Program

4\textsuperscript{th} Fetal MRI Course
3\textsuperscript{rd} Fetal MRI Congress

VIENNA
May, 13\textsuperscript{th} - 15\textsuperscript{th} 2010
Dear Friends and Colleagues,

This is now the fourth time I am happy to welcome you in Vienna at an international event on fetal MRI. This year we dare to tackle two topics where fetal MRI is still in its infancy: skeletal and cardiac imaging.

However, at our first international course on fetal MRI the same was thought of fetal brain MRI that has become a valuable prenatal diagnostic tool in the meantime. Regarding the fetal brain ultrasound as well as MRI methods have progressed and allow in vivo insights into normal and pathological developmental changes that have to date only been known or suspected in vitro. Regarding the brain, it could been shown that hemispheric asymmetry in fetuses is the rule, and not an exception. Thus brain asymmetry has been chosen as one of the main topics.

I hope you will enjoy Vienna (again) not only the course and the scientific program, but also the city itself.

With my best wishes for your stay

Daniela Prayer

Department of Radiology
Division of Neuroradiology and Musculoskeletal Radiology
4th Fetal MRI-Course, May 13th 2010

3rd Fetal MRI Congress, May 14th-15th 2010

Local Faculty:

Peter C. Brugger  
Christian Czerny  
Gregor Kasprian  
Agnes Messerschmidt  
Daniela Prayer  
Max Schmid

Venue:

Börsensäle, Wipplingerstraße 34, 1010 Vienna  
Contact/Information: daniela.prayer@meduniwien.ac.at

See map last page
Thursday, 13th, Morning

07:30    Registration

08:15    Welcome
Wolfgang Arzt/ Linz, Daniela Prayer/ Vienna

Chairpersons: Wolfgang Arzt/ Linz, Daniela Prayer/ Vienna

08:30    What sequence for what purpose?
Peter C Brugger/Vienna

09:00    The fetal musculoskeletal system: US and MRI
Gustavo Malinger/Holon

09:30    MRI of the fetal abdomen- what is new?
Peter C Brugger/Vienna

10:00    Break

Chairpersons: Siegfried Rothmensch/Los Angeles, Rabih Chaoui/ Berlin

10:30    Why we MAY NOT need prenatal MRI?
Ilan Timor-Tritsch/New York

11:00    Why we MAY need prenatal MRI
Daniela Prayer/Vienna

11:30    US of the fetal heart and great vessels
Rabih Chaoui/Berlin

11:45    MRI of the fetal heart and great vessel/ basics
Peter C Brugger/Vienna

12:00    Lunch
Thursday, 13th, Afternoon

Chairpersons: Elisabeth Krampl-Bettelheim / Vienna, Gustavo Malinger/ Holon

13:00  MRI of the fetal heart and great vessels/ Dynamic studies
Vanessa Berger-Kulemann/Vienna

13:30  Utero-placental and fetal circulation - an obstetrician’s view
Maria Stammler-Safar, Kinga Chalubinski/Vienna

14:00  A radiologist’s view of the placenta
Christian Nasel, Daniela Prayer/Vienna

14:30  Anatomy of the fetal brain
Milos Judas/Zagreb

15:00  Break

Chairpersons: Denise Pugash/ Vancouver, Gregor Kasprian/ Vienna

15:20  Fetal brain and face anatomy US and MRI
Gustavo Malinger/Holon, Gregor Kasprian, Maria-Theresa Schmook, Nilouparak Hachemian, Mariella Mailath-Pokorny/Vienna

16:20  3D Ultrasound of the fetal brain
Rabih Chaoui/Berlin

16:50  Normal and pathological connectivity of the fetal Brain
Gregor Kasprian/Vienna

17:20  Discussion

17:40  End
Friday, 14th, Morning

Chairpersons: Ulrike Salzer-Muhar/ Vienna, Sahar Saleem /Kairo

08:30 Genetic skeletal dysplasias: molecular diversity and diagnostic approach
Andrea Superti-Furga/Freiburg

09:00 Brain anomalies in skeletal dysplasias: ultrasound and MRI findings
R. Palma-Dias, A. Sampson, G. McGillivray, A.M. Fink/Melbourne

09:15 Two female sibs with a severe form of Hallermann-Streiff syndrome and retrospective detection of characteristic features in fetal MRI.
J. Vodopiutz, U. Salzer, D. Prayer, A. R. Janecke/Vienna

09:30 Cardiac and extra-cardiac MRI findings in fetuses with congenital heart abnormalities
Sahar Saleem/Cairo

09:45 Prenatal brain pathology in congenital heart disease - does oxygen saturation of cerebral blood influence its occurrence?

10:00 Pseudo-gating for fetal cine cardiac MRI
M. Seed, D. Wong, C. Macgowan, L. Grosse-Wortmann, E.R Jaeggi, S. Blaser, S. Yoo/Toronto

10:15 Cardiac MR Imaging of the Fetal Heart using a novel Triggering Method: Initial Results
J. Yamamura, R. Fischer, K. Valett, G. Adam, U. Wedegärtner/Germany

10:30 Break
Friday, 14th, Morning

Chairpersons: Monika Bekiesinska-Figatowska/Warsaw, Max Schmid/Vienna

11:00  Prenatal prediction of chronic lung disease based on fetal MR lung volumetry in survivors with congenital diaphragmatic hernia

11:15  Repetitive MRI measurements of lung volume in fetuses with CDH to investigate the serial time course of pulmonary hypoplasia during gestation
A.K. Kilian, K.A. Büsing, A. Bauer, T. Schaible, S.O. Schönberg, K.W. Neff/Germany

11:30  Logistic regression analysis for prenatal prediction of survival and need for extracorporeal membrane oxygenation in fetuses with congenital diaphragmatic hernia based on the observed to expected fetal lung volume

11:45  MRI investigation of the effect of antenatal corticosteroid treatment on fetal lung maturation

12:00  Congenital tumors diagnosed on prenatal MRI
M. Bekiesinska-Figatowska, M. Duczkowski, A. Duczkowska, A. Romaniuk-Doroszewska, H. Brsgoszewska, Maria Uliasz, E. Jurkiewicz/Warsaw

12:15  Lunch and Lunchsymposium:
Höchste Bildqualität - Geringe Dosis: Die neuesten Entwicklungen in der Kinderradiologie zur Dosisreduzierung
Arnd Hejny/Agfa Healthcare
Friday, 14th, Afternoon

Parallel: Hands-on Workshop at DZU

Chairpersons: Eugen Boltshauser/Zürich, Ritsuko Pooh/Japan

13:15 Vascular supply of the fetal brain on Ultrasound
Ritsuko Pooh/Osaka

13:45 PVL and plasticity: lessons from prenatal brain development
Ivica Kostovic/Zagreb

14:15 Fetal studies- the statisticians point of view
Michael Weber/Vienna

14:25 Diffusion weighted imaging in routine fetal brain MRI

14:40 SNAPIR, an optimised T1-weighted sequence.
Advancing fetal brain imaging in a predominantly T2 weighted field.

14:55 Abnormal brain microstructure and metabolism in small for gestational age term fetuses with normal umbilical artery Doppler.
M. Sanz-Cortes, F. Figueras, N. Bargalló, N. Padilla, I. Amat, E. Gratacós/Barcelona

15:10 Morphological brain development of very low birth weight infants measured by 3D-ultrasound (3D-US) and its correlation to neurodevelopmental outcome
K. Klebermaß, S. Mörth, K. Vergesslich, A. Pollak, N. Haiden/Vienna

15:25 Break
Friday, May 14th, Afternoon

Hands-on workshop on Friday 14th in 3 groups, assignment to your group at registration!

Group I 14:30-15:30 workshop I
Group II 15:30-16:30 workshop II
Group III 16:30-17:30 workshop III

Venue:
Diagnosezentrum Urania (DZU), Laurenzerberg 2, 1010 Wien

How to get there:
Tram 1 stop Schwedenplatz (3 stops from Börsensäle)
Friday, 14th, Afternoon

Chairpersons: Ricardo Palma-Dias/ Melbourne, Rainer Seidl/ Vienna

15:45  Fetal cerebellar pathology- what is the outcome?  
Eugen Boltshauser/Zurich

16:15  Measurements of the posterior fossa on fetal MRI in differentiating between open and closed neural tube defects  

16:30  Holocarboxylase synthetase deficiency – in utero imaging, postnatal course and management  
D. Pugash, Y. Lillquist, P. Waters, H. Osiovich, S. Stöckler/Canada

16:45  Cerebellar cysts associated with multiple carboxylase deficiency: A case report.  

17:00  Presence or absence of TTTS in twin pregnancies: Are there differences in placental pathologies seen by fetal MRI?  
N. Linduska, A. Messerschmidt, S. Dekan, P. Brugger, A. Pollak, D. Prayer/Vienna

17:15  Vascular Placental Pathologies on Fetal MRI and Neonatal Outcome  
Agnes Messerschmidt, Nina Linduska, Gregor Kasprian, Peter C Brugger, Antonia Bauer, Michael Weber, Daniela Prayer/Vienna

17:30  End
Saturday, 15th

Chairpersons: Hanneke de Vries/ Amsterdam, Daniela Prayer/ Vienna

08:30 Early MR diagnosis of Lissencephaly
Christian Mitter/Vienna

09:00 In utero tractography of abnormal white matter connectivity in callosal agenesis

09:15 Prenatal environmental influence on postnatal laterality in twins

09:30 Break

09:50 poster prize

10:30 Laterality of the brain
Lukas Pezawas/Vienna

11:00 Molecular Studies of Human Cerebral Asymmetry: An Axis to Grind
Daniel Geschwind/LosAngeles/London

11:30 Asymmetry in fetal brain development
Gregor Kasprian/Vienna

11:55 farewell

12:00 End
Saturday, 15\textsuperscript{th}

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Poster Comittee:</th>
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<tbody>
<tr>
<td>11:00</td>
<td>Award of best posters</td>
<td>Susan Blaser/Toronto</td>
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<td></td>
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<td>Ivica Kostovic/Zagreb</td>
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<td>Rainer Seidl/ Vienna</td>
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<td>Vasiliki Dermentoglou/Athens</td>
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<td>Wolfgang Arzt/Linz</td>
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<tr>
<td>09:50 - 10:00</td>
<td>Poster 3\textsuperscript{rd} prize</td>
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<td>10:00 - 10:10</td>
<td>Poster 2\textsuperscript{nd} prize</td>
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<td>10:10 - 10:20</td>
<td>Poster 1\textsuperscript{st} prize</td>
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<td>12:00</td>
<td>Farewell and Boxlunch</td>
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DFP/CME credits for the congress: 21

Social program
(please register on-site)

**Thursday 13\textsuperscript{th} May**, 17:40-19:30: Cocktail at Börsensäle (included)
Sponsor: [McMed](#)

**Friday 14\textsuperscript{th} May**, 19:30: Dinner at **summer stage** U4 Rossauer Lände (50 €)
Posters

01 MRI of Fetal Intracerebral Hemorrhage
   U. Asenbaum, A. Benco, K. Kieberrmass, G. Kasprian, PC. Brugger, B.Ulm, D. Prayer

02 When can the Hippocampus be evaluated on fetal MRI?
   D. Bajic, N. Canto Moreira, J. Wikström, R. Raininko

03 Metabolism and fetal body surface - Quantification of the subcutaneous fat layer with MRI in normally developed fetuses and in fetuses of diabetic and adipose mothers

04 Chemical shift imaging of the fetal liver

05 Prenatal diagnosis of facial clefts by the combination of two-dimensional and three-dimensional ultrasound and fetal magnetic resonance
   V. Frisova, M. Kyncl, B. Prosova, L. Mrazkova, M. Rocek

06 Vena-Cava-Inferior-Compression-Syndrom in pregnant women-a fairy tale?

07 Magnetic resonance imaging of fetal alveolar process and teeth sockets

08 Can syndromic macrocephaly be diagnosed in utero?
   G. Malinger, D. Lev, L. Ben-Sira, C. Hoffmann, M. Herrera, F. Viñals, H. Vinkler, S. Ginath, D. Kidron, T. Lerman-Sagie

09 Fetal MRI of the Pena-Shokeir Phenotype
   U. Nemec, S.F. Nemec, P.C. Brugger, D. Bettelheim, D. Prayer

10 Tumors in Utero: Spectrum of Findings on Fetal MRI
   U. Nemec, S.F. Nemec, G. Kasprian, P.C. Brugger, E. Horcher, D. Prayer

11 Does in-utero MRI aid in diagnosing syndromes with bilateral cystic dysplastic kidneys associated with brain anomalies?
   Sahar N Saleem

12 Fetal MRI on 1.5T and 3T in comparison: advantages and disadvantages.
   S. Savelli, M. Di Maurizio, C. Fonda

13 A well-documented multimodality imaging approach to fetus in fetu: from prenatal to postnatal imaging features.
   S. Savelli, M. Di Maurizio, C. Fonda

14 Impact of maternal smoking on fetal lung development – an in utero MRI investigation
   M. Schmid, N. Hachemian, A. Posch, C. Balassy, G. Kasprian, D. Prayer

15 Quantification of lung volumes in fetuses with tetralogy of Fallot using fetal MRI

16 Fetal teratoma and the role of Fetal MRI to plan the management of the patient
   E.H. Whitby, F. Roberts, N. Bateman, J. Walker, A. Gibson, N. Pereira, S.V. Gandhi
Invited speakers and Chairpersons

Wolfgang Arzt, Maternity and Children’s Hospital Linz, Institute of Prenatal Medicine, Linz, Austria
Monika Bekiesinska-Figatowska, Department of Diagnostic Imaging of the Institute of Mother and Child in Warsaw, Poland
Vanessa Berger-Kulemann, Medical University of Vienna, Department of Radiology, Vienna, Austria
Susan Blaser, Department of Diagnostic Imaging, the Hospital for Sick Children, University of Toronto, Toronto, Ontario, Canada
Eugen Boltshauser, Children’s Hospital Zürich, Division of Neuropädiatrie, Zürich, Schweiz
Peter Brugger, Medical University of Vienna, Center of Anatomy and Cell Biology, Vienna, Austria
Rabih Chaoui, Center of Prenatal Diagnosis and Human Genetics, Berlin, Germany
Hanneke de Vries, VU University, Department of Obstetrics and Gynaecology, Amsterdam, The Netherlands
Daniel Geschwind, Department of Neurology, Psychiatry and Human Genetics, UCLA, Los Angeles, USA
Nilouparak Hachemian, Medical University of Vienna, Department of Obstetrics and Gynaecology, Vienna, Austria
Milos Judas, Section for Developmental Neuroscience, Croatian Institute for Brain Research, Zagreb, Croatia
Gregor Kasprian, Medical University of Vienna, Department of Radiology, Vienna, Austria
Ivica Kostovic, Section for Developmental Neuroscience, Croatian Institute for Brain Research, Zagreb, Croatia
Elisabeth Krampi-Bettelheim, Department of Obstetrics and feto-maternal Medicine Vienna, Austria
Gustavo Malinger, Department of Obstetrics and Gynaecology, Fetal Neurology Clinic, Wolfson Medical Center, Holon, Tel-Aviv University, Tel-Aviv, Israel
Christian Mitter, Medical University of Vienna, Department of Radiology, Vienna, Austria
Franklin Moser, Clinical Neuroradiology and Interventional Neuroradiology for Radiology Research FACR is S. Mark Taper Foundation Imaging Center/Cedars-Sinai Medical Center. Los Angeles, USA
Christian Našel, Landesklinikum, Donauregion, Tulln, Department of Radiology, Tulln, Austria
Nilouparak Hachemian, Department of Obstetrics and feto-maternal Medicine Vienna, Austria
Ricardo Palma-Dias, Fetal Management Unit, Royal Women's Hospital, Melbourne, Australia
Lukas Pezawas, Medical University of Vienna, Department of Psychiatry and Psychotherapy, Vienna, Austria
Mariella Mailath-Pokorny, Department of Obstetrics and feto-maternal Medicine Vienna, Austria
Ritsuko Pooh, Clinical Research Institute of Fetal Medicine PMC, Osaka, Japan
Daniela Prager, Medical University of Vienna, Division of Neuroradiology and Musculoskeletal Radiology, Vienna, Austria
Denise Pugash, Ultrasound 1 T48, BC Women's and Children's Hospital/ University of British Columbia, Canada
Siegfried Rothmensch, David Geffen School of Medicine, UCLA, Department of Obstetrics & Gynaecology, Cedars-Sinai Medical Center, Los Angeles, USA
Sahar Saleem, University Hospital Cairo, Egypt
Ulrike Salzer-Muhar, Medical University of Vienna, Department of Pediatrics and Adolescent Medicine Vienna, Austria
Rainer Seidl, Medical University of Vienna, Childrens Department, Vienna, Austria
Maria Stammler-Safar, Medical University of Vienna, Department of Obstetrics and Gynecology, Vienna, Austria
Andrea Superti-Furga, University of Freiburg Department of Pediatrics, Freiburg, Germany
Max Schmid, Department of Obstetrics and feto-maternal Medicine Vienna, Austria
Maria-Theresa Schmook, Medical University of Vienna, Division of Neuroradiology and Musculoskeletal Radiology, Vienna, Austria
Ilan Timor-Tritsch, New York University Medical Center, Department of Obstetrics & Gynecology, New York
Michael Weber, Medical University of Vienna, Department of Radiology, Vienna, Austria
## Registration

<table>
<thead>
<tr>
<th>Arrangement* / Fees</th>
<th>Category</th>
<th>Before November 30, 2009 (Early bird fee)</th>
<th>From December 1, 2009 until March 31, 2010 (Standard fee)</th>
<th>From March 31, 2010 and On Site (Late fee)</th>
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<tr>
<td>1. Course without Hands-on workshop</td>
<td>MD, PhD</td>
<td>€ 240,–</td>
<td>€ 270,–</td>
<td>€ 320,–</td>
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<td></td>
<td>Technologist</td>
<td>€ 190,–</td>
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<td>2. Course with Hands-on workshop</td>
<td>MD, PhD</td>
<td>€ 290,–</td>
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<td>€ 240,–</td>
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<td>3. Congress without Hands-on workshop</td>
<td>MD, PhD</td>
<td>€ 250,–</td>
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<td>€ 200,–</td>
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<td>5. Course &amp; Congress without Hands-on workshop</td>
<td>MD, PhD</td>
<td>€ 330,–</td>
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<td>6. Course and Congress with Hands-on workshop</td>
<td>MD, PhD</td>
<td>€ 390,–</td>
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<td>Technologist</td>
<td>€ 330,–</td>
<td>€ 370,–</td>
<td>€ 420,–</td>
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<td>7. Hands-on workshop only</td>
<td>MD, PhD</td>
<td>€ 110,–</td>
<td>€ 130,–</td>
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<td>Technologist</td>
<td>€ 80,–</td>
<td>€ 100,–</td>
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Members of the Austrian Society of Perinatology pay 40 less of all fees. Payments to: “Fetal MRI 2010” Bank Austria BLZ: 12000 Account number 50457 181 802 IBAN: AT69 1200 0504 5718 1802 BIC: BKAUATWW Payment to: Guido Holzknecht Verein

Fees include Abstracts, Coffee breaks, Lunches, Cocktail.

Please understand that registration will be only valid after full payment is received.

Hotel reservation:
Cornelia Enzfelder
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Phone: +43 (1) 20560626
Fax: +43 (1) 20560699
We wish to thank the following sponsors:

BY PUBLIC TRANSPORTATION

Bus
1A (stop Schottentor)
3A (stop Wipplingerstraße)

Underground
U3-stop Herrengasse
U2-stop Schottentor, Universität

Tram
D, 1 - in front of the building
38, 39, 40, 41, 42, 43 and 44 – stop Schottentor, 3 min to go

Location: Wiener Börsensäle
Wipplingerstraße 34
1010 Vienna