INFLAMMATORY BOWEL DISEASE (IBD) is a collection of diseases, including Crohn’s disease and ulcerative colitis, which result in chronic inflammation and damage along the lining and tissues of the digestive tract. The disease greatly affects an individual’s quality of life, causing symptomatic fatigue, abdominal pain, diarrhea, bloody stool, nausea, weight loss, with external manifestations such as joint pain, eye irritation, and skin rashes. Current treatments for IBD have allowed patients to better manage disease symptoms, but are limited in their ability to prevent or cure disease.

Patients and individuals at risk for developing IBD face many challenges and critical unmet needs, issues mirrored in the roadblocks facing IBD clinicians and researchers. In December 2015, the Kenneth Rainin Foundation in conjunction with the Milken Institute Philanthropy Advisory Service convened leading academic, clinical, industry, patient, and foundation stakeholders to discuss the state of IBD science and the key challenges impeding research progress. In a new Giving Smarter Guide, the Philanthropy Advisory Service presents the key unmet needs of disease research and recommendations for how strategic philanthropic investments can impact the trajectory of research and better benefit IBD patients and those at risk of developing IBD.

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The global burden of IBD is immense, with disease incidence steadily increasing since the 1960s, concomitant with a nation’s increasing industrialization and migration toward urban centers (Figure 1). Estimates from 2008 indicate the highest average of Crohn’s disease incidence is in North America, at 20 per 100,000 person-years, while Europe reported the highest average incidence for ulcerative colitis, at 24 per 100,000 person-years. Individuals with IBD face a lifetime of disease symptoms that require constant treatment, resulting in increased medical costs and lost productivity. Furthermore, the chronic nature of IBD can lead to disease-related complications that require surgery, while also increasing the risk for developing colorectal cancer and liver disease.

Currently, there is insufficient research to determine what causes IBD or who will develop this lifelong disease. Although research advancements have led to a broad treatment armamentarium against IBD, clinicians lack the data and tools to predict which patients would best respond to specific therapies. To address these challenges, targeted investments in basic, translational, and clinical IBD research are essential. In this Giving Smarter Guide, we outline the barriers to IBD research progress and the key philanthropic opportunities to better identify and treat persons affected by IBD. These opportunities include:

- Basic and clinical research efforts to develop distinct biochemical, genetic, or molecular characteristics (biomarkers) that will identify individuals at risk for disease development and onset.
- Translational research aimed at developing effective regimens tailored to the individual, from improved delivery of existing drugs, to identification of biomarkers that predict a successful response to potent biologic therapies.
- Interdisciplinary efforts to understand the role of the microbiome in disease etiology, progression, and its potential as a therapeutic intervention.

Readers will be able to use this guide to pinpoint research solutions aligned with their interests, and will help to answer the following questions:

- Why should I invest in IBD research?
- What key information should I know about this disease?
- What is the current standard of care and state of IBD research efforts?
- What are the barriers preventing improved diagnosis and treatment?
- How can philanthropy support the translation of innovative basic research into novel treatments?

**FOR THE FULL GIVING SMARTER GUIDE, VISIT PHILANTHROPY.MILKENINSTITUTE.ORG/REPORTS**

The Philanthropy Advisory Service (PAS), flagship program of the Milken Institute Center for Strategic Philanthropy, counsels philanthropists, family offices, wealth advisors, and foundations seeking to make transformative philanthropic investments. We provide comprehensive, digestible information that helps philanthropists evaluate research efforts and funding opportunities in various disease areas. Expert advisory boards, in-depth due diligence, and an objective framework for evaluation shape our analysis. Each PAS project is personalized to the needs of our partners. We offer a range of services that empower philanthropists with the actionable information to make impactful philanthropic investments in research. philanthropy.milkeninstitute.org