

**Date Prepared:** November 2021  
**Name:** Ashwin N Ananthakrishnan, MD, MPH  
**Office Address:** 165 Cambridge Street, 9<sup>th</sup> floor  
Boston, MA 02114  
**Work Phone:** 617-724-9953  
**Work Email:** aananthakrishnan@mgh.harvard.edu  
**Work FAX:** 617-726-3080

### Education

07/97 – 01/03	MBBS	Medicine	Jawaharlal Institute of Post-Graduate Medical Education and Research, (JIPMER) INDIA
07/03 – 05/04	MPH	Public Health	Johns Hopkins Bloomberg School of Public Health

### Postdoctoral Training

07/04 – 06/05	Internship	Internal Medicine	Medical College of Wisconsin
07/05 – 06/07	Residency	Internal Medicine	Medical College of Wisconsin
07/07 – 06/10	Fellowship	Gastroenterology	Medical College of Wisconsin

### Faculty Academic Appointments

07/10 – 12/12	Instructor	Medicine	Harvard Medical School
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12/12 –	Assistant Professor	Medicine	Harvard Medical School
7/18			
7/18 -	Associate Professor	Medicine	Harvard Medical School

**Appointments at Hospitals/Affiliated Institutions**

07/10 -	Assistant in Medicine	Medicine Gastrointestinal Unit	Massachusetts General Hospital
04/16 -	Assistant Investigator	Internal Medicine Clinical and Translational Epidemiology Unit	Massachusetts General Hospital

**Other Professional Positions**

**Major Administrative Leadership Positions**

**Local**

2011 -	Director, GI Unit Clinical Journal Club	Massachusetts General Hospital
2014 - 16	Co-Director, Crohn’s and Colitis Center	Massachusetts General Hospital
2016 -	Co-Chair, Microbiome Think tank	Massachusetts General Hospital
2017 -	Director, Crohn’s and Colitis Center	Massachusetts General Hospital

**Regional**

**National**

**International**

**Committee Service**

**Local**

**Regional**

**National**

**International**

**Professional Societies**

2004 – 07	American College of Physicians	
2004 – 10	American Medical Association	
2007 -	American Gastroenterological Association	
	2009 – present	Member, Abstract Selection Committee
	2014 – present	Member, AGA Research Awards Panel
	2014 - 17	Abstract Committee Chair, IBD Epidemiology Section
	2015 – 18	Member, Publications Committee
2007 -	American Society of Gastrointestinal Endoscopy	
2007 -	American College of Gastroenterology	
	2010 – 2013	Member, Publications Committee
	2011 – 2012	Member, <i>Clostridium difficile</i> infection practice guidelines taskforce
	2012	Member, Abstract Selection Committee
	2014 – present	Mentor, ACG Mentoring Program
	2015 – present	Member, Ulcerative colitis practice guidelines taskforce
	2017 – present	Member, Research Review Committee
2008 -	Crohn’s and Colitis Foundation of America (CCFA)	

2013 – 2015	Member, Patient Education Committee
2014 – present	Member, New England Chapter Medical Advisory Committee
2014 – 2017	Member, CCFA Partners Review Committee
2015 – 2018	Member, National Scientific Advisory Committee (Research Initiatives Subcommittee)
2015 – 2018	Member, CCFA Clinical Awards Review Committee
2018 -	Member, International Organization for Study of Inflammatory Bowel Diseases (IOIBD)

### Grant Review Activities

2012	Agence Nationale de La Recherche	French National Research Agency Ad hoc Reviewer
2012	Veterans Affairs Cooperative Studies Program	Department of Veterans Affairs Ad hoc reviewer
2013	Environment, genes, and chronic disease	Canadian Institute of Health Research Member, peer review committee
2014	Excellence in IBD Clinical Care Program	Crohn's and Colitis Foundation of Canada Ad hoc reviewer
2014	ERC Consolidator Grant - 2014	European Research Council Ad hoc reviewer

### Editorial Activities

Adhoc Reviewer

- New England Journal of Medicine
- Lancet
- Gastroenterology
- Gut
- Clinical Gastroenterology and Hepatology
- Annals of Internal Medicine
- Archives of Internal Medicine
- British Medical Journal
- Hepatology
- American Journal of Gastroenterology
- Inflammatory Bowel Diseases
- Journal of Crohn's and Colitis

- Nature Reviews Gastroenterology and Hepatology
- American Journal of Epidemiology
- Digestive Diseases and Sciences
- BMC Gastroenterology
- Liver transplantation
- Gastrointestinal Endoscopy
- Clinical Infectious Diseases
- Journal of Infection
- BMC Infectious Diseases
- Mayo Clinic Proceedings
- Journal of General Internal Medicine
- BMC Health Services Research
- Preventive Medicine
- American Journal of Infection Control

### **Other Editorial Roles**

2013 -	Editorial Board Member	Gastroenterology
9/2013 – 12/2013	Interim Associate Editor	Gastroenterology
2013 - 17	Section Editor, Clinical	Inflammatory Bowel Diseases
2013 – 15	Section Editor, Epidemiology of Intestinal Diseases	BMC Gastroenterology
2013 -	Editorial Board Member	Clinical Gastroenterology and Hepatology
2014 – 16	Associate Editor	Clinical and Translational Gastroenterology
2015 -	Editorial Board Member	Alimentary Pharmacology and Therapeutics
2015 -	Editorial Board Member	Journal of Crohn’s and Colitis
2015 -	Editorial Board Member	Digestive Diseases and Sciences
2016 - 17	Associate Editor	Alimentary Pharmacology and Therapeutics
2017 -	Associate Editor	Clinical Gastroenterology and Hepatology

### **Honors and Prizes**

1999	Ajay J Matthews memorial gold medal for best student of 1 <sup>st</sup> MBBS	JIPMER, India
2000	Dr. B.N. Ghosh Memorial prize for Pharmacology	JIPMER
2000	21 <sup>st</sup> Annual Conference of Association of Pathologists and Microbiologists Prize for Microbiology	JIPMER
2001	Indian Association of Dermatology, Venereology, & Leprology (IADVL) gold medal in Dermatology	JIPMER

2001	M/s. South Arcot District Co-op Supply and Marketing Society Ltd. prize for Ophthalmology	JIPMER
2001	Dr. Uvathi Memorial medal in Obstetrics and Gynecology	JIPMER
2002	Mrs. Susheela Selvaradjalou Chettiar Memorial Prize in Pediatrics	JIPMER
2002	Mrs. Santhoshwathi Memorial Prize in Surgery	JIPMER
2003	Anandaranga Pillai medal for standing first in the I MBBS University Examinations	JIPMER
2003	M C Rama Varma Valia Raja memorial gold medal for best All round performance by an MBBS undergraduate	JIPMER
2003	Dr. Vikrant Gupta Memorial gold medal for Best Outgoing Graduate	JIPMER
2003	JIPMER gold medal for Best Outgoing student in the graduating class	JIPMER
2003	Academic scholarship	Johns Hopkins Bloomberg School of Public Health
2003	John C Hume Award for academic excellence and professional promise	Johns Hopkins Bloomberg School of Public Health
2004	Member, Delta Omega Society, Alpha Chapter	Johns Hopkins Bloomberg School of Public Health
2005	American Liver Foundation / American Association for Study of Liver Diseases (AASLD) Resident Travel Scholar Award	American Liver Foundation / AASLD
2006	James M. Cerletty Excellence in Medicine Award	Medical College of Wisconsin
2007	Best Clinical research poster at the Internal Medicine Research day	Medical College of Wisconsin
2008	Selected for 18 <sup>th</sup> Annual North American Conference of Gastroenterology Fellows	American College of Gastroenterology
2009	CCFA Visiting IBD fellowship – University of Pittsburgh Medical Center	Crohn's and Colitis Foundation of America

2009	Selected for Investing in the Future: Clinical Research in IBD program	American Gastroenterological Association
2010	Fellowship2Leadership Program	Salix pharmaceuticals
2011	American Gastroenterological Association - Investing in the Future in IBD <i>Invited Faculty</i>	American Gastroenterological Association
2011	American College of Gastroenterology Governors Award for Excellence in Clinical Research	American College of Gastroenterology
2013	AGA / UEG Rising Star	American Gastroenterological Association
2014	GRG / AGA Young Investigator Clinical Science Award	American Gastroenterological Association
2014	American College of Gastroenterology Governors Award for Excellence in Clinical Research	American College of Gastroenterology
2014	American College of Gastroenterology Auxiliary Award (Best Scientific Paper by a Member of the College)	American College of Gastroenterology

## **Report of Funded and Unfunded Projects**

### **Funding Information**

#### **Past**

- 2011 - 2013 ***A Prospective Study of Diet and Gene-Diet interaction and Risk of Crohn's Disease and Ulcerative Colitis***  
 American Gastroenterological Association (AGA) Research Scholar Award  
 PI (\$ 120,000)  
 The aim of this proposal is to examine the effect of dietary fiber and n-3, n-6 fatty acids on the risk of incident Crohn's disease and ulcerative colitis using the Nurses' Health Study cohorts. A secondary aim of this grant is to examine the interaction between known IBD risk alleles and the above dietary factors in influencing disease course.
- 2011 - 2013 ***Genomic mechanisms for loss of response to anti-TNF therapy in Crohn's Disease***  
 AGA Elsevier Pilot Award  
 PI (\$25,000)

This proposal aims to examine the underlying genomic mechanisms that contribute to loss of response to anti-TNF therapy. In this pilot study, we will compare gene expression using RNA microarray from patients with active colonic inflammation in the anti TNF-naïve and anti-TNF exposed cohorts to examine if anti-TNF exposure induces specific pathways of inflammation.

2011 - 2013 ***A prospective study of pre-diagnostic plasma vitamin D in Inflammatory bowel disease***  
Broad Medical Research Program (BMRP – IBD-0312R)

Co-investigator (\$90,000) (PI: Andrew Chan) [Click or tap here to enter text.](#))

The goal of this project is to assess if vitamin D status using a validated prediction score or measured pre-diagnostic plasma vitamin D levels are associated with increased risk of developing Crohn's disease or ulcerative colitis. The second aim is to examine the association of vitamin d status with known IBD risk alleles.

2012 – 2013 ***Genetic Influences on the effect of smoking on Crohn's disease and ulcerative colitis***  
American College of Gastroenterology Clinical Research Award

PI (\$34,888)

This proposal aims to analyze whether genetic influences modulate the effect of smoking on Crohn's disease and ulcerative colitis. In particular, it aims to examine if polymorphisms in enzymes involved in nicotine metabolism or free oxygen radical generation influence susceptibility to the effect of cigarette smoke.

2012 – 2013 ***Air Pollution and Risk of Inflammatory Bowel Diseases – A pilot gene-environment Study***

Center for Study of Inflammatory Bowel Diseases Pilot and Feasibility Study

PI (\$25,000)

The major goal of this proposal is to examine the association between air pollution exposure and risk of subsequent Crohn's disease or ulcerative colitis, and to examine whether this risk is modified by genotype.

2014 - 2015 ***Epidemiology of Recurrent Clostridium difficile infection***

Cubist Pharmaceuticals

PI (\$114,281)

This proposal aims to validate a definition of recurrent *C difficile* infection in administrative data and understand the economic and health consequence of recurrent disease.



- 2014 - 2015 ***Understanding the genetic determinants of response to anti-TNF therapy in the IBD patient population***  
 Amgen, Inc  
 PI (\$69,484)  
 The goals of this proposal are to develop an electronic medical record algorithm to define treatment response and non-response in patients with inflammatory bowel diseases using electronic medical record data. We will also define therapy related adverse events in this population and subsequently aim to identify genetic predictors of such events.
- 2017 – 2019 ***Genetic predictors of calprotectin response with anti-TNF and anti-integrin biologic therapy in Crohn’s disease and ulcerative colitis***  
 NIH R03 DK112909  
 PI (\$85, 500)  
 This proposal aims to validate a previously developed risk score for Crohn’s disease and ulcerative colitis in a prospective cohort with objective assessment of therapy response using fecal calprotectin markers.
- Current**
- 2017 – 2021 ***Microbiome predictors of response to anti-TNF and anti-integrin therapy in inflammatory bowel diseases***  
 Crohn’s and Colitis Foundation of America Senior Research Award  
 PI (\$115,829)  
 This proposal aims to identify the role of microbial composition, metabolites, and inflammatory cytokines in predicting response to two different therapeutic mechanisms in CD and UC.
- 2018 – 2021 ***Microbial basis of fatigue in inflammatory bowel diseases: Towards microbiome-directed therapeutics***  
 Pfizer, Inc  
 PI (\$163,583.00)  
 This proposal funds an observational cohort study of patients with quiescent IBD who experience significant fatigue and matched controls. Stool metagenomic sequencing will be performed to identify microbial constituents predictive of fatigue.

- 2018 – 2021 ***Multicenter acute severe colitis cohort study (MASCC)***  
 Crohn's and Colitis Foundation  
 Co-PI (\$110,000)  
 This proposal will set up a 5-center prospective cohort of patients hospitalized with acute severe colitis. Clinical and biospecimen biomarkers for predicting response and disease outcome will be developed.
- 2018 – 2021 ***Microbial basis of fatigue in inflammatory bowel diseases***  
 Crohn's and Colitis Foundation Litwin IBD Pioneers Program  
 PI (\$130,000)  
 This proposal will conduct an observational study of the role of the microbiome and metabolome in defining fatigue in patients with IBD. It will also support a randomized controlled trial of a probiotic compared to placebo for treatment of fatigue in IBD
- 2020 – 2023 ***Differential impact of smoking on transcriptome and epigenome***  
 National Institutes of Health R21 DK127227-01  
 PI (\$ 368,500)  
 The goal of his proposal is to examine the impact of smoking on the transcriptome and epigenome in Crohn's disease and ulcerative colitis and to use its divergent clinical effect to determine the biologic mechanism of its action.
- 2020 – 2023 ***Crohn's disease in South Asians: Defining disease biology***  
 Leona M. and Harry B. Helmsley Charitable Trust  
 PI (\$1,496,972)  
 This grant proposes to define the environmental and biologic architecture of Crohn's disease in South Asian immigrants in the United States as well as native residents of South Asia.
- 2021 – 2026 ***Determinants of Inception of Inflammation in IBD***  
 National Institutes of Health R01 DK127171  
 Co-PI (contact PI) \$ 5,954,408  
 This grant aims to define the dynamic microbial, metabolomic and proteomic factors that determine the transition for a state of quiescence to active inflammation in IBD

### [Current Unfunded Projects](#)

## **Report of Local Teaching and Training**

### **Teaching of Students in Courses**

#### **Formal Teaching of Residents, Clinical Fellows and Research Fellows (post-docs)**

##### **Teaching prior to current Harvard appointment**

2010 -	GI Unit Clinical Journal Club (Gastroenterology Fellows)	MGH  Lead a weekly one hour group discussion for GI fellows on clinical research methods, epidemiology, and recent advances in the field.
2010 -	GI Unit Weekly Inflammatory Bowel Disease Forum (Gastroenterology and Advanced inflammatory bowel disease fellows)	MGH  Lead a weekly one hour group discussion and teaching on IBD for GI fellows
2011	Clostridium difficile and CMV infection in Inflammatory Bowel Disease (Gastroenterology Fellows)	MGH  One hour lecture
2012	Management of the Inpatient with Inflammatory Bowel Disease (Gastroenterology Fellows)	MGH  One hour lecture

##### **Teaching during current Harvard appointment**

2013- present	Inpatient management of severe ulcerative colitis	MGH  One hour lecture
2014- present	Management of Crohn's disease	MGH  One hour lecture

#### **Clinical Supervisory and Training Responsibilities**

2010 -	Supervising Endoscopy Visit Attending	One half session per week, 2 months per year
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2010 -	Massachusetts General Hospital Supervising Attending	2-5 half sessions per week.
	Massachusetts General Hospital Advanced Inflammatory Bowel Disease fellow	
2011 - 17	Supervising Attending Gastroenterology Ambulatory Resident Rotation Massachusetts General Hospital	One half session per week

### **Laboratory and Other Research Supervisory and Training Responsibilities**

2010 –	Supervision of Gastroenterology/Inflammatory Bowel Disease Research Fellows	2-3 times/week for 12 months for each fellow
2015 – 16	Supervision of Masters Student, Amar Vedamurthy, MD	Masters thesis supervision for 1 year
2017 -	Supervision of Doctoral Student, Nynke Borren MD (co-advisor, PhD)	Daily supervision for three years

### **Mentored Trainees and Faculty**

2010 – 13	Muhammad Ali, MD / Gastroenterology Fellow, UT Southwestern Medical School Oral presentation at Digestive Disease week 2010, two published manuscripts
2010 – 13	Amit Desai, MD / Gastroenterology Fellow, Weill Cornell Medical College Oral presentation at Digestive disease week 2012 and one manuscript
2011 – 13	Punyanganie de Silva, MBBS, MCRP / Instructor in Medicine, Brigham and Women’s Hospital Oral presentation at Digestive disease week 2012, five manuscripts, one published commentary, and one in submission.
2012 – 14	Zachary Zator, MD / Gastroenterology Fellow, University of Pittsburgh Research project examining the effect of vitamin D on response to anti-TNF therapy in patients with Crohn’s disease and ulcerative colitis. Two manuscripts.
2012 – 13	Stephanie Cantu / Internal Medicine Resident, Brigham and Women’s Hospital Research project examining association between vitamin D and anti-TNF response. One manuscript.
2012 – 14	Emily Oxford / Tulane University School of Medicine, Medical Student Year 4

Study examining the effect of co-existing celiac disease on phenotype and natural history of patients with inflammatory bowel disease, genetics of *C difficile* in IBD, impact of mode of delivery on perianal disease. Three manuscripts.

- 2012 – 14 Gauree Konijeti, MD, MPH / Assistant Professor of Medicine, Scripps Clinic, La Jolla  
Projects examining various cost-effectiveness studies, identifying high risk subgroups in IBD, and examining the impact of environmental risk factors on IBD. Six published manuscripts. Fellow Abstract Award, ACG.
- 2012 – 13 Joanna Lopez, MD / Gastroenterology Fellow, Mount Sinai Hospital  
Study examining recurrence of Crohn's disease in the ileum following a total proctocolectomy and end-ileostomy. This novel study resulted in a poster at ACG and a publication.
- 2013 – 15 Alice Cheng, MD / Gastroenterology Fellow, University of California at San Francisco  
Research project examining the effect of mode of delivery on perianal disease in Crohn's disease. Two accepted manuscripts.
- 2013 – 15 Tanya Sahay, MD / Hospitalist, MGH (GI fellow, University of Rochester)  
Association between vitamin D and community acquired *Clostridium difficile* infections. One accepted manuscript.
- 2013 – 16 Zain Kassam, MD, MPH / Gastroenterology Fellow, McMaster University  
Examination of severity and outcomes of *Clostridium difficile* infection in hospitalized patients and examination of disparities and time trends. Analysis in progress. Fellow Abstract Award, ACG.
- 2014 – 16 Ruma Rajbhandari, MD, MPH / Gastroenterology fellow, MGH  
Research project examining outcomes of hepatitis B related infections in hospitalized patients. Manuscript submitted.
- 2014 – 16 Kyle Staller, MD / Gastroenterology fellow, MGH  
Project defining subtypes of constipation and anorectal dysfunction, healthcare utilization and assessment of severity
- 2015 – 16 Vikas Gupta, MD / Internal Medicine Resident, MGH  
Study examining the potential benefit of addition of antibiotics to intravenous steroids in the management of inflammatory bowel diseases. One publication.
- 2015 – 16 Cindy Cin Yee Law, MD / Medical Student, University of Ottawa  
Examined the impact of specialized inpatient care on the outcomes of patients hospitalized with Crohn's disease and ulcerative colitis. Two publications, One AGA student research award
- 2015 – 16 Saranya Sasidharan, MD / Internal Medicine Resident / Boston Medical Center  
Identification of the role of genetics in mediating susceptibility to serious infectious complications in patients with inflammatory bowel diseases. One manuscript. One oral presentation.

- 2015 – 16 Grant E Barber, MD / Medical Student, Harvard Medical School  
Role of genetics in determining primary non-response and durable response to anti-TNF biologic therapy in Crohn's disease. Two manuscripts. One poster of distinction
- 2015 – 17 Aurada Cholapranee, MD / Medical Resident, Montefiore Medical Center  
Meta-analysis of effect of hygiene related factors on risk of Crohn's disease and ulcerative colitis and examination of effect of ethnicity on such risks. Meta-analysis of comparative effectiveness of therapies in inducing mucosal healing. Two publications.
- 2016 – 17 Alexander Levy, MD / Gastroenterology Fellow, Tufts Medical Center  
Systematic review and meta-analysis examining differences in IBD phenotype among whites, asian, hispanic, and african-american populations in population-based cohorts. Two publications.
- 2016 – 17 Luyi (Louise) Xu, MD / Medical student, Harvard Medical School  
Systematic review and meta-analysis examining the association between breastfeeding and risk of Crohn's disease and ulcerative colitis. Two publications.
- 2016 – 21 Nynke Z Borren, MD / Medical Student, University of Groningen, Netherlands  
Prospective cohort study examining the association between inflammatory cytokines and metabolomic profile and fatigue in IBD patients in remission. Five publications.
- 2016 – 20 Kristin Burke, MD / Gastroenterology Fellow, Massachusetts General Hospital  
Study examining the association between genetics and response to therapy in ulcerative colitis and validation in an external dataset. Examination of the association between genetics and biologic pharmacokinetics in inflammatory bowel diseases. One publication. One manuscript submitted.
- 2016 – 21 Amar Vedamurthy, MD / Hospitalist, Massachusetts General Hospital  
Examination of the benefit of early escalation to immunosuppressive therapy in treatment-naïve hospitalized acute severe ulcerative colitis patients. Masters thesis guide. One publication submitted.
- 2017 – 19 Kelly Cushing, MD / Advanced IBD fellow, Massachusetts General Hospital  
Projects examining radiographic predictors of response to intravenous steroids in hospitalized acute severe ulcerative colitis patients and determination of the role of sarcopenia and visceral adiposity. Secondary analysis of clinical trial data to define the efficacy and safety of biologics in the elderly. Three posters, one research grant from AGA Academy of Educators.
- 2017 – 19 Tomer Adar, MD / Advanced IBD fellow, Massachusetts General Hospital  
Comparative safety and effectiveness of anti-TNF biologic and gut selective anti-integrin therapy in elderly IBD patients. One poster.
- 2018 - Nikitha Gangasani, MD / Internal Medicine Resident, Boston Medical center  
Examination of post-colectomy natural history of extraintestinal manifestations in ulcerative colitis. One poster.

- 2019 – 20 Anne Hu, MD / Advanced IBD fellow, Massachusetts General Hospital  
Examination of benefit of combination immunomodulator therapy in vedolizumab or ustekinumab users with moderate to severe Crohn’s disease or ulcerative colitis. Defining yield of random biopsies in dysplasia screening in IBD. Two papers, one oral presentation.
- 2020 - Alexa Sasson, MD / Advanced IBD fellow, Massachusetts General Hospital  
Defining the yield of surveillance colonoscopy in older patients with IBD. Examination comparative efficacy and safety of ustekinumab, vedolizumab, and anti-TNF therapy in older patients with CD or UC.
- 2018 - Bharati Kochar, MD, MPH / Junior faculty, Massachusetts General Hospital  
Defining epidemiology of IBD in older individuals with Crohn’s disease or ulcerative colitis. Understanding the impact of frailty on natural history of IBD. Four publications.
- 2019 - Winston Cai / High-school student, Bronx Science High School  
Use of bioinformatic tools to define frailty and other outcomes in a large electronic medical record linked cohort of IBD; perform PheWas analysis.

**Formal Teaching of Peers (e.g., CME and other continuing education courses)**

**Choose an item.**

2007	Excess hospitalization burden due to <i>Clostridium difficile</i> in patients with inflammatory bowel disease Department of Medicine, Medical College of Wisconsin	Inflammatory Bowel Disease Working Group Milwaukee, Wisconsin. No sponsorship
2008	Does it matter where you are hospitalized for IBD? A nationwide analysis of hospital volume Department of Medicine, Medical College of Wisconsin	Inflammatory Bowel Disease Working Group Milwaukee, Wisconsin. No sponsorship
2012 – 14	Management of Inflammatory Bowel Disease Patients on Biologics No sponsoring institution	Practicing Clinician Exchange

**Local Invited Presentations**

No presentations below were sponsored by outside entities

2007	Disparities in colon cancer screening in the Medicare population Department of Medicine, Medical College of Wisconsin (MCW)
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- 2009 Using databases to explore natural history and outcomes in Inflammatory Bowel Disease  
Division of Epidemiology, Department of Population Health, MCW
- 2010 Disease specific severity scores for Inflammatory Bowel Disease – Why and how?”  
Division of Epidemiology, Department of Population Health, MCW
- 2011 Environmental Risk Factors for Inflammatory Bowel Diseases  
21<sup>st</sup> Annual Center for Study of Inflammatory Bowel Disease Symposium, MGH
- 2011 Biologic Therapy for Inflammatory Bowel Diseases in 2011 – An Update  
Department of Medicine Grand Rounds, MGH
- 2012 Personalizing Therapy for Inflammatory Bowel Diseases  
Gastrointestinal Unit Grand Rounds, MGH
- 2012 Understanding Newer Environmental Triggers for Inflammatory Bowel Disease  
GI Grand Rounds, Beth Israel Deaconess Medical Center
- 2012 Using Informatics for Discovery Research in IBD  
22<sup>st</sup> Annual CSIBD Symposium, MGH
- 2013 – 2019 Management of post-operative Crohn’s disease  
Advances in Gastroenterology, Harvard Medical School
- 2013 – 2020 Management of Inflammatory Bowel Disease  
Internal Medicine: Comprehensive review and update, Harvard Medical School
- 2014 Your Diet, Your Environment, and Your IBD  
Crohn’s and Colitis Foundation of American – New England Society of Gastroenterology  
Nursing Winter Symposium 2014
- 2014 Causes of IBD  
i2b2-HST Summer Institute in Bioinformatics & Integrative Genomics, Harvard Medical  
School
- 2015 Diet and IBD: Evidence-based or Myth?  
Gastrointestinal Unit Grand Rounds, MGH
- 2015 IBD Epidemiology: Risk factors, association, and causation  
Frontiers in Pediatric Gastroenterology, Hepatology & Nutrition 2015, Harvard Medical  
School
- 2016 IBD and the Environment – Through the ages  
IBD Symposium, Boston Children’s Hospital
- 2017 Beyond anti-TNFs: Newer biologics in IBD



- Advances in Gastroenterology, Harvard Medical School
- 2017 Five-step, evidence-based guide to the management of acute severe ulcerative colitis  
Gastrointestinal Unit Grand Rounds, MGH
- 2017 Management of Inflammatory bowel diseases – A gastroenterologist’s perspective  
Rheumatology Grand Rounds, MGH
- 2018 Management of IBD in patients with current or prior malignancy  
Beth Israel Deaconess Medical Center Gastroenterology Weekly Conference
- 2018 The microbiome as a prognostic factor in IBD  
HMS Microbiome Symposium
- 2019 Advances in IBD Care  
Massachusetts General Hospital Department of Medicine Grand Rounds
- 2020 Clinician Perspective of Use of Imaging in Inflammatory Bowel Diseases  
Radiology Grand Rounds, MGH

## **Report of Regional, National and International Invited Teaching and Presentations**

### **[Invited Presentations and Courses](#)**

#### **Regional**

No presentations below were sponsored by outside entities

- 2010 – 2011 Inflammatory Bowel Disease Update 2011  
Melrose-Wakefield Hospital, Melrose, MA
- 2010 Environmental Risk Factors for Inflammatory Bowel Disease  
Maine Medical Center, Portland, ME
- 2016 Can the microbiome predict response to vedolizumab therapy?  
Center for Microbiome Informatics and Therapeutics Symposium, Cambridge, MA
- 2017 IBD and the Environment – Influence through the ages  
Gastroenterology Grand Rounds, Tufts University School of Medicine
- 2018 Use of biologics in patients with current and prior cancers  
11<sup>th</sup> Annual Boston IBD Symposium, Boston, MA
- 2019 IBD in the elderly  
Advances in IBD Regionals, Boston, MA
- 2019 Prevention and management of Clostridium difficile colitis

- Advances in IBD Regionals, Boston, MA
- 2020 Crohn's disease Update  
Maine Gastroenterology Society Winter meeting, Carrabasset Valley, MA
- 2020 Update in Management of Ulcerative Colitis  
Maine Gastroenterology Society Winter meeting, Carrabasset Valley, MA
- 2020 Geriatric IBD – time for a new subspecialty  
13<sup>th</sup> Annual Boston IBD Symposium, Boston, MA
- 2021 Management of Acute Severe Ulcerative Colitis  
14<sup>th</sup> Annual Boston IBD Symposium, Boston, MA

### **National**

Those presentations below sponsored by outside entities are so noted and the sponsors identified

- 2010 *Clostridium difficile* and cytomegalovirus infections in inflammatory bowel disease  
New Advances in Inflammatory Bowel Disease, Scripps Health, La Jolla, CA (Scripps Health)
- 2011 Personalizing Therapy for Inflammatory Bowel Disease (Keynote Speaker)  
Updates in current therapy for Inflammatory Bowel Disease, Vanderbilt University, Nashville, TN (Shire, Salix, UCB, Braintree, Abbott)
- 2011 Personalizing Therapy for Inflammatory Bowel Disease (Keynote Speaker)  
Crohn's and Colitis Foundation of America (CCFA) Patient Symposium, Nashville, TN (Shire, Salix, UCB, Braintree, Abbott)
- 2012 Ulcerative Colitis Flare causes by NSAIDs  
Mastering Clinical Challenges and Emerging Therapies in IBD, Chicago, IL (Abbott, Warner Chilcott, Prometheus, Santarus)
- 2013 Newer Environmental Triggers for Inflammatory Bowel Disease  
Department of Medicine Grand Rounds, Medical College of Wisconsin
- 2013 Limitations and advantages of large prospective cohort studies in creating a surveillance program for IBD: the Harvard professional health studies experience  
Epidemiologic Research in IBD: Designing a Surveillance Program for IBD in the United States – A CCFA/CDC Meeting
- 2013 Understanding Newer Environmental Triggers for Inflammatory Bowel Disease

- Division of Gastroenterology Grand Rounds, University of Miami
- 2013 Understanding Newer Environmental Triggers for Inflammatory Bowel Disease  
Inflammatory Bowel Disease Research Seminar, Weill Cornell Medical College
- 2014 Earth, Wind, and Fire – Environment and Inflammatory Bowel Disease  
IBD Grand Rounds, Mount Sinai Hospital, New York
- 2014 Stress and Exercise – Is that the answer in IBD?  
Digestive Disease Week, Chicago, IL
- 2014 Nutritional Management of IBD (Meet the Professor Talk)  
Digestive Disease Week, Chicago, IL
- 2014 Microbiome in IBD: Current Status and the Future Ahead  
Richmond University Internal Medicine Update, Staten Island, NY
- 2015 The Gut microbiome and disease  
Milwaukee Gastroenterology Society, Milwaukee, WI
- 2016 What role does dietary intervention play for Crohn’s disease and ulcerative colitis patients  
treated with biologics?  
Johns Hopkins University Emerging Treatments & Practice patterns for Inflammatory  
Bowel Disease, Baltimore, MA
- 2016 What is the role of environmental factors in the pathogenesis of IBD?  
Advances in IBD 2016 (CCFA Annual Conference)  
Orlando, FL
- 2017 IBD Epidemiology  
2<sup>nd</sup> Annual Baylor University Medical Center IBD Conference  
Dallas, TX
- 2017 Is there an anti-inflammatory diet in IBD?  
2<sup>nd</sup> Annual Baylor University Medical Center IBD Conference  
Dallas, TX
- 2017 Is IBD an environmental disease?  
Gastroenterology Grand Rounds, Indiana University Medical Center  
Indianapolis, IN
- 2018 Understanding the Epidemiology and Natural History of IBD for Clinicians  
American College of Gastroenterology IBD School  
Boston, MA

- 2018      Microscopic colitis  
American College of Gastroenterology IBD School  
Boston, MA
- 2018      Non-biologic therapies in inflammatory bowel diseases  
American College of Gastroenterology Annual Meeting postgraduate course  
Philadelphia, PA
- 2018      Quantifying immune response to the microbiome  
AAG-NIDDK Symposium: The gut microbiome as a paradigm for the opportunities and  
challenges of human subject research  
Philadelphia, PA
- 2018      Stool and urine biomarkers in IBD  
Crohn's and Colitis Foundation Biomarker Summit  
Newark, NJ
- 2019      Big Data in IBD  
2<sup>nd</sup> Crohn's and Colitis Congress  
Las Vegas, NV
- 2019      Management of the hospitalized patient with acute severe ulcerative colitis  
11<sup>th</sup> University of Pennsylvania IBD Symposium  
Philadelphia, PA
- 2019      Immunomodulators: Thiopurines, Methotrexate, Tofacitinib  
11<sup>th</sup> University of Pennsylvania IBD Symposium  
Philadelphia, PA
- 2019      Bugs and Bowel Disease: Through the eyes of a clinical researcher  
Icahn School of Medicine at Mount Sinai Hospital  
Inflammatory Bowel Disease Grand Rounds  
New York, NY
- 2019      Diet and Environment in IBD  
Digestive Disease Week  
San Diego, CA
- 2019      Non-Endoscopic staging of IBD  
Digestive Disease Week  
San Diego, CA

- 2019 Geriatric IBD: A new subspecialty  
Gastroenterology Grand Rounds, Lennox Hill Hospital  
New York, NY
- 2019 Does food cause symptoms and/or inflammation in IBD?  
AGA James W Freston conference  
Chicago, IL
- 2019 Bugs and Bowel Disease  
University of Wisconsin-Madison Gastroenterology Grand Rounds  
Madison, WI
- 2019 Update: ACG Guidelines for Treatment of Ulcerative colitis  
Advances in IBD  
Orlando, FL
- 2020 Update in the management of inflammatory bowel diseases  
Loyola University – Department of Medicine Grand Rounds  
Chicago, IL
- 2021 Management of acute severe ulcerative colitis  
ACG IBD School  
Williamsburg, VA

### **International**

Those presentations below sponsored by outside entities are so noted and the sponsor(s) is (are) identified

- 2009 Measurement tools used to diagnose, monitor and treat Crohn's disease  
Abbott International Forum, Barcelona, Spain (Abbott Pharmaceuticals)
- 2011 Earth, Wind, and Fire: Understanding Environmental factors in IBD  
Western Canada Inflammatory Bowel Disease symposium, Banff, AB  
(University of Calgary Faculty of Medicine)
- 2013 How to deal with refractory *Clostridium Difficile* Colitis  
United European Gastroenterology Week, Berlin, Germany
- 2014 Exploiting electronic medical records for discovery research in inflammatory diseases  
Summer School on Systems Medicine, Kiel University, Germany
- 2016 Compare and contrast on IBD epidemiology in U.S., Europe and other Western societies.

- Asia America Assembly of IBD, Beijing, China (AGA / CSG)
- 2016 Clinical phenotype differences in IBD between Western countries  
Asia America Assembly of IBD, Beijing, China (AGA / CSG)
- 2016 Management of Acute Severe Ulcerative Colitis: State-of-the-art lecture  
Indian Society of Gastroenterology Annual Meeting, New Delhi, India
- 2016 Role of Diet, vitamin D and Zinc in inflammatory bowel disease: State-of-the-art lecture  
Indian Society of Gastroenterology Annual Meeting, New Delhi, India
- 2018 Making sense of clinical predictors  
Personalizing IBD Treatment Symposium, Melbourne, Australia
- 2018 Debate: So what causes IBD? It's all in the environment  
Personalizing IBD Treatment Symposium, Melbourne, Australia
- 2018 Gut microbiome & response to anti-integrin therapy: Bugs and Drugs  
Personalizing IBD Treatment Symposium, Melbourne, Australia
- 2018 Microbiome for prognosis in IBD  
3<sup>rd</sup> Asia America Assembly of IBD, Chengdu, China (AGA / CSG)
- 2019 Harvard Health Study Cohort  
1<sup>st</sup> International Meeting on IBD Prevention, Copenhagen, Denmark
- 2019 Artificial Intelligence, Bugs, and Cohorts  
IOIBD Annual Meeting  
Havana, Cuba
- 2019 Personalized Treatment for IBD – Guidance from the microbiome  
IBD Today and Tomorrow  
Amsterdam, The Netherlands
- 2019 Diet and IBD – Clinical Experience and Rationale  
Western Canada Nutrition Day  
Edmonton, Canada

## **Report of Clinical Activities and Innovations**

### **Current Licensure and Certification**

- 2004 - 10 State of Wisconsin License
- 2007 - American Board of Internal Medicine certification in Internal Medicine
- 2010 - Commonwealth of Massachusetts License
- 2010 - American Board of Internal Medicine certification in Gastroenterology and Hepatology

### Practice Activities

2010 -	Ambulatory Practice	Gastroenterology, MGH	4 sessions per week
2010 -	Inpatient Practice	Gastroenterology, MGH	2-5 weeks per year
2010 -	Endoscopy	Gastroenterology, MGH	2 sessions per week

### Clinical Innovations

## Report of Technological and Other Scientific Innovations

## Report of Education of Patients and Service to the Community

### Activities

2012	Your Diet, Your Environment and Your IBD – Patient Education Seminar Massachusetts General Hospital
2013	Your Diet, Your Environment and Your IBD – Patient Education Seminar CCFA: Springfield Patient and Family IBD Symposium
2014	Causes of IBD CCFA: Boston patient and family Symposium
2018	Health care maintenance and prevention in IBD Crohn's and Colitis Foundation Boston patient and family symposium

### Educational Material for Patients and the Lay Community

Books, monographs, articles and presentations in other media

Educational material or curricula developed for non-professional students

Patient educational material

### Recognition

## Report of Scholarship

### Publications

## Peer reviewed publications in print or other media

### Research Investigations

1. **Ananthakrishnan AN**, Kanungo R, Kumar A, Badrinath S. Detection of Extended Spectrum beta-Lactamase producers among surgical wound infections and burns patients in JIPMER. Indian J Med Microbiol. 2000; 18(4): 160-165.
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14. Gonzaga JE\*, **Ananthakrishnan AN\***, Issa M, Beaulieu DB, Skaros S, Zadvornova Y, Johnson K, Otterson MF, Binion DG. Durability of Infliximab in Crohn's Disease – A single center experience. Inflammatory Bowel Diseases. 2009; 15(12): 1837-1843. (\* contributed equally)
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### Thesis

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### **Narrative Report (limit to 500 words)**

My clinical practice (60% effort) predominantly consists of care of patients with complex and severe inflammatory bowel diseases (IBD) and my research (40% effort) is focused on better understanding the pathogenesis and clinical course of these diseases and optimizing treatment algorithms with the aim of developing risk stratification and prediction models that can be used in personalizing therapy and prognosis. Inflammatory bowel diseases (Crohn's disease (CD); ulcerative colitis (UC)) are chronic illnesses that have a prolonged relapsing and remitting course, often affecting individuals from a young age. The broad overarching goal of my research is to identify subgroups among the entire cohort of IBD who are at a particularly high-risk for adverse disease outcomes and to identify mechanisms behind these adverse outcomes.

One area of significant contribution in this field has been ongoing work in the identification of environmental factors that influence risk of developing Crohn's disease or ulcerative colitis, and how they may be modified to prevent disease and improve patient outcomes. To achieve this, I used large, prospective studies such as the Nurses' Health Study and Health-Professionals Follow-up Study and published seminal works describing the association between low pre-diagnosis vitamin D levels, low fiber diet and stress and risk of Crohn's disease. I have also identified the use of non-steroidal anti-inflammatory drugs but not aspirin as risk factors for both diseases. Ongoing work is examining how these risk factors interact with known IBD genetic risk alleles as well as other genetic polymorphisms in influencing disease risk. I am also conducting clinical trials intervening on diet and with micronutrient supplementation on patient outcomes in IBD. In addition to demonstrating epidemiologic associations, my research group is examining how these environmental factors including early life influences modify microbiome and influence epigenetic changes in patients with IBD. Identification of such novel environmental associations will significantly contribute to our understanding of the pathogenesis of these complex immune mediated diseases and potentially guide new avenues for therapies. A second



area of research has been the role of genetics and microbiome in determining disease course and behavior in IBD. I have led important publications defining the role of genetic variants and microbial markers in predicting severe disease course, response to biologic therapy as well as specific adverse effects of such therapies.

In teaching, I am currently a preceptor for advanced inflammatory bowel disease fellow in 3 clinical sessions and 1 endoscopy session a week and for gastroenterology fellows once a month. In addition, I am mentoring several gastroenterology fellows, two advanced inflammatory bowel disease fellows, a post-doctoral student, and two hospitalist faculty on various research projects, examining outcomes of acute severe ulcerative colitis and hospitalized patients with IBD.

In summary, my clinical and education area of excellence relates to the care of patients with inflammatory bowel diseases. I mentor trainees in the clinical care of these patients and in research examining outcomes in at-risk subgroups. My research area of excellence focuses on furthering our understanding of the pathogenesis of these diseases by identifying how environmental factors influence disease risk as well as the dynamic role of microbiome and genetics in predicting natural history, disease behavior, and therapy response. The overarching aim of my clinical and research practice is to make meaningful contributions to personalizing care of patients with inflammatory bowel diseases.