Amsterdam (The Netherlands), September 5 – 6, 2014

Falk Symposium Report

Falk Symposium 193

Celiac Disease and Other Disorders of the Small Bowel

Scientific Organization

Prof. Dr. C.J.J. Mulder
Amsterdam
(The Netherlands)

Prof. Dr. D. Schuppan
Mainz
(Germany)
Falk Symposia and Workshops

Where medicine and pharmaceuticals meet – a tried and trusted link

Falk Workshop
Viral Hepatitis – From Bench to Bedside
Munich, Germany
January 29 – 30, 2015

Falk Symposium 196
Critical Evaluation of Current Concepts and Moving to New Horizons in the Management of IBD
Frankfurt, Germany
March 6 – 7, 2015

Falk Symposium 197
Autoimmune Diseases of the Liver
Lisbon, Portugal
May 8 – 9, 2015

Falk Symposium 198
IBD: East Meets West
Shenzhen, P. R. China
September 11 – 12, 2015

VIII Falk Gastro-Conference
Freiburg, Germany
October 14 – 17, 2015

Falk Symposium 199 (Part I)
Highlights from Hepatology 2015: From Chronic Hepatitis to Hepatocellular Carcinoma
October 14 – 15, 2015

Falk Symposium 200 (Part II)
Therapeutic Strategies in Diseases of the Digestive Tract – 2015 and Beyond
October 16 – 17, 2015

Falk Workshop
Workshop on Gastrointestinal GVHD
Regensburg, Germany
November 13 – 14, 2015
Celiac disease is a disorder whose importance remains underappreciated. This is underscored by the fact that it remains unrecognized in as many as 90% of patients. The prevalence of the disease in the population is estimated at about 1% worldwide, with only few exceptions, including a lower prevalence in Germany of approx. 0.5%. Moreover, celiac disease, related and other enteropathies can cause a variety of extraintestinal symptoms and complications – this was the message of the Falk Foundation’s 193rd International Symposium in Amsterdam.

"With celiac disease, we are really seeing only the tip of the iceberg," Dr. M.L. Mearin, Leiden (The Netherlands) emphasized. The disease is much more frequent than the number of those diagnosed would suggest.

Many reasons lead to this “diagnostic gap” including its subclinical or atypical (non-diarrheal) course in many patients and the wide variety of symptoms by which celiac disease may manifest itself.
**A broad spectrum of symptoms**

According to Prof. Dr. C.J.J. Mulder, Amsterdam (The Netherlands), there is significant clinical overlap between celiac disease and the clinical picture in the inflammatory bowel diseases (IBD) such as ulcerative colitis and especially Crohn’s disease. Celiac disease, however, represents a distinct disorder that must be differentiated from IBD. Clinicians must consider this diagnosis not only when confronted with symptoms such as malnutrition, frequent diarrhea, abdominal pain and weight loss, or when children present with growth retardation. In fact, celiac disease may just as likely manifest with less obvious symptoms such as arthritis, anemia, unclear elevation of liver enzymes, neurological disorders or even psychiatric symptoms, such as depression. Similarly, when patients present with frequent oral aphthae, a feeling of being unwell or with otherwise unexplained reduced physical fitness, celiac disease should always be considered in the differential diagnosis.

Celiac disease should also be considered, said Dr. J.C. Bai, Buenos Aires (Argentina), when patients present with osteopenia or osteoporosis, or in whom gastroesophageal reflux symptoms do not respond to conventional therapies or when an autoimmune disorder is diagnosed, as there is a significant association between these disorders and celiac disease. Celiac disease is especially widespread in patients with dermatitis herpetiformis, as well as in patients with thyroid autoimmunity or type 1 diabetes mellitus.

**Undiagnosed in 90%**

In busy clinicians’ daily routine, however, this connection is often missed. “Right now, nine of ten cases go unrecognized,” said Dr. L.M. Mearin, Leiden (The Netherlands), arguing for a general screening for celiac disease beginning in childhood.

In any case, patients whose differential diagnosis includes celiac disease, should always be asked regarding a connection between their complaints and their diet. If there is any evidence of an association with the consumption of foods containing gluten, an antibody test is indicated. This is usually only the first step: Gluten-containing foods are ubiquitous, hence this rarely allows for an unequivocal differentiation.

**Hope for pharmacological therapy**

The only currently available therapeutic option is a strict gluten-free diet. Many patients, however, find this difficult to maintain, especially because of its significant impact on the quality of life. “For patients affected by celiac disease, just picking a restaurant becomes practically impossible,” Prof. Dr. D. Schuppan, Mainz (Germany), remarked. Notably, studies showed that the felt quality of life of celiac patients is comparable to that of patients with hemodialysis.

Maintaining a gluten-free diet is difficult in general since many, in particular processed foods contain hidden gluten. Comprehensive nutritional counseling is imperative: “Patients should be referred to an experienced dietician,” Prof. Schuppan emphasized.

---

**Fig. 2:** Dermatitis herpetiformis, an autoimmune disease, forming rash and herpes, predominantly on the extensor side of joints (J.C. Bai, Buenos Aires)
There is, however, the justified hope that new therapy concepts may just be on the horizon. For example, research has targeted the development of glutenases that degrade and thus abolish immunogenicity in dietary gluten. Other novel concepts are also being pursued, including vaccination, or inhibition of the tissue transglutaminase, the celiac disease autoantigen which potentiates the immunogenicity of gluten. Still, as Prof. Schuppan noted, these new concepts are not likely to make a gluten-free diet superfluous: “These new therapies may serve to complement the diet in such that patients will experience fewer problems if they do consume small amounts of hidden gluten.”

As with celiac disease, only dietary measures are currently available to target wheat intolerance: “Based on preclinical and clinical data we estimate that up to 10% of the general population could benefit today from a wheat-reduced diet, but more and better clinical studies are needed” Prof. Schuppan said.

**Wheat sensitivity:**
**Possibly caused by amylase-trypsin inhibitors**

Celiac disease is not the only wheat-related disorder. Apart from wheat allergy, non-celiac wheat sensitivity may represent an even more common disorder, though to date a clear definition and diagnosis has been difficult, being largely based on exclusion of other disorders including irritable bowel syndrome (IBS) and other food intolerances.

“This type of sensitivity to wheat is probably due to an innate immune response to the amylase-trypsin inhibitors (ATI) in wheat. In plants, ATIs, among other functions, act as inhibitors for parasite enzymes,” remarked Prof. Schuppan. A normal wheat-based diet containing about 15–20 grams of gluten per day includes up to 1 gram of ATIs. Non-celiac wheat sensitivity manifests itself not only with gastrointestinal symptoms but also with increased fatigue, neurological or dermatological symptoms and likely worsening of pre-existing autoimmune disorders. A clear diagnosis currently requires exclusion of celiac disease, food allergies (including wheat allergy), IBS and intolerances to FODMAPs (fermentable oligo-, di- and monosaccharides and polyols) which are present in many grains, vegetables and fruits, among other factors. Specific diagnostic tests are expected to be available in the near future.

Fig. 3:
Heal and support the gut
(M. Dennis, Boston)

Eat whole, unprocessed food as much as possible

Space regular meals and snacks

Drink fresh water

Take appropriate supplements

Gluten-free diet

Prioritize exercise and social connections
Celiac disease ...

Gluten-induced enteropathy: Immunology – diagnostics – therapy

Closely tied to the HLA system

The pathogenesis of celiac disease has roots in both genetic and environmental factors. There is a close association with the HLA system, said Prof. Dr. L.M. Sollid, Oslo (Norway). Patients with celiac disease carry HLA haplotypes DQ2 and DQ8 as a necessary but not sufficient precondition. In the intestinal immune system, gluten epitopes are presented to CD4+ T cells via HLA-DQ2 or HLA-DQ8, and can thus lead to gluten-induced T cell activation. Patients produce mucosal (especially IgA) antibodies to gluten (with gliadin as a subfraction), to the body’s own enzyme, transglutaminase 2 (TG2), and to deamidated gluten peptides that have been generated by TG2. The presentation of gluten epitopes to T cells is a required step in the pathogenesis of celiac disease, said Dr. N. Cerf-Bensussan, Paris (France), but does not in itself suffice. Further factors must converge in order to produce an immunological intolerance to dietary gluten. As an important example of such factors Dr. Cerf-Bensussan cited the activation of intraepithelial lymphocytes by interleukin-15 (IL-15) and the resultant compromise of T regulatory cells that usually maintain tolerance to dietary gluten.

Chronic inflammation in the small bowel

These pathological immune reactions result in a breakdown of the normal default tolerance to gluten and lead to a chronic inflammatory reaction in the small bowel, reported Prof. Dr. A.M. Mowat, Glasgow (Scotland). Also involved in this reaction are interactions with the intestinal microbiome, Prof. Dr. C.O. Elson, Birmingham (USA) added: Certain bacteria stimulate either an aggressive or a regulatory T cell response, and can thus suppress or trigger dysregulation of intestinal inflammation.

Prevalence: Higher than previously estimated

The prevalence of gluten-induced enteropathy averages about 1% of the general population worldwide, though there are significant regional differences, said Prof. Dr. C. Catassi, Ancona (Italy). Even in Asia, especially in India and probably also in northern and central China, where celiac disease was long considered a rarity, recent surveys estimate a prevalence of about 1%, said Prof. Dr. G.K. Makharia, New Delhi (India).

A disease that is often overlooked

Celiac disease may manifest with any of a number of symptoms. This explains why this disorder is so frequently overlooked. In the USA, for example, it is estimated that, from the first onset of symptoms, an average of 11 years may pass before the correct diagnosis is made.

- Refractory iron-deficiency anemia
- Dermatitis herpetiformis
- GERD symptoms
- Osteopenia & osteoporosis
- Psychological distress
- Recurrent mouth ulcers
- Failure to thrive
- Neurological symptoms
- Hypertransaminasemia
- Menstrual disturbances
- Short stature
- Recurrent abortion
- Low body weight
- Skin disorders (psoriasis)
- Hypoproteinemia (albumin)
- Vitamin D and B12 deficiency
- Bleeding diathesis
- Paresthesia, cramps, tetany
- Hypopituitarism
- Adrenal insufficiency
- Unexpected weight loss

In Germany, this gap stands at eight years, on average, reported Dr. P.H.R. Green, New York (USA). One reason for this may be that the symptomatology of celiac disease has undergone a significant transition in the past 30 years. In the past, diarrhea predominated the clinical picture; today, an increasing association with other disorders and symptoms is observed. As examples, Dr. Green cited anemia and osteopenia/osteoporosis, adding that “celiac disease is no longer a disease of children as had long been assumed.” The disease can just as frequently manifest itself in adults, though here it often manifests itself with a much different symptomatology. According to Dr. J.C. Bai, Buenos Aires (Argentina), celiac disease should be considered among the potential differential diagnoses in patients with skin disorders (especially dermatitis herpetiformis), with gastroesophageal reflux disorder (GERD), and even with psychological or neurological symptoms. In addition, celiac disease should also be considered in patients with unusually low body weight or with vitamin D or B12 deficiencies, as well as in patients with paresthesias, cramping or tetany, Dr. Bai added.

Tab. 1 Extraintestinal manifestations of celiac disease – Clinical aspects (J.C. Bai, Buenos Aires)
Association with autoimmune disorders

Complicating the differential diagnosis are the different forms in which celiac disease may present and progress. While celiac disease may present with intestinal and/or manifest extraintestinal symptoms, there is also the possibility of subclinical or atypical forms. There is also a close association between celiac disease and autoimmune disorders, said Prof. Dr. G.J. Kahaly, Mainz (Germany). According to data from the Gastroenterological and Endocrinological Clinic in Mainz, Prof. Kahaly reports a prevalence of celiac disease in patients with type-1 diabetes mellitus at 4% and in those with an autoimmune thyroid disorder at 13%. Here, celiac disease is a predictor of multiple endocrine autoimmunity, such as the autoimmune polyendocrine syndrome type 3 variant which runs in families and encompasses autoimmune thyroiditis and type 1 diabetes.

Breastfeeding: Does it really prevent celiac disease?

Still unclear is the extent to which the development of celiac disease can be prevented. Breastfeeding has long been considered a means of primary prevention but, as Dr. M.L. Mearin, Leiden (The Netherlands) explained, the data have been contradictory. While retrospective studies point to a 52% reduced risk of celiac disease in children who had been breastfed for prolonged periods, two recently published large prospective studies suggest that the situation is more complex and do not support any significant prophylaxis from prolonged breastfeeding. Earlier studies also suggested that the risk of celiac disease was increased when infants were started on foods containing gluten prior to the fourth or after the sixth month of life. An US study of 2005 even postulated a “window of opportunity” for introducing gluten in children at risk. The above mentioned Europe-wide prospective study headed by Dr. Mearin, as well as the accompanying large Italian study, however, failed to confirm a benefit of cautious introduction of gluten in this time window or early in life. In Dr. Mearin’s opinion, the last word regarding other preventive measures has yet to be written: “We need further prospective cohort studies to develop effective strategies.”

Still essential: The gluten-free diet

A strict gluten-free diet remains the only therapeutic option in celiac disease. Affected patients require a corresponding education and the ongoing support of a competent dietician, said M. Dennis, Boston (USA). Follow-up care must include regular assessments of nutritional status including absorption parameters, in order to promptly recognize any deficiencies.

Don’t forget non-celiac enteropathies

Differential diagnostic considerations must include a number of other enteropathies that do not develop on the basis of intolerance to dietary gluten. One such disease entity, Dr. G. Pineton de Chambrun, Lille (France) discussed, is eosinophilic enteritis, which may occur in association with different types of food allergies (intolerances). Also to be considered, according to Dr. R. Valenta, Vienna (Austria), are allergic reactions that remain difficult to diagnose, because even the improved skin and IgE tests often yield false-negative or false-positive results. Here, more sensitive and specific tests are in development. Another example was provided by Prof. Dr. T. Marth, Daun (Germany), who discussed Whipple’s disease and other rare infectious diseases, which, when suspected, need to be ruled out. Furthermore, motility disturbances, as may, for example, be associated with IBS, must be considered, said Dr. E.F. Verdu, Hamilton (Canada). Finally, Prof. Dr. J. Murray, Rochester (USA) discussed drug-induced damage to the small bowel that may resemble celiac disease, such as the recently described but not-so-rare syndrome of duode-
This underscores the requirement for comprehensive biopsy and molecular diagnostics, said Prof. Dr. C.J.J. Mulder, Amsterdam (The Netherlands), in addition to continued intensive research aimed at developing alternate or adjuvant therapeutic options for patients with refractory disease. Possible candidates are common immunosuppressants and biologics. If, however, lymphoma develops, the patients’ prognosis is limited: According to Dr. O. Visser, Amsterdam (The Netherlands), reports in the literature point to a five-year survival of 8–50%. Autologous bone marrow transplantation may offer some hope but further studies are required.

Endomicroscopy: Histological examination in vivo

Current guidelines recommend at least four biopsies from the duodenum in patients being worked up for celiac disease. At the same time, however, there have been significant advances in endoscopic diagnostics, explained Prof. Dr. R. Kiesslich, Frankfurt (Germany), citing as an example endomicroscopy, a method that practically allows for a histological examination in vivo. Among its other capabilities, endomicroscopy provides real-time data on rapidly developing inflammatory processes in the small bowel provoked by ingestion of defined foods, as recently demonstrated in a study published in Gastroenterology (Fritscher-Ravens A et al.). Further advances in the diagnosis of celiac disease are expected from new radiological methods as well as from capsule endoscopy, said Dr. M. Jacobs, Amsterdam (The Netherlands) and Dr. E. Rondonotti, Como (Italy). This latter method is especially useful to diagnose cases of refractory celiac disease, said Dr. S. van Weyenberg, Leiden (The Netherlands). Some researchers, such as Dr. D. Leffler, Boston (USA), however, have focused especially on the new developments in serum markers. In addition to the conventionally measured antibodies in active celiac disease, primarily antibodies to TG2, researchers have identified new markers of intestinal inflammation, such as intestinal fatty acid binding protein (I-FABP).

Wheat sensitivity: Widespread but not widely recognized

Not every patient who reacts symptomatically to gluten has celiac disease. In fact, as Dr. A. Sapone, Naples (Italy) explained, there is the condition of non-celiac gluten sensitivity (NCGS), which can cause gastrointestinal and extraintestinal symptoms and which is probably more common than celiac disease. For a diagnosis of NCGS to be made, celiac disease or wheat allergy, as well as other intolerances to, for example, lactose or fructose, must be ruled out. According to Prof. Dr. Dr. D. Schuppan, Mainz (Germany), NCGS may be caused by a reaction of the innate immune system against wheat proteins other than gluten. Investigations by his research group have found that NCGS (more correctly named non-celiac non-allergy wheat sensitivity) appears to be based on an innate immune response against amylase-trypsin inhibitors (ATIs), non-gluten proteins found in wheat and other gluten-containing grains such as rye and barley, a reaction that is mediated by the widespread Toll-like receptor 4 (TLR4) expressed mainly on macrophages and dendritic cells. This mechanism would also explain the worsening of both intestinal and extraintestinal symptoms in these patients. Patients with wheat sensitivity probably do not require a strict gluten-free diet but only a 90–95% reduction in dietary gluten. However, this link has to be further explored in clinical studies.

Neurological manifestations: Consider gluten sensitivity

A gluten-free diet is also indicated in patients with gluten ataxia, another disease entity that is related to gluten sensitivity, explained Prof. Dr. M. Hadjivassiliou, Sheffield (Great Britain). Gluten ataxia is responsible for about 15% of all progressive ataxias and for 42% of idiopathic sporadic ataxias. If patients can maintain a strict gluten-free diet, improvement of the ataxia can occur within one year. All of this data, however, should not lead to a “wheat avoidance epidemic” warned Dr. E. Newnham, Melbourne (Australia). However, he cautioned that, in addition to gluten, wheat contains so-called FODMAPs (fermentable oligo- di- and monosaccharides and polyols) that can cause both gastrointestinal and extraintestinal symptoms, especially bloating. FODMAPs, however, are contained in many foods and do not induce intestinal inflammation.

Hope for new therapy options for celiac disease

Researchers are intensively working on the development of new therapy options for patients with celiac disease. One focus of their attention is a group of non-mammalian enzymes known as glutensases that degrade immunogenic gluten peptides that are otherwise not degraded by the human GI tract, explained Prof. Dr. K. Kaukinen, Tampere (Finland). Whether this concept will indeed prove successful is currently tested in clinical studies, with a positive result in a phase 2a study that was recently published in Gastroenterology. The concept seems logical, since the enzymes act in the small bowel and are thus not directly involved in the “immunological cascade in the lamina propria.” “A pharmaceutical treatment option would be highly welcome, since the lifelong maintenance of a strict gluten-free diet is extremely difficult for patients and often not unproblematic in terms of patients’ overall nutritional status,” she emphasized. In addition, explained Dr. M. Rossi, Avellino (Italy), researchers are pursuing the development of novel treatment strategies including a therapeutic vaccination with the objective of inducing oral tolerance to gluten in patients with celiac disease.
Poster prizes awarded

Three poster prizes were awarded during Falk Symposium 193
The recipients are:

First prize:
Sandra Pahr, Vienna (Austria) for her research on “Biochemical, structural, immunological characterization and IgE epitope mapping of an important wheat food allergen, Tri a 37”.

Second prize:
Mohamed Sharaf-Eldin, Tanta (Egypt), for his work on “Prevalence of celiac disease in Egyptian children and adolescents with diabetes mellitus: A clinical, biochemical and histopathologic study”.

Third prize shared by the following three recipients:

Dr. Ilma Korponay-Szabo, Budapest (Hungary), for her research on “Food-grade glutenases to treat dietary transgressions in coeliac adolescents”.

Dr. Karen M. Lammers, Boston (USA), for her work on “Gliadin peptide motifs induce human neutrophil chemotaxis via the engagement of formyl peptide receptor 1”.

Dr. Maria Ines Pinto-Sanchez, Hamilton (Canada) for her research on “Improvement of gastrointestinal symptoms and motility in non-celiac gluten-sensitive patients after the gluten-free diet”.


Interview with Prof. Dr. Dr. Detlef Schuppan, Mainz (Germany)

“We have long underestimated celiac disease as a disease entity”

Editors:
Professor Schuppan, why devote a symposium lasting several days to celiac disease?

Professor Schuppan:
Celiac disease is a distinct disease entity that differs significantly from the classical inflammatory bowel diseases. On the other hand, they also show similarities with respect to their immunological background. Thus, there is an overlap of cytokine-mediated immune mechanisms, especially with Crohn’s disease, and in part also in their genetic predisposition. This new understanding has spawned interest in scientific exchange of ideas, since we are seeing new, often common, avenues for the development of novel therapy options for both (complicated) celiac disease and IBD.

Editors:
Is it really true that celiac disease, as reported during the symposium, is more common than previously thought?

Professor Schuppan:
We have long underestimated this disease and have learned that celiac disease occurs much more frequently than, for example, the inflammatory bowel diseases. Although the symptoms are generally not so dramatic, the frequency of this disorder is probably 10-times higher than that of Crohn’s disease or ulcerative colitis. This fact had long been unrecognized due to the high number of undiagnosed cases.

This number has been estimated at 80% or even as high as 95%. Even in the developed countries, celiac disease frequently goes undetected or is diagnosed very late. Current estimates place its prevalence at about 1% or more in most countries around the globe.

In Germany, the prevalence of celiac disease is surprisingly low: We estimate it at about half as high as in many other nations with a similar genetic background. We can only speculate about the reasons. For example, the later onset of consumption of large amounts of gluten-containing products may play a role, but this has largely been published in the New England Journal of Medicine. The type of bread we eat may also be important. A higher proportion of sour dough bread is eaten in Germany with a reduced content of immunogenic gluten. Further environmental factors likely also play a role.

Editors:
Why was the prevalence underestimated for so long?

Professor Schuppan:
Diarrhea is considered the cardinal symptom of celiac disease. It is known, however, that, in about 80% of patients, diarrhea either does not occur or does not dominate the clinical picture.

There are also a number of patients whose celiac diseases follows a subclinical course. These patients may simply feel “unwell” or even experience constipation. Or, as is not all that infrequent, celiac disease may be associated with an autoimmune disorder and mainly manifests as such. Because these patients may also benefit from a gluten-free diet in regards to the associated autoimmunity, a population-wide screening for celiac disease, beginning in childhood, may be indicated. A clear indication for a screening examination naturally exists in any patient who presents with complaints out of the extremely diverse celiac disease symptom complex.

Editors:
In what specific situations should clinicians think about celiac disease?

Professor Schuppan:
There are many symptoms that can be attributed to celiac disease, but most of these are not specific or pathognomonic. Naturally, the disease should always be considered in patients with the classical, diarrhea-dominated gastrointestinal symptoms in combination with parameters of malabsorption. Also, celiac disease should be considered in all patients with an associated autoimmune disease such...
Editors: What is characteristic for wheat sensitivity?

Professor Schuppan: It has long been known that certain individuals, who do not suffer from either celiac disease or wheat allergy, nevertheless react specifically and with diverse symptoms including severe inflammatory processes to the ingestion of wheat. These reactions may impact the gastrointestinal tract but may also primarily manifest outside the GI tract. There may be rheumatological and even neurological symptoms/exacerbation or preexisting disease or dermatological disorders. Or, there may simply be a reduction in physical and psychological well being.

Strictly speaking, the expert community agrees that wheat sensitivity is based on an innate immune reaction. We know that, beyond gluten, there are other substances contained in wheat that stimulate the innate immune system in affected individuals. According to current understanding, these substances are amylase-trypsin inhibitors or ATIs, which constitute up to 4% of wheat protein and serve, among others, to protect the grains against pests like the mealbug.

Editors: Are there any therapy options besides the gluten-free diet?

Professor Schuppan: A gluten-free diet remains the cornerstone in the treatment of celiac disease. Patients require comprehensive nutritional counseling including measures to prevent possible nutrient deficiencies that can be associated with gluten-free diets. The treating physician should always refer freshly diagnosed patients or patients with complaints despite a gluten-free diet to competent nutritional counseling. Maintaining a strict gluten-free diet is not easy, since apart from obvious gluten sources most refined foods contain hidden gluten. Currently, there is no effective pharmaceutical treatment for celiac disease. Researchers, however, are intensively exploring novel treatment options, including first clinical trials up to phase 2. If effective, these will likely not make the gluten-free diet obsolete. Instead, they will supplement the diet and thus, neutralize the small amounts of gluten the patient may be consuming unintentionally, a constant fear for patients that leads to a dramatic reduction in their quality of life.

Promising concepts are the development of glutenases that are taken together with the food, an inhibitor of TG2, or induction of tolerance to gluten, e.g. by a “gluten vaccination” or similar immunological approaches.

These efforts will hopefully lead to an adjunctive therapy that will substantially relieve the constant dietary and psychological stress of patients suffering from celiac disease.

Professor Schuppan, thank you for the interview.
Critical Evaluation of Current Concepts and Moving to New Horizons in the Management of IBD

March 6 – 7, 2015
Frankfurt, Germany

Congress Venue
Kap Europa
Osloer Str. 5
60327 Frankfurt
Germany

Scientific Organization
A. Dignass, Frankfurt (Germany)
S. Danese, Rozzano (Italy)
G. Mantzaris, Athens (Greece)
B. E. Sands, New York (USA)
Speakers, Moderators and Scientific Organizers

Dr. Julio C. Bai
Jefe de Departamento de Medicina
Hospital de Gastroenterologia
Dr. Carlos Bonorino Udaondo
Av. Caseros 2061
1264 Buenos Aires
Argentina
jbai@intramed.net

Dr. Federico Biagi
First Department of Internal Medicine
Policlinico San Matteo
Piazzale Golgi 19
27100 Pavia
Italy
f.biagi@smatteo.pv.it

Dr. Gerd Bouma
Vrije Universiteit
Medisch Centrum
Afd. MDL
de Boelelaan 1117
1081 HV Amsterdam
The Netherlands
g.bouma@vumc.nl

Prof. Dr. Carlo Catassi
Department of Pediatrics
Università Politecnica delle Marche
Via F Corridoni 11
60123 Ancona
Italy
c.catassi@univpm.it

Prof. Dr. Christophe Cellier
Dept. of Gastroenterology and Digestive Endoscopy
Hôpital Européen Georges Pompidou
20 Rue de Leblanc
75908 Paris
France
christophe.cellier@egp.aphp.fr

Dr. Nadine Cerf-Bensussan
Université Paris Descartes
Medical School
INSERM U989
156, rue de Vaugirard
75730 Paris
France
nadine.cerf-bensussan@inserm.fr

Melinda Dennis
Nutrition Coordinator, Celiac Center
Beth Israel Deaconess Medical Center
330 Brookline Ave
Boston, MA 02215
USA
mdennis@bidmc.harvard.edu

Charles O. Elson, M.D.
Professor of Medicine
Univ. of Alabama at Birmingham
Div. of Gastroenterology and Hepatology
SHEL 607
1825 University Boulevard
Birmingham AL 35294-0005
USA
colson@uab.edu

Alessio Fasano, M.D.
MassGeneral Hospital for Children
Pediatric Gastroenterology and Nutrition
175 Cambridge Street, CPZS - 574
Boston, MA 02114
USA
afasano@partners.org

Peter H. R. Green, M.D.
Celiac Disease Center
Columbia University Medical Center
180 Fort Washington Ave., Room 936
New York, NY 10032
USA
pg11@columbia.edu

Prof. Dr. Marios Hadjivassiliou
Royal Hallamshire Hospital
Glossop Road
Sheffield S10 2JF
Great Britain
m.hadjivassiliou@sheffield.ac.uk

Dr. Maarten Jacobs
Vrije Universiteit
Medisch Centrum
Afd. MDL
de Boelelaan 1117
1081 HV Amsterdam
The Netherlands
majm.jacobs@vumc.nl

Prof. Dr. George J. Kahaly
Innere Medizin I
Universitätsmedizin der
Johannes Gutenberg-Universität
Langenbeckstr. 1
55131 Mainz
Germany
kahaly@ukmainz.de

Prof. Dr. Katri Kaukinen
School of Medicine
University of Tampere
33014 Tampere
Finland
katri.kaukinen@uta.fi
Ciarán P. Kelly, M.D.
Professor of Medicine
Harvard Medical School
Beth Israel Deaconess Medical Center
330 Brookline Ave
Boston, MA 02215
USA
cckelly2@bidmc.harvard.edu

Prof. Dr. Ralf Kiesslich
Innere Medizin
Katharina-Kasper-Kliniken
St. Marienkrankenhaus
Richard-Wagner-Str. 14
60318 Frankfurt
Germany
info@ralf-kiesslich.de

Prof. Dr. Frits Koning
Department of Immunohematology
and Blood Transfusion
Leiden University Medical Center
Building 1, E3-Q
P.O. Box 9600
2300 RC Leiden
The Netherlands
fkoning@lumc.nl

Daniel A. Leffler, M.D.
Beth Israel Deaconess Medical Center
Division of Gastroenterology
East/Dana 501
330 Brookline Avenue
Boston, MA 02215-5400
USA
dleffler@bidmc.harvard.edu

Dr. Knut E. A. Lundin
Oslo University Hospital Rikshospitalet
Department of Gastroenterology
Sognsvannveien 20
0027 Oslo
Norway
k.e.a.lundin@medisin.uio.no

Dr. Govind K. Makharia
Additional Professor
Department of Gastroenterology
and Human Nutrition
All India Institute of Medical Sciences
Ansari Nagar
New Delhi 110029
India
govindmakharia@aiims.ac.in

Prof. Dr. Thomas Marth
Innere Medizin
Krankenhaus Maria Hilf
Maria-Hilf-Str. 2
54550 Daun
Germany
t.marth@krankenhaus-daun.de

Dr. M. Luisa Mearin
Department of Paediatrics
Leiden University Medical Center (LUMC)
E3-Q, P.O. Box 9600
2300 RC Leiden
The Netherlands
ml.mearin_manrique@lumc.nl

Prof. Dr. Allan M. Mowat
Institute of Infection,
Immunity and Inflammation
120 University Place
Glasgow G12 8TA
Scotland
allan.mowat@glasgow.ac.uk

Prof. Dr. Christinus J. J. Mulder
Vrije Universiteit
Medisch Centrum
Afd. MDL
de Boelelaan 1117
1081 HV Amsterdam
The Netherlands
cjmulder@vumc.nl

Joseph Murray, M.D.
Professor of Medicine
Mayo Clinic, Consultant, Division of
Gastroenterology, Hepatology and
Department of Immunology
200 1st St SW
Rochester, MN 55905
USA
murray.joseph@mayo.edu

Dr. Evan Newnham
Monash University
Gastroenterology
Level 2, 5 Arnold Street
Box Hill, 3128
Australia

Dr. Guillaume Pineton de Chambrun
Gastroenterology Department
Lille University Hospital
North of France University
59000 Lille
France
gpinetondechambrun@yahoo.fr

Dr. Emanuele Rondonotti
Ospedale Valduce
Gastroenterology Unit
Via Dante 10
22100 Como
Italy
ema.rondo@libero.it