Leading Innovations in Immunology
Pioneering Transformational Solutions for Patients with Immune Diseases

Janssen Research & Development, LLC
Building from Our Strength

Who We Are

The Immunology Therapeutic Area (TA) of Janssen Research & Development, LLC, has redefined the standard of care in immunology over the past two decades. Through the work of our dedicated team of scientists and drug developers, the TA has propelled Janssen to a leadership position with cutting-edge treatments that address the needs of millions of patients living with autoimmune and inflammatory diseases.

We have been working for more than 20 years in the discovery, development and commercialization of monoclonal antibodies. We offered the first anti-tumor necrosis factor (TNF) antibody, leading a class of new medicines that have changed the way chronic conditions in gastroenterology, rheumatology and dermatology are treated. Today, biologic medicines have been used to treat millions of patients worldwide across a broad spectrum of inflammatory diseases, targeting the underlying drivers of disease—not just the symptoms.

What We Do

Our portfolio of large molecule therapies in immunology is unmatched. In addition to establishing anti-TNF-alpha therapy, we demonstrated the essential roles for inhibiting interleukin (IL)-12 and IL-23 in immune-mediated inflammatory diseases. We continue to strive to break new ground, and we are expanding our research into challenging areas, including respiratory diseases, where high unmet medical needs remain. We have also expanded our portfolio beyond monoclonal antibodies to include novel, oral small molecules, new biologic platforms and inhaled therapeutics.

Our scientists in research and clinical development work closely with medical affairs and commercial teams to enable a cycle of learnings that run from bench to bedside and back to bench, with a common goal—advancing science to improve the lives of patients. The scope of our work includes discovery based on deep scientific understanding of the diseases we treat. We look to remain a leader in optimizing and tailoring therapeutic advances to target the right treatment for the right person in every part of the world.
Where We’re Going
We are looking ahead, long term, in the pursuit of next-generation therapeutic solutions for immunological diseases where unmet needs persist. By integrating biomarkers and translational approaches into the way we conduct research and development (R&D), we look to deliver medicines with improved efficacy and safety profiles. Our focus on understanding disease at the molecular level is key to the discovery of new targets that drive the inflammation and autoimmune processes. Our early work on understanding disease triggers may enable entirely new approaches to treating and potentially preventing disease.

Our experience in bringing numerous therapeutic solutions to market demonstrates an acumen and entrepreneurial spirit to pioneer novel approaches in medicine. Inspired by the needs of patients, we have a passion for leveraging the science of immunology and sharing knowledge with internal and external partners to build upon this foundation and transform the immunology field for the future.

Pushing the Frontiers of Immunology R&D

Building from Our Strength

Our Expertise
• Pioneers in immune pathways
• Understanding of disease mechanisms
• Operational excellence
• Best-in-class commercial capabilities
• Robust large and small molecule pipeline

Our Commitment
• Driving medical innovation for patient needs
• Applying biomarkers to clinical decision-making
• Earlier interception of disease and, ultimately, prevention
• Engaging a broad collaborative network of partners

Our Focus
• Gastroenterology
  • Ulcerative colitis
  • Crohn’s disease
• Rheumatology
  • Rheumatoid arthritis
  • Psoriatic arthritis
  • Ankylosing spondylitis
• Dermatology
• Respiratory
  • Severe asthma
  • Chronic obstructive pulmonary disease

Heat Map
Time course of differential gene expression in human epithelial cells following in vitro stimulation with cytokines (columns 1-5) or untreated (columns 6-10). Red color denotes up-regulated genes; green colors denote down regulated genes. Each column represents a time point post cytokine stimulation.

Molecular Interaction Network
Molecular interaction network in psoriasis. Each purple circle denotes a major network hub. Other circles represent genes in the molecular network. Lines connect network hubs to network genes. Red lines denote driving network connections.

Looking for Answers at the Molecular Level
With a goal of understanding the underlying molecular pathogenesis of autoimmune and inflammatory diseases, Janssen scientists employ computational analytical tools, including heat maps and molecular interaction networks. Integration and interrogation of different data types allow scientists to generate and test hypotheses leading to new therapeutic approaches at the bench and in the clinic.
We passionately pursue our vision of transforming patients’ lives.

An estimated 5 to 10 percent of the developed world’s population is affected by an immune disease and approximately 7 percent is living with asthma or chronic obstructive pulmonary disease (COPD). Biologics have provided transformational, disease-modifying medicines, but significant medical need exists to address growing populations of patients refractory to current treatments, drive deeper responses and remissions, and identify predictive biomarkers to match the best available medicine for each patient.

From rheumatoid arthritis to Crohn’s disease, the impact of living with these conditions can be physically and emotionally devastating. These types of disorders, including ulcerative colitis, ankylosing spondylitis, psoriasis and psoriatic arthritis, are often debilitating and seriously diminish quality of life.

We recognize that there is no universal solution for people living with these complex diseases. We believe in the value of investing in emerging areas of science with the understanding that diverse perspectives are needed for a breakthrough therapy or patient solution. To this end, we actively collaborate globally with those who share our passion.

The Economy of Our Experience

We passionately pursue our vision of transforming patients’ lives. Looking to the future, we are setting our sights high, to meet patient needs, enable earlier diagnoses and, ultimately, develop preventive medicines and cures through cutting-edge research and advanced technologies.

To facilitate these future achievements, translational research is at the core of our R&D strategy. Given the heterogeneity of chronic autoimmune diseases, we are constantly informing our discovery and development programs with learning to accelerate drug development and to be more effective and efficient in bringing medicines to market.

This approach helps us target new indications and, through our understanding of the inflammatory cascade, expand our research into challenging areas ripe with opportunities to transform standards of care. Vast numbers of millions of people suffer from severe asthma and COPD worldwide, resulting in billions in healthcare costs each year.

Through an ongoing dedication to enhance patient care, we are developing a strong portfolio of biologics with improved properties; small molecule compounds with novel targets; new mechanisms and advanced drug delivery options to fulfill the needs of diverse patient populations.
Our Transformational Technologies

Providing more targeted personalized treatment options to patients is within reach. To achieve such a level of care requires heightened attention to disease mechanisms and patients’ response to treatments.

Our extensive biomarker discovery program provides valuable information to ultimately improve patient outcomes. We envision a day when we can provide healthcare professionals with the tools to consistently prescribe the most appropriate treatment to each patient—the first time.

Through the application of cutting-edge technologies, our scientists are able to improve their tracking of disease progression and treatment efficacy in pre-clinical studies. These tools can provide us with a better understanding of disease mechanisms, longer-term disease impact and the effect of therapy, and may ultimately help to improve treatment results.

Computer-based research can greatly aid in efforts to understand disease pathogenesis and identify potential targets for therapeutic intervention, thus accelerating efforts to bring medicines to market. We look for and apply advanced computational tools to help combine complex data, create scenarios and predict outcomes.

Building from a foundation of scientific excellence, translational research and technology, the Immunology TA will continue to lead the industry, making connections that bridge current knowledge to new discoveries.
Immunological diseases are indiscriminate and affect people of all ages and ethnicities in every part of the world. Finding solutions requires global connections and global efforts. Scientific excellence and diversity are key drivers for the success of the global pharmaceutical research and development organization of Janssen.

As our internal research activities continue, we look to the world as our laboratory, seeking external partnerships with leading research organizations in industry and academia. By joining forces with strategic partners whose research complements our own, we can maximize the potential of scientific knowledge, expertise and capabilities that are critical to successfully bringing forward transformational solutions that benefit patients.

Partners around the Globe

Partnerships established today drive the solutions of tomorrow, as we strive to discover and develop transformational therapeutic solutions. Our collaborative network is expansive, and draws on multiple types of collaborations and partnerships with experts in their fields as valued partners.

As a member of the Janssen Pharmaceutical Companies of Johnson & Johnson, we have the operational connections to enable new ideas. With Immunology TA R&D hubs in the United States and Europe, a network of R&D and commercial centers, and clinical trial operations worldwide, we have the ability to discover, develop and deliver new therapies to market simultaneously across the globe. Our Innovation Centers located at some of the world’s leading scientific hotspots further expand our reach and serve as platforms to source early-stage external innovations.

Complementary research can often be found in academic institutions, where we seek the best minds and new ideas. A different perspective on key areas of interest for our portfolio can offer valuable new insights and approaches to assessing targets and progressing differentiated compounds for autoimmune diseases. We have established unique partnerships with leading institutions enabling academic scientists to work side by side with an R&D team.

Scientific discovery is our highest priority. To better understand diseases and patient needs, we connect with public and private organizations through consortia that include pharmaceutical companies, government or independent research organizations and key opinion leaders, to pool findings and accelerate advancement.

We have a long and successful history of R&D and commercial partnerships with pharmaceutical and biotech companies. Through these partnerships and collaborations, we are able to bring new ideas, expertise and capabilities into the fold to complement our internal strengths.
The World is Our Laboratory

A Successful Formula
We are proud of the scientific excellence and diversity that make up our organization. These are the key drivers of our success as a global R&D company and make us an attractive partner in the immunology area.

- The global infrastructure of the Immunology TA and its medical affairs and commercial partners drives close collaboration with a network of immunology resources around the world.

- Our established track record of bringing innovative treatments for devastating diseases to patients makes us a leader in discovery, research, and development, and commercialization of immunology products.

- We recognize that patient advocacy and access to care are critical components of ensuring the reach of our medicines to appropriate patient populations in global markets.

- A long-term commitment to transforming patients’ lives and an openness to embrace new ideas has given us a unique ability to bring differentiated medicines forward and build a promising pipeline for the future.

As we explore new transformational therapeutic solutions, we welcome opportunities to unite with the best global scientific expertise for the mutual benefit of our organizations and the patients we serve.
Driven by the passionate pursuit of science for the benefit of patients, our philosophy of collaboration means that we have a fundamental understanding of the value of working together to bring innovative ideas and therapies from the lab to the clinic to patients in need.

We are using our strength to expand R&D capabilities, with advancements in large and small molecule, alternative therapeutic platforms, companion diagnostics, biomarkers and integrative informatics.

We look forward to establishing strategic alliances with immunology experts worldwide so we can help each other achieve key goals for patients with devastating immune-mediated inflammatory diseases.

For more information about the Janssen Immunology TA or to discuss potential partnership and collaboration opportunities, please email ImmunologyTA@its.jnj.com.

Align with Our Passion