Actelion Ltd. is a leading biopharmaceutical company focused on the discovery, development and commercialization of innovative drugs for diseases with significant unmet medical needs. The company has its corporate headquarters in Allschwil/Basel, Switzerland where it was founded in 1997.

The company has proven its ability to discover new compounds and to rapidly move them from research through development to commercialization. In particular, Actelion scientists were among the first to work in the field of endothelin receptor antagonists (ERA), leading to Tracleer® and now the tailored ERA Opsumit®.

Actelion has over 30 operative affiliates around the world including the United States, Canada, Brazil, Australia, Japan, Switzerland and a number of EU countries. These subsidiaries provide distribution, sales and marketing services.
Our history and culture have shaped the company. We are leaders in the science and medicine of pulmonary arterial hypertension (PAH), with over 15 years of experience. Our understanding of the complex pathways and molecular mechanisms of this disease has enabled the development of tailored medicines that can make a real difference to patient outcomes.

We are set to continue our leadership in the field of PAH into the mid-2020s, thanks to our assets Veletri®, Opsumit®, and Uptravi®. The company’s efforts have resulted in a specialty pipeline which continues to mature as programs make progress including in disease areas such as Clostridium difficile-associated diarrhea, Eisenmenger syndrome, pediatric PAH, relapsing multiple sclerosis and insomnia.

**IT IS THIS KNOWLEDGE THAT WILL TAKE US TO NEW AREAS**

Our expertise in human biology, especially our knowledge of specific families of molecular targets, such as G-Protein Coupled Receptors, led us to Opsumit and it is this knowledge that will take us to new areas.

We will leverage our scientific expertise through in-house discovery, development and marketing talents; ‘fully-fledged’ also means that we have all the expertise in all areas of the value chain for delivering great products to physicians, patients, payors – as well as all the support functions and infrastructure needed to deliver our ambition efficiently. All Actelion employees have an integral role to play in achieving success. Who you are, how you collaborate with colleagues and the way you approach your work is key to both personal and company success.
Ventavis® (iloprost)
Ventavis has been marketed by Actelion in the US since 2007. Bayer Healthcare markets Ventavis elsewhere. Ventavis is an inhaled formulation of iloprost, a synthetic compound structurally similar to prostacyclin (PGI2).

Veletri® (epoprostenol for injection)
Introduced in the US in 2010, Veletri is commercially available in 15 countries worldwide. Veletri, an intravenous prostacyclin, is stable at room temperature (77°F/25°C), removing the need for patients to carry ice packs.

ACTELION’S PRODUCT PORTFOLIO

Our PAH Franchise
Pulmonary arterial hypertension (PAH) is a chronic, life-threatening disorder characterized by abnormally high blood pressure in the arteries between the heart and lungs. Actelion’s PAH franchise encompasses oral, inhaled and intravenous formulations of compounds, for patients at various stages in the course of this disease (WHO functional classes II–IV), enabling us to deliver treatments across the entire continuum of care.

Opsumit® (macitentan)
Introduced in the US in November 2013, Opsumit is commercially available in over 35 countries worldwide. Opsumit is an orally available endothelin receptor antagonist that resulted from a tailored drug discovery process in Actelion’s laboratories.

Tracleer® (bosentan)
Introduced in the US in November 2001, Tracleer is commercially available in over 60 countries worldwide. Tracleer is an orally available endothelin receptor antagonist and was the first oral treatment approved for PAH.

Uptravi® (selexipag)
Introduced in the US in January 2016, and in both Germany and Canada (private market) in June 2016, Uptravi is currently under review with health authorities around the globe. Uptravi, originally discovered and synthesized by Nippon Shinyaku, is the only approved oral, selective IP receptor agonist targeting the prostacyclin pathway in PAH.

Veletri® (epoprostenol for injection)
Introduced in the US in 2010, Veletri is commercially available in 15 countries worldwide. Veletri, an intravenous prostacyclin, is stable at room temperature (77°F/25°C), removing the need for patients to carry ice packs.

Ventavis® (iloprost)
Ventavis has been marketed by Actelion in the US since 2007. Bayer Healthcare markets Ventavis elsewhere. Ventavis is an inhaled formulation of iloprost, a synthetic compound structurally similar to prostacyclin (PGI2).
Our Specialty Products
Actelion is creating specialty franchises alongside PAH – discovering, developing and/or in-licensing/acquiring products in new therapeutic areas.

Valchlor® (Mechloretamine)
Valchlor (mechloretamine) 0.016% gel is applied topically once daily to affected areas of the skin. Valchlor is approved for the topical treatment of Stage IA and IB mycosis fungoides-type cutaneous T-cell lymphoma in patients who have received prior skin-directed therapy. Valchlor is the first and only FDA-approved topical formulation of mechloretamine.

Introduced in the US in November 2013, and Israel in April 2016, Valchlor is currently under review with European health authorities under the trade name Ledaga®.

Zavesca® (Miglustat)
Zavesca is an orally active, competitive, reversible inhibitor of glucosylceramide synthase.

Zavesca is commercially available for the treatment of mild to moderate type 1 Gaucher disease in 47 countries, including the US and the European Union since 2003.

Outside of the US, Zavesca is commercially available for the treatment of Niemann-Pick type C disease in 45 countries, including the European Union since 2009.

More details on the availability of our products can be found on www.actelion.com/investors/products
## ACTELION’S DEVELOPMENT PIPELINE

<table>
<thead>
<tr>
<th>Compound</th>
<th>Indication</th>
<th>Study</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Phase III</strong></td>
<td></td>
<td></td>
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<tr>
<td>Cadazolid</td>
<td><em>Clostridium difficile</em>-associated diarrhea</td>
<td>IMPACT</td>
<td>Ongoing</td>
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<tr>
<td>Macitentan</td>
<td>Eisenmenger syndrome</td>
<td>MAESTRO</td>
<td>Ongoing</td>
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<tr>
<td>Macitentan</td>
<td>Pediatric PAH</td>
<td>TOMORROW</td>
<td>Initiating</td>
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<tr>
<td>Ponesimod</td>
<td>Multiple sclerosis</td>
<td>OPTIMUM</td>
<td>Ongoing</td>
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<tr>
<td><strong>Phase II</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Cenerimod</td>
<td>Systemic lupus erythematosus</td>
<td>-</td>
<td>Ongoing</td>
</tr>
<tr>
<td>Clazosentan</td>
<td>Reversal of vasospasm associated with aneurysmal subarachnoid hemorrhage</td>
<td>REVERSE</td>
<td>Ongoing</td>
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<tr>
<td>Dual Orexin Receptor Antagonist</td>
<td>Insomnia</td>
<td>-</td>
<td>Initiating</td>
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<tr>
<td>Endothelin Receptor Antagonist</td>
<td>Specialty cardiovascular disorders</td>
<td>-</td>
<td>Ongoing</td>
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<tr>
<td>Macitentan</td>
<td>Chronic thromboembolic pulmonary hypertension</td>
<td>MERIT</td>
<td>Ongoing</td>
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<tr>
<td>Macitentan</td>
<td>Combined pre- and post-capillary pulmonary hypertension</td>
<td>MELODY</td>
<td>Complete</td>
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<tr>
<td>Ponesimod</td>
<td>Graft-versus-host disease</td>
<td>-</td>
<td>Ongoing</td>
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<td><strong>Phase Ib</strong></td>
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<td></td>
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<tr>
<td>Lucerastat</td>
<td>Fabry disease</td>
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<td>Complete</td>
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<td><strong>Phase I</strong></td>
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<td>New Chemical Entity</td>
<td>Cardiovascular disorders</td>
<td>-</td>
<td>Ongoing</td>
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<tr>
<td>Selective Orexin 1 Receptor Antagonist</td>
<td>Neurological disorders</td>
<td>-</td>
<td>Ongoing</td>
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<tr>
<td>T-type Calcium Channel Blocker</td>
<td>Neurological disorders</td>
<td>-</td>
<td>Ongoing</td>
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Status as of 20 July 2016
EMPLOYEES

Employees by Function

- Number of employees

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<th>Function</th>
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<td>Corporate Functions</td>
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<tr>
<td>Drug Discovery</td>
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<tr>
<td>Marketing &amp; Sales</td>
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Employees by Region

- Number of employees

<table>
<thead>
<tr>
<th>Region</th>
<th>Number of employees</th>
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</thead>
<tbody>
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<td>CH</td>
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<td>EU</td>
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<td>JP</td>
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</tr>
<tr>
<td>RoW</td>
<td>231</td>
</tr>
<tr>
<td>US</td>
<td>491</td>
</tr>
</tbody>
</table>
Actelion's founders were drawn together by successful collaboration, complementary skills and a belief in their collective scientific ideas. Having performed pioneering research at Roche, to characterize endothelin – a powerful blood vessel constrictor – and its receptors, they set out to discover and develop a new class of anti-hypertensive drugs, so-called endothelin receptor antagonists (ERAs).

When Roche decided not to pursue this class of drugs the founders seized the opportunity to realize their ambition. Taking personal risk with their own funding, Actelion's founders walked away from security at Roche, and following some rounds of additional financing, they negotiated the licensing of the compounds they had discovered and developed: tezosentan and bosentan.

Actelion was born!

GOING PUBLIC
Just a few years later, in April 2000, Actelion went public. Approximately one year later, shortly after a competitor’s ERA failed in development, in April 2001, tezosentan reported an unsuccessful study – and the share price plummeted. The founders’ commitment, however, did not waiver, and in December 2001, the initial risk was rewarded, as bosentan became Actelion’s first marketed product, Tracleer®.

Actelion was lifted into profitability in record time.

DRUG HUNTERS
What made Actelion different was the deliberate decision to create its own discovery capability, to develop its own drugs and then to market them around the globe. The founders did not opt to pass the drugs along and quickly recoup their investment, but set about establishing a company with a clear ambition to find new drugs and treat more patients. Over time, Actelion established a very active drug discovery and development organization, created a sales and marketing organization that spans the globe and acquired additional products.
OUR MISSION
We strive to treat more patients with ground-breaking therapies. This mission inspires and motivates us.

OUR GOALS
The three elements of our strategy are to:

• Sustain and grow the PAH franchise
• Build additional specialty franchises
• Optimize profitability

OUR STRATEGIC PRINCIPLES

Drive innovation forward
Pursue top quality science, internally and externally, balanced with medical need and commercial potential.

Maximize the value of innovation
Develop projects ourselves and seek partners or out-license when necessary to maximize value.

Leverage our global presence
Expand innovative commercial capabilities to new customers and regions. Manage alliances, putting the product first.

Insist on the highest quality in all we do
Quality is crucial and needs to be ingrained across all functions.

SHAPING OUR FUTURE.
OUR CORE VALUES

Innovation
We have a keen understanding of the entrepreneurial spirit. We will challenge assumptions and conventional wisdom and consider the opportunity in every situation. We provide the time and freedom to innovate.

Trust and teamwork
We know that our people make all the difference and Trust and Teamwork is fundamental to our work. We engage fully and positively with colleagues. Through sharing ideas and responsibilities, we maximize our expertise and skills – because working together yields greater results.

Open communication
In order to advance our projects rapidly, we need to make sound decisions based on facts. We listen to and inquire about others’ opinions, advice and experience. This ensures efficiency and effective use of our resources.

Results driven
We set clear, ambitious objectives – aligned to the company strategy – to deliver high performance and seek and rely on data to make decisions. We aim to be consistent and clear in decision making, and focus our drive on simple, practical approaches.
Actelion Clinical Research, Inc. is a key part of Actelion Global Clinical Development, focused on providing strategic input representing US scientific, medical, and regulatory perspective into clinical development. ACR is a significant contributor in the implementation of clinical trials requested for market authorization. ACR is based just east of Philadelphia, in Cherry Hill, New Jersey.

Global Clinical Development at Actelion
Actelion’s promising development pipeline comprises novel compounds addressing a broad range of diseases, including cardiovascular and immunological disorders as well as central nervous system disorders and infectious disease. Actelion’s late-stage product candidates include: a novel antibiotic, cadazolid, under investigation for *Clostridium difficile*-associated diarrhea (CDAD), a S1P₁ receptor modulator, ponesimod, investigated in multiple sclerosis and dual orexin receptor antagonist, investigated in insomnia.
SHAPING YOUR FUTURE WITH ACTELION

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Actelion Clinical Research, Inc. in New Jersey is delighted to continue its collaboration with Rutgers University and the Pharmaceutical Industry Fellowship Program. Our US Management Team has put a lot of effort and care into building a program that we hope will meet your training expectations.

For the two-year fellowship program in the Global Clinical Science & Epidemiology (GCS&E) department, our philosophy in terms of training is to provide a hands-on experience by integrating our fellow within our clinical development teams with an assigned mentor and expected deliverables. Real life experience, including interaction within cross functional teams, deliverables within tight timelines and agreed budget, while maintaining a high standard of quality, is the first guided step to a successful career in pharmaceutical industry. We are also committed in Actelion to provide an international experience to our fellows through our headquarters located in Allschwil, Switzerland. Actelion’s success story was built thanks to bright motivated people like you! We would be delighted to have you at Actelion. We therefore encourage you to consider our fellowship positions.

REAL LIFE EXPERIENCE... IS THE FIRST GUIDED STEP TO A SUCCESSFUL CAREER IN PHARMACEUTICAL INDUSTRY.

Best regards,

Tarek El-Akkad, VP, Head of US Clinical Development, Actelion Clinical Research, Inc.
Dr. Kelly Papadakis, Director, Clinical Project Physician, joined Actelion in January 2010. She is an internist by training, and local to New Jersey, having received her formalized training through an accelerated B.A.-M.D. Joint Degree Program at Rutgers University and UMDNJ Medical School, where she also completed her residency training. She has amassed almost 15 years of experience designing, leading, and managing clinical trials in the pharmaceutical industry across multiple therapeutic areas (CNS/psychiatry, Cardiopulmonary, and Rheumatology).

Dr. Papadakis completed her clinical research fellowship through Duke University, having received a Masters of Health Sciences in clinical research in 2007 after completion of her thesis: “Memantine monotherapy in acute Bipolar mania”. She entered the industry through a two year fellowship program (between Janssen Pharma and Duke University) during which she received advanced training in clinical trial methodology and design, biostatistics and clinical epidemiology. She has since amassed almost 15 years of experience designing, leading, and managing clinical trial programs in the pharmaceutical industry across multiple therapeutic areas (CNS/psychiatry, Cardiopulmonary, and Rheumatology).

Currently, Dr. Papadakis is the Clinical indication leader for macitentan in Pulmonary Hypertension and is accountable for providing leadership for the design, implementation and execution of PH clinical development programs.
ACTELION FELLOWSHIP OPPORTUNITY – JULY 2017
GLOBAL CLINICAL SCIENCE AND EPIDEMIOLOGY

By becoming a member of a clinical trial team, the Rutgers Pharmaceutical Industry fellow will gain a broad understanding into the integrated and multifaceted nature of clinical drug development.

Specifically, the GCS&E fellowship will offer a comprehensive and foundational industry knowledge and training in:

- **Medical Content:** Development of extensive product-related and therapeutic area expertise in one or more of Actelion’s development pipelines (cardiovascular disorders, central nervous system disorders, infectious disease, and immunological disorders).
- **Clinical Trial Methodology:** Conceptualize and design good clinical trials, contribute to the development of scientific protocols, informed consent, case report forms, statistical analysis plans and other clinical documents.
- **Clinical Trial Conduct and Management:** Implementation, monitoring and managing a clinical trial within the framework of Good Clinical Practices (GCP) and regulatory requirements; opportunity to participate in site selection and protocol feasibility; actively contribute at investigator meetings and study initiation visits; monitor site/investigator performance, adherence to protocol, patient accrual and retention, proactively address conduct issues; periodically assess data quality and perform data clean-up.
- **Opportunity to interact with experts, key opinion leaders, and multidisciplinary teams from a wide range of functions within Clinical Development, including Data Management, Biostatistics, Pharmacology, Clinical Operations (both project management and clinical monitoring), Drug Regulatory Affairs, and Drug Safety.
- **Complete research and competitive intelligence activities, participate and support the clinical team at scientific meetings and advisory boards.
- **Receive an introduction to epidemiology and observational study designs to support the pharmaceutical development life-cycle.
- **Conduct and contribute to epidemiologic literature reviews for both internal and external needs.
- **Work with an Actelion Epidemiology Disease Area Leader to define and implement an epidemiology strategy to meet both short and long term project needs.
- **Contribute to the strategic development of drug/disease studies in the post-approval setting.

Actelion’s fellowship will include annual travel, each time for a period of up to two weeks, to our global corporate headquarters in the historic city of Basel, Switzerland, which is an international hub of the pharmaceutical industry. During the time spent at headquarters, the fellow will collaborate with Global Clinical Science & Epidemiology colleagues, develop further scientific expertise in the assigned therapeutic area, and gain exposure and further understanding of other functional areas outside of Clinical Development, such as Pre-Clinical and Business & Strategic Operations. Attendance at the annual Global Clinical Science & Epidemiology department off-site meeting may also be included.

The length of Actelion’s fellowship [two years] will also enable the fellow to travel domestically for co-monitoring visits to learn about activities performed at the clinical site level and to meet and interact with clinical investigators who are actively involved in Actelion studies.

The overall principle of the Actelion fellowship program is to provide a hands-on experience to the candidate since we believe that the best learning is by doing. The two year length of the program, focused in the Global Clinical Science & Epidemiology department, allows a significant comprehensive longitudinal experience, thus allowing the candidate to follow clinical development from protocol concepts to study outcomes.
RUTGERS PHARMACEUTICAL INDUSTRY FELLOWSHIP PROGRAM

Ernest Mario School of Pharmacy
Rutgers, The State University of New Jersey

PROGRAM HISTORY
In 1984, at Rutgers, The State University of New Jersey, the Ernest Mario School of Pharmacy and two pharmaceutical companies began a collaborative pilot program to evaluate the potential contributions of clinically-trained pharmacists within a pharmaceutical industry practice setting. Following the successful pilot, the Rutgers Pharmaceutical Industry Fellowship (RPIF) Program grew significantly and expanded to include 19 companies within the pharmaceutical and biopharmaceutical industries and over 160 fellows annually.

In 2002, Dr. Ernest Mario generously provided an endowment to establish the Institute for Pharmaceutical Industry Fellowships to enhance and promote the role of pharmacists in industry through the RPIF Program. The Institute staff members:

• provide leadership and administrative support;
• promote quality, communication, and scholarly activity; and
• arrange specialized fellowship training opportunities within the pharmaceutical and biopharmaceutical industries.

The RPIF Program has thrived under the leadership of the founder, Dr. Joseph A. Barone, Dean and Distinguished Professor II of the Ernest Mario School of Pharmacy and Dr. Michael Toscani, Research Professor and the Fellowship Director for the Institute for Pharmaceutical Industry Fellowships.

2016 RPIF PROGRAM CERTIFICATE DINNER
More than 850 post-doctoral fellows have completed the RPIF Program, most of whom are pursuing influential and rewarding careers in the pharmaceutical and biopharmaceutical industries throughout the US and abroad. The RPIF Program has preceptors/mentors from industry who share their knowledge and experiences with the fellows through an intense but closely-guided training program. Assignments and projects are challenging, meaningful, and designed to enhance understanding of the pharmaceutical and biopharmaceutical industries and the fellow’s functional area.

PROFESSIONAL DEVELOPMENT SERIES
All fellows gather at Rutgers once or twice monthly as a group to participate in the Professional Development Day (PDD) Series, an important component of their training that complements the hands-on experience provided at the partner companies. The PDDs are steered by a committee of fellows and are designed to enhance the fellows’ presentation skills, emotional intelligence, promote connectivity and a sense of community among fellows from different companies and disciplines, develop new skill sets under the guidance of external trainers, and provide general knowledge about various aspects of drug development and issues facing the pharmaceutical and biopharmaceutical industries.

The fellows learn from each other through individual and group presentations and debates on topics and issues related to the pharmaceutical and biopharmaceutical industries. This dynamic forum provides an opportunity for open discussion and debate among fellows, Rutgers faculty, and company preceptors. In addition, outside experts provide training and professional development in a variety of areas [e.g., tools for corporate success; professional writing, presentations, meeting facilitation, negotiating, influencing, networking, and conflict resolution skills; giving and receiving feedback; and business and dining etiquette]. Other PDD guest speakers include senior industry executives, patient advocacy groups, and successful RPIF Program alumni who share their insights and experiences. Importantly, PDDs provide an excellent opportunity for fellows to interact with each other and develop lasting personal friendships and a strong professional network of fellows, faculty, alumni, and other industry executives.

PHARMACEUTICAL INDUSTRY FELLOWSHIP PROGRAM 2017.

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KEY PROGRAM FEATURES
The Rutgers Pharmaceutical Industry Fellowship Program FOSTERS the growth and development of future pharmaceutical and biopharmaceutical industry professionals through the following key program features:

- Family of Leading Companies—Partners include several of the top 19 global pharmaceutical and biopharmaceutical companies.
- Outstanding Alumni Track Record—Over 850 alumni hold prominent positions at many leading companies.
- Strong Network—Over 160 fellows each year develop valuable, lasting connections with each other, alumni, preceptors and faculty.
- The Pathway to Industry—Since 1984, the Rutgers program has been nationally recognized, trusted, and proven as the pathway to industry for pharmacists.
- Enhanced Career Path—Increasingly challenging assignments build depth of experience and enhance the potential for an accelerated career path.
- Rigorous Academic Component—Rutgers affiliation provides academic and professional development opportunities.

Rutgers, The State University of New Jersey, with approximately 65,000 students in its three campuses, is one of the major state university systems in the United States. The New Jersey College of Pharmacy was founded in 1892 and was incorporated into the University in 1927. The Ernest Mario School of Pharmacy is the only state school of pharmacy in New Jersey, with approximately 1,400 students in its Doctor of Pharmacy program.

The Rutgers Ernest Mario School of Pharmacy is located on the University’s main science and technology campus in Piscataway, New Jersey. Because of its close proximity to the nation’s leading pharmaceutical and biopharmaceutical companies, the Ernest Mario School of Pharmacy and the RPIF Program are uniquely capable of providing fellows with exposure to the pharmaceutical and biopharmaceutical industries.

APPLICATION PROCESS AND ELIGIBILITY REQUIREMENTS
Fellows for the Rutgers Pharmaceutical Industry Fellowship Program are selected on a nationally-competitive basis. Candidates must have completed a Doctor of Pharmacy degree from an ACPE accredited institution before July 1 of the fellowship term.

Participation in the ASHP Midyear Clinical Meeting/PPS is strongly encouraged. Interested individuals are invited to electronically submit a curriculum vitae, three letters of recommendation and a letter of intent and complete a program interest form online by visiting our website at: pharmafellows.rutgers.edu

Please address all correspondence to:
Joseph A. Barone, Pharm.D., F.C.C.P. 
Dean and Professor II, 
Ernest Mario School of Pharmacy, 
Rutgers, The State University of New Jersey, 
160 Frelinghuysen Road, 
Piscataway, 
NJ 08854-8020
fellows@pharmacy.rutgers.edu

Application materials may be submitted as early as November 19, and applicants are encouraged to submit as many of the required materials as possible by December 15.