European Skeletal Dysplasia Network www.esdn.org

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ESDN Newsletter

In this issue:

Don't forget to use the ***ESDN Case Manager***, the efficient, secure way to submit and manage all referrals to ESDN. If you would like to become a user or find out more about the ***ESDN Case Manager*** please let us know, email: info@esdn.org

The British Society for Matrix Biology

The **25th Anniversary BSMB Meeting: Pathobiology of Bone and Cartilage,** held in Manchester, UK, 12th - 13th September 2005, will be a special meeting to mark the retirement of Professor Mike Grant.

Session 1: Differentiation, pattern formation and morphogenesis in skeletal development
Stefan Mundlos (Max-Planck-Institute for Molecular Genetics, Berlin), Frank Luyten (University of Leuven), Pip Francis-West (King's College, London), Checco Ramirez (Hospital for Special Surgery, New York).

Session 2: Structure and function of the cartilage extracellular matrix
Kathy Cheah (University of Hong Kong), Dick Heinegard (University of Lund, Sweden), John Bateman (Royal Children's Hospital, Melbourne).

Session 3: Genetic diseases of bone and cartilage
Gillian Wallis (University of Manchester), Matt Warman (Case Western Reserve University, Cleveland), Michael Briggs (University of Manchester).

Session 4: BSMB Society Session
Six short talks selected from the abstracts

Session 5: Repair and regeneration of bone and cartilage
Peter Byers (University of Washington, Seattle), Bruce Caterson (University of Cardiff, Wales), Frank Barry (NUI Galway, Ireland), Tim Hardingham (University of Manchester).

Abstract deadline: 5th August 2005. For further details contact: Linda Green, tel: +44 (0) 161 2751516, email: linda.j.green@manchester.ac.uk or go to: http://www.bsmb.ac.uk and:

BSMB Autumn 2005 Meeting - Manchester 12-13th September 2005. **"Pathobiology of bone and cartilage"**

On the move

- Dr Andrea Superti-Furga, formerly head of the Lausanne (Switzerland) branch of ESDN and member of the expert review panel, recently moved to the position of Director of the Centre for Pediatrics and Adolescent Medicine in Freiburg, Germany. Dr Superti-Furga continues as an ESDN panel expert, and continues as supervisor of the ESDN Clinical and Radiological Review Coordinator: Dr Zankl. The Lausanne laboratory, under the direction of Dr Luisa Bonafé, continues to offer molecular testing within the ESDN programme.
- Dr Sheila Unger also recently moved from Lausanne (Switzerland) to Freiburg (Germany) where she has a joint appointment in the Institute for Human Genetics and Anthropology and the Center for Pediatrics. Dr Unger also continues as an ESDN review panel expert.
- The administrative arm of ESDN remains on the Manchester campus, but has relocated to the European Projects Office, housed within the purpose built North West Genetics Knowledge Park (Nowgen Centre). This move has facilitated closer links with a number of important resources, e.g., other UK and Europe wide networks and other rare disease initiatives. Molecular testing and sample processing in Manchester continues to be handled in the National Genetics Reference Laboratory (Manchester), which has close links with the Nowgen Centre.
- The Gent Connective Tissue Laboratory recently moved to a new medical research building, see ESDN in Focus - Part VII: "Details on the Gent group" for more details on this move.

ESDN Publications in 2005

Kennedy J, Jackson GC, Barker FS, Nundlall S, Bella J, Wright MJ, Mortier GR, Neas K, Thompson E, Elles R, Briggs MD. Novel and recurrent mutations in the C-terminal domain of COMP cluster in two distinct regions and result in a spectrum of phenotypes within the pseudoachondroplasia - multiple epiphyseal dysplasia disease group. **Hum Mutat. 2005 Jun;25(6):593-4.**

Kennedy J, Jackson G, Ramsden S, Taylor J, Newman W, Wright MJ, Donnai D, Elles R, Briggs MD. COMP mutation screening as an aid for the clinical diagnosis and counselling of patients with a suspected diagnosis of pseudoachondroplasia or multiple epiphyseal dysplasia. **Eur J Hum Genet. 2005 May;13(5):547-55.**

Zankl A, Bonafe L, Calcaterra V, Di Rocco M, Superti-Furga A. Winchester syndrome caused by a homozygous mutation affecting the active site of matrix metalloproteinase 2. **Clin Genet. 2005 Mar;67(3):261-6.**

Zankl A, Neumann L, Ignatius J, Nikkels P, Schrander-Stumpel C, Mortier G, Omran H, Wright M, Hilbert K, Bonafe L, Spranger J, Zabel B, Superti-Furga A. Dominant negative mutations in the C-propeptide of COL2A1 cause platyspondylic lethal skeletal dysplasia, torrance type, and define a novel subfamily within the type 2 collagenopathies. **Am J Med Genet A. 2005 Feb 15;133(1):61-7.**

ESDN in Focus

Part VII: "Details on the Gent group"

The Gent ESDN team is based at the Center for Medical Genetics, located at the Gent University Hospital (http://medgen.ugent.be/CMGG/). The department provides a clinical genetics service for the Northern part of Belgium (West and East Flanders) with molecular and cytogenetic testing for several genetic disorders.

The diagnostic service for ESDN provided by the Gent team includes the molecular and biochemical testing for osteogenesis imperfecta and molecular analysis for the type II collagenopathies, such as Stickler syndrome. The group is also actively involved in the clinical – radiological review of cases submitted to the ESDN via the online ESDN Case Manager.

The Gent team's current research in the field of skeletal dysplasias focuses on the role of LEMD3 in BMP/TGFb signaling and endochondral ossification, and on the identification of genes responsible for osteoporosis in males. The Gent group is also interested in receiving more cases with osteopoikilosis, melorheostosis and acrocapitofemoral dysplasia for mutation analysis of the LEMD3 and IHH genes. Finally, cases with severe Caffey-Silverman disease (infantile cortical hyperostosis) are collected in order to identify the genetic defect for this disorder.

Both the diagnostic and research part of ESDN are performed in the Connective Tissue Laboratory that recently moved to a new medical research building.

Fig1. The Gent group. From left to right: Inge Vereecke (Technician), Chantal De Winter (Technician), Anne De Paepe (Head of the Genetics Department), Kristien Hoornaert (PhD student), Jan Hellemans (PhD student), Paul Coucke (Supervisor of the Connective Tissue Laboratory) and Geert Mortier (Clinical Head of the Genetics Department).

Fig 2. The **new** medical research building in which the laboratories of the genetics department are located. The Gent group's mailing address remains the same**: *Connective Tissue Laboratory, Department of Medical Genetics, Gent University Hospital, De Pintelaan 185, B-9000 Gent, Belgium.***

Recent publications from the Gent lab:

Hellemans J, Coucke PJ, Giedion A, De Paepe A, Kramer P, Beemer F, Mortier GR. Homozygous mutations in IHH cause acrocapitofemoral dysplasia, an autosomal recessive disorder with cone-shaped epiphyses in hands and hips. **Am J Hum Genet. 2003 Apr;72(4):1040-6.**

Faivre L, Le Merrer M, Douvier S, Laurent N, Thauvin-Robinet C, Rousseau T, Vereecke I, Sagot P, Delezoide AL, Coucke P, Mortier G. Recurrence of achondrogenesis type II within the same family: evidence for germline mosaicism. **Am J Med Genet A. 2004;126:308-312.**

Hellemans J, Preobrazhenska O, Willaert A, Debeer P, Verdonk PC, Costa T, Janssens K, Menten B, Van Roy N, Vermeulen SJ, Savarirayan R, Van Hul W, Vanhoenacker F, Huylebroeck D, De Paepe A, Naeyaert JM, Vandesompele J, Speleman F, Verschueren K, Coucke PJ, Mortier GR. Loss-of-function mutations in LEMD3 result in osteopoikilosis, Buschke-Ollendorff syndrome and melorheostosis. **Nat Genet. 2004;36:1213-1218.**

Announcements

Check out a new book by Helen Firth and Jane Hurst with advisory editor Judith Hall: "Clinical Genetics"
This book provides a practical, easy-to-use guide to clinical consultation in genetics, covering the process of diagnosis, investigation, management, and counseling for patients. All commonly encountered genetic conditions are covered. June 2005 / ISBN 0-19-262896-8. Order from Oxford University Press at www.oup.com/uk/medicine, or telephone +44 (0)1536 741727.

ESDN questionnaire - We will be sending out a questionnaire in the near future and would be very grateful if you could help us by completing this questionnaire and letting us know what you think of **ESDN.**

Looking forward to seeing you at the 2005 International Skeletal Dysplasia Society meeting in MARTIGNY, Switzerland, from AUGUST 25th - 28th 2005. (**ISDS** - http://www.isds.ch/ISDSframes.html)