

## 16<sup>th</sup> World Congress on Ultrasound in Obstetrics and Gynecology, 3–7 September 2006, London, UK: presentations and awards

### Presentation of the Ian Donald Gold Medal to Brian Trudinger

It is a great pleasure and honor for me to introduce the winner of the Ian Donald Gold Medal 2006. Once a year, the International Society of Ultrasound in Obstetrics and Gynecology gives this award to a researcher, who, by his/her scientific work, contributed in a significant way to the field of obstetric and gynecological ultrasound. The decision on who will be given this honor is made by a committee consisting of all previous Ian Donald Gold Medal winners. For the year 2006, the committee decided to award Professor Brian Trudinger the Ian Donald Gold Medal.

Brian Trudinger is Professor of Obstetrics and Gynecology and Academic Head at Westmead Hospital,



Brian Trudinger and Karel Maršál.

University of Sydney, Australia. Since the early 1970s, he has used various modes of diagnostic ultrasound for studies of fetal physiology and for the development of new methods of monitoring fetal well-being. During his postgraduate stay at the University of London, Brian Trudinger studied fetal breathing movements using A-mode and later real-time B-mode ultrasound. After his return to Sydney, he worked with the research group of the Ultrasonics Institute. Together they succeeded in measuring volume blood flow in the umbilical vein by combining pulsed Doppler ultrasound for estimation of the mean blood velocity with B-mode for measurement of the vessel diameter.

Later, Brian Trudinger moved to Doppler studies of umbilical artery waveforms, and, in the systematic way that is so characteristic of his research, he explored the basics of blood velocity waveform analysis and the possibilities of applying the Doppler method for monitoring fetal health in pregnancies complicated by placental dysfunction. Trudinger's research group at the University of Sydney used clinical studies as well as mathematical and animal models to investigate factors influencing blood velocity waveforms. Their experimental studies on embolization of the fetoplacental circulation and clinical studies relating umbilical artery Doppler velocimetry to morphological findings in the placenta, belong to the classical studies in this field. Trudinger and colleagues performed one of the first randomized clinical trials indicating the clinical usefulness of umbilical artery Doppler velocimetry when applied for fetal surveillance in complicated pregnancies. They also followed the postnatal development of fetuses with abnormal intrauterine blood velocity waveforms. The results of their clinical research were applied in a clinical context in a 'Fetal Welfare Laboratory', founded by Dr Trudinger at Westmead Hospital. In a number of studies, various pharmacological effects on the fetoplacental circulation have also been elucidated by the Westmead group.

More recently, Brian Trudinger started to use modern molecular biology methods to study the origins and pathophysiology of placental vascular disease. Trudinger's group investigated several other features of the fetal circulation using new ultrasound techniques – for example, the phase-locked loop echo-tracking system for the non-invasive measurement of pressure pulse waveforms, or digital Doppler signals for the estimation of cardiac isovolumetric contraction time.

Brian Trudinger is active clinically as a specialist in maternal–fetal medicine, which has always guaranteed the high clinical relevance of his research. He is very

much focused on his research and clinical work, but still keeps his many cultural and sporting interests alive. Many of his colleagues and friends envy him his physical fitness and we feel ashamed when we hear about his bicycle tours in the Rocky Mountains or hiking in the Highlands of Scotland or the Italian mountains.

The time limits of this presentation do not allow me more than a very superficial description of Brian Trudinger's outstanding scientific contribution to the field of obstetric ultrasound and fetal medicine, for which ISUOG has awarded him the Ian Donald Gold Medal 2006.

Karel Maršál  
Lund, Sweden

### Free communication acknowledgments

The following free communications, presented during the 16<sup>th</sup> World Congress on Ultrasound in Obstetrics and Gynecology, were each selected as the best poster presentation in their subject area. Selection was according to a combination of the anonymous peer-review score for abstracts in advance of the congress and the scores for presentation and/or scientific merit allocated on-site by a panel of judges.

Full abstracts to these titles may be found in *Ultrasound Obstet Gynecol* 2006; 28(4). The authors' valuable contribution to the scientific program is gratefully acknowledged.

Non-invasive prenatal diagnosis of fetal sex using free fetal DNA in the maternal circulation – changing obstetric management (OP01.13)

L. S. Chitty<sup>1,2</sup>, T. Stojilkovic-Mikic<sup>2</sup>, J. Hogg<sup>2</sup>, P. G. Martin<sup>3</sup>, J. A. Hyett<sup>4</sup>, C. H. Rodeck<sup>4</sup>. <sup>1</sup>Institute of Child Health, United Kingdom, <sup>2</sup>University College London Hospitals, United Kingdom, <sup>3</sup>International Blood Group Reference Laboratory, Bristol, United Kingdom, <sup>4</sup>Royal Free and University College Medical School, United Kingdom

The spectrum and outcome of prenatally diagnosed fetal tumors (OP02.11)

D. Kamil<sup>1</sup>, J. Tepelmann<sup>1</sup>, C. Berg<sup>1</sup>, A. Heep<sup>2</sup>, R. Axt-Flidner<sup>3</sup>, U. Gembruch<sup>1</sup>, A. Geipel<sup>1</sup>. <sup>1</sup>Department of Obstetrics and Prenatal Medicine, University of Bonn, Germany, <sup>2</sup>Department of Pediatrics, University of Bonn, Germany, <sup>3</sup>Department of Obstetrics and Gynecology Lübeck, University of Schleswig-Holstein, Germany

Sonographic morphology of the fetal fourth ventricle, cerebellar vallecula and Blake's pouch – potential prognosticators in abnormalities of vermian development (OP03.13)

A. J. Robinson<sup>1</sup>, S. I. Blaser<sup>2</sup>, A. Toi<sup>3</sup>, D. Chitayat<sup>3</sup>, S. Pantazi<sup>3</sup>, W. Halliday<sup>2</sup>, G. Ryan<sup>3</sup>. <sup>1</sup>Children's & Women's Hospital of British Columbia, Canada, <sup>2</sup>Hospital for Sick Children, Canada, <sup>3</sup>Mount Sinai Hospital, Toronto, Canada

Impaired systolic and diastolic ventricular function after permanent extra-embryonic venous obstruction, a pressure-volume loop assessment in the stage-24 chick embryo (OP04.23)

S. Stekelenburg-de Vos<sup>1</sup>, P. Steendijk<sup>2</sup>, N. T. C. Ursem<sup>1</sup>, J. W. Wladimiroff<sup>1</sup>, R. E. Poelmann<sup>2</sup>. <sup>1</sup>Erasmus MC, Netherlands, <sup>2</sup>Leiden University Medical Center, Netherlands

Does the way of conception influence pregnancy outcome after fetal reduction? (OP05.11)

L. De Catte, E. Sleurs, W. Foulon. AZ Vrij Universiteit Brussels, Belgium

Normal lung signal on fetal MRI (OP06.02)

G. Gorincour<sup>1</sup>, J. Bouvenot<sup>1</sup>, B. Bourliere-Najean<sup>1</sup>, D. Eurin<sup>2</sup>. <sup>1</sup>La Timone Children's Hospital, France, <sup>2</sup>CHU Charles Nicolle, Rouen, France

Are acute episodes of severe hyperglycemia during organogenesis lethal? (OP06.24)

P. Mittal<sup>1</sup>, N. G. Than<sup>1</sup>, R. Wolf<sup>2</sup>, L. F. Goncalves<sup>1</sup>, R. Romero<sup>3</sup>, J. Santolaya-Forgas<sup>1</sup>. <sup>1</sup>Wayne State University, Detroit, United States, <sup>2</sup>Oklahoma University Health Science Center, United States, <sup>3</sup>Perinatology Research Branch/NIH/NICHD/DHHS, Bethesda, United States

First-trimester uterine artery Doppler and small-for-gestational-age infants (OP07.03)

F. Prefumo, A. T. Papageorghiou, N. Fratelli, A. Bhide, B. Thilaganathan. St George's Hospital, University of London, United Kingdom

Femoral soft tissue thickness as potential parameter for ultrasound estimation of fetal weight (OP08.01)

M. Scioscia<sup>1</sup>, F. Scioscia<sup>2</sup>, A. Vimercati<sup>1</sup>, F. Caradonna<sup>1</sup>, A. Maiorano<sup>1</sup>, E. Panella<sup>1</sup>, C. Camporeale<sup>1</sup>, L. Selvaggi<sup>1</sup>. <sup>1</sup>Department of Obstetrics and Gynecology, University of Bari, Italy, <sup>2</sup>Department of Electrotechnology and Electronics, University of Bari, Italy

Fetal soft tissue and birth weight: their relationship to newborn infant body composition (OP09.08)

W. Lee<sup>1</sup>, M. J. Yao<sup>2</sup>, R. L. Deter<sup>3</sup>, L. F. Goncalves<sup>4</sup>, J. Espinoza<sup>4</sup>, B. McNie<sup>1</sup>, M. D. Powell<sup>1</sup>, R. M. Espinosa<sup>1</sup>, R. Romero<sup>5</sup>. <sup>1</sup>William Beaumont Hospital, Royal Oak, United States, <sup>2</sup>Life Measurements, United States, <sup>3</sup>Baylor College of Medicine, United States, <sup>4</sup>Wayne State University, Detroit, United States, <sup>5</sup>Perinatology Research Branch, NICHD/NIH/DHHS, Bethesda, United States

Correlation of ultrasound placental grading and a stereological estimate of placental function (OP10.11)

T. T. Yin<sup>1</sup>, S. S. Ong<sup>2</sup>, J. Padfield<sup>3</sup>, T. M. Mayhew<sup>4</sup>, P. V. Loughna<sup>1</sup>. <sup>1</sup>Nottingham City Hospital, United Kingdom, <sup>2</sup>Birmingham Women's Hospital, United Kingdom, <sup>3</sup>Queen's Medical Centre, Nottingham, United Kingdom, <sup>4</sup>School of Biomedical Science, University of Nottingham, United Kingdom

Intrapubic intrapartum ultrasound (iiUS): sonographic landmarks and correlation with successful vacuum extraction (OP11.04)

W. Henrich<sup>1</sup>, J. W. Dudenhausen<sup>1</sup>, I. B. Fuchs<sup>1</sup>, A. Kaemena<sup>2</sup>, B. Tutschek<sup>3</sup>. <sup>1</sup>Department of Obstetrics, Charité, Berlin, Germany, <sup>2</sup>Department of Radiology, Charité, Berlin, Germany, <sup>3</sup>Childrens Hospital Westmead Sydney, Australia

Investigation of optimization techniques to prepare ultrasound images for electronic transfer by memory sticks (OP12.03)

E. C. Parry<sup>1</sup>, R. Sood<sup>2</sup>, D. T. Parry<sup>2</sup>. <sup>1</sup>University of Auckland, New Zealand, <sup>2</sup>Auckland University of Technology, New Zealand

Longitudinal reference ranges for flow velocities and waveform indices of the ductus venosus (OP13.08)

J. Kessler<sup>1</sup>, S. Rasmussen<sup>2</sup>, T. Kiserud<sup>2</sup>. <sup>1</sup>National Health Council, Norway, <sup>2</sup>Department of Clinical Medicine, Division of Obstetrics and Gynecology, University of Bergen, Norway

The value of ultrasound for the diagnosis of gestational trophoblastic disease (OP15.06)

C. Bottomley, E. Kirk, A. T. Papageorgiou, G. Condous, T. Bourne. *St George's Hospital, London, United Kingdom*

Use of 3D ultrasound to assess puborectalis muscle measurements (OP16.03)

M. M. Weinstein<sup>1</sup>, S. A. Jung<sup>2</sup>, D. H. Pretorius<sup>1</sup>, C. W. Nager<sup>1</sup>, B. S. Padda<sup>1</sup>, D. den Boer<sup>1</sup>, R. K. Mittal<sup>1</sup>. <sup>1</sup>University of California, San Diego, United States, <sup>2</sup>Ewha Women's University, Republic of Korea

Accuracy of transvaginal sonography in the diagnosis of deep posterior endometriosis (OP17.04)

M. Guerrini, G. Villa, R. Barzanti, M. Nanni, L. Firinu, T. Ghi, R. Seracchioli, L. Savelli. *University of Bologna, Italy*

Prognostic role of findings at sonohysterography in postmenopausal patients with abnormal uterine bleeding and abnormal uterine transvaginal sonography (OP18.01)

F. P. G. Leone, C. Lanzani, T. Bignardi, C. Marciante, E. Ferrazzi. *Department of Obstetrics and Gynecology, DSC L. Sacco, University of Milan, Italy*

Occurrence and outcome of placental remnants: a predictive model (OP19.06)

T. Van den Bosch<sup>1</sup>, N. Pochet<sup>2</sup>, D. Timmerman<sup>1</sup>. <sup>1</sup>University Hospital Gasthuisberg, Leuven, Belgium, <sup>2</sup>ESAT, KU Leuven, Belgium

Hysterocontrast sonosalpingography (HyCoSy): tolerability, complication and spontaneous pregnancy rates after examination (OP20.05)

L. Savelli<sup>1,2</sup>, M. Guerrini<sup>2</sup>, G. Villa<sup>2</sup>, R. Barzanti<sup>2</sup>, L. Firinu<sup>2</sup>, M. Nanni<sup>2</sup>, M. Ceccarini<sup>3</sup>, T. Ghi<sup>2</sup>, R. Seracchioli<sup>2</sup>. <sup>1</sup>Diagnostica Ecografica/Centro Medico 'Le Palme', Italy, <sup>2</sup>University of Bologna, Italy, <sup>3</sup>Tecnobios Prenatale, Italy

Three-dimensional ultrasound for the evaluation of breast masses: a multiplanar analysis of the growth pattern of 180 tumors (OP21.03)

E. Merz, A. Oberstein. *Krankenhaus Nordwest, Germany*

Adnexal cyst with papillae: role of three-dimensional power Doppler ultrasound for discrimination between benign, borderline and invasive malignant ovarian tumors (OP22.04)

M. E. Romanini, C. Exacoustos, A. Amadio, C. Amoroso, B. Szabolcs, E. Zupi, D. Arduini. *Department of Surgery, Obstetrics and Gynecology Unit, University of Rome 'Tor Vergata', Italy*