

INNOVATIVE SCIENCE

# RESEARCH AND DEVELOPMENT

## Partnering to Expand R&D Impact

External collaboration is critical to advancing our R&D strategy and expediting new breakthroughs for patients

### OWNING COLLABORATION



### Centers for Therapeutic Innovation

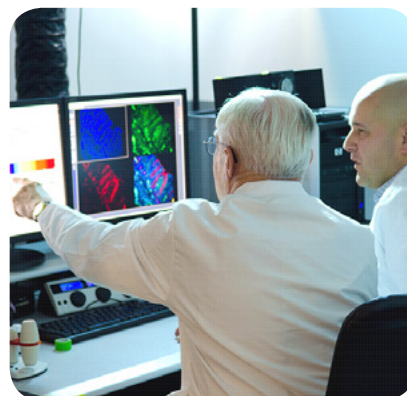
Pfizer's [Centers for Therapeutic Innovation](#) (CTI) enable us to partner more closely with academic scientists located at major biotech hubs in the U.S., all in an effort to accelerate the translation of emerging science into new therapies. CTI combines the research expertise of academic experts in disease, targets and patient populations with Pfizer's R&D knowledge, resources and development capabilities. CTI's innovative business model allows academic scientists to share more fully in the value of their science and positions Pfizer to potentially enrich our R&D pipeline with innovative next generation therapeutics.

### National Center for Advancing Translational Sciences

Pfizer is a pioneering partner in the National Center for Advancing Translational Sciences (NCATS), the newest program of the U.S. National Institutes of Health (NIH). NCATS provides a collaborative program to match academic researchers with dozens of pharmaceutical industry-owned molecules. A key step forward for the R&D ecosystem, this emerging meta-collaboration among government, academia and industry focuses on a portion of the therapeutic pipeline that traditionally has been difficult for academic researchers to access: compounds that already have cleared safety testing in humans.

Industry partners will retain ownership of their compounds, while academic partners will own any intellectual property they discover using these compounds, along with the right to publish their results.

Some compounds are not effective for their initial intended use, but additional research may yield different therapeutic uses. Examples include sildenafil, which was originally studied as a potential angina treatment, but went on to be developed as Viagra for erectile dysfunction and then repurposed as Revatio for pulmonary arterial hypertension.



### COLLABORATING ACROSS ALL BOUNDARIES

Pfizer has a robust internal pipeline of product candidates across our key therapeutic focus areas, all of which are rooted in leading-edge science in disease biology. Pfizer's 10 in-house research units are complemented by a wide range of collaborators outside the company. Our new, more expansive approach to external collaboration is essential to our R&D strategy—forging partnerships that connect the assets and capabilities of different organizations and sectors to speed the development of new medicines for patients.

### **Cystic Fibrosis Foundation Therapeutics, Inc.**

Cystic Fibrosis Foundation Therapeutics, Inc., the nonprofit drug discovery and development affiliate of the Cystic Fibrosis Foundation, has greatly expanded its research collaboration with Pfizer, agreeing to invest up to approximately \$58 million to speed potential therapies that target the most common underlying causes of cystic fibrosis. The new six-year pre-clinical research program strengthens Pfizer's position in developing therapies that help "correct" the action of mutated proteins and is designed to advance one or more drug candidates into the clinic. Such innovative collaborations between industry and patient organizations are seen as increasingly critical in expediting the translation of science into potential new treatments.

### **Duke University: Exploring Insulin Resistance**

Pfizer entered into collaboration with Duke University's Stedman Center to enhance our understanding of the mechanisms by which insulin resistance develops in humans. The partnership focuses on identifying the pathways underlying the development of diabetes by leveraging the Center's established technology platforms and deep understanding of metabolic pathways. These insights into the biology of diabetes support the research and development of compounds that target the underlying causes of the disease.

### **Nodality: Precision Medicine R&D for Lupus**

Nodality and Pfizer have entered into a strategic collaboration for the use of Nodality's proprietary Single Cell Network Profiling (SCNP) technology as a Precision Medicine tool for the development of Pfizer compounds to treat autoimmune diseases. Precision Medicine has been widely adapted in oncology drug development, and there is considerable optimism that these principles can be applied to other disease areas. This multiyear, collaborative effort will initially focus on lupus, including characterizing mechanisms of action, disease analysis and drug profiling. Pfizer Venture Investments has been an investor in Nodality since 2008.

### **Transcelerate: Drug Development Solutions**

Pfizer is a founding member of TransCelerate BioPharma, a nonprofit consortium formed by leaders in our industry to accelerate the development of new medicines. Joining us in the initiative are Abbott, AstraZeneca, Boehringer Ingelheim, Bristol-Myers Squibb, Eli Lilly, GlaxoSmithKline, Johnson & Johnson, Roche and Sanofi.

This cross-industry initiative is dedicated to identifying and solving common drug development challenges, beginning with clinical study execution, with the end goals of improving the quality of clinical studies and bringing new medicines to more patients more quickly. The five initial projects are: development of a shared user interface for investigator site portals; mutual recognition of study site qualification and training; development of risk-based site monitoring approach and standards; development of clinical data standards; and establishment of a comparator drug supply model.

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## Advancing Our Pipeline

### A Focused Portfolio of Promising Drug Candidates

Our programs in development include potential treatments for autoimmune diseases such as inflammatory bowel disease, lupus, cardiovascular disease, diabetes, cancer, neurological diseases and pain, as well as vaccines for meningococcal B disease in adolescents and for *Staphylococcus aureus*.

View the latest pipeline on [pfizer.com](http://pfizer.com)

### PROGRAMS IN CLINICAL TRIAL AND REGISTRATION

As of February 28, 2013



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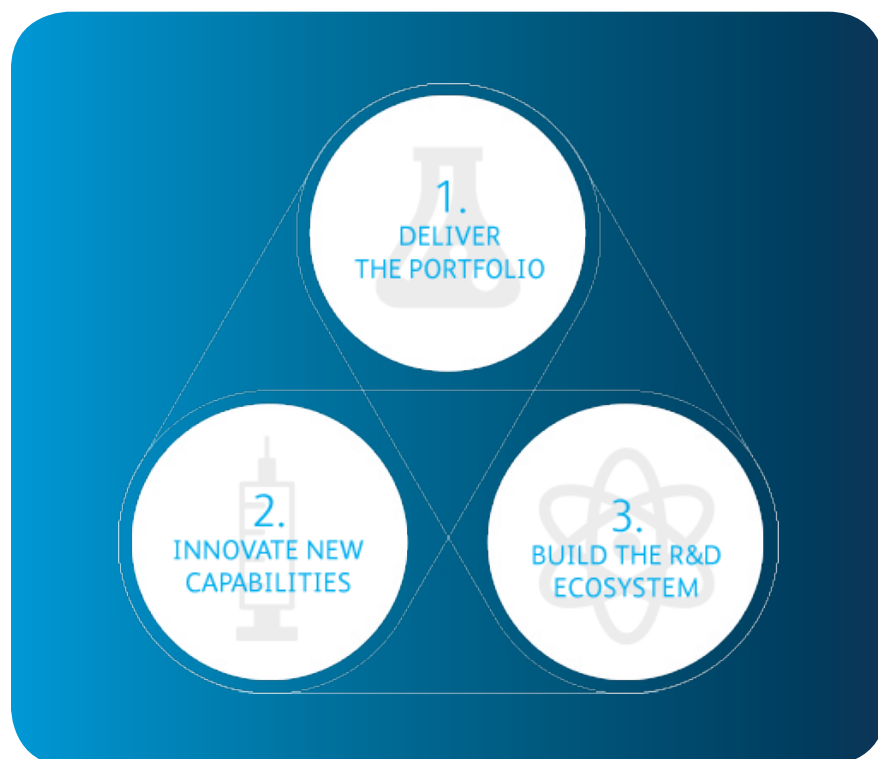
# Creating a Robust and Sustainable Innovative Core

We continue to transform our R&D approach and capabilities with strategic choices that build a sustainable engine for innovation over the long term, while at the same time ensuring we execute effectively on our near-term pipeline priorities.

## ADVANCING A DIFFERENTIATED PIPELINE — OUR R&D PRIORITIES

Pfizer has established three R&D priorities, unfolding over time, to focus on advancing a differentiated pipeline of medicines and vaccines.

Underlying our choices is a focus on increasing differentiation and innovation and improving R&D productivity and return on investment over the long term, while at the same time seeking to ensure we execute effectively on our near-term pipeline priorities. Two years after launching a comprehensive R&D turnaround effort, we are seeing positive indicators, with a robust portfolio grounded in rigorous decision making and an ownership culture.



## 1. Deliver the Portfolio

First and foremost, we are concentrating internal efforts where we believe we can deliver the greatest medical and commercial impact in areas of significant patient need. Over the last year, Pfizer has gained momentum in our late-stage pipeline with key regulatory approvals for important new medicines, including Eliquis (apixaban) for stroke prevention in nonvalvular atrial fibrillation, Xeljanz (tofacitinib), a first-in-class JAK inhibitor for moderate-to-severe rheumatoid arthritis, and the oncology compounds Inlyta (axitinib) and Bosulif (bosutinib).

Pfizer is advancing a solid late-stage pipeline, including a number of Phase III programs in areas of critical patient need, such as:

- **Vaccines:** To prevent Meningitis B in adolescents.
- **Breast Cancer:** Palbociclib (PD-991) for certain breast cancer patients with limited treatment options.
- **Blood cancer:** Inotuzumab ozogamicin, an antibody drug conjugate for certain types of lymphoma and leukemia.
- **Autoimmune disease:** Xeljanz (tofacitinib) in psoriasis and ulcerative colitis.

## 2. Innovate New Capabilities That Position Us for Leadership

Pfizer is focused on innovative capabilities that can position the company for long term competitive advantage. This includes the significant expansion of our vaccine development program, which now includes investigational first-in-class therapeutic and prophylactic vaccines targeting smoking cessation and deadly hospital-acquired infections. It also includes a leading platform in next-generation antibody drug conjugates (ADCs), which are targeted treatments for cancer that include an antibody and cancer cytotoxic in one medicine. Pfizer has cutting-edge small and large molecule technology capabilities that position us to develop fit-for-purpose optimized medicines for patient needs.

In addition to scientific capabilities Pfizer is at the forefront of innovating novel open-innovation models such as the CTIs, where Pfizer scientists work in real time with academic scientists to expedite the translation of science into medicine.

Key early-to-mid-stage clinical programs that reflect our new capabilities include:

- **Cardiovascular disease:** An optimized antibody targeting PCSK9 for high LDL cholesterol
- **Vaccines:** Therapeutic vaccine for smoking cessation, and prophylactic vaccines targeting two common and deadly hospital-acquired infections caused by *Staph. aureus* and *C. difficile bacteria*
- **Pain:** New family of candidates targeting ion channels with important implications in pain
- **Oncology:** Our first next-generation ADC, rooted in novel science on cancer stem cells
- **Diabetes:** Tissue-distributed small molecule glucokinase inhibitors designed to help patients with glycemic control without causing long term complications
- **Autoimmune disease:** Novel antibodies targeting inflammatory bowel disease (IBD) and lupus
- **Rare disease:** Antibody targeting new pathways for Duchenne's muscular dystrophy, a debilitating and deadly genetic disease in children

## 3. Build the R&D Ecosystem of the Future

We are moving toward a much more networked R&D model—shaping how biopharmaceutical innovation will be done. The R&D ecosystem of the future will draw on the total capabilities in the biomedical community, reducing silos and increasing productivity.

Critical to this new ecosystem is optimizing the promise of Precision Medicine, an approach to discovering, developing and commercializing medicines that we believe will deliver superior clinical outcomes in complex diseases, identify patient populations that are most likely to respond to our medicines and expedite the timelines for drug development.

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## CLINICAL TRIALS

Ensuring Integrity  
in Clinical Trials

We work to help ensure that all our clinical trials, wherever they take place, are conducted to the same high ethical standards and comply with applicable local laws and federal regulations to ensure the rights and welfare of our clinical trial participants around the world are fully protected. We recently re-engineered our clinical trial process to further enhance our capabilities in these areas, in particular by implementing quality management principles (such as quality by design) into these processes, and our vigilance and oversight of contract research organization partners and clinical trial physician investigators, who are actively involved in the development of our new medicines. As part of this quality process, we conduct inspections of these sites and studies to help ensure patient safety, data integrity, protocol adherence and regulatory compliance.

## Clinical Innovation Roadmap

We launched Clinical Innovation in 2011 to provide focus and discipline in our initiatives to reverse the increasing time, cost and complexity of clinical trials across the industry. As an early mover defining the field, we are positioned as a leader driving the re-invention of clinical research for Pfizer and the R&D ecosystem.

Our vision for that ecosystem includes research participation made easier for patients and providers, enabling every health care interaction to serve as an opportunity to inform our medical product development.

Pfizer Clinical Innovation develops, tests and scales new approaches to understand the efficacy and safety of our investigational medicines, drawing from tools such as mobile health, social media and health information technology. Clinical Innovation also leads collaborations with other stakeholders to work together to fix shared clinical research challenges. Collaboration examples include: TransCelerate BioPharma, a novel partnership of 10 major biopharmaceutical companies developing shared solutions, and the Partnership to Advance Clinical Electronic Research, an initiative aligning pharmaceutical companies with New York-based medical centers to improve the use of electronic health records in clinical research.

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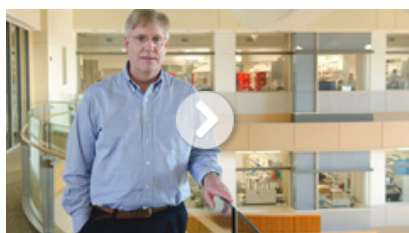
# LEADING MEDICINES

## Noteworthy in 2012

For more information on any of these medicines, visit [Pfizer Pharmaceutical Products](#).

### Xeljanz

#### OWNING POTENTIAL



Xeljanz (tofacitinib) is the first new oral disease-modifying antirheumatic drug approved for rheumatoid arthritis in more than ten years and the first rheumatoid arthritis treatment in a new class of medicines known as Janus kinase (JAK) inhibitors. Unlike biologic therapies, which work outside the cell, Xeljanz targets the inflammation associated with rheumatoid arthritis from inside the cell. Specifically, Xeljanz inhibits the JAK pathways, which are signaling pathways inside cells that are used by pro-inflammatory cytokines (proteins that facilitate communication between cells). Approved in the U.S. for the treatment of adults with moderately to severely active rheumatoid arthritis who have had an inadequate response or intolerance to methotrexate, Xeljanz is currently under review by several regulatory agencies around the world, including in Europe and Japan.

### Bosulif

Bosulif (bosutinib) is for the treatment of adult patients with chronic, accelerated, or blast phase Philadelphia chromosome positive (Ph+) chronic myelogenous leukemia (CML) with resistance, or intolerance to prior therapy. Once-daily Bosulif was studied in a broad range of patients with CML, including CML patients treated with imatinib followed by a second-generation tyrosine kinase inhibitor. Bosulif addresses an unmet need in the CML treatment landscape.

### Eliquis

Eliquis (apixaban) gained approval to reduce the risk of stroke and systemic embolism in patients with nonvalvular atrial fibrillation in the U.S., the 27 countries in the European Union, Canada, and Japan, and is under review in other countries. Eliquis, an oral Factor Xa inhibitor anticoagulant, has demonstrated superior risk reductions versus warfarin in three key outcomes of stroke and systemic embolism, major bleeding and all-cause death in patients with nonvalvular atrial fibrillation. In 2007, Pfizer and Bristol-Myers Squibb entered into a worldwide collaboration to develop and commercialize this oral anticoagulant discovered by Bristol-Myers Squibb.

### Inlyta

Inlyta (axitinib) is indicated for the treatment of advanced kidney cancer when one prior drug treatment for this disease has not worked or has stopped working. It is the first treatment to demonstrate superior progression-free survival in a Phase III study compared with sorafenib in second-line advanced kidney cancer. Since its approval, Inlyta has established its utility in this setting, where it is an important treatment option for many patients with advanced renal cell carcinoma after failure of one prior systemic therapy.

### Quillivant XR

Quillivant XR (methylphenidate hydrochloride) for extended-release oral suspension, CII, is the first once-daily liquid medication approved in the U.S. for the treatment of attention deficit/hyperactivity disorder (ADHD). This recently approved medicine is expected to be available in pharmacies in the U.S. in early 2013. With the acquisition of NextWave Pharmaceuticals in 2012, Pfizer gained exclusive North American rights to market Quillivant XR.

## Our Top 10 Best Selling Medicines in 2012

For more information on any of these medicines, visit [Pfizer Pharmaceutical Products](#).

**Lyrica**  
(pregabalin)  
\$4,158 million

**Viagra**  
(sildenafil)  
\$2,051 million

**Lipitor**  
(atorvastatin)  
\$3,948 million

**Norvasc**  
(amlodipine besylate)  
\$1,349 million

**Enbrel**  
(Outside the U.S. and Canada)  
(etanercept)  
\$3,737 million

**Zyvox**  
(linezolid)  
\$1,345 million

**Prenar 13/Prevenar 13**  
(pneumococcal polysaccharide conjugate vaccine)  
\$3,718 million

**Sutent**  
(sunitinib malate)  
\$1,236 million

**Celebrex**  
(celecoxib)  
\$2,719 million

**Premarin Family**  
(conjugated estrogens)  
\$1,073 million



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## LEADING CONSUMER HEALTHCARE PRODUCTS

### Familiar Around the World

Pfizer Consumer Healthcare's products include OTC medicines, supplements and other treatments that are top sellers in their categories and household names for consumers around the world.



## KEY MEDICINES



### Advil

A trusted and effective OTC pain reliever for more than 25 years for millions of consumers, Advil is one of Pfizer's billion-dollar brands and the No. 1 selling branded OTC analgesic in the world. In 45 countries, Advil helps consumers treat headaches, backaches, muscle aches, minor arthritis and other joint pain, and the aches and pains of the common cold. In 2012, Children's Advil enhanced its position in the U.S. and Canada, becoming the No. 1 selling OTC pediatric brand in those markets. In Australia, we launched the Advil Children's Pain & Fever line. In a number of Latin American markets, we extended the brand into the cold/flu segment. This year also brought substantial success for Advil Migraine, which has gained additional distribution at key retailers.

Learn more  
at [advil.com](http://advil.com)



## Caltrate

Caltrate is the No. 1 selling brand of calcium supplements in the U.S. and China. Globally, Caltrate is sold in 57 countries. In the U.S., we launched a new Caltrate formula in 2012 with double the amount of vitamin D3, which helps aid in the absorption of calcium—a higher amount of vitamin D3 than any other leading brand. Because bone is composed of two-thirds calcium and one-third collagen, healthy bones require both calcium and collagen for resiliency—a fact Caltrate has highlighted. The Caltrate 600+D Plus Minerals formulation, which contains calcium and vitamin D, plus extra minerals, helps to stimulate collagen production and delivers bone health. Caltrate is available in four different formulas and different forms to suit individual consumer needs.

Learn more  
at [caltrate.com](http://caltrate.com)



## Centrum

Centrum is the No. 1 selling brand of multivitamins in the world, sold in 86 countries, and the No. 1 doctor-recommended multivitamin brand in the U.S. Centrum provides a range of scientifically advanced multivitamins for adults and children that help fill dietary gaps and support important life benefits. In addition to Centrum and Centrum Silver, there are the following Centrum Specialist products in the U.S.: Energy, Heart, Vision and Prenatal. In 2012, we launched Centrum Gender—multivitamins specially designed to support men's and women's unique health needs—in Europe, Centrum Cardio/Centrum Control in Brazil and Taiwan, and Centrum Flavor Burst, a chewable adult multivitamin, in the U.S. Additionally, our Centrum Silver multivitamin was used in the Physicians' Health Study II, a landmark 12-year study that evaluated the long-term benefits of taking multivitamins for men age 50 and older. The quality of Centrum multivitamins, among other factors, led the study investigators to use Centrum Silver as the multivitamin for the duration of the study.

Learn more  
at [centrum.com](http://centrum.com)



## ChapStick

The leading lip care brand in the U.S., ChapStick is sold in 25 countries globally. Some of consumers' favorite ChapStick products include Moisturizer, Classic Cherry and Classic Original. With a history of more than 125 years, the brand continues to evolve, incorporating new technologies to meet consumer demands for a product that replenishes, rehydrates and protects lips while providing great taste.

Learn more  
at [chapstick.com](http://chapstick.com)



## Emergen-C

A leading health and wellness lifestyle brand, Emergen-C features vitamin C in vitamin drink mixes and now a liquid concentrated shot. Through its 30 years on the market in the U.S., Emergen-C has built a loyal customer base. It is sold in more than 15 flavors, including top sellers Super Orange and Raspberry. Specialty formulas include Emergen-C Immune+ System Support, Joint Health, Heart Health, Vitamin D & Calcium and Emergen-C Multi-Vitamins.

Learn more  
at [emergenc.com](http://emergenc.com)



## Robitussin

The leading doctor-recommended OTC cough medicine brand in the U.S., Robitussin has been providing effective relief from cough and cold symptoms for more than 50 years. In 2012, the brand partnered with WebMD, the No. 1 online source in the U.S. for health information, to educate consumers about treating their coughs. Worldwide, Robitussin is the No. 3 branded cough remedy and is available in 41 countries. In addition to an extensive lineup of liquid cough and cold products, Robitussin Day & Night Cold + Flu products are also available in liquid-filled capsules. These products provide multisymptom relief of cough, nasal congestion, headache and sore throat in a convenient liquid-filled capsule form.

Learn more  
at [robitussin.com](http://robitussin.com)





## ThermaCare

Available in 12 countries, ThermaCare Heatwraps deliver heat that penetrates deep, warming the muscle right where it hurts—to relax, soothe and unlock tight muscles. In 2012, tapping into new channels available by virtue of the Ferrosan acquisition, ThermaCare products were launched in Denmark and Finland. ThermaCare HeatWraps have transformed the field of heat therapy by making it portable, safe and long-lasting. ThermaCare HeatWraps keep on working even after a person takes them off—totaling up to 16 hours of back pain relief.

Learn more  
at [thermacare.com](http://thermacare.com)



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## ENSURING GLOBAL SUPPLY

### Produced to the Highest Standards

We strive to ensure that all Pfizer products are always available when needed.

#### ENVIRONMENT, HEALTH AND SAFETY IN THE SUPPLY CHAIN

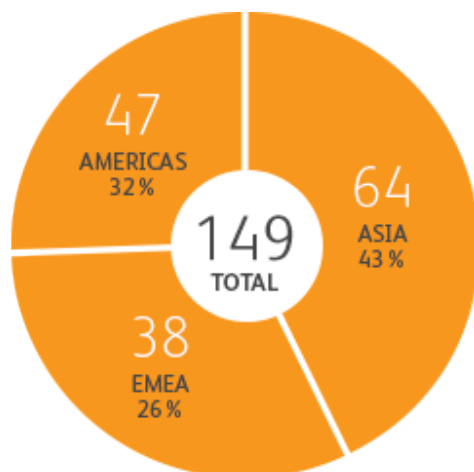
At Pfizer, responsible supply chain management is central to how we do business. We operate within a framework of principles aligned with ethical, social and environmental responsibilities to help ensure the sustainability of our business and the communities in which we operate. To that end, an external supply team oversees efforts to ensure that our chemical and biological product suppliers manage environment, health and safety (EHS) risks. We recently partnered with the Institute of Sustainable Communities, an organization committed to advancing sustainability in developing countries through education and training, and we participate in the industry-wide Pharmaceutical Supply Chain Initiative.

Click [here](#) for more information about EHS within our supply chain.

Pfizer is committed to responsible supply chain management. To learn more, please see:

[Supplier Conduct Position](#)  
[Supplier Conduct Principles](#)

#### SUPPLIER ONSITE ASSESSMENTS COMPLETED BY PFIZER'S EHS EXTERNAL SUPPLY TEAM IN 2012



There was a 30 % reduction in EHS supplier onsite assessments from 2011 to 2012 due largely to the use of a new risk priority ranking tool.



#### OUR GLOBAL SUPPLY CHAIN

Pfizer products are produced to the highest standards, in full compliance with all applicable legal requirements. We supply products from both our internal manufacturing sites and a network of external partners. External partners are selected based on their ability to reliably supply quality product at a competitive cost. We apply rigorous controls to assure quality across the entire supply chain.

3,000+  
Formulations

175  
Markets

>150  
Market Distribution & Logistics Center  
Operations Globally

500+  
Suppliers

84\*  
Manufacturing Sites

\*Zoetis sites (formerly Pfizer Animal Health) are included.