

# Very Early Onset IBD

Mapping the Research Agenda | January 2013

**February 10, 2013**

**Dear VEO-IBD Senior Advisory Committee Member, Friends, and Colleagues:**

I am delighted to share with a brief synopsis of our working meeting on Very Early Onset IBD that took place in Amsterdam January 10-12, 2013 that hopes to shed light on our understanding of IBD that develops in young children and to develop targeted therapeutics. It was a resounding success! The meeting started with a reception at the Royal Netherland Academy of Arts and Sciences (Host: Hans Clevers, recently appointed President) with Introductions by myself and Co-PP's Drs. Christoph Klein and Aleixo Muise. James O'Sullivan, representing the Leona M. and Harry B. Helmsley Charitable Trust, shared insight regarding current IBD programs by the Helmsley Charitable Trust followed by an impassioned plea by a member of the Children's Hospital Board of Trustees, who gave a patient & family member's perspective. Richard Flavell from Yale University delivered a Keynote Address. The meeting began the next morning on January 11<sup>th</sup> and continued until the afternoon of January 12<sup>th</sup> at the Sofitel Legend The Grand Amsterdam. An initial report of the meeting is appended below.

Because of the enthusiasm generated, our project is moving forward at an aggressive pace. As noted below, we have already submitted several pilot grants for funding since the meeting. As we move forward on developing our larger initiative and program, I hope you will not mind if we reach out to you for advice and/or participation in our exciting endeavors.

Yours sincerely,



Scott B. Snapper, M.D., Ph.D.  
Wolpow Family Chair in IBD Treatment and Research  
Director, Inflammatory Bowel Disease Center (Boston Children's Hospital)  
Director, Inflammatory Bowel Disease Research (Brigham & Women's Hospital)  
Associate Professor of Medicine, Harvard Medical School

# Very Early Onset IBD

Mapping the Research Agenda | January 2013

## Initial Report on the Working Meeting on Very Early Onset IBD in Amsterdam January 10-12, 2013

The impetus for this meeting was the recognition of the growing incidence of very early onset IBD (estimated at 25% of all pediatric IBD), the dearth of systematic studies of this severe form of IBD, the promise of learning about the cause of later onset IBD by studying very early onset IBD, and the promise of a multi-disciplinary approach that takes advantage of new technologies of investigation.

The goals of the meeting included creating a ten-year vision of the research that will provide a much deeper understanding of VEO IBD and get us much closer to cures, as well as developing aims for research projects that can be launched immediately and after a more comprehensive approach can be developed.

The Amsterdam meeting was a milestone event. In less than two days, it went a long way toward establishing a creative environment in which the distinguished participants agreed to share novel ideas, apply powerful new technologies, and develop integrated approaches to unravel different aspects of the VEO-IBD puzzle.

It was evident that combining different kinds of expertise was not only exciting, but also eye-opening. Pediatric GI specialists have long recognized the need to identify and head off the environmental culprits that trigger IBD. It was enlightening to hear leading experts in toxicology, the microbiome, pathway/network big data analysis, and stem cell and animal modeling techniques explain the limits and the possibilities of their skills and specialties.

And it was clear that the group was inspired by the common goal of helping families and children facing miserable disease and poor prognoses. The inclusion of a pharma expert who has had success in sidestepping the conventional drug discovery model added to the sense of promise and possibility. The participation in the meeting of families personally affected by IBD and the perspective of the two pediatric VEO IBD specialists kept the discussion grounded in reality—and made it clear that young patients would be foremost in the proposed VEO IBD initiative.

The group

- Outlined a way to classify VEO-IBD by etiology, differentiating cause from effect, primary from secondary causes,
- Proposed three broad areas for research projects
  - Identifying the Rare Genetic Variants and Functional Pathways Leading VEO-IBD
  - Proof of Principle of Innovative Therapeutic Strategies in Recently Identified Novel Targets
  - Defining the crosstalk that governs mucosal homeostasis in the developing child
- Came up with a preliminary list of potential clinical studies.

Since the meeting, pilot studies to generate new knowledge and to test innovative processes of analysis with an international team have been submitted for funding. We anticipate development of additional joint projects under the umbrella of a more formalized consortium by the end of March.

# Very Early Onset IBD

Mapping the Research Agenda | January 2013

## ATTENDEES

<b>PRINCIPAL INVESTIGATORS</b>		
<b>Name</b>	<b>Institution</b>	<b>Titles</b>
Scott Snapper	Boston Children's Hospital, Boston, MA	Principal Investigator: VEO IBD Initiative; Wolpov Family Chair of IBD Treatment and Research, Director of the Inflammatory Bowel Disease Center
Christoph Klein	Ludwig-Maximilians University, Munich, Germany	Co-PI: VEO IBD Initiative; Chair, Department of Pediatrics; Principal Investigator of Care-for-Rare Alliance
Aleixo Muise	University of Toronto, ON	Co-PI: Co-PI: VEO IBD Initiative; Clinician-Scientist, Hospital for Sick Children, Toronto; Principal Investigator of NEOPICS
<b>SCIENTISTS</b>		
<b>Name</b>	<b>Institution</b>	<b>Titles</b>
Judy Cho	Yale University School of Medicine, New Haven, CT	Director, Inflammatory Bowel Disease Program and Binder Professor of Medicine and Genetics at Yale University
Hans Clevers	Royal Netherlands Academy of Arts and Sciences, University of Utrecht, Netherlands	President, Royal Netherlands Academy of Arts and Sciences; Professor of Molecular Genetics, University of Utrecht
Lynn Goldman	George Washington University School of Public Health, Washington, DC	Dean, GWU School of Public Health and Health Services
Dermot McGovern	Cedars-Sinai Hospital, Los Angeles, CA	Director, Translational Medicine, IBD Center and Immunobiology Research Institute; Greer Chair in IBD Genetics at Cedars; Professor of Medicine/Geffen School of Medicine, UCLA
Ruslan Medzhitov	Yale University School of Medicine, New Haven, CT	David W. Wallace Professor of Immunobiology; Investigator, Howard Hughes Medical Institute
Josef Penninger	Institute of Molecular Biotechnology, Vienna, Austria	Senior Scientist and Scientific Director, Institute of Molecular Biotechnology of the Austrian Academy of Sciences
Fiona Powrie	University of Oxford, United Kingdom	Director of Translational Gastroenterology Unit, Nuffield Department of Medicine, Oxford University; Truelove Professor of Gastroenterology
David Relman	Stanford University School of Medicine, CA	Professor, Department of Medicine - Division of Infectious Diseases, Department of Microbiology & Immunology

# Very Early Onset IBD

Mapping the Research Agenda | January 2013

Eric Schadt	Mount Sinai School of Medicine, New York, NY	Chair of the Department of Genetics and Genomic Sciences; Director of the Institute for Genomics and Multiscale Biology, and Professor of Genomics
Dan Turner	Shaare Zedek Medical Center, Jerusalem, Israel	Head of the Pediatric Gastroenterology and Nutrition Unit at Shaare Zedek; Senior Lecturer at the Medical School of Hebrew University
<b>KEYNOTE SPEAKER</b>		
<b>Name</b>	<b>Institution</b>	<b>Titles</b>
Richard Flavell	Yale University	Sterling Professor of Immunobiology, Yale University School of Medicine; Investigator, Howard Hughes Medical Institute
<b>SPEAKER</b>		
<b>Name</b>	<b>Institution</b>	<b>Titles</b>
Chas Bountra	University of Oxford, United Kingdom	Professor of Translational Medicine, Nuffield Department of Medicine; Head of Structural Genomics Consortium, Group Head / PI, Member of congregation and Unit Director
<b>REPRESENTATIVES - The Leona M. and Harry B. Helmsley Charitable Trust</b>		
<b>Name</b>	<b>Institution</b>	<b>Titles</b>
Sandor & Ruth Frankel	Leona M. and Harry B. Helmsley Charitable Trust, New York, NY	Trustee, Leona M. and Harry B. Helmsley Charitable Trust
Jim O'Sullivan	Rockefeller Philanthropy Advisors/Leona M. and Harry B. Helmsley Charitable Trust, New York, NY	Director, Rockefeller Philanthropy Advisors
<b>REPRESENTATIVES – Boston Children's Hospital</b>		
<b>Name</b>	<b>Institution</b>	<b>Titles</b>
Marc Wolpow	Boston Children's Hospital, MA	Board of Trustees