive impact in their communities thrive as caring educators and clinicians.

Featuring programs in educational leadership, teacher and special education, and counseling and human development, the school prepares students to be thought leaders through research, service and professional training opportunities.

In a commitment to Jesuit ideals and *cura personalis*, students are introduced to social justice content through innovative school-wide themed syllabi, with topics ranging from “Lifting the Mask of Institutional Bias: From Discussion to Disruption,” to “Social and Emotional Wellness: Considering Access and Equity.”

Students also complete student-teaching and clinical training experiences, while benefiting from interdisciplinary opportunities within the school and across the University.

For students in the School of Health Professions’ occupational therapy program, there will be opportunities for collaboration within the School of Education and Human Development’s Kinney Center for Autism Education and Support. The School is also collaborating with the College of Arts and Sciences to establish programs in art, history, foreign language and STEM education, as well as with the Haub School to offer continuing education certification in business.



FAST FACTS

- Top employers of School of Education and Human Development graduates include **Children’s Hospital of Philadelphia, School District of Philadelphia** and **U.S. Department of Veteran Affairs**.
- A funnel into some of **U.S. News & World Report’s 100 Best Jobs of 2022**, including high school teacher (No. 46), audiologist (No. 79), school counselor (No. 87) and elementary school teacher (No. 95).
- Home to the **Kinney Center for Autism Education and Support**, a community-facing organization that trains the next generation of autism professionals while supporting individuals and families affected by autism spectrum disorder.
- Featuring the **Alliance for Catholic Education**, a two-year service program that provides recent graduates the opportunity to serve as full-time teachers and administrators in under-resourced Catholic schools in the Archdiocese of Philadelphia and Diocese of Camden while pursuing a master’s degree.

Dean Spotlight



JOSHUA POWER '05, '16 (EDD), was named dean of the School of Education and Human Development in April. He most recently served as Saint Joseph’s executive director of graduate and extended studies, having first joined the University in 2005 as an AmeriCorps VISTA Fellow with the Faith-Justice Institute.

Power played an integral role co-founding the University’s Alliance for Catholic Education, an innovative two-year service program that provides recent college graduates the opportunity to earn a master’s degree while serving as full-time teachers and administrators in under-resourced Catholic schools.

“A big part of acting with and for others is supporting our local community,” says Power. “I look forward to not only building upon our existing partnerships, but also forging new ones.”

Power received both his bachelor’s and EdD from Saint Joseph’s, earning the Rashford Award for Outstanding Dissertation for his work exploring the perceived impact of community living and spirituality on first-year teachers. He earned his master’s degree in education, culture and society from the University of Pennsylvania. ■

KEY PROGRAMS

Autism Behavioral Studies (BS)

This program is designed to meet the growing need for qualified, professionally trained clinicians, educators and researchers to support individuals with autism.

COMPLEMENTARY PROGRAMS: SPECIAL EDUCATION STUDIES, HEALTH STUDIES, CHILDHOOD STUDIES

Interdisciplinary Doctor of Educational Leadership (EdD)

The program prepares transformational scholar-practitioners across K-12, higher education and social sector fields who are committed to equity-oriented change.

COMPLEMENTARY PROGRAMS: EDUCATIONAL LEADERSHIP AND ADMINISTRATION, ORGANIZATIONAL DEVELOPMENT AND LEADERSHIP

Clinical Mental Health Counseling (MS)

This graduate program trains students to work as licensed counselors serving clients, individuals and families who struggle with addiction, self harm, thoughts of suicide and mental health disorders.

COMPLEMENTARY PROGRAMS: CERTIFICATES IN APPLIED BEHAVIORAL ANALYSIS OR ADDICTION COUNSELING

School Counseling (MS)

Within PK-12 schools, trained school counselors provide critical social-emotional, academic, personal and career support that ensures optimal learning outcomes for students.

COMPLEMENTARY PROGRAMS: PSYCHOLOGY, EDUCATION STUDIES, APPLIED BEHAVIOR ANALYSIS



Dedicated to DISCOVERY

A Brief History of Jesuits in the Sciences

By Jeff Martin '04, '05 (MA)

Throughout its history, the Jesuit order has been populated with scientific thinkers who have helped shape our understanding of the world.

When students enroll at Saint Joseph's University, they become members of a nearly 500-year-old tradition of Jesuit education. This education teaches them to direct their lives in service to others, no matter the field they choose. In essence, students who are Jesuit educated study the world around them and find ways to make it better.

Similarly, those who study science do so because they want to discover new ways to improve the world around them. And the parallel is no coincidence: From the earliest days of the order through the modern era, Jesuits have made contributions to scientific conversations and discovery. For centuries, at important times when science and faith have mixed, a Jesuit has often been at the center.

"Ignatian spirituality calls for us to find God in all things, and when we say 'all,' we don't limit ourselves to the sacred," says Daniel R.J. Joyce, S.J. '88, vice president for mission and ministry at Saint Joseph's. "For the early Jesuits and for all those who followed in their footsteps, science gave insight into knowing how the universe worked, which in turn gave us greater understanding of God's creation."

"Science gave insight into knowing how the universe worked, which in turn gave us greater understanding of God's creation."

Daniel R.J. Joyce, S.J. '88

JESUIT ASTRONOMERS: Looking to the Heavens

In the annotated autobiography of Jesuit founder St. Ignatius of Loyola, editor Joseph Tylanda, S.J., notes that "the greatest consolation [Ignatius] received ... was from gazing at the sky and stars, and this he often did and for quite a long time. The result of all this was that he felt within himself a strong impulse to serve the Lord."

One of the earliest official interactions between Jesuits and astronomy came in 1582, when mathematician Christopher Clavius, S.J., used calculations by scientists — including Copernicus and Erasmus Reinhold — in his creation of the Gregorian calendar, which accounted more closely for the length of the Earth's trip around the sun and changed the timing of leap days to correct the 365-day calendar. Fr. Clavius, who taught at the Roman College, was in frequent correspondence with the astronomer Galileo

**Did you
know?**

11 asteroids
have been named
after Jesuits

Galilei, who often consulted with the Jesuit priest on mathematical issues of the day.

Robert Bellarmine, S.J. — after whom the University's Bellarmine Hall is named — would challenge Galileo to prove some of his findings, sparking a struggle between Galileo and Pope Urban VIII (a non-Jesuit) that brought the scientist before the Roman Inquisition more than once. Meanwhile, the Jesuits continued to make important contributions to astronomy. Giovanni Battista Riccioli, S.J., conducted some of the most thorough research of the late 17th century to demonstrate the Earth's rotation around its axis — research that wasn't fully realized for another 200 years. Roger Boscovich, S.J., who studied the travel of comets and the transit of Venus across the sun, helped prove the heliocentric model that Galileo had promoted.

The modern Vatican maintains its own observatory, led by Bro. Guy Consolmagno, S.J., who was awarded an honorary degree from Saint Joseph's this year. The observatory is also staffed by Jesuits who are experts in asteroids, extrasolar planets, stellar evolution and more.

A Growing Order... AND BURGEONING PHARMACEUTICAL TRADE

From the very beginning, Jesuits were an order of missionaries, sent out to work in the larger world. Just a year after St. Ignatius founded the order, one of his early companions, St. Francis Xavier, traveled to modern-day India and, within a decade, the first Jesuits arrived in South America. By 1568, the first Jesuit college outside of Europe was established: San Pablo de Lima in Peru.

As they traveled the globe, though, the Jesuits often found themselves in poor communities located far from medical aid. They learned many remedies using local plants and herbs, and when they eventually established more colleges, they would build pharmacies to provide care to both the priests living there and the local population.

Inspired by their tenets of service and justice, the Jesuits began to share the remedies that they had learned whenever they established a new mission. Soon, San Pablo became internationally known for pharmacological research, and remedies developed there were distributed around South America. So entwined are the Jesuits with medicinal knowledge in

Peru that an indigenous remedy for malaria using cinchona tree bark — which contains quinine, an effective antimalarial — was learned and spread by the order and is today popularly known as “Jesuit’s bark.”

Because of their worldwide network and regular travel, the Jesuits became one of the only organizations that could facilitate pharmaceutical commerce. They could source ingredients, share knowledge of how to concoct remedies and, most importantly, ship medicines to other Jesuit outposts. Their exchange would eventually spread back to Europe.

The Roman College established its pharmacy in 1627, sprawling across five rooms and including medicines that were regularly sent to and from other Jesuit pharmacies around the world. The Jesuit influence is evident even as far as the Philippines, where Jesuits including Paul Klein, S.J., and Georg Joseph Kamel, S.J., kept manuals for making medicines that included ingredients from the Americas, including maize, pineapple and cacao.

Did you know?

Saint Joseph’s may have dipped its toes into the medicinal trade early in its history. A company called “The College Remedy Company” had the same address as the University’s one-time location on North 12th Street. The company sold elixirs and tonics claiming medical benefits, including “Father Villiger’s Remedy,” trading on the well-known name and image of Burchard Villiger, Saint Joseph’s fifth president.

THE JESUIT, Scientist Pope

Whatever icy relationship there is between faith and science writ large has thawed considerably over the years, but the melt accelerated when an Argentinian Jesuit priest named Jorge Mario Bergoglio became Pope Francis in 2013. Prior to entering the seminary to train as a priest, Pope Francis studied chemistry at a technical school in Buenos Aires and worked as a technician in a food science laboratory. And though he didn’t pursue an advanced degree in science, Pope Francis continues to be an advocate for people of faith to trust in science. His *Laudato Si encyclical* is a clarion call for all people to acknowledge the human contribution to climate change and work to mitigate the damage it causes to Earth.

Pope Francis also seems to be willing to heal past divisions between the Church and science. In *Laudato Si*, Francis became the fourth pope to write positively about Pierre Teilhard de Chardin, S.J., a French paleontologist and contemporary of Charles Darwin whose discoveries in evolution and

theory of an “Omega point” — where everything in the universe spirals to a final unified point — made him an outcast in the Church.

Pope Francis’ call to find harmony between science and religion comes at a time when the two are too often portrayed as enemies, according to John Braverman, S.J., PhD, an evolutionary biologist and assistant professor of biology at Saint Joseph’s.

“I teach a class called God in Evolution, in which we imagine what hand God may have had in guiding, managing or intervening in evolution,” Braverman shares. “A student once asked me if I believed in evolution; he thought that maybe I was teaching the material without believing in it. That’s because young people today are facing a culture that feeds them clichés that faith is necessarily anti-science.”

But for Braverman, who studied biology and earned a PhD before joining the order, the long history of the Jesuits in the sciences is just a base on which modern priests, brothers and scholars can build. Indeed, he

says, the Jesuit way of teaching is closely related to how scientists approach the world.

“Ignatian pedagogy has an empirical quality to it,” he says. “It’s about listening to and observing the world around us, making an assessment using reason and our educated backgrounds, and doing something about it to solve the issue, before cycling back to observation. In the natural sciences it’s similar — we use our senses to detect the world around us, come up with a hypothesis to test, act and make observations on what changed. The approaches are so similar, it’s no wonder there are so many scientists throughout Jesuit history.” ■

Interested in Learning More?

“The Jesuits: Cultures, Sciences, and the Arts, 1540-1773,” by John W. O’Malley, S.J.; Gauvin Alexander Bailey; Steven J. Harris; and T. Frank Kennedy, S.J., and its follow-up, *“The Jesuits II,”* are excellent resources on the history of Jesuit scientists.

HAWK HILL
125
ACRE CAMPUS



City Avenue

54th Street

Cardinal Avenue



Expanding Our Philly Footprint

FROM HAWK HILL TO UNIVERSITY CITY

By Andrew Westveer '21 (MA)

The Saint Joseph's student experience isn't just expanding, it's evolving.

With the addition of cutting-edge research facilities, residence halls, historic buildings and gathering spaces, the University offers a robust living-learning experience, spanning 161 acres and three zip codes.

Hawk Hill Campus

A – Barbelin Hall

Built in 1927, Barbelin was named after Saint Joseph's founder Felix J. Barbelin, S.J. The beloved building, with its 165-foot bell tower, houses the College of Arts and Sciences, Office of Graduate and Extended Studies, and many classrooms and academic majors.

B – Barnes Arboretum

Featuring more than 2,500 types of woody and herbaceous plants, the 12-acre arboretum — operated by Saint Joseph's as part of an educational partnership with the Barnes Foundation — is the ideal site for the Barnes horticultural certificate program and Institute for Environmental Stewardship, supporting teaching, research and scholarly work.

C – Connelly Hall/Kinney Center for Autism Education and Support

In addition to science labs and classrooms, Connelly Hall houses the Kinney Center, a nationally prominent center dedicated to autism research, supporting students and families affected by ASD, and educating students who will play a critical role in those individuals' futures. It also features a hands-on lab where autistic students and community members can hone their vocational skills.

D – Michael J. Hagan '85 Arena

Stomping grounds for the men's and women's NCAA Division I basketball teams, Hagan features a 4,500-seat arena, practice courts, a workout facility, state-of-the-art locker rooms, Hall of Fame room and an eight-lane pool.

E – Maguire Wolfington Welcome Center

The home base of the Office of Undergraduate Admission, this grand building is the former residence of archbishops and cardinals of the Archdiocese of Philadelphia. It counts among its distinguished visitors three popes, three presidents and first ladies, senators, governors and ambassadors.

F – Mandeville Hall

Residing in Mandeville is the Erivan K. Haub School of Business, one of the world's top-ranked business schools, featuring the Academy of Food Marketing, Cooperative Education Program, Haub Innovation Center and Wall Street Trading Room — an integrated learning environment incorporating analytical tools, investment data and trading simulations.

G – Merion Hall

Merion Hall is home to the School of Education and Human Development and features classrooms, study spaces, an art gallery and the Writing Center. A tech-forward, multi-use esports lab opened in the space in 2020, boasting academic programming, an esports club and recreational space.

H – Science Center

Equipped with a tissues-culture lab (used to grow animal cells) and a biodiversity lab (boasting rare and exotic species), the Science Center also features a greenhouse and extensive green roof system. Part of a stormwater management program, it's one of the only research facilities of its kind in the region, used to study the efficacy of drainage systems and plant types.

University City Campus

A – Griffith Hall

The oldest building on the University City campus is the location of the Industrial Pharmacy Laboratory, a full-scale, GLP-compliant pharmaceutical research facility offering complete drug delivery research services; the West Center for Computational Research; and chemistry, biochemistry and pharmacy-related programs.

B – Integrated Professional Education Complex

Featuring innovative learning spaces, simulation labs and the physician assistant studies program, this steel superstructure made from recycled metal has a green roof with 20,000 square feet of vegetation, earning it three Green Globes from the Green Building Initiative.

C – Joseph W. England Library

The library, dedicated in 1973, contains one of the nation’s most complete collections of pharmaceutical literature, including many rare volumes on the history of pharmacy and medicine dating to the Middle Ages.

D – Living & Learning Commons (LLC)

In addition to state-of-the-art classrooms and living space, the LLC’s courtyard is flanked with bioretention planters that clean pollution from surface runoff, allow groundwater tables to recharge, reduce the burden on the city’s sewer system and create a habitat for pollinators.

E – Marvin Samson Center for the History of Pharmacy

Pharmaceutical history is on display with an original collection of over 8,000 pharmaceutical and medical artifacts dating back to the 1600s, including ceramic apothecary jars, pharmacy show globes, mortars and pestles, molds, and balances.

F – McNeil Science and Technology Center (STC)

Named for Robert L. McNeil Jr. '38, who invented Tylenol, and his grandfather Robert McNeil (Class of 1876), founder of McNeil Laboratories Inc., the STC includes nuclear magnetic resonance suites; research and teaching laboratories; a 20-seat bioinformatics lab; and two Beowulf supercomputers, which are part of the Cephalon bioinformatics suite.

G – Pharmacology/Toxicology Center

The pharmacology labs located in the center offer state-of-the-art equipment for research, including real-time polymerase chain reaction (PCR) for nucleic acid amplification and quantification. Students engage in research and classroom learning in the center’s compounding, tissue culture and pharmacology laboratories.

H – Athletic Recreation Center (ARC)

The 78,000-square-foot ARC provides recreational facilities for exercise and sports practice as well as classrooms and space for student organizations. In addition, the ARC offers programs that encompass stress management, leadership and teamwork development, civil engagement, intramural and club sports, and group fitness.

Saint Joseph's has officially launched a virtual tour of the Hawk Hill and University City campuses. Visit [sju.edu/VirtualTour](https://www.sju.edu/VirtualTour) to check it out.





HISTORIES

INTERVIEW

One University, Endless Possibilities

With over 370 years of combined academic success, growth and service to students, Saint Joseph's University and the University of the Sciences have built incredible legacies, with so many stories yet to be told. As we welcome this new era of Saint Joseph's, we look back on the events and people who paved the way for the next generation of leaders.

By Victor Filoromo

START HERE

1821

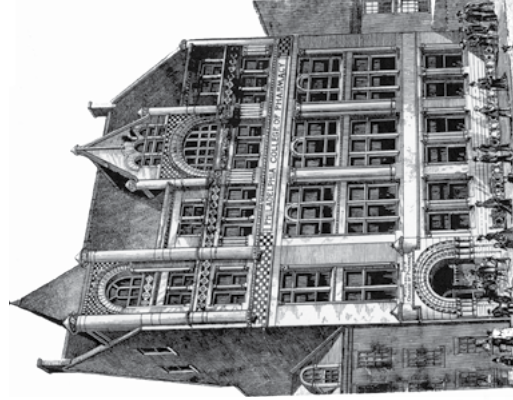
A group of 68 apothecaries meet at Carpenters' Hall in Philadelphia to "advance the character and forward the interest of the profession," establishing the Philadelphia College of Apothecaries.

1822

Philadelphia College of Apothecaries is incorporated as the Philadelphia College of Pharmacy. It is the first college of pharmacy in North America. ▶

1883

Susan Hayhurst becomes the first woman to graduate from the Philadelphia College of Pharmacy. She is awarded a graduate degree in pharmacy.



1920

Through a charter amendment, Philadelphia College of Pharmacy becomes the Philadelphia College of Pharmacy and Science. Baccalaureate programs in biology, bacteriology and chemistry enhance its offerings.



1928

The Philadelphia College of Pharmacy and Science relocates to its new (and current) home, 43rd St. and Woodland Avenue in West Philadelphia. ▶

1929

The generosity of Eli Lilly (Class of 1907) helps ensure the college's survival during the Great Depression. Future success is secured when the Lilly estate provides the largest gift in the college's history (\$22.5 million, which has a current market value of \$36.6 million). ▶



1967

The Doctor of Pharmacy program, one of the earliest such programs on the East Coast, is introduced. ▼



Doctor of Pharmacy students.



1851

Saint Joseph's College opens its doors on Sept. 15, 1851. Thirty-six young men are assigned to classes in a building adjacent to Old St. Joseph's Church in Philadelphia following High Mass. ◀

1866

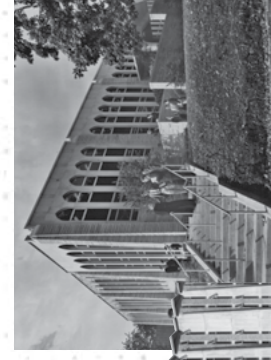
With a full block purchased on Girard Avenue between 17th and 18th Streets in Philadelphia, Saint Joseph's College moves to a new site. Two years later, Burchard Villiger, S.J., becomes president.

1922

Matthew Fortier, S.J., organizes an aggressive \$1 million campaign to expand Saint Joseph's College. The college purchases 23 acres of land on the western edge of Philadelphia.



Campion Student Center



Bellarmine Hall

Drexel Library

1949

Over the next decade and a half, numerous buildings are added to campus, including the Alumni Memorial Fieldhouse (1949, now Hagan Arena), Bellarmine Hall (1960), Campion Student Center (1961), Drexel Library (1963) and the Villiger classroom building (1964, now Post Hall). ▶

1956

Jim Brennan '58 creates and debuts the Hawk mascot using a \$120 student government grant. Six years later, "The Hawk Will Never Die" originates as a rebuke during a nail-biting basketball game against Villanova in which Wildcat fans begin to chant "The Hawk is dead." ▶



1962

Executive Director James J. O'Connor founds the nation's first Academy of Food Marketing at Saint Joseph's. Years later, professors Joseph DeFrates, PhD, and Morris C. Matt, DSc, Philadelphia College of Pharmacy and Science alumnus, develop a powdered milk tolerable to lactose intolerant individuals. ◀



Students in the Academy of Food Marketing.

CONTINUE ON
NEXT PAGE

1983

With a lead gift of \$2 million from the Pew Charitable Trusts, nearly \$6 million is raised toward the construction of the new Pharmacology/Toxicology Center.

1992

Leonard Abramson '60, a benefactor and board of trustees member, presents a gift that creates the institution's first fully endowed faculty chair, the Leonard and Madlyn Abramson Professorship in Pharmacology.

1995

The college's museum is officially named the Marvin Samson Center for the History of Pharmacy in honor of the vice chairman of the board of trustees and a major benefactor for the institution. ▶

1998

The institution acquires university status, officially designating itself as the University of the Sciences in Philadelphia, later shortened to the University of the Sciences, or USciences, in 2010.



2014

The Integrated Professional Education Complex (IPEX) opens. The 57,000-square foot building showcases an interprofessional education model, allowing students to experience mock exam rooms, simulation labs and clinical spaces. ▶

2019

With the completion of the Living and Learning Commons, the University expands its footprint and provides new state-of-the-art living facilities to residential students. ▼



1991

The Wilson Student Center opens, providing an honors residence for upperclass students, along with new dining facilities; conference rooms; and recreation, music and computer rooms. ▼



2006

The McNeill Science and Technology Center (STC) is dedicated to Robert J. McNeil Jr. '38, former University professor and CEO of McNeill Laboratories.

2012

Helen Giles-Gee, PhD, is named the first Black and first female president of USciences. Giles-Gee makes significant upgrades to operations while establishing new accredited academic programs. ◀



1970

The fall semester brings major changes to campus, with the College opening its doors to women as full-time students for the first time.



1997

The College of Business and Administration is renamed the Erivan K. Haub School of Business in honor of the generous benefactor and former Saint Joseph's trustee. A year later, Mandeville Hall is built and becomes home to its undergraduate and graduate programs. ▲

2008

The acquisition of the 38-acre Episcopal Academy in Merion sparks the largest expansion since the move to City Avenue; it is renamed the James J. Maguire '58 Campus.

2004

The men's basketball team goes undefeated in the regular season (27-0) in its 2003-2004 campaign, advancing to the NCAA's Elite Eight. ▶



2010

Ground breaks on the John R. Post '60 Academic Center and the John and Maryanne Hennings Post Learning Commons. The project brings new, collaborative learning environments, with a three-story addition to the Drexel Library.



2015

Mark C. Reed, EdD, is elected as the University's 28th president, becoming the first lay president in the University's storied history. This same year, Pope Francis makes a surprise trip to Hawk Hill, blessing the *Synagoga and Ecclesia in Our Time* sculpture and greeting community members. ◀

2017

In July, the University announces the receipt of a \$50 million gift from James J. Maguire '58 and his wife, Frances: the single largest gift in the University's history. ▶



2018

The Barnes Foundation and Saint Joseph's embark on a long-term partnership, expanding opportunities for both students and the surrounding community to engage in the horticulture education program and fine arts programming. This includes operation and management of the 12-acre Barnes Arboretum at Saint Joseph's and reimaged Frances M. Maguire Art Museum. ◀



2019

The University opens the School of Health Studies and Education, bringing together more than 40 programs in the in-demand areas of health and education. Today, the school has expanded into two entities: the School of Health Professions and the School of Education and Human Development.

JUNE 1, 2022

The merger with USciences is complete. Today, the combined institution features more than 100,000 students, faculty, staff and alumni.

The POWER of PARTNERSHIP

STUDENT-FACULTY RESEARCH COLLABORATIONS WITH BIG IMPACT

By Emmalee Eckstein

Saint Joseph's students are driving their own research. They seek out professors to partner with on critical issues that they are passionate about, bringing fresh perspectives and ideas to the table. They gain independence and confidence as they try new approaches, navigating the ups and downs of the research process and, ultimately, coming into their own as scientists, analysts and changemakers.

The research taking place on our campuses knows no boundaries. Students and their faculty research advisors are getting to the root cause of degenerative neurological diseases, using AI to solve issues within our global supply chain, helping probated students overcome systemic oppression, and improving our understanding of synthetic toxins and how they affect brain activity for forensic screenings.

This is how students learn at Saint Joseph's — working hands-on with guidance from faculty, they go beyond the classroom to turn their ideas into high-impact research that addresses critical challenges of our world.

Strengthening Detection of Recreational Toxins

Jason Wallach, PhD,
assistant professor of
pharmaceutical sciences

Garrett Walker '23,
pharmacology and
toxicology major

Wallach, left, and Walker, right, examining slides in the lab.

RESEARCH OVERVIEW

Having worked together on multiple projects, Garrett Walker '23 and Jason Wallach, PhD, are currently synthesizing two different PCP-type derivatives to better detect recreational drugs that are being bought and sold as “legal highs.”

“Legal highs” are chemical compounds synthesized in labs that stimulate or depress the central nervous system in a way that mimics the psychoactive effects of illicit drugs, like cocaine or PCP. Recreational chemists tinker with the structure of these compounds so that they will intentionally fall outside international drug controls — at least when they first emerge — but they remain dangerous to consumers, just like the illegal substances they imitate.

“Once we’ve successfully synthesized the derivatives, we’ll have the ability to test how these compounds bind to certain receptors in the brain,” explains Walker. “Ultimately, this research will give us a better picture of how these drugs actually function and how changing the structure of the drug impacts its effect.”

Synthesizing these compounds makes it possible for Wallach and Walker to gather analytical data that can be used to detect these drugs in potential forensic or medical research.

ON WORKING TOGETHER

Walker has grown exponentially since joining Wallach's lab — he went from being a first-year student who needed a lot of oversight to someone who checks in with his mentor occasionally to make sure he's on the right track.

“I feel much more like a scientist,” says Walker. “I never thought I would be this independent in the lab.”

Wallach, too, has found growth in his relationship with Walker.

“Garrett is very passionate. I want that in my lab, it's infectious. Even for me,” says Wallach. “It's so valuable to have someone I can leave in charge of my lab; while I'm teaching or working on grant research, I know he's there taking care of everything and diving into niche subjects that I've always wanted to pursue but have never had the time.”

ON RECOGNIZING THE POSSIBILITIES

“This work I'm doing with Dr. Wallach has completely changed the way I think about how science actually gets done. I used to think only the smartest people were able to work as scientists and that's just not true,” says Walker. “It takes some time and effort to learn the language and understand the systems, but just being there and being interested — that's the main thing. And with the right sense of curiosity and a willingness to work hard, you can really understand it.”

“It's true that people feel intimidated by science and the research we do,” agrees Wallach. “And there is a lot of grit and passion that goes into excelling in this field. It takes effort, sure. But with the right passion and the right dedication, anyone can become a valuable researcher and scientist.” ■

Using AI to Streamline Our World

RESEARCH OVERVIEW

Chasity Nadeau '20, '22 (MS) and Jeannine Shantz '20, '22 (MS) are working under Marcello Balduccini, PhD, to better understand how cyber-physical systems can be used to reduce the brittleness of supply chains.

A cyber-physical system is a physical device whose behavior is controlled or monitored by computers running dedicated programs.

"For instance," explains Shantz. "Your car. It has a camera on it, right? How is that camera interacting with the environment?"

The camera on an automobile can identify the road in front of or behind it and recognize when a person or vehicle is too close to it — that's because the computer controlling the car's camera is taking its physical surroundings into account and incorporating them into the non-physical systems that control it.

Viewing the global supply chain as a large cyber-physical system allows for better management of manufacturing, logistics and shipping.

Marcello Balduccini, PhD, assistant professor of decision and system sciences, director of the Haub Innovation Center

Chasity Nadeau '20, '22 (MS), business intelligence

Jeannine Shantz '11 (MS), '22 (MS), business intelligence

The team is also working on a handbook chapter on utilizing cyber-physical systems in business contexts.

For example, imagine a mortgage company that can use artificial intelligence to decide how large of a loan to award a person.

"Technically speaking, it's a very complicated process for a machine to understand all your information and assign value to it. Errors can happen quite easily," says Balduccini. "So this handbook chapter will give companies the answers they need to communicate their process to consumers."

ON WORKING TOGETHER

"Dr. B. really trusts us and encourages us to dive in," says Nadeau. "Not every research role I've taken on has allowed me to be so independent. Jeannine and I really have to figure things out on our own, which has made a big difference in how I approach my professional work. I'm much more confident."

"When I started working with Dr. B, my entire view expanded," says Shantz, the director of research, evaluation and assessment at Drexel University's Close

School of Entrepreneurship. "I'm working on projects that are so far beyond the scope of what I started out thinking this degree program was about. It doesn't seem to matter what academic track you're on, he'll find a way for you to contribute in a meaningful way."

ON ACCEPTING THE UNKNOWN

"I genuinely did not think that this is the type of research I would ever do," admits Nadeau, who graduated with a major in finance and is working on her master's in business intelligence. "I've always been more geared toward data visualization and analytics. But I've really enjoyed the work we do."

Shantz has been impressed by the level of respect she has received from industry leaders during her work with Balduccini.

"We're sitting down with the CTO at Intel and a lab director at NIST," says Shantz. "They're really open to our thoughts and ideas. They've been so gracious and attentive when we're bringing research to the table. It's been very affirming." ■

Left to right: Balduccini, Nadeau and Shantz meeting in the Haub Innovation Center to discuss their research.

Disrupting the School-to-Prison Pipeline

RESEARCH OVERVIEW

Suniti Sharma, PhD, began her career as a prison educator and high school English teacher. This intersection of professional experiences — combined with her cultural identity as a woman from India — became her motivation to change how teachers view cultural diversity in a school setting.

"My work lies in guiding my students to become culturally conscious teachers — educators who can engage students who are culturally different from them rather than watch them be shuffled into the school-to-prison pipeline," says the Saint Joseph's professor, who prepares her students to teach high school English and history.

That's where Jaulie Cantave '22 comes in. In the summer of 2021, Cantave began working under Sharma through Saint Joseph's Summer Scholars program — a program in which undergraduates participate in faculty-mentored research and other scholarly

endeavors. With Sharma as her research advisor, Cantave expanded upon Sharma's work to disrupt the school-to-prison pipeline, working with high-risk youth at The Academy in Norristown. The school-to-prison pipeline is defined by the ACLU as a "disturbing national trend wherein children are funneled out of public schools and into the juvenile and criminal justice systems."

Students land in the school-to-prison pipeline for a complex set of reasons, including cultural alienation from schools or misuse of the zero-tolerance policy to criminalize students who are culturally different, come from economically depressed neighborhoods, or who have learning disabilities but no access to support. Students of color are especially vulnerable to these trends and the discriminatory application of discipline.

The Academy is an academic day program for young men who have demonstrated disruptive behavior in a school setting and been pushed out to a nontraditional program.

Cantave, left, Sharma, right, conducting research in the library.

Suniti Sharma, PhD, professor and chair of teacher education

Jaulie Cantave '22, secondary education and English major

Cantave is tracking how an increased level of literary enrichment supports these students' current school experiences and enables their transition back to a more traditional academic environment.

Cantave is also mentoring these young men and discovering what tactics are most effective in forging deeper connections between educators and students who have been labeled at-risk.

"Jaulie's research will be used by future teachers in our teacher preparation — her findings will connect them with the cultural knowledge, testimonials and actual experiences of students labeled at-risk," explains Sharma. "The goal is to generate knowledge useful to teachers who are teaching cross-culturally, making equity a priority and inclusion the starting point of teaching and learning."

(Continued on next page)

(Continued from previous page)

■ ON WORKING TOGETHER

For Sharma, research and teaching have a symbiotic relationship.

“In Indian culture, the ‘guru-shishya parampara’ translates into ‘the teacher-scholar tradition’ and is key to students’ and teachers’ professional and spiritual development,” says Sharma. “It affects every aspect of life including teaching and learning. So to have the opportunity to work with students while immersing ourselves in a research project is its own reward.”

Cantave, who is in the process of becoming a general education teacher herself, has been able to dive more deeply into her values as an educator under Sharma’s wing.

“It isn’t always enough to be a good person,” says Cantave. “That isn’t what will make you a good teacher. You need to use research to stay active and up to date. That’s what shows you care.”

■ ON OVERCOMING CHALLENGES

“This work is so humbling,” says Cantave. “I am a Black, gay person from Philadelphia, so understanding the prison industrial complex is important to my personal life as well as my professional one. My students are crazy intelligent and very capable, but undoing the effects of systemic oppression can feel impossible.”

Despite the enormity of the task at hand, Sharma remains impressed by her student’s determination.

“Jaulie has been able to go beyond her own struggle with this subject to really connect with students at The Academy,” says Sharma. “She continues to integrate the knowledge generated from her research into what she’s teaching.”

Cantave knows that staying current and available are critical to her success.

“Kids, especially kids in Philadelphia, need teachers who are hyper aware of the society in which they live,” Cantave says. “It all impacts the classroom and how our kids will be able to learn and grow.” ■

Getting to the Root Cause of Alzheimer’s

Margaret Panning Pearce, PhD, associate professor of biology and neuroscience
Jenna Hunt ’23, neuroscience major

■ RESEARCH OVERVIEW

Jenna Hunt ’23 and Margaret Panning Pearce, PhD, are conducting research on neurodegenerative diseases, working with a microtubule-associate protein called “tau” for short, which is implicated in Alzheimer’s disease. Hunt is trying to model Alzheimer’s disease in *Drosophila*, or fruit flies, in an attempt to see the expression of the tau protein in the brain. Once the model works, Hunt will be able to learn more about what might cause Alzheimer’s disease.

“I developed this research model to study how these protein assemblies form in the brains of patients with neurodegenerative disorders like Huntington’s and Alzheimer’s diseases,” explains Pearce. “The one that Jenna has focused on is an inherited tauopathy, [diseases caused by misfolding of the tau protein], known as frontotemporal dementia.”

As Pearce established her own lab as a professor, her work in better understanding how these protein aggregates could spread through the brain came to the forefront of her research.

“The hypothesis we focus on in my lab with students like Jenna is that different cell types participate in a different way in a brain experiencing neurodegeneration,” says Pearce. “And that’s groundbreaking. It’s not just neurons — it’s these non-neuronal cells, known as glia, that seem to play a major role in the development and progression of these diseases. So the major questions we’re asking are, how is this happening? And could the molecules and pathways we identify become viable drug targets in the future?”

■ ON WORKING TOGETHER

“Dr. Pearce is kind of my guiding light for everything research and career-oriented,” says Hunt. “All that she’s accomplished — having a lab and a family and outside interests — it’s everything I want for myself.”

Originally, Hunt had intended to go to medical school after getting her degree in neuroscience. Since joining the Pearce lab, however, Hunt’s appreciation for research has grown exponentially.

“I’ve always been very impressed by Jenna,” says Pearce. “Not many first-year students have time to pursue research, and she was asking about joining my lab as early as her orientation week.”

The pair has now been working together for three years.

“Frankly, I feel a little spoiled to have Jenna in my lab,” admits Pearce. “She has such a strong passion for research and science — and such unique intelligence. She even works with me over winter and summer breaks!”

■ ON ACCEPTING THE UNKNOWN

So far, Hunt has come up against one very significant issue in this research: The model has yet to produce the expected results, which means she and Pearce must continue exploring alternative approaches to observe

the spreading of tau proteins in the *Drosophila*.

Learning how to fail has been the most humbling lesson of all.

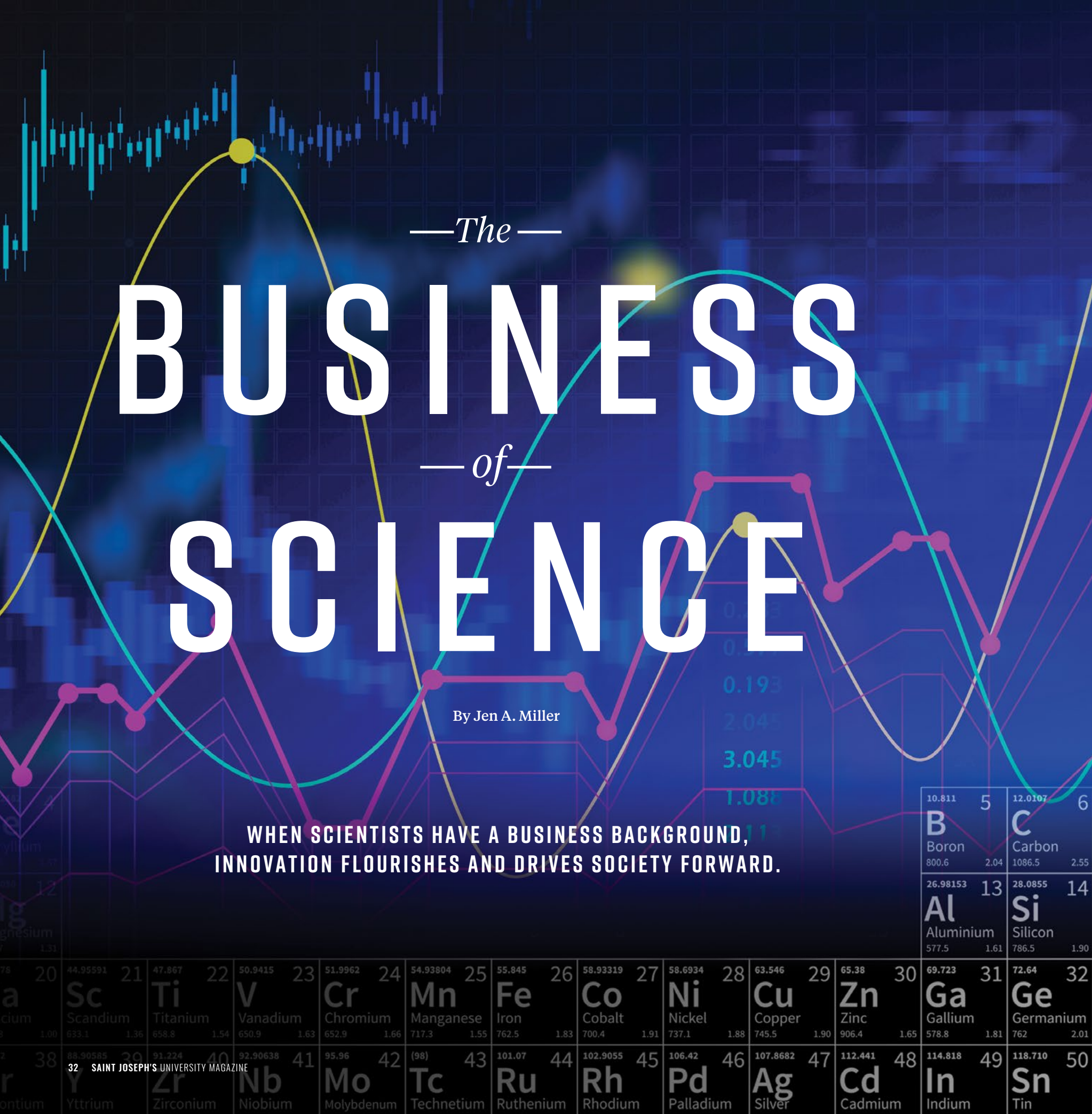
But that’s the thing about science, she says. Research lies in being able to accept the unknown of it all and pivot to other experimental approaches.

“Relinquishing control to the cells and the science is really hard, but really exciting,” she says. “Accepting that I might fail has been the hardest thing I’ll ever do, but it’s also where I’ve made the most progress.” ■



Scan this QR code to hear more from our student-faculty pairs.

Pearce, left, and Hunt, right, reviewing samples.



—The—

BUSINESS

—of—

SCIENCE

By Jen A. Miller

WHEN SCIENTISTS HAVE A BUSINESS BACKGROUND,
INNOVATION FLOURISHES AND DRIVES SOCIETY FORWARD.

AT THE FOUNDATION OF BUSINESS AND SCIENCE IS INNOVATION:

a desire to bring new ideas, products or processes to market to better our world. While curiosity drives science and need drives business, together, the two fields can revolutionize drug therapies, transform healthcare and harness the latest scientific discoveries, all while being mindful of growth opportunities and profit margins, and keeping both society and investors' best interests in mind.

Following Saint Joseph's integration with the University of the Sciences, the opportunities to capitalize on the intersection of these two fields are more abundant than ever. Two alumni, John P. (Jay) Borneman, PhD, and Catherine Croke, DBA, have already earned degrees from each of these institutions; their professional success is a testament to the multitude of possibilities of Saint Joseph's today.

A career in science seemed like destiny for John P. (Jay) Borneman, PhD. His father was a homeopathic pharmacist, as was his father before him, and his father before him.

But instead of going right to pharmacy school at the University of the Sciences (as his father and grandfather had), Borneman took a slightly different path, gaining both chemistry and business acumen on his way to becoming an entrepreneur.

He earned three degrees from Saint Joseph's (and was one of multiple people in his family to graduate from the University, including his wife, Anne Marie Borneman '08 (EdD)); his bachelor's degree in 1980, an MS in chemistry in 1983 and an MBA in 1987. That same year, he joined the Standard Homeopathic Company and its subsidiary Hyland's Inc., where he served as CEO until he retired last year (he still serves as chairman).

He credits his education and expertise in business and chemistry as a driving factor in that success, both for himself and for Hyland's.

"For every five PhDs, you need an engineer," he says. "The thread between the two is entrepreneurship. If you understand both, you're connecting the dots all the time."

Scientific breakthroughs rarely go anywhere without the business community, and the business community

identifies needs that only scientists can meet.

Sometimes that means business and science partners working together, or the scientists developing the business know-how themselves.

The recent integration of Saint Joseph's University and the University of Sciences capitalizes on the institutions' respective strengths, and will make it easier for scientists with an interest in business to gain that knowledge for the betterment of their careers and the discoveries they'll shepherd into the world.

"We want our scientists to know how to live and work in that space, whether they partner with businesses or become the business-scientist expert themselves," says Joseph A. DiAngelo, EdD '70, dean of the Haub School of Business. "The innovations that come out of these dually trained experts are already changing the world. By offering more scientists opportunities to have a business education, we'll be driving innovation forward."

In the Greater Philadelphia area, 41% of the region's jobs are supported by "meds & eds" and nearly every major pharmaceutical company has operations in Philadelphia or nearby suburbs. DiAngelo points to newer companies like Jazz Pharmaceuticals, which focuses on cannabinoid science to create new treatment options for serious diseases, and Sparks Therapeutics, a



The innovations that come out of these dually trained experts are already changing the world. By offering more scientists opportunities to have a business education, we'll be driving innovation forward."

Joseph A. DiAngelo, EdD '70

company that develops gene therapies, setting up bases in Philadelphia as proof of the city’s position as an international science hub. There’s a need to train the future professionals in those industries with business in mind, he explains.

“Whether we like it or not, scientists need to understand business. Pure academics may have a great idea, but a scientist with business know-how is going to ask ‘how are we going to fund the idea’ and figure out how to make it happen,” adds Sinclair Smith, ScD, dean of the School of Health Professions.

“For a scientist to bring an idea to market, understanding how to communicate with the business world is critical. The best person to pitch an idea and bring it to market is the person who developed it. If we can provide that business background to scientists, they can be the best advocates for advances that could change the world.”

Scientists are also bringing their expertise to public and private companies to help them sharpen their offerings and drive innovation from within, whether that’s pharmacists working for insurance companies, food scientists determining how to market new organic foods, or chemists navigating regulatory requirements to make sure new products are safe and ready for the public.

This is especially true in Philadelphia. “You’ve got this high density of very smart people, fine educational institutions and an ecosystem of finance that can get behind these projects. Philadelphia is well positioned to be the lead on all of this,” Borneman says. “The confluence of business and science is a powerful thing. It’s driving the region’s and the country’s economy, and it will make a better world for all of us.”



Saint Joseph’s board member John P. (Jay) Borneman, PhD, earned his bachelor’s, master’s and MBA degrees from Saint Joseph’s in 1980, 1983 and 1987, respectively. He went on to earn his PhD in health policy and public health from USciences in 2007.



The confluence of business and science is ... driving the region’s and the country’s economy, and will make a better world for all of us.”

Regulating the Safety of Science

Understanding the regulatory world and ensuring product safety are critical steps in making discoveries widely available, which is where business scientists like alumna Catherine Croke, DBA, come in.

Croke started her career working for a private forensic toxicologist while also studying for a degree in pharmacology and toxicology at the University of the Sciences.

She never thought she’d need business training, but while a student, she was mentored by Joan Tarloff, PhD, a longtime USciences professor, who “opened my eyes to the career possibilities that existed at the intersection of the two fields,” Croke says. Tarloff also showed her that there was a path for women to advance in the sciences at a time when the industry was dominated by men.

Croke transitioned to a job in food safety testing for the U.S. Department of Agriculture, where she approved imitation seafood products. After graduation, she worked in a number of product safety positions, where she saw how more formal business training could enhance her career. So, she went back to school and earned a master’s degree at Saint Joseph’s in environmental protection and safety management while she was a product safety manager at Arkema, a chemical manufacturing company.

That led to a job at Evonik, a specialty chemical manufacturer, where Croke’s been for 22 years. She’s now senior advocacy and compliance manager, maintaining compliance for Evonik’s facilities in North America. She also recently earned her DBA in business administration at Columbia Southern University.

“My doctorate was the culmination of my schooling to meet all of these career opportunities,” she says. “My combined business and science background enables me to better lead discussions with regulatory agencies and advocate for new policies within emerging markets.”

Croke is seeing more public interest in companies like Evonik and tighter regulations for all industries up ahead, which means that business training is becoming more critical. It will help companies interact with the public and explain aspects of their business, and also pushes forward innovation to hit new sustainability benchmarks. She sees Saint Joseph’s playing a key role in preparing future scientists to be ready for whatever the future brings.

“It’s important to raise the bar, and working together can help the schools do that,” she says of the now-merged schools. “They helped develop my career and opened my eyes by providing mentorship opportunities that I would not have been able to find on my own.”

Propelling Discoveries Forward via the Business Scientist

Borneman has seen where a scientist’s lack of business knowledge can stop discoveries from going anywhere — or allow these breakthroughs to fall into the hands of someone who did not make the initial discovery.



Catherine Croke, DBA, received her bachelor’s degree in pharmacology and toxicology from USciences in 1992, subsequently earning a master’s in environmental protection and safety management from Saint Joseph’s in 1997. She also holds a doctor of business administration from Columbia Southern University.



The competitive advantage you have as a scientist in business is to adapt and change faster than your competition.”

“What astonishes me is you talk to really fine scientists who come up with incredibly good ideas and they don’t protect their intellectual property, and they give this stuff away,” says Borneman.

That doesn’t happen with scientists who have a business background, whether they earned that through a degree or picked it up along the way.

Likewise, business-minded professionals often benefit from the ingenuity of a science background.

“The competitive advantage you have as a scientist in business is to adapt and change faster than your competition, and the only way you can adapt and change is to understand both the science and business opportunities,” says Croke. “Someone who speaks the language has to be the liaison to the business to introduce things into market and to get regulatory approvals. That’s a big part of what my team and I do every day.”

Borneman has also seen how having that formal science background can help push business projects ahead and even have government officials return your calls faster, which is one reason he went back to USciences in 2007 to earn his PhD in health policy and public health. It also made him the fourth generation in his family to carry a USciences degree.

He thinks about his generation and the generations that will come after him, how critical it is for scientific discoveries to leave the academic space and enter the real world, and how business can help them break out. “It’s about a sustainable future, not only for us, but for the folks who come behind us,” he says. ■

New University Trustees

Seven new trustees joined the University board and began their four-year terms on June 1, 2022, under the leadership of Board Chair James M. Norris '85.



John P. (Jay) Borneman, PhD '80, '83 (MS), '87 (MBA), USP'07 (PhD) is the founder and principle of Oak View Point Partners, a privately held investment firm, and the chairman and retired CEO of Hyland's Inc., a mid-size OTC pharmaceutical manufacturer.

Borneman earned bachelor's and master's degrees in chemistry from Saint Joseph's and an MBA with a concentration in finance from the Haub School of Business. He subsequently earned his PhD in health policy from the University of the Sciences. Borneman joins the Saint Joseph's Board of Trustees after sitting on several boards of visitors, and subsequently serving as a trustee for USciences since 2016.



Doneene K. Damon, Esq. '89 is the director and president of Richards, Layton & Finger, Delaware's largest law firm specializing in some of the nation's most complex and highly sensitive corporate, alternative entity and bankruptcy matters. In 2021 alone, Damon was named among the *Philadelphia Business Journal's* Diversity Leaders in Business; the *News Journal's* Most Influential Delawareans; *Savoy Magazine's* Most Influential Black Lawyers; and a Women, Influence & Power in Law Managing Partner of the Year. Damon graduated from Saint Joseph's as a business major and earned her law degree from Temple University.



Timothy G. Fallon '76 was the president and CEO of Columbus Foods, Inc. from 2010 to 2015. Currently, he is a senior operating partner at Arbor Investments, LLC, a private equity firm focused on middle-market food and beverage companies. Fallon previously served four years on the Saint Joseph's

board from 2016–2020. He earned his undergraduate degree in food marketing from Saint Joseph's and his MBA from Temple University.



Kelly Flanagan '06, '12 (MBA) was named executive vice president of business planning for the Jacksonville Jaguars in 2021. Flanagan joined the organization in 2012 and quickly was promoted as the club's chief financial officer in 2014. She is responsible for providing integrated financial oversight across the

portfolio of sports and entertainment properties, development and implementation of strategic initiatives, and the application of business analytics and insights across the organization. Flanagan earned her undergraduate degree in accounting and MBA from Saint Joseph's.



Michael C. Hemsley, Esq. '72 is currently a senior advisor at Juniper Advisory in Chicago, Illinois. Hemsley received his bachelor's in international relations from Saint Joseph's University and taught health law and policy at the University intermittently as an adjunct professor from 2006–15. Hemsley earned his

JD from Villanova and his MA from George Washington University. He most recently served as vice chair of the University of the Sciences' Board of Directors.



Edgardo (Ed) A. Mercadante, USP'79, H'17 is the founder and CEO of MediTelecare, a leading telehealth provider for behavioral health in long-term care markets. He graduated from the University of the Sciences in 1979 with a bachelor's degree in pharmacy. He was later given an honorary

doctor of science degree in 2017 as part of his Founder's Day Award. Mercadante has been a member of the University of the Sciences' Board of Directors intermittently since 2000.



Michael J. Sofia, PhD, is chief scientific officer and co-founder of Arbutus Biopharma Corporation, a biopharmaceutical company focused on developing a cure for hepatitis B and coronavirus infections. He holds adjunct positions at Drexel University and the Baruch S. Blumberg Institute, an independent

nonprofit research institute established in 2003 by the Hepatitis B Foundation. Sofia received his bachelor's degree in chemistry from Cornell University in 1980 and his PhD in organic chemistry from the University of Illinois in 1984. He has received numerous awards for his work in developing a cure for the hepatitis C virus, including the 2016 Lasker Award.



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