

CDMedics General Assembly EDITORIAL



Welcome to this edition of the CD Medics Newsletter. The CD Medics project is just past its mid-term. The third CDMedics General Assembly was held in Dublin between the 1st and 3rd March 2010.

During this meeting a full review of the project workpackages was presented by the relative workpackage leader in preparation to the mid-term review by the commission. The project passed its mid-term review by the commission with flying colours, and all the aspects of the projects being well on course.

This issue of the CD-Medics Public Newsletter shall be dedicated to a report on the Coeliac Disease Road-show – International Coeliac Disease Medical Training Seminar, was held in Budapest, Hungary between the 29th and 30th April 2010. Both the Road-show – Training Seminar formed part of the Training and Dissemination workpackages of CDMedics.

For this Road-show and Training Seminar it was decided to discuss Coeliac Disease from a complex point of view with experts in epidemiology, pathology, genetics, serology, diagnosis, family practice and dietary science brought together so as to give a multidisciplinary approach to CD. In addition the particular aspects of environmental/risk factors and the relation to other autoimmune diseases completed the picture.

In addition, this issue shall also present information on one of the partners, the Finnish Red Cross blood Service as well as announcing the events that shall take part in the next few months.



The participants of the 3rd CDMedics General Assembly in Dublin

CDMedics training secondments

Coeliac UK and UKC-Maribor are in the process of organising a training secondment for the beginning of November. A gastroenterologist on Coeliac UK's Health Advisory Panel who practices in Sheffield will host two Russian doctors for two days to introduce them to gastroenterology practices on coeliac disease in the UK.

The visit will include an introductory day to clinics (programme, gastroenterology department); exposure to the hospital laboratory and pathology; working with English expert in

clinic (seeing patients with coeliac disease; diagnostic procedure); visit with Coeliac UK to discuss recent funded research and information on the gluten-free diet and available resources.

Additionally, a UK pathologist visited Moscow in mid-May to provide training to a high profile Russian pathologist. Agenda items included histology and specimen staining. The main goal for this knowledge transfer is that the Russian pathologist will cascade up-to-date information to their colleagues via recognized local dissemination streams.

Coeliac Disease Road-show – International Coeliac Disease Medical Training Seminar

Budapest, Hungary, 29-30 April, 2010

The Coeliac Disease Road-show – International Coeliac Disease Medical Training Seminar held in Budapest, Hungary between 29-30 April, 2010, was attended by over 90 participants coming from neighbouring countries round Hungary. It was officially opened by Mrs Tunde Koltai, the President of the Hungarian Coeliac Society as well as a member of the Board of AOECS

She was followed by Prof. Dr. Dušanka Mičetić-Turk, MD, that presented the latest data on the epidemiology of Coeliac Disease (CD). She presented data showing that within Europe, the ratio between diagnosed and undiagnosed cases ranges from 1:13 to as high as 1:5. This fact coupled with the high risk of morbidity and mortality in undiagnosed cases, is increasing the need for quicker and more specific screening tools. The development of serological and genetic markers has resulted in an increase in the identification of new cases and a better understanding of the incidence of the CD in Europe, that is currently estimated to be in the range of 1%.

The pathogenesis of the CD was elucidated by Dr Federico Biagi, who described the cellular interactions within the intestinal mucosal that include gliadin-specific DQ2-restricted T lymphocytes that are sensitized once gliadin is presented to them by antigen-presenting HLA DQ2 positive cells. Once they have been activated by gliadin, these lymphocytes produce a pattern of type Th 1 cytokines, which are responsible for the development of the subsequent intestinal lesions. This triggers a mechanism which, by producing nitric oxide and increasing enterocyte apoptosis that leads to the development of the intestinal lesions.

Prof. Luisa Mearin of Leiden University Medical Center, the Netherlands and Co-ordinator

PreventCD project, gave an overview of the present knowledge on the genetics of CD. As has been known for a number of years, the principal genetic determinants for the predisposition of CD are the major histocompatibility class II human leukocyte antigen (HLA) class II, in particular the presence of HLA-DQ2 or HLA-DQ8 genotype. Though the relationship between CD and HLA is very strong, the fact that 30% to 40% of the Caucasian population holds the HLA-DQ2 and/or HLA-DQ8 genes whilst only 1% develop CD, indicates that though necessary, these genes are not sufficient to develop CD. By inference, other genetic loci are therefore important to develop CD. In the past 5 years, over 26 non-HLA loci have been conclusively identified

through genome-wide association study (GWAS) on CD. There is evidence that the presence of these genes shall be useful in identifying individuals at risk of CD.

Prof Mearin was followed by Dr Melinda Raki, of the Institute of Immunology, University of Oslo, Norway, who spoke of serological aspect of CD. Dr. Raki compared the different types of serological markers presently used in the screening for CD in particular the anti-endomyseal (EMA) and anti transglutaminase antibodies (TGA). Though both are highly specific to identify CD, the fact that TGA estimation is based on an ELISA technique makes more objective. On The other hand, IgA deficiency effects the sensitivity for both tests.

Prof. Vincenzo Villanacci from the University of Brescia, Italy, delivered a





Partner Overview

Finnish Red Cross blood Service, Finland

detailed presentation on the pathology of Coeliac Disease. In his very interesting discussion and exposition of the pathological changes in CD, Prof. Villanacci presented the main problems that give rise to misdiagnosis of CD, mainly the pathological interpretation of intestinal biopsies, the adequate number of biopsies needed for proper diagnosis and the proper orientation of the biopsy material. In his presentation, Prof Villanacci gave a detailed account of the new classification that is replacing the modified Marsh classification. In this new classification the lesions characterising coeliac disease were divided into non-atrophic (grade A, corresponding to Marsh 1 and 2) and atrophic (grade B, corresponding to Marsh 3) with the latter further split into grade B1 (Marsh 3a and 3b), in which the villus/crypt ratio is less than 3/1, with still detectable villi, and grade B2 (Marsh 3c) in which the villi are no longer detectable.

Dr. Dorine Borensztajn from the University Medical Centre, the Netherlands and PreventCD, discussed the appearance of CD in relationship to the time of gluten exposure and breast feeding. Dr Borensztajn described how a number of studies have indicated that the introduction of gluten in the period 4-6 months of age might provide a “window of opportunity” for the introduction of gluten. The PreventCD project has been designed in an attempt to test this hypothesis. In addition to the timing of gluten introduction, the duration of breast feeding as well as possible intestinal infections have all been implicated as environmental factors that predispose to CD.

Dr. Katharina Julia Werkstetter, from the third invited speaker from the PreventCD project. Dr Werkstetter delivered a talk on the AiDA subproject of PreventCD. This subproject is

The Finnish Red Cross Blood Service (FRCBS) is the nationwide blood service provider in Finland. Its services comprise recruiting blood donors, organising blood donation, collecting blood and testing the donated blood. It also offers a range of laboratory services to hospitals, related to organ and stem cell transplantation, blood grouping etc. The FRCBS operates the Finnish Bone Marrow Donor Registry and Cord Blood Bank. Successful accomplishment of these tasks requires not just a professional, high-quality organisation but close alliance with donors, health-care staff and regulatory authorities too. Together they create potential to enhance

patients’ quality of life and, in many instances, to save lives. The Blood Service is an economically and operationally independent section of the Finnish Red Cross. Hospitals pay FRCBS for the products and services, and FRCBS uses this income to cover its operating expenses and investments. In 2009 FRCBS had a turnover of EUR 74,8 million. The FRCBS is a non-profit organisation. Its operations are subject to the Finnish Blood Service Act and other regulations, including the EU Blood Safety Directive. The operations are supervised by the Finnish Medicines Agency Fimea. The laboratory testings, including the HLA typings, have both the European (EFI) and ISO accreditations.

investigating the association of other autoimmune disorders (AiD) with CD in particular Type 1 Diabetes mellitus (T1DM), Autoimmune Thyroiditis, Systemic Lupus erythematosus and Sjogren’s syndrome. This subproject is attempting to identify the common genetic and environmental factors that link CD with the other AiD’s.

The role of the Family Practitioner has been identified to play a pivotal role in the early diagnosis of CD. Dr. Anna Magyar, a Family practitioner, expounded on the strategies in identifying persons with CD as well as the role of screening amongst the population at risk e.g. first degree relatives of CD patients.

The Coeliac diet was discussed by Ms Norma McGough from CoeliacUK, a partner in the CDMedics project. Ms McGough gave an overview of the evolution of the Codex Alimentarius standard for foods labelled gluten-free and the recently introduced EU labeling Directive 2003/89/EC that provides

guidelines for the food industry on labeling of allergens in food products. This legislation came into force in November 2005. Another aspect that was discussed was the safety of oats as part of a gluten free diet plan.

The meeting was closed by Ms Tunde Koltai, President of the Hungarian Coeliac Society and one of the Directors of the Board of AOECS. In her talk, MS Koltai discussed the role of the coeliac patients’ society in the various aspects of the CD patient’s life. These roles include, improvement in the quality of life of coeliac patients, the increase awareness of coeliac disease in the country among the general population and the healthcare professionals, organise scientific conferences, support and actively take part in scientific and research projects, and last but not least protect coeliac consumers’ rights.

The meeting was concluded by a general discussion on the various topics that were discussed.

2010 Events

EUROPE

24th AOECs General Assembly

September 16 - 18, 2010, Valencia, Spain

CDMedics International Coeliac Disease Conference

September 18, 2010, Valencia, Spain

CD-MEDICS will be present at Europe's most visible forum for ICT Research and Innovation: ICT 2010

September 27 - 29, 2010

7th European Mucosal Immunology Group Meeting (EMIG 2010)

September 29 - October 2, 2010, Amsterdam, The Netherlands
(<http://www.emig.eu>)

24th Meeting of the Working Group on Prolamin Analysis and Toxicity

September 30 - October 02, 2010, Ancona, Italy

2nd International Scientific Conference on Cereals - Their Products and Processing (ICC 2010)

October 07 - 08, 2010, Debrecen, Hungary
(http://portal.agr.unideb.hu/tanszekek/elelmiszertudomanyi/sajat_oldalak/2nd_international_scientific_conference_on_cereals)

18th Annual Congress of the United European Gastroenterology Federation (UEGW 2010)

October 23 - 27, 2010, Barcelona, Spain (<http://uegw10.uegf.org>)

2nd Course on Early Diagnosis and Follow-up of Coeliac Disease

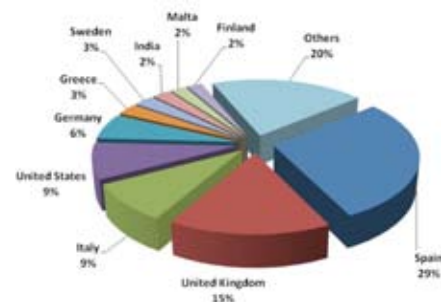
November 18, 2010, Madrid, Spain

2nd Congress of the Spanish Society of Coeliac Disease (SEEC 2010)

November 25 - 27, 2010, Arona, Tenerife, Spain
(http://www.seec.es/noticiasver.php?not_id=15)

XXVIII Madrid Coeliac Festival

December 11, 2010, Madrid, Spain



CDMedics Website

1610 the number of visits to the site in the last six months

2.7 average pages visualised per visit

4347 number of webpages visited

55.96% first time users to the site



CDMEDICS

Project Co-ordination Team

Nanobiotechnology
& Bioanalysis Group
Dynamic Innovation Center
Department of Chemical Engineering
Universitat Rovira i Virgili
Avinguda Paisos Catalans,
18, 43007 Tarragona, Spain
Tel: +34-977-558740/8721
Fax: +34-977-559621/8205
Email: cdmedics-info@urv.cat

www.cdmedics.eu

