

# IBD News

Winter 2008

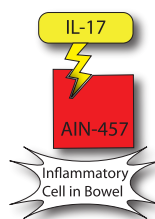
U-M Division of Gastroenterology



## Upcoming Clinical Studies:

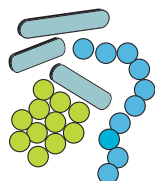
### Blocking IL-17....

**T**he hottest molecule in IBD, interleukin 17 (IL-17) is considered an important signaling molecule in the immune system, and appears to be particularly important in driving inflammatory bowel disease. New molecules to block IL-17 activity are considered the next frontier in IBD therapy. AIN-457, an anti-IL17 antibody made by Novartis, has been used in more than 100 patients with autoimmune diseases, including rheumatoid arthritis and psoriasis. The Michigan IBD Center, with Dr. Peter Higgins as the lead investigator, will be a site for a phase II study of this antibody in patients with mild to moderate Crohn's disease. Please contact Meg Chaudhary at 734- 615-4843 if you have patients who are eligible.



### Understanding Bacteria in the Lining of the Intestine...

**A** hot area in IBD is the study of which bacteria lining the intestines have effects on disease activity. If we understand this better, we might be able to use antibiotics or probiotics more effectively. However, to study these bacteria, we have to be able to get samples from specific affected segments of the intestine without contamination. Dr. Peter Higgins' study sponsored by the American Society for Gastrointestinal Endoscopy will examine whether a sheathed forceps can get samples of the bacteria from the terminal ileum without contamination from colonic bacteria. Subjects who are undergoing a standard colonoscopy will be asked to provide extra biopsies with the special sheathed forceps to test whether the sheath will prevent contamination with colon bacteria.



A mixture of normal intestinal bacteria appears to stimulate inflammation in IBD

Study Coordinators:  
Judi Schmitt 734/615-2457  
Meg Chaudhary 734/615-4843  
More information on these studies can be found at [www.med.umich.edu/engage](http://www.med.umich.edu/engage).

### Telephone Monitoring in IBD Care...

**B**eing able to keep close track of how patients are doing can produce big benefits in diabetes and heart failure. It is not known if this will be helpful in IBD. Dr. Ellen Zimmermann is initiating a study of automated telephone monitoring of patients with IBD to determine whether this approach can accurately track how patients are doing between appointments or after starting certain medications. It is possible that this kind of monitoring can identify patients who are starting to have flares before they get into trouble, and lead to rapid notification of their physicians for early intervention if needed.



## IBD Visiting Professors Series

Shire Pharmaceuticals is sponsoring the IBD Visiting Professors Series at the University of Michigan. Invited IBD researchers will present their cutting-edge results and discuss their research with our University of Michigan IBD group.

For the 2007-2008 year, the IBD Visiting Professors will be:

#### September 24th

Dr. Corey Seigel  
Dartmouth University

#### November 13th

Dr. Robert Cima  
Mayo Clinic

#### January 8th

Dr. William Sandborn  
Mayo Clinic

#### March 11th

Dr. Charles Bernstein  
University of Manitoba

#### April 14th

Dr. Richard Blumberg  
Harvard University

#### May 12th

Dr. Gary Wu  
University of Pennsylvania

Each visiting professor will present at Gastroenterology Grand Rounds.

Gastroenterologists throughout the region are welcome to attend. Please contact Patricia Arnold, 734-615-2170 for details and directions.

## How to Refer a Patient to one of our IBD Specialists

Call our GI appointment center at 888-229-7408 for the appointment line, and specify that you want an IBD Specialist.

Fax patient records to our GI Call Center at 734-936-5458. Please include most recent labs, recent imaging reports or CDs, endoscopy reports, and pathology reports.

IBD specialists available by day:

Monday:  
Leslie Aldrich  
Rafat Rizk

Tuesday:  
Leslie Aldrich  
Timothy T. Nostrant  
Grace Elta  
Ellen M. Zimmermann  
Peter Higgins  
Rafat Rizk

Wednesday:  
Rafat Rizk

Thursday:  
Leslie Aldrich  
Rafat Rizk

Friday:  
Leslie Aldrich

For a physician to physician consultation, call M-Line at 800-962-3555.

## The IBD Urgent Appointment Clinic



The demand for scheduled appointments with our IBD physician specialists has made it difficult to obtain urgent appointments if patients have flares.

Now, on Thursday afternoons, Jason Grove, PA-C, a gastroenterology physician assistant, is available for urgent IBD patient appointments and can staff these appointments with our IBD physician specialists.

Jason has been part of our GI division for six years, largely rounding in the hospital with the inpatient and consult GI teams. Jason is now going to be seeing patients with IBD who have established care with one of our IBD specialists who need urgent appointments because of a change in their symptoms. This service will help

patients who need to be seen soon, but are not sick enough to go to an emergency room. We are hopeful that by being able to evaluate and treat flares earlier, we may reduce emergency room visits and hospital admissions in our IBD patients.

You can call one of the nurses to discuss your symptoms. You may be scheduled for an appointment with Jason in the IBD urgent care clinic, you may be scheduled for an earlier appointment with your MD, or you may be directed to the emergency department if your symptoms are severe. If you are an established IBD patient with one of our IBD specialists and you have a major change in your symptoms, call one of the nurses to evaluate whether you would benefit from a Thursday afternoon appointment.

## On the Drawing Board

This is a list of clinical studies we are currently designing, considering, trying to get funding for, or filing the paperwork to get institutional permission to do in the future:



- A survey study of people of college age to understand how having IBD affects adjustment to college.
- A study of whether injection of adalimumab next to fistula openings can close fistulas in Crohn's.
- A survey study of how patients with colitis understand their risk of colon cancer.
- A study of magnetization transfer-MRI to detect intestinal scarring in patients going to surgery for Crohn's.
- A study of ultrasound elasticity imaging to detect intestinal scarring in patients going to surgery for Crohn's.
- A study of whether molecules (biomarkers) in the stool, urine, or blood can predict which IBD patients will be able to taper off steroids faster, and which patients will flare if they taper quickly.

## Patient Question of the Quarter:

# Why Does My Doctor Worry About My Bones When I Have a Bowel Disease?

Bone loss is common as we age. Bone loss accelerates when our sex hormones decrease. Estrogen levels decrease in women at 50 and testosterone levels decrease in men at 65 years of age respectively. Osteoporosis is a loss of bone strength predisposing to fracture. Bone strength is a combination of bone density and bone quality. Genetics, nutrition, and lifestyle behaviors affect our bone mass. In the U. S. today, 8 million women and 2 million men have osteoporosis and 34 million Americans have low bone density. Fifty percent of women and 25% of men over the age of 50 will develop an osteoporosis-related fracture in their lifetime. Of people in the first year after hip fracture, 20% will die, 30% will have permanent disability and 80% will have a decreased quality of life.

Patients with IBD develop bone loss at an earlier age than people without IBD. This is due to inactivity (when sick), poor intake of calcium and vitamin D, poor absorption of vitamin D and calcium (particularly with small bowel Crohn's), and medications, particularly steroids.

Your doctor may ask you to get a bone density exam (dual x-ray absorptometry [DXA Scan]). Your scan results will be compared to young adults with peak bone mass and will be scored as normal, low bone mass, osteopenia, or osteoporosis. These values correlate with fracture risk, just as high cholesterol correlates with heart attacks. Other factors that increase the risk of broken bones are a family history or personal history of broken bones (not from trauma), smoking, excess alcohol (>2 drinks/day), poor vision, or neuromuscular disease (more falls with the last 3).

Steroids predispose to broken bones even with normal bone density. Your doctor may prescribe medications to decrease fracture risk when you start steroids. There is no safe steroid dose and bone loss occurs immediately, so ask your doctor.

Treatment should start with a good diet (with at least 1500 mg/day of calcium, and 1000 units of vitamin D daily) and exercise (core strength). Daily core strength can be increased with vibrating boards, "gallop" equipment, and flexibility exercises. These exercises are low impact and increase core muscle strength by acceleration using high frequency (30-90 Hz). To reduce falls that can lead to broken bones, always keep one foot on the floor and avoid forward flexion of the spine or excessive neck twisting. Smoking should be stopped to help decrease inflammation and decrease bone loss. Bisphosphonates (Fosamax, Actonel, and Boniva) decrease bone breakdown and can be taken daily, weekly, or monthly as determined by your doctor. Some of these medications can be taken with steroids to prevent bone loss. For people with severe bone loss, newer medications are available that can rebuild bone density (teraparotide). Dental trauma and mouth infections should be avoided while taking bisphosphonates or teraparotide to minimize the risk of a rare form of jaw bone loss. If possible, all dental work should be done before starting bisphosphonates or teraparotide.

Newer kinds of CT scans are able to measure bone quality, rather than just bone density, and this approach may improve both prevention and active treatment of osteoporosis.



## How to Refer a Patient to an IBD Clinical Trial

They do not need a clinic appointment – Just call one of our IBD Study Coordinators:



Meg Chaudhary  
734-615-4843



Judi Schmitt  
734-615-2457



Andrace De Yampert  
734-764-0507

## Nursing Staff Profile: Lisa S. Sylvest, RN BSN



Lisa S. Sylvest, RN BSN, has worked at the health system for almost 27 years as a staff nurse, education coordinator, assistant head nurse, and a clinical care coordinator. She received her BSN from

Michigan State University. During her tenure at UMHS, she has worked in the Diabetes Center Unit, on the GI inpatient unit on 6B, and in the outpatient area for 18 years.

Over the past 13 years, Lisa has been in the GI division, focusing on the care of patients with IBD. She enjoys teaching patients about their diseases and medications. She also lectures to other nurses about IBD. Lisa is also active in the nurses union at UM, serving as the secretary. She is also active in the Michigan Nurses Association. Lisa was also Team Captain for the UM IBD Busters Walk Team for the CCFA of Michigan 4th Annual Guts and Glory Walk. Lisa has 2 children and a very demanding dog. In her spare time, she enjoys swimming, reading and travel.



University of Michigan  
Health System

**U-M Inflammatory  
Bowel Diseases Program**  
[www.med.umich.edu/ibd](http://www.med.umich.edu/ibd)

**U-M Division of  
Gastroenterology**  
[www.med.umich.edu/gi](http://www.med.umich.edu/gi)

For a physician to  
physician consultation, call  
M-Line at 1-800-962-3555.

**Executive Officers of the University of Michigan Health System:** Robert P. Kelch, Executive Vice President for Medical Affairs; James O. Woolliscroft, Interim Dean, U-M Medical School; Douglas Strong, Chief Executive Officer, U-M Hospitals and Health Centers.

**The Regents of the University of Michigan:** Julia Donovan Darlow, Laurence B. Deitch, Olivia P. Maynard, Rebecca McGowan, Andrea Fischer Newman, Andrew C. Richner, S. Martin Taylor, Katherine E. White, Mary Sue Coleman (ex officio).

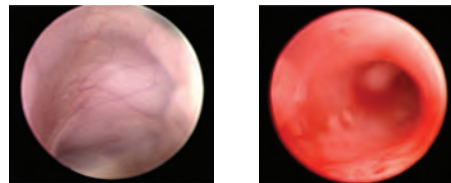
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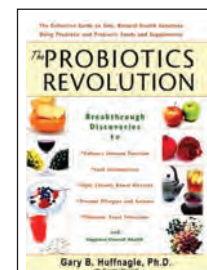
## Researcher Profile: John Kao, M.D.

**I**nflammatory bowel disease (IBD) is a condition where a dysregulated host immune system is activated against luminal bacteria leading to chronic colitis. The current management mainly focuses on suppressing lymphocytes that attack the gut or on eliminating the circulating inflammatory cytokines. Recently, in a study lead by John Kao, M.D., a gastroenterologist and mucosal immunologist at the University of Michigan demonstrated the critical role of a specialized antigen presenting cells, called dendritic cells, in the development of an experimental model of colitis. Dendritic cells are normally found in the gut mucosa and play a key role in the regulation of mucosal immune response against luminal pathogens. “The association of Nod2 mutation with Crohn’s disease gave us the hint that the problem resides in these cells,” said Dr. Kao. Nod2 is found in a class of cells called antigen presenting cells. Dendritic cells are the most potent antigen presenting cells thus a prime candidate to fuel chronic inflammation in IBD. Although the role of dendritic cells in the pathogenesis of IBD has long been implicated, it has not been shown previously. In this study, published in the November issue of the Journal of Immunology, a transgenic mouse model which transiently removed dendritic cells was used and these mice failed to induce significant inflammation upon exposure to a chemical that caused acute colitis (dextran sulfate sodium, see images below). Furthermore, they showed that dendritic cell depletion was more effective than biologics (cytokine neutralizing antibodies) which is the mainstay treatment for IBD. “We believe targeting dendritic cells is more effective than targeting T cells or cytokines, liken the analogy of turning off the faucet instead of mopping up the floor.” If confirmed in man, dendritic cell targeting therapy may achieve greater results than current biologics in treating patients with IBD. This work also helps the scientific community to focus their effort on studying the microbe-dendritic cell interaction to better our understanding of mucosal immune regulation.



**High resolution endoscopic photos of normal mouse colon (left) and DSS colitis (right) are shown. Notice the clear vascular pattern (left), a characteristic feature of a healthy colon, compared to red erosive mucosa (right).**

Dr. Kao is also teaming up with Dr. Gary Huffnagle an immunologist in the Pulmonary Division (the Author of the highly acclaimed book Probiotics Revolution), and Dr. Vincent Young, the newest member of the Infectious Disease Division and an expert in the molecular characterization of gut microbiota, to study the role of normal microbiota and probiotics in maintaining gut homeostasis. “I believe probiotics are promising in preventing IBD,” said Dr. Kao, “but we need more information on how they work and how to choose the optimal probiotic combination.”



Dr. Kao obtained his psychobiology degree from UCLA and medical degree from Univ. of Southern CA. He then completed internal medicine residency at UC Davis Medical Center. He came to UoM in 1999 and completed his combined basic/clinical GI fellowship here. He is current appointed assistant professor of medicine and is NIH funded to study bacterial-host interaction.

Besides his research and clinical activities, Dr. Kao enjoys spending time at home with his wife, Sherry, and three children ages 9, 7, and 5. His weekends are usually filled with church and children’s activities. His favorite leisure activities are cooking and playing basketball. He plays bass guitar at his church worship services and cooks regularly at church for 300 people.