

UNITING TO CURE: 2019 RESEARCH ACCOMPLISHMENTS

In 2019, the Foundation invested \$28 million in research, including 85 new multi-year and one-year studies, a total investment of \$384 million since our inception.

LEVERAGING YEARS OF FOUNDATIONAL RESEARCH INVESTMENTS



MICROBIOME INITIATIVE

A multi-institutional project to identify, compare, and analyze how intestinal microbes and their metabolic byproducts play a role in IBD in hopes of one day developing cures.

- Discovered a type of fatty acid that shows an increase in the stools of IBD patients and could shift a healthy microbiome into an IBD-like state
- Demonstrated that two genetic mutations linked to IBD drive colonization of disease-causing bacteria in the gut and the production of inflammation-causing molecules



GENETICS INITIATIVE

A research initiative to study the genetic component of IBD and find gene pathways that may help in the design of new IBD medications.

- Created an unprecedented model, where “mini guts” are cultured in a petri dish and engineered to carry IBD gene variants using a cutting-edge gene editing technology. This will aid in the identification of new therapeutic approaches toward customized, precision medicine.
- Identified 30 new drug-like molecules that could decrease PAI-1, a protein that is elevated in many IBD patients



PEDIATRIC RISK STRATIFICATION STUDY

The largest, new-onset study completed on pediatric Crohn's disease patients.

- Centralized reading of radiology tests led to more accurate classification of complications in RISK-enrolled patients
- Used artificial intelligence (AI) to discover four additional genetic signatures that may predict complications at diagnosis and response to anti-TNF treatment

ACCELERATING THE PACE OF RESEARCH & CATALYZING CRITICAL RESEARCH IN NEW DOMAINS



FOUNDATION FUNDING SUPPORTED RESEARCH INVESTIGATING:

- Light-activated sealants that stick to wet surfaces and have potential to treat fistulas
- Wearable bracelet that can detect inflammation-associated signals in sweat
- Role of genes and microbes in the development of intestinal fibrosis using a new “guts-on-a-chip” model
- New method to detect viral exposures in the blood and their association with flare-ups in pediatric Crohn’s patients
- Blood test to predict, at the time of diagnosis with IBD, whether a patient is at high or low risk for aggressive disease
- Engineering of probiotic bacteria that may detect IBD-associated intestinal inflammation
- New biomarker to measure the relationship between higher psychological stress and frequency of flares in UC patients
- Ideas proposed by researchers to address how diet affects IBD, particularly at the individual patient level

INSPIRING & ENGAGING PATIENTS

Contributing data and biosamples to accelerate research



IBD PLEXUS®

The largest and most comprehensive data and research information platform in IBD that enables researchers from industry and academia to cut years off the research process, as we search for better treatments and cures.

- Over 70 sites contributing biosamples and/or data linked through IBD Plexus, with 15 medical centers newly added
- Increased data from SPARC IBD and IBD Qorus® cohorts by over 50%, to over 7,000 adult patients
- Grew biobank to 100,000 biosamples, a 30% increase from last year
- IBD Plexus was recognized as a modern registry by the FDA and was one of three organizations selected to participate in an FDA Real-World Evidence Program using the FDA MyStudies App. Using this open-source device and data storage system, we are piloting IBD PROdigy, a digital tracker, through our SPARC-IBD cohort.



IBD PARTNERS®

A patient-powered research network that connects patients and researchers, and allows patients to ask questions, propose research ideas, and share their experiences with IBD. This data is contributed to the IBD Plexus platform.

- Based on patient-reported data collected by IBD Partners, findings have been shared with the scientific community through 41 manuscripts and 52 abstracts to date.

Our mission: To cure Crohn’s disease and ulcerative colitis, and to improve the quality of life of children and adults affected by these diseases.

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