CLINICAL ENDOCRINOLOGY, METABOLISM AND NUTRITION

Thesis Program of the Curriculum N790

Doctor of Applied Medical Science

Coordinator

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General Description and Aims

Endocrinology and metabolism are traditionally linked to each other not only in clinical settings. Due to the importance of hormones to regulate metabolism of individual cells, tissues and whole organisms, regulatory mechanisms in metabolism and endocrine axes often follow common mechanisms. Following the elucidation of endocrine regulatory mechanisms and principal metabolic pathways in the midst of the 20th century, recent developments in methods of molecular biology and in vivo investigations have now paved the way for further significant progress in the field of endocrinology and metabolism. Beginning with the molecular identification of transcription factors for genes implicated in metabolic and endocrine regulations up to in vivo NMR spectroscopy for analysis of metabolic regulation in humans these novel methods will facilitate essential contributions for the elucidation of endocrine and metabolic regulations and enable the development of novel therapeutic approaches. A prerequisite for this progress to occur in research and clinics is the availability of trained researchers and clinicians.

The clinical approach to patients suffering from disorders in hormone and metabolic homeostasis has changed in parallel with basic scientific progress, e.g., by the advancements in molecular genetics and their application for diagnosis of a multitude of disorders. Moreover, the prevalence of endocrine and metabolic diseases has shifted, e.g., due to the increased frequency of obesity and the increasing age in our population. Hence it is expected that the field of endocrinology and metabolism will be subject to further exciting developments in the near future.

It is the aim of the Doctoral Program of Applied Medical Science on "Endocrinology and Metabolism" to train young scientists and professionals practising Endocrinology and Metabolism in its broadest sense for independent scientific work in medical and associated professions. The symbiosis of science and practice will be accomplished by combining scientific experience and guidance with practical seminars. As a result, graduates will be prepared to apply scientific and practical methods in his/her profession in order to continuously improve professional practice and effectivity, to take responsibility for changing situations and to address modern issues of Endocrinology and Metabolism by independent application-oriented research projects. In addition, graduates will be trained in presenting results to other specialists in the field and to educate laypersons likewise.

Principles of endocrinology and metabolism are not only scientifically and clinically present in the specialty of internal medicine, but also in gynecology, pediatrics, surgery and
nutritional medicine. The lecturers and principal investigators of this doctoral study program work in diverse areas from basic sciences up to various clinical disciplines and provide opportunities for scientific research in diverse aspects of the field of endocrinology and metabolism including nutrition. Thematically, the program comprises mainly application-oriented theses from translational research up to diagnostics and therapeutic approaches. Methodologically, the spectrum comprises a broad array of biochemistry and molecular biology up to in vivo investigations and clinical trials.

In the framework of this doctoral study, the student will scientifically work in a well-defined thematic segment under supervision of an experienced principal investigator. Aim of the scientific work is the compilation of a doctoral thesis. In addition, the student will have the possibilities to gain theoretical knowledge in endocrinology and metabolism in its broadest sense and in various methods for its investigation, e.g. in basic seminars. Own scientific works will be accompanied by critical discussion of scientific results from other groups in journal clubs. Current research projects of involved groups will be discussed in thesis seminars. Practical seminars are specific to the Applied Doctoral Study Program. Practical seminars will give guidance to professional application of modern achievements and prepare for dissemination of current knowledge to laypersons. These instruments will put own scientific work into the context of other scientific and practical achievements to promote skilled independent work and application of scientific methods. Furthermore, practical and thesis seminars advance students’ presentation skills.

The Medical University of Vienna has established a research focus concentrating scientific resources on various aspects of metabolism including efforts on the investigation of type 2 diabetes mellitus and the metabolic syndrome, diabetic complications, high-field NMR spectroscopy of metabolic intermediates, mechanisms of metabolic regulation, interference of metabolism with immunological and inflammatory mechanisms, inherited metabolic disorders, and (neuro)endocrine regulation. The Applied Doctoral Study program "Endocrinology and Metabolism" strengthens these efforts and provides a unique opportunity for students to promote their graduation while interacting with a critical mass of expert principal investigators and clinicians.

The participating university teachers belong to three groups according to their roles in the Applied Doctoral Study Program "Endocrinology and Metabolism":

1. “Supervisors” (S) possess remarkable scientific output and are experienced professionally and in training doctoral students. They give lectures and supervise students in their thesis projects.

2. “Young supervisors” (YS) comprise particularly ambitious principal investigators who are on the way but have not yet achieved a "venia docendi" (“Habilitation”). Young supervisors are supported by experienced supervisors. Students guided by young supervisors meet more often with the thesis committee, i.e. every 6 months, instead of the usual yearly meetings to guarantee the highest level of education. Young supervisors contribute to the courses as do other teachers and students benefit by obtaining insight into more technical details.

3. “Lecturers” (L) comprise teachers who currently do not fulfill all criteria or abstain from supervising students but have considerable knowledge and experience in a given area. Lecturers contribute to the courses often by presenting a particularly practical approach.

Last but not least it is emphasized that the current version of the program with its contributing principal investigators and lecturers is regarded as a preliminary nucleus. The program is designed to integrate more teachers and institutions in order to cover the field of endocrinology and metabolism and related disciplines in all theoretical and practical aspects.
Recommended Literature

Courses

Propedeutics

The propedeutics will be an obligatory part of the Applied Medical Science doctoral study. Six semester hours (SHrs) have to be completed with emphasis on natural science or medical courses for graduates from medical and non-medical studies, respectively. Please follow general regulations for the Applied Doctoral Science study as posted.

Basic Seminar

The Basic Seminar is held in winter semesters only (2 semester hours) comprising two different sets of themes (I and II). In total 4 SHrs must be completed for the thesis program. The Basic Seminar will provide a broad overview of the field of Endocrinology and Metabolism including nutritional aspects.

| VO Basic Seminar "Endocrinology and Metabolism [I/II]"; | Sabina Baumgartner-Parzer, Christian Bieglmayer, Martin Bischof, Olaf Bodamer, Wilfred Druml, Manuela Födinger, Clemens Fürnsinn, Gabriele Häusler, Jörg Michael Hiesmayr, Alexandra Kautzky-Willer, Michael Krebs, Bernhard Ludvik, Anton Luger, Wolfgang Marktl, Bruno Niederle, Peter Pietschmann, Gerhard Prager, Erich Roth, Thomas Stulnig, Walter Tschugguel, Nicole Unger-Manhart, Heinrich Vierhapper, Ludwig Wagner, Kurt Widhalm |
| 2 SHrs (compulsory course); English; personal registration by email to Prof. Th. Stulnig (thomas.stulnig@meduniwien.ac.at) | |

**BASIC SEMINAR I**

<table>
<thead>
<tr>
<th>Title</th>
<th>Teacher</th>
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<tbody>
<tr>
<td>Congenital adrenal hyperplasia</td>
<td>S. Baumgartner-Parzer</td>
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<tr>
<td>Modern methods of clinical laboratory analysis</td>
<td>C. Bieglmayer</td>
</tr>
<tr>
<td>In vivo studies on hepatic glycogen metabolism</td>
<td>M. Bischof</td>
</tr>
<tr>
<td>Stable isotope techniques-basics and applications</td>
<td>O. Bodamer</td>
</tr>
<tr>
<td>Clinical Nutrition and Infusion Therapy 1</td>
<td>W. Druml</td>
</tr>
<tr>
<td>Molecular methods in research and diagnostics of metabolic diseases 1</td>
<td>M. Födinger</td>
</tr>
<tr>
<td>Basics for working with experimental animals</td>
<td>C. Fürnsinn</td>
</tr>
<tr>
<td>Physiology and pathophysiology of growth</td>
<td>G. Häusler</td>
</tr>
<tr>
<td>Epidemiology of malnutrition</td>
<td>M. Hiesmayr</td>
</tr>
<tr>
<td>Title</td>
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<tr>
<td>Gestational diabetes</td>
<td>A. Kautzky-Willer</td>
</tr>
<tr>
<td>Insulin resistance</td>
<td>M. Krebs</td>
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<tr>
<td>Obesity</td>
<td>B. Ludvik</td>
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<td>Physiology of the hypothalamic-pituitary regulation</td>
<td>A. Luger</td>
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<td>Physiology of nutrition and pathophysiology of macronutrients</td>
<td>W. Marktl</td>
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<td>Endocrine surgery 1</td>
<td>B. Niederle</td>
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<td>Bone biology</td>
<td>P. Pietschmann</td>
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<td>Bariatric surgery 1</td>
<td>G. Prager</td>
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<tr>
<td>Protein catabolism, post-aggression phase, immunonutrition 1</td>
<td>E. Roth</td>
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<td>Lipid metabolism and hyperlipidemia</td>
<td>Th. Stulnig</td>
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<td>Pathophysiology of estrogen-dependent diseases</td>
<td>W. Tschugguel</td>
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<td>D-A-CH Reference values for food intake</td>
<td>N. Unger-Manhart</td>
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<td>Adrenal glands</td>
<td>H. Vierhapper</td>
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<td>Genes relevant in endocrine tumorigenesis</td>
<td>L. Wagner</td>
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<tr>
<td>Familial hypercholesterolemia in childhood and adolescence</td>
<td>K. Widhalm</td>
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**BASIC SEMINAR II**

<table>
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<tr>
<th>Title</th>
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<tbody>
<tr>
<td>Multiple Endocrine Neoplasia 2</td>
<td>S. Baumgartner-Parzer</td>
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<tr>
<td>Interpretation of endocrinological lab results</td>
<td>C. Bieglmayer</td>
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<tr>
<td>Hypoglycemia counterregulation in type 1 diabetes</td>
<td>M. Bischof</td>
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<tr>
<td>Analytical techniques for quantification of small molecules</td>
<td>O. Bodamer</td>
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<tr>
<td>Clinical Nutrition and Infusion Therapy 2</td>
<td>W. Druml</td>
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<tr>
<td>Molecular methods in research and diagnostics of metabolic diseases 2</td>
<td>M. Födinger</td>
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<tr>
<td>From cell culture to the whole organism: experimental approaches</td>
<td>C. Fürnsinn</td>
</tr>
<tr>
<td>Basic scientific aspects of growth</td>
<td>G. Häusler</td>
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<tr>
<td>Stresshyperglycemia, nutritive intervention in hospitalized patients</td>
<td>M. Hiesmayr</td>
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<tr>
<td>Pregnancy in patients with type 1 and type 2 diabetes mellitus</td>
<td>A. Kautzky-Willer</td>
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<tr>
<td>Direct and indirect effects of nutrients on glucose metabolism</td>
<td>M. Krebs</td>
</tr>
<tr>
<td>Metabolic syndrome</td>
<td>B. Ludvik</td>
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</table>
New developments in the regulation of appetite and body weight | A. Luger
---|---
Physiology of nutrition and pathophysiology of vitamins and trace elements | W. Marktl
Endocrine surgery 2 | B. Niederle
Bariatric surgery 2 | G. Prager
Pathogenesis and treatment of osteoporosis | P. Pietschmann
Protein catabolism, post-agression phase, immunonutrition 2 | E. Roth
Dyslipidemias and polyunsaturated fatty acids | Th. Stulnig
Pathophysiology of endometriosis | W. Tschugguel
Polyphenols: antioxidants and signalling molecules? | N. Unger-Manhart
Thyroid gland | H. Vierhapper
The beta cell and insulin transcription | L. Wagner
Principles and evidence for a preventive nutrition | K. Widhalm

### Journal Club

The Journal Clubs (critical paper reviews) are held on a weekly basis by the program’s teachers. Currently, a single Journal Club is established each term. In total 12 SHrs must be completed for the thesis program.

<table>
<thead>
<tr>
<th>Title</th>
<th>Lecturer(s)</th>
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</thead>
<tbody>
<tr>
<td>SE Journal Club &quot;Endocrinology and Metabolism [Semester]&quot;, 2 SHrs (compulsory course); English; personal registration by email to Prof. Th. Stulnig (<a href="mailto:thomas.stulnig@meduniwien.ac.at">thomas.stulnig@meduniwien.ac.at</a>) Contents: presentation and critical discussion of published papers</td>
<td>Sabina Baumgartner-Parzer, Christian Bieglmayer, Martin Bischof, Olaf Bodamer, Wilfred Druml, Manuela Födinger, Clemens Fürnsinn, Gabriele Häusler, Jörg Michael Hiesmayr, Alexandra Kautzky-Willer, Michael Krebs, Bernhard Ludvik, Anton Luger, Wolfgang Marktl, Bruno Niederle, Peter Pietschmann, Gerhard Prager, Erich Roth, Thomas Stulnig, Walter Tschugguel, Nicole Unger-Manhart, Ludwig Wagner, Kurt Widhalm</td>
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</table>

### Compulsory Optional Courses

According to the curriculum, each student must attend a total of 12 SHrs of Thesis Seminars and 4 SHrs of Practical Seminars, i.e. a total of 16 SHrs. More elective courses are to be announced in the future. Please see the current index of courses of the Medical University of Vienna for details.
<table>
<thead>
<tr>
<th>Title</th>
<th>Lecturer(s)</th>
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</thead>
<tbody>
<tr>
<td>2 SHrs; English; personal registration by email to Prof. T. Stulnig (<a href="mailto:thomas.stulnig@meduniwien.ac.at">thomas.stulnig@meduniwien.ac.at</a>)</td>
<td>Contents: presentation and critical discussion of thesis projects</td>
</tr>
</tbody>
</table>

| 2 SHrs; English; personal registration by email to Prof. T. Stulnig (thomas.stulnig@meduniwien.ac.at) | Contents: Case studies in endocrinology and metabolism will be presented in an interactive manner in order to promote analytical thinking and practical problem solving; depending on the teaching faculty member, clinical cases or laboratory problems will be addressed; ethical and societal issues are to be discussed; another focus will be made on presentation techniques in order to teach students to communicate clinical issues and scientific results in an easy to understand language |

**Elective Courses**

Please see the current index of courses of the Medical University of Vienna for details on elective courses for doctoral study programs.
## Experimental Techniques

<table>
<thead>
<tr>
<th>Methods</th>
<th>Working groups</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>in vitro methods</strong></td>
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<tr>
<td>apoptosis / proliferation assays</td>
<td>Baumgartner-Parzer, Unger-Manhart, Roth</td>
</tr>
<tr>
<td>bone histomorphometry</td>
<td>Pietschmann</td>
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<tr>
<td>cell culture, cell lines</td>
<td>Stulnig, Lugер, Wagner, Bodamer, Unger-Manhart</td>
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<tr>
<td>cell culture, perfusion model</td>
<td>Luger</td>
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<tr>
<td>cell culture, primary</td>
<td>Stulnig, Baumgartner-Parzer, Pietschmann, Luger, Wagner, Bodamer, Häusler</td>
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<tr>
<td>enzymatics</td>
<td>Bodamer</td>
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<tr>
<td>FACS - dynamic measurements (calcium etc.)</td>
<td>Stulnig</td>
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<tr>
<td>FACS - immunofluorescence</td>
<td>Stulnig, Baumgartner-Parzer, Pietschmann, Wagner, Unger-Manhart</td>
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<tr>
<td>fatty acid analysis (GC)</td>
<td>Stulnig</td>
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<tr>
<td>fluorescence microscopy</td>
<td>Stulnig, Wagner</td>
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<td>gas chromatography</td>
<td>Stulnig, Bodamer</td>
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<tr>
<td>gene expression profiling (microarrays)</td>
<td>Stulnig, Födinger</td>
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<tr>
<td>HPLC, FPLC and other chromatographic analyses</td>
<td>Wagner, Bodamer, Roth</td>
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<tr>
<td>immunohistochemistry</td>
<td>Baumgartner-Parzer, Häusler</td>
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<tr>
<td>immunoassays (ELISA, FIA, RIA etc.)</td>
<td>Pietschmann, Bodamer</td>
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<tr>
<td>immunoblotting</td>
<td>Stulnig, Baumgartner-Parzer, Fürnsinn, Krebs, Häusler</td>
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<tr>
<td>immunoprecipitation</td>
<td>Stulnig, Wagner</td>
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<tr>
<td>isolated muscle incubation</td>
<td>Fürnsinn</td>
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<tr>
<td>lipoprotein ultracentrifugation</td>
<td>Stulnig</td>
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<td>magnetic cell sorting</td>
<td>Stulnig</td>
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<tr>
<td>mass spektrometry</td>
<td>Bodamer</td>
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<tr>
<td>metabolic labeling</td>
<td>Stulnig, Wagner</td>
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<tr>
<td>metabolic rates with radioactive tracers</td>
<td>Fürnsinn</td>
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<tr>
<td>mikronukleation in lymphocytes</td>
<td>Bodamer</td>
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<tr>
<td>northern blotting</td>
<td>Stulnig, Baumgartner-Parzer, Fürnsinn, Wagner, Bodamer, Födinger</td>
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<tr>
<td>PCR, genomic</td>
<td>Baumgartner-Parzer, Födinger</td>
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<tr>
<td>PCR, on chip</td>
<td>Bodamer</td>
</tr>
<tr>
<td>Method</td>
<td>Authors</td>
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<td>-----------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------</td>
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<tr>
<td>PCR, real-time (quantitativ, SNP)</td>
<td>Stulnig, Pietschmann, Wagner, Födinger, Häusler</td>
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<tr>
<td>PCR, reverse transcriptase (RT-PCR)</td>
<td>Stulnig, Pietschmann, Wagner, Födinger</td>
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<td>protein expression</td>
<td>Wagner</td>
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<tr>
<td>protein sequencing</td>
<td>Bodamer</td>
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<tr>
<td>reporter gen assay</td>
<td>Stulnig, Baumgartner-Parzer, Wagner</td>
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<tr>
<td>RFLP</td>
<td>Baumgartner-Parzer, Födinger</td>
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<tr>
<td>sequencing</td>
<td>Baumgartner-Parzer, Födinger</td>
</tr>
<tr>
<td>southern blotting</td>
<td>Baumgartner-Parzer, Födinger</td>
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<tr>
<td>spectrophotometric enzyme analyses</td>
<td>Fürnsinn</td>
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<tr>
<td>SSCP</td>
<td>Bodamer</td>
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<tr>
<td>subcellular fractionation</td>
<td>Stulnig, Wagner</td>
</tr>
<tr>
<td>tissue explants (adipose)</td>
<td>Stulnig</td>
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<tr>
<td>transfection, gene expression</td>
<td>Stulnig, Wagner</td>
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**in vivo methods - animal experiments**

<table>
<thead>
<tr>
<th>Method</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>effects of antidiabetic drugs in rats</td>
<td>Fürnsinn</td>
</tr>
<tr>
<td>mouse models</td>
<td>Stulnig, Pietschmann, Bodamer, Unger-Manhart</td>
</tr>
<tr>
<td>rat models</td>
<td>Pietschmann</td>
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<tr>
<td>stable isotope application</td>
<td>Bodamer</td>
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**in vivo methods - experiments in humans**

<table>
<thead>
<tr>
<th>Method</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>body composition measurement</td>
<td>Widhalm</td>
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<tr>
<td>epidemiology of malnutrition</td>
<td>Hiesmayr</td>
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<tr>
<td>indirect calorimetry</td>
<td>Hiesmayr</td>
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<tr>
<td>magnetic resonance spectroscopy, multi-nuclear</td>
<td>Roden, Bischof, Krebs, Bodamer</td>
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<tr>
<td>muscle biopsy</td>
<td>Krebs</td>
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<tr>
<td>nutritional training, assessment of nutritional status</td>
<td>Widhalm, Roth, Unger-Manhart, Druml, Hiesmayr</td>
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<tr>
<td>positron emission spectroscopy</td>
<td>Bischof, Krebs</td>
</tr>
<tr>
<td>stable isotope technique (protein turnover, glucose turnover, gluconeogenesis, methionine-homocysteine metabolism)</td>
<td>Roden, Bischof, Krebs, Bodamer</td>
</tr>
<tr>
<td>tests of endocrine function</td>
<td>Luger</td>
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<tr>
<td>tests of insulin secretion and insulin sensitivity</td>
<td>Roden, Bischof, Kautzky-Willer, Krebs</td>
</tr>
</tbody>
</table>
**Faculty**

incl. contact information and role in the program

<table>
<thead>
<tr>
<th>Principal investigator</th>
<th>E-mail</th>
<th>Role*</th>
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<tbody>
<tr>
<td>Ao.Univ.Prof.Dr. Sabina Baumgartner-Parzer</td>
<td><a href="mailto:sabina.baumgartner-parzer@meduniwien.ac.at">sabina.baumgartner-parzer@meduniwien.ac.at</a></td>
<td>S</td>
</tr>
<tr>
<td>Ao.Univ.-Prof. Dr. Christian Bieglmayer</td>
<td><a href="mailto:christian.bieglmayer@akhwien.at">christian.bieglmayer@akhwien.at</a></td>
<td>L</td>
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<tr>
<td>Ao.Univ.-Prof. Dr. Martin Bischof</td>
<td><a href="mailto:martin.bischof@meduniwien.ac.at">martin.bischof@meduniwien.ac.at</a></td>
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<tr>
<td>Ao.Univ.-Prof. Dr. Olaf Bodamer</td>
<td><a href="mailto:olaf.bodamer@meduniwien.ac.at">olaf.bodamer@meduniwien.ac.at</a></td>
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<tr>
<td>Ao. Univ.-Prof. Dr. Wilfred Druml</td>
<td><a href="mailto:wilfred.druml@meduniwien.ac.at">wilfred.druml@meduniwien.ac.at</a></td>
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<tr>
<td>Ao. Univ.-Prof. Dr. Manuela Födinger</td>
<td><a href="mailto:manuela.foedinger@meduniwien.ac.at">manuela.foedinger@meduniwien.ac.at</a></td>
<td>YS</td>
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<tr>
<td>Ao. Univ.-Prof. Dr. Clemens Fürnsinn</td>
<td><a href="mailto:clemens.fuernsinn@meduniwien.ac.at">clemens.fuernsinn@meduniwien.ac.at</a></td>
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<tr>
<td>Ao. Univ.-Prof. Dr. Gabriele Häusler</td>
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<tr>
<td>Ao. Univ.-Prof. Dr. Michael Hiesmayr</td>
<td><a href="mailto:michael.hiesmayr@meduniwien.ac.at">michael.hiesmayr@meduniwien.ac.at</a></td>
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<tr>
<td>Ao. Univ.-Prof. Dr. Alexandra Kautzky-Willer</td>
<td><a href="mailto:alexandra.kautzky-willer@meduniwien.ac.at">alexandra.kautzky-willer@meduniwien.ac.at</a></td>
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<td>Ao. Univ.-Prof. Dr. Michael Krebs</td>
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<tr>
<td>Ao.Univ.-Prof. Dr. Bernhard Ludvik</td>
<td><a href="mailto:bernhard.ludvik@meduniwien.ac.at">bernhard.ludvik@meduniwien.ac.at</a></td>
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<tr>
<td>Ao.Univ.Prof. Dr. Anton Luger</td>
<td><a href="mailto:anton.luger@meduniwien.ac.at">anton.luger@meduniwien.ac.at</a></td>
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<td>Ao.Univ.-Prof. Dr. Bruno Niederle</td>
<td><a href="mailto:bruno.niederle@meduniwien.ac.at">bruno.niederle@meduniwien.ac.at</a></td>
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<td>Ao. Univ.Prof. Dr. Peter Pietschmann</td>
<td><a href="mailto:peter.pietschmann@meduniwien.ac.at">peter.pietschmann@meduniwien.ac.at</a></td>
<td>S</td>
</tr>
<tr>
<td>Univ.-Doz. Dr. Gerhard Prager</td>
<td><a href="mailto:gerhard.prager@meduniwien.ac.at">gerhard.prager@meduniwien.ac.at</a></td>
<td>S</td>
</tr>
<tr>
<td>Prim. ao.Univ.-Prof. Dr. Michael Roden</td>
<td><a href="mailto:michael.roden@wgkk.sozvers.at">michael.roden@wgkk.sozvers.at</a></td>
<td>S</td>
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<tr>
<td>ao.Univ.-Prof. DI. Dr. Erich Roth</td>
<td><a href="mailto:erich.roth@meduniwien.ac.at">erich.roth@meduniwien.ac.at</a></td>
<td>S</td>
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<tr>
<td>Ao.Univ. Prof. Dr. Thomas Stulnig</td>
<td><a href="mailto:thomas.stulnig@meduniwien.ac.at">thomas.stulnig@meduniwien.ac.at</a></td>
<td>S</td>
</tr>
<tr>
<td>Ao.Univ.Prof. Dr. Walter Tschugguel</td>
<td><a href="mailto:walter.tschugguel@meduniwien.ac.at">walter.tschugguel@meduniwien.ac.at</a></td>
<td>S</td>
</tr>
<tr>
<td>Univ.-Doz. Mag. Dr. Nicole Unger-Manhart</td>
<td><a href="mailto:nicole.unger-manhart@meduniwien.ac.at">nicole.unger-manhart@meduniwien.ac.at</a></td>
<td>L</td>
</tr>
<tr>
<td>Ao.Univ.Prof. Dr. Heinrich Vierhapper</td>
<td><a href="mailto:heinrich.vierhapper@meduniwien.ac.at">heinrich.vierhapper@meduniwien.ac.at</a></td>
<td>L</td>
</tr>
<tr>
<td>Ao.Univ.Prof. Dr. Ludwig Wagner</td>
<td><a href="mailto:ludwig.wagner@meduniwien.ac.at">ludwig.wagner@meduniwien.ac.at</a></td>
<td>S</td>
</tr>
<tr>
<td>Univ. Prof. Dr. Kurt Widhalm</td>
<td><a href="mailto:kurt.widhalm@meduniwien.ac.at">kurt.widhalm@meduniwien.ac.at</a></td>
<td>S</td>
</tr>
</tbody>
</table>

* currently assigned roles: S, supervisor; YS, young supervisor; L, lecturer.
Description of thesis projects and CVs of supervisors & lecturers:

Sabina BAUMGARTNER-PARZER ...................................................................................... 12
Christian BIEGLMAYER .................................................................................................. 19
Martin BISCHOF ............................................................................................................. 21
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Alexandra KAUTZKY-WILLER ....................................................................................... 57
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Heinrich VIERHAPPER ................................................................................................. 153
Ludwig WAGNER .......................................................................................................... 154
Kurt M. WIDHALM ........................................................................................................ 161
Diabetes associated micro- and macrovascular dysfunction. Analysis of cellular and molecular mechanisms.

Abstract
Long standing diabetes is characterized by diabetic microangiopathy (diabetic retinopathy and nephropathy) and by premature atherosclerosis. The latter represents the major cause of morbidity and mortality in patients with diabetes mellitus, whereas diabetic retinopathy is the leading cause for blindness in Europe.
Recent data suggest that loss of retinal endothelial cells and pericytes due to apoptosis results in acellular capillaries and ischemia, providing the basis for the progression of diabetic retinopathy to the proliferative form of this disease. Accelerated apoptosis of endothelial cells and vascular smooth muscle cells in atherosclerotic regions is assumed to result in plaque erosion and plaque rupture and thus to favor atherothrombosis. It was only recently that bone marrow derived endothelial progenitor cells (EPCs) have been found to contribute to vascular repair and angiogenesis. In diabetic patients, however, numbers of EPCs circulating in the blood are reduced when compared to healthy control subjects. Such reduction of EPCs may contribute to diabetes associated endothelial dysfunction and to the clinical manifestation of atherosclerosis and cardiovascular disease. Therefore, it is of importance to evaluate the hypothesis that diabetes associated metabolic abnormalities (hyperglycemia, dyslipidemia and chronic elevation of free (non-esterified) fatty acids (FFA), elevated levels of proinflammatory cytokines and adhesion molecules) cause depletion of EPCs in diabetic patients.
We have previously shown that vasoprotective factors (antioxidants, leptin) prevent, whereas atherosclerotic risk factors (oxidized/glycated LDL, hyperglycemia, proinflammatory cytokines, elevated free fatty acids) trigger apoptosis in cultured vascular cells, depending on stimulus and cell type. Using inhibitors of caspases, of protein kinases and of transcription factors, we could identify the respective target molecules and signal transduction pathways. Due to our extensive experience in this field of research, in future studies we want to test the hypothesis that function (apoptosis, proliferation and secretory profile) of human endothelial progenitor cells is directly affected by diabetes associated metabolic factors. It will be evaluated, whether EPCs functional alterations can be modulated by vasoprotective agents and the respective target molecules and signaling pathways will be characterized.

Thesis Subjects
Modulation of human endothelial progenitor cell function by metabolic factors.

Techniques and infrastructure
Isolation and culture of primary cultures of human vascular cells and of endothelial progenitor cells, apoptosis and proliferation assays, FACS analysis, Western and Northern blots, immunocytochemistry, transfection experiments.
Curriculum Vitae

Sabina M. Baumgartner-Parzer

Address: Department of Medicine III, Division of Endocrinology & Metabolism, Medical University of Vienna, Waehringer Gürtel 18-20, A-1090 Vienna, Austria; Phone +43 1 40400 4368; Fax +43 1 404007790; Email sabina.baumgartner-parzer@meduniwien.ac.at

Personal Data
Date of Birth: 5.11.1962
Place of Birth: Bad Ischl, Austria
Nationality Austria

Education
1985-1989 Doctoral thesis
1981-1985 Study of biotechnology

Career History
1998-present Associate Professor of Biochemistry at the Department of Internal Medicine III, Div. Endocrinology & Metabolism, Medical University of Vienna
Head of the working groups of vascular biology and of molecular genetics of hereditary endocrine diseases

11/1997 Habilitation at the University of Vienna

1990-1997 Post-Doc at the Research Laboratories of Department of Medicine III, Division of Endocrinology & Metabolism, Medical University of Vienna (former Division of Endocrinology & Diabetes Mellitus, 1st Medical Department, University of Vienna)

1993 and 1994 2 months Visiting Fellow at the Havard Medical School, Boston

1989 Promotion (Dr. rer.nat.techn)

1985-1989 Thesis at the 1.Dept. of Medicine (Prof. Mannhalter / Prof. Deutsch), University of Vienna

1985 Graduation (Dipl.-Ing) at the University of Bodenkultur

Career-related Activities
2003 -present Editorial board of the journal Metabolic Syndrome and Related Disorders
1998-2003 Assistant Editor of the journal Diabetologia
1996 Organization of the EASD Satellite Symposium:"Role of adhesion molecules in Diabetes Mellitus"

Awards

2005 Poster-Prize - Austrian Society of Endocrinology & Metabolism
1997 Science award of Upper Austria
1985 Dr. Karl Schleinzer-Award (University of Bodenkultur)
1984/85 Award for gifted students

Memberships

Austrian Diabetes Association (ÖDG),
Austrian Association for Endocrinology and Metabolism (ÖGES),
European Association for the Study of Diabetes (EASD)
Gesellschaft für gute Labor und Analysenpraxis (GALP)

Sources of funding since 2000

<table>
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<tr>
<td>2005-2006</td>
<td>Eurasia Pacific Network (Grant to Erdenekhuu Nansalma)</td>
<td>Supervisor</td>
<td>Vascular dysfunction in diabetes</td>
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<td>2005-2007</td>
<td>FWF(Charlotte-Bühler-Program to coworker)</td>
<td>Supervisor</td>
<td>Nutritional free fatty acids and diabetic vascular dysfunction. Analysis of cellular and molecular mechanisms and interactions.</td>
<td>80</td>
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<tr>
<td>2004-2005</td>
<td>Jubiläumsfonds der Österr. Nationalbank</td>
<td>Co-investigator</td>
<td>Freie Fettsäuren und Diabetes assoziierte Gefäßerkrankungen</td>
<td>60</td>
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<td>1997-1999</td>
<td>FWF</td>
<td>Principal investigator</td>
<td>Hyperglykämie und Apoptose</td>
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<tr>
<td>1993-1995</td>
<td>Herzfelder’sche</td>
<td>Principal</td>
<td>Einfluß von Glukose auf ET-1</td>
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</table>
Familienstiftung | investigator | und EDRF Produktion in kultivierten humanen Endothelzellen verschiedener Stromgebiete

### Supervision of doctoral and diploma students (since 2000)

**Diploma students:** Andrea Lindenmayer, Kathrin Malits, Ursula Schauer, Magdalena Reithner

**PhD students:**

<table>
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<th>Name</th>
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<tr>
<td>Karin Tobler</td>
<td>Function of endothelial progenitor cells in gestational diabetes</td>
<td>2005-2008</td>
<td>(PhD)</td>
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<tr>
<td>Michaela Artwohl</td>
<td>Heterogeneous regulation by hyperglycemic / hyperlipidemic states as well as by an adjuvans in colon cancer therapy (levamisole) of apoptosis, proliferation and associated gene/protein expression in vascular endothelial cells.</td>
<td>1997-2000</td>
<td>Dr. rer. nat.techn</td>
</tr>
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</table>

### Teaching

- Biochemische, molekularbiologische Arbeitsmethoden in der Endokrinologie (für Wahlfachausbildung gemäß §13 Studiengesetz Medizin, für Diplomanden und Dissertanten).
- Experimentelle Arbeiten in Endokrinologie und Stoffwechsel (für Wahlfachausbildung gemäß §13 Studiengesetz Medizin, für Diplomanden und Dissertanten).
- Molekulare Endokrinologie, gemeinsam mit H Cross (Pathophysiologie)
- Eukaryonten - Biogenese von Zellorganellen (Wahlfachvorlesung gem. mit Prof. Glößl) - Externer Lehrauftrag an der Univ. f. Bodenkultur
- Biochemische, molekularbiologische Aspekte der Endokrinologie (Dozentenvorlesung)
- Ringvorlesung - ICP (Interdisciplinary Cooperation Project of Molecular Medicine) – im SS 1999

### Publications

44 peer reviewed publications and 3 reviews in scientific journals, 8 invited lectures

Peer reviewed manuscripts since 2000 (original research and reviews)

**First, last or corresponding author manuscripts:**


SM Baumgartner-Parzer, E Schulze, S Pauschenwein, S Rondot, P Nowotny, W Waldhäusl, H


H Vierhapper, C Bieglmayer, G Heinze, SM Baumgartner-Parzer. Frequency of RET-protooncogene mutations in patients with normal and with moderately elevated (50-100 pg/ml) pentagastrin-stimulated serum concentrations of calcitonin. Thyroid 14:580-583, 2004


SM Baumgartner-Parzer, R Lang, G Heinze, B Niederle, K Kaserer, W Waldhäusl and H Vierhapper. Polymorphisms in exon 13 and intron 14 of the RET-protooncogene: Genetic modifiers of medullary thyroid carcinoma? J Clin Endocrinol Metab 90: 6232-6236, 2005

H Vierhapper, B Niederle, C Bieglmayer, K Kaserer and S Baumgartner-Parzer. Early diagnosis and curative therapy of medullary thyroid carcinoma by routine measurement of serum calcitonin in patients with thyroid disorders. Thyroid 15: 1267-1272, 2005


Co-author manuscripts:


D Stoiber, B Kovacic, C Schuster, C Schellack, M Karaghiosoff, R Kreibich, E Weisz, Artwohl M, OC Kleine, M Müller, S Baumgartner-Parzer, J Ghysdael, M Freissmuth, V Sexl. Tyk2 is a key regulator for the tumor surveillance of B lymphoid tumors. JCI 114 (11):1650-1658, 2004


Endocrinol 153:99-106, 2005

Invited Talks:
Hyperglycemia and endothelial cells. XIII. International Donausymposium on Diabetes mellitus. Vienna 5.-7.10.1995
Role and mechanisms of apoptosis in endothelial cells: Zellkultur-Workshop - European Tissue Culture Society, Wien 21/02/1997
Effect of tri-iodothyronine on cultured endothelial cells. The Vascular System in Thyroid Disease. Heidelberg 6.10.1999
Hyperglycemia and endothelial dysfunktion. Donau-Symposium, Zürich 16.10.1999
Christian BIEGLMAYER
Clinical Institute for Medical and Chemical Laboratory Diagnostics
christian.bieglmayer@akhwien.at

Curriculum Vitae

Personal data:
Born 09/15/1947, living in Vienna, married, one son.

Education:

Profession:
1972-1974: Half-day employee at the Institute of General Biochemistry, afterwards full-time university assistant.
1981-1991: Entrusted with the organisation and direction of the Endocrine Laboratory of the 2nd Dept. Obstetrics and Gynaecology.
1987 "Venia docendi for Biochemistry". 1988 assistant professor and since 1990 tit.a.o. Univ. Prof.
1991 till now: manager of the domain “Endocrinology” at the Clinical Institute for Medical and Chemical Laboratory Diagnostics (KIMCL)

Consultant of WHO in Pyongyang, North-Korea in 1988. ÖQUASTA ring-trial leader for quality assurance of “Fertility Hormones”.

Award: "Theodor Körner Award" for "Secretion of gonadotropins by pituitary cell culture" in 1978.

Membership: Austrian Biochemical Society (member of the board from 1986 to 1988), Austrian Society for Clinical Chemistry, Austrian Society for Endocrinology and Metabolism (founder-member and member of the board since 1995) and New York Academy of Science.


Scientific work: About 250 articles in scientific periodicals and books: carbohydrate metabolism in plants, steroid hormone receptors, autoimmune-reactions in pre-eclampsia, clinical and experimental endocrinology and oncology, bone marker.


page 19 of 168
Guidance of 35 students during their diploma work or thesis and final examinations. Guidance of MD’s during their special training in laboratory medicine.
**Effect of Continuous Subcutaneous Glucose Monitoring and Insulin Infusion on the Incidence of Hypoglycemia in Type 1 Diabetic Patients**

**Abstract**
Hypoglycemia is a frequent complication in long-term type 1 diabetes, especially in patients with low HbA1c-levels. On average, one type 1 diabetic patient attempting to maintain near-normoglycaemia suffers two episodes of symptomatic hypoglycemia per week and one episode of severe, at least temporarily disabling, hypoglycemia approximately once a year. Long-term type 1 diabetic patients often develop hypoglycemia unawareness leading to a greater risk of severe hypoglycemia since symptom recognition and accurate detection of extreme blood glucose values are crucial for management of type 1 diabetes. With subcutaneous glucose sensors continuous blood glucose monitoring is possible. Even with older systems where glucose levels are not visible for the patient, the increased amount of blood glucose measurements allowed the physician to optimize insulin therapy resulting in reduced incidence of hypoglycemia. Only recently an improved system for continuous blood glucose measurements became available. Glucose levels are visible for the patient and alarm limits can be set. A randomized study demonstrated that this system reduces the duration of hypoglycemic episodes by 45%.

The latest innovation in hypoglycemia therapy is the combination of continuous insulin supply with continuous blood glucose monitoring. This concept was implemented by the Paradigm Real Time - System which recently became available in Europe. The long-term effects of this therapeutic option on the incidence of hypoglycemia and the quality of life in type 1 diabetic patients has not yet been studied.

**Thesis Subjects**
This study plans to evaluate the hypothesis is that a combination of optimal insulin therapy by CSII combined with continuous blood glucose monitoring reduces hypoglycemia frequency and duration in type 1 diabetic patients with frequent hypoglycemia under functional insulin therapy. Furthermore we hypothesize that this therapy will improve quality of life and reduce the fear of hypoglycemia.

**Techniques and infrastructure**
Continuous subcutaneous insulin infusion, Continuous glucose monitoring systems
Curriculum Vitae

Martin BISCHOF, MD
Division of Endocrinology & Metabolism, Department of Internal Medicine III, Medical University of Vienna, Waehringer Guertel 18-20, A-1090 Vienna, Austria; Phone +43 1 40400 7257 Fax +43 1 40400 7257 email martin.bischof@meduniwien.ac.at

Personal Data
Date of Birth: 01.04.1969
Place of Birth: Vienna, Austria
Nationality Austria

Education
2003 Certification Internal Medicine
1987 – 1996 studies of Human Medicine
1979 – 1987 secondary school

Career History
2005-present Clinical responsibility for the Metabolic Research Unit
2004 – present Associate Professor of Medicine at the Medical University of Vienna
Attending Physician at the Div. of Endocrinology & Metabolism
2004 “venia docendi” for Internal Medicine
1998 – 2004 Clinical training and lecturer at the Division of Endocrinology & Metabolism, Medical University of Vienna
1996-1998 Postdoctoral fellow Department of General and Experimental Pathology, University of Vienna Medical School
1996 Fellowship Brown University, Rhode Island, USA
1992-1995 Scientific coworker of the group „Tumorpallatology“ Department of General and Experimental Pathology, University of Vienna Medical School

Career-related Activities
2005-present Management Training for Medical Leaders at the University of Krems
Awards
2002 Aventis-Preis, University of Vienna Medical Faculty
1996 Legacy Hirtl-Buss, University of Vienna Medical Faculty
(research grant)

Memberships
Austrian Diabetes Society
European Society for the Study of Diabetes
Austrian Society for Endocrinology and Metabolism
Austrian Society for Internal Medicine

Sources of funding (since 2000)

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<tr>
<td>2005 –</td>
<td>FWF (F17980-B11)</td>
<td>Brain metabolism during hypoglycemia in type 1 DM</td>
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<td>2004 –</td>
<td>Austrian National Bank Project</td>
<td>Glucose metabolism in GSD 1</td>
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<td>2006</td>
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Supervision of doctoral students (since 2000)

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<tr>
<td>Martina Mandl</td>
<td>Measurement of unidirectional fluxes to ATP in human occipital lobe using 31PMR saturation transfer</td>
<td>2005 – 2008</td>
<td>PhD</td>
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Publications
27 peer reviewed publications in scientific journals

Peer reviewed manuscripts since 2000 (original research and reviews)

First, last or corresponding author manuscripts:


of Short-Term Improvement of Insulin Treatment and Glycemia on Hepatic Glycogen Metabolism in Type 1 Diabetes Mellitus. Diabetes (2001) 50: 392-398

Co-author manuscripts:


Mechanisms of prematurity - the potential role of genetic and metabolic factors

Abstract
Preterm delivery is the worldwide leading cause of infant mortality and morbidity. In the United States of America between 7 and 8% of live born newborn infants have a birth weight of 2500 g. About 20% of these weigh 1500 g or less and are mostly born prematurely. The causes for premature birth and intrauterine growth retardation are closely related and are multifactorial in origin; many social, environmental, medical and genetic factors have been suggested. Genetic factors from both mother and fetus probably play a role in determining gestational length and could confer a possible genetic predisposition towards preterm birth. Since infections seem to be most prevalent among the identifiable causes of preterm birth, it is conceivable that genetic factors that predispose to infections may play an important role. A candidate genetic study focusing on genes that encode cytokines, mediators of apoptosis and host defense found associations with allelic variants in the genes for interleukin 4 and 10 (IL4, IL10), the tumor necrosis factor alpha (TNF), and the mannose-binding lectin gene (MBL2). The possible genetic context between infection, inflammation and preterm delivery is also supported by other findings, in particular for IL4 and TNF. In addition, genetic and dietary factors conferring metabolic perturbations, such as low cholesterol during early pregnancy have been associated with adverse outcome including prematurity. The objectives of our research are twofold: First to identify novel genetic and metabolic factors that are associated with prematurity and, secondly, to identify and test appropriate mouse models of prematurity with respect to novel therapeutic approaches.

Thesis Subjects
Arginine:glycine amidinotransferase (AGAT) knock-out mice - a model for prematurity and perinatal asphyxia?
The role of genetic factors for the pathophysiology of prematurity - prospective multi-center, multi-national study.

Techniques and infrastructure
Mouse model of AGAT deficiency; phenotypic characterization of mice; primary tissue cultures; enzymatic analysis; molecular analyses (PCR, dHPLC, sequencing); chip arrays; all required equipment available.
Curriculum Vitae

Olaf BODAMER
Division of Biochemical and Paediatric Genetics, Department of General Paediatrics, Medical University of Vienna, Waehringer Guertel 18-20, A-1090 Vienna, Austria Phone +43 1 40400 3210; Fax +43 1 4063484; Email olaf.bodamer@meduniwien.ac.at

Personal Data
Date of Birth: 25.03.1963
Place of Birth: Stuttgart, Germany
Nationality: Germany

Education
2005 Specialist in Human Genetics (Medizinische Biologie)
2001 – present Specialist in Inborn Errors of Metabolism
1999 Specialist in Paediatrics
1999 American Board Certification in Medical Genetics
1997-1999 Fellowship Medical Genetics, Baylor College of Medicine, Houston, USA
1997 Educational Commission for Foreign Medical Graduates (ECFMG) test passed
1994 - 1997 PhD Studies at the University College London, UK
1989 – 1992 Doctoral thesis MD at the University Medical School Heidelberg and Saarland
1982 – 1989 Studies of Human Medicine at the University of Heidelberg, Germany
1974 – 1982 secondary school in Stuttgart, Germany

Career History
2004 – present Director of the Austrian National Screening Program
2004 – present Director of Biochemical and Paediatric Genetics at the Department of General Paediatrics, Medical University of Vienna.
2002 – present Associate Professor at the Department of General Paediatrics, Medical University of Vienna. Consultant at the Children’s Hospital Mödling and Prayer Children’s Hospital Vienna
2002 “venia docendi” for Paediatrics

page 27 of 168
2001-present  Elected Fellow of the American College of Medical Genetics
1999-2001  Assistant Professor at the Department of Human and Molecular Genetics, Baylor College of Medicine, Houston, USA
1997 – 1999  Fellow at the Department of Human and Molecular Genetics, Baylor College of Medicine, Houston, USA
1994 – 1999  Senior Research Associate at the Institute of Child Health, London, UK
1992 – 1993  University Assistant at the Division of Paediatric Oncology and Haematology, Univ.-Children’s Hospital Erlangen, Germany
1989– 1992  Doctoral thesis at the University Medical School Heidelberg and Saarland
1989 – 1992  Assistant Children’s Hospital Ludwigshafen, Germany and different private practices

**Career-related Activities**

2001 – present  Director of quality management at the Division of Biochemical and Paediatric Genetics, Medical University Vienna
2003 – present  Director of the interdisciplinary working group at the University Children’s Hospital Vienna
2003 – present  Director of the National Metabolic Registry

**Awards**

2005  Wissenschaftspreis Österreichische Gesellschaft für Kinder- und Jugendheilkunde
2001  Travel award Society of Inbron Errors of Metabolism USA
1988  Stipend of the DAAD (Deutscher Akademischer Auslandsdienst)

**Memberships**

Deutsche Gesellschaft für Kinderheilkunde
Society for the Study of Inborn Errors of Metabolism
British Inherited Metabolic Group, England
American Society of Human Genetics
American College of Medical Genetics
Österreichische Gesellschaft für Humangenetik
International Society for Neonatal Screening
### Sources of funding (since 2000)

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<tr>
<td>2007 – 2009</td>
<td>Navi Mumbai Institute of Research in Mental and Neurological Handicap</td>
<td>Incidence of Inborn Errors of Metabolism in India</td>
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<td>2007 – 2009</td>
<td>Ministry of Science</td>
<td>Diagnostic strategies for the molecular diagnosis of Lysosomal storage disorders</td>
<td>67</td>
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<tr>
<td>2006 – 2010</td>
<td>Ministry of Health</td>
<td>Neonatal Screening for Lysosomal storage disorders</td>
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<td>Cytonet</td>
<td>Hepatocytes and urea cycle function</td>
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<td>2006 - 2007</td>
<td>Milupa</td>
<td>Threonine Metabolism in individuals with phenylketonuria</td>
<td>18</td>
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<td>2004 - 2009</td>
<td>Genzyme</td>
<td>Morbus Fabry, Development of a novel method for neonatal screening for lysosomal</td>
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<td>2004 - 2008</td>
<td>SHS GmbH</td>
<td>Development of analytical techniques</td>
<td>46</td>
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### Supervision of doctoral students (since 2000)

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<tr>
<td>Karin Tuschl</td>
<td>therapeutic effects of oral Tetrahydrobiopterin in patients with classical phenylketonuria-a stable isotope study</td>
<td>2001 - 2004</td>
<td>MD</td>
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<td>Rene Ratschmann</td>
<td>Haploid Protein Expression Test</td>
<td>2001 - 2004</td>
<td>MD</td>
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<td>Yvonne Sommer</td>
<td>Homocysteine and Methionine Metabolism using stable isotopes</td>
<td>2004 - 2007</td>
<td>MD</td>
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<tr>
<td>Karin Tuschl</td>
<td>Stipend Metabolicum (€ 15.000)</td>
<td>2004</td>
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<tr>
<td>Manuela Hiess</td>
<td>Epigenetics and Methylation</td>
<td>2004 – 2006</td>
<td>MD</td>
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<td>Name</td>
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<td>Dimitri Saliabis</td>
<td>Tandem MS Screening</td>
<td>2005 - 2007</td>
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<tr>
<td>Julia Vodopiutz</td>
<td>CDGIK – a novel disorder of glykosylation</td>
<td>2005</td>
<td>PhD</td>
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<tr>
<td>Furhan Iqbal</td>
<td>AGAT Mousemodel</td>
<td>2006</td>
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<tr>
<td>Ana Kiš</td>
<td>Genetics of prematurity</td>
<td>2007</td>
<td>PhD</td>
</tr>
</tbody>
</table>

**Publications**

61 and 10 peer reviewed publications and reviews, resp., in scientific journals, 53 invited lectures,

**Peer reviewed manuscripts since 2000 (original research and reviews)**

*First, last or corresponding author manuscripts:*


Co-author manuscripts:


S. Fischer, G. Mann, M. Konrad, M. Metzler, G. Ebetsberger, N. Jones, B. Nadel,
Wilfred DRUML
Clinical Division of Nephrology and Dialysis, Department of Internal Medicine III
wilfred.druml@meduniwien.ac.at

Curriculum Vitae

Name: Prof. Dr. med. Wilfred Johannes DRUML
married with Mrs. Dr. jur. Christiane Druml
3 children (Hephzibah 22, Zino 20, Carl 16)
Home address: Gottfried Keller-Gasse 13, A-1030 Vienna, Austria
31. 7. 1949 born in Mauthen/ Carinthia, Austria
1969 - 1972 Medical training (preclinical part) in Innsbruck, Austria
1972 - 1975 Medical training (clinical part) Vienna, Austria
1975 Graduation; MD
1975 - 1991 Residence/ fellow in medicine, Department of Internal Medicine I,
University of Vienna, Austria
1982 Board certification Internal Medicine
1985 - 1987 Postdoctoral research fellow Harvard University, Boston, USA
1986 US-certification (ECFMG)
1986 - 1987 Medical Fellow, Harvard University
(Brigham and Women’s Hospital) Boston
1987 Board Certification in Austria : Nephrology
1987 Associate Professor of Medicine
1991 Professor of Medicine, Tenure
since 1991 Director, Nephrology Intensiv Care Programme
1995 Vienna General Hospital, Vienna, Austria
Board certification: Intensive Care Medicine

Research Focus: Metabolism and nutrition in the critically ill, in patients with renal failure,
development of the first dipeptide-containing amino acid solution worldwide and of many
nutritional programs, intravenous lipids, acute renal failure, continuous renal replacement
therapies, general infusion therapy.

Society (Founding) Member /Officer : Austrian Society of Clinical Nutrition
(AKE)(president, responsible for publication of “nutritional recomendations”), Austrian
Society of Medical Intensive Care Medicine (president, responsible for “consensus reports”) 
European, Society of Parenteral and Enteral Nutrition, European Society of Intensive Care
Medicine

Congress Organization : Numerous national and international seminars and workshops in
the field of intensive care medicine, clinical nutrition, of acute renal failure

Editor, Editorial Board : Editor-in-Chief of Wiener klinische Wochenschrift (The Middle
European Journal of Medicine),
founder and editor-in-chief of an intensive care newsletter (INTENSIV-News), editorial
board of several national and international journals

Manuscript Reviewer: Regular reviewer for the major journals in the fields of clinical
nutrition, of nephrology and intensive care medicine.
Manuela FÖDINGER  
Clinical Institute of Medical and Chemical Laboratory Diagnostics  
manuela.foedinger@meduniwien.ac.at  

Effect of iron therapy on cellular iron homeostasis - safety of iron therapy?  

Abstract  
Most patients with chronic renal failure must receive erythropoietic agents and iron to maintain a hemoglobin level above 11 g/dL. Intravenous iron is more effective than oral iron substitution. Intravenously iron is mainly supplied as iron sucrose and iron gluconate. However, non-transferrin bound labile iron can produce side effects possibly by affecting endothelial cells, polymorphonuclear leukocytes and cytokines. Moreover, labile iron may act as a catalytic agent in the formation of hydroxyl radicals, and could hence contribute to cell damage. Therefore, iron must be carefully administered intravenously, particularly when supplied in high doses.  
Data in the literature suggest that iron is an important factor in the process of atherosclerosis, but exact mechanisms are still unknown. The ‘iron hypothesis’ suggests that iron depletion protects against ischemic heart disease. Furthermore, iron promotes bacterial growth and thus is potentially related to infectious complications.  
End-stage renal disease patients require iron therapy to benefit from treatment with recombinant human erythropoietin or novel erythropoiesis stimulating proteins. Monitoring of iron status in these patients includes the determination of the percentage of hypochromic red blood cells and/or the reticulocyte hemoglobin content, in addition to ferritin serum concentration and transferrin saturation.  
Concerning safe and optimal correction of renal anemia by intravenous iron therapy the principal questions are to be answered are the following: Does intravenous iron application indeed contribute to 1) atherogenesis, 2) infectious disease, and 3) cell damage?  
A first step to clarify these issues is to identify genes that are responsive to intravenous iron therapy (i.e. up- or down-regulated genes). This is to be accomplished by using gene expression microarrays in cells isolated from chronic renal failure patients that have received intravenous iron or not. Identification of genes regulated by iron therapy will provide basic information to support or reject the hypothesis of an involvement of iron in atherogenesis, infections, and cell damage.  

Thesis Subjects  
Effects of intravenous iron therapy on gene expression in human cells  
Molecular effects of intravenous iron therapy on oxidative stress in human cells  

Techniques and infrastructure  
Cell culture, isolation of RNA, microarray analysis; quantitative real-time PCR; all required equipment available.
Curriculum Vitae

Manuela FÖDINGER
Clinical Institute of Medical and Chemical Laboratory Diagnostics, Medical University of Vienna, Waehringer Guertel 18-20, A-1090 Vienna, Austria; Phone +43 1 40400 5388; Fax +43 1 40400 6752; Email manuela.foedinger@meduniwien.ac.at

Personal Data
Date of Birth: 09.02.1964
Place of Birth: Steyr, Austria
Nationality Austria

Education
1997 – present specialist in Laboratory Medicine
1990 International Diploma of Tropical Medicine
1982 – 1990 studies of Human Medicine
1974 – 1982 secondary school

Career History
2004 – present Head of the section „Molecular Endocrinology, Pharmacology & Metabolism“ and medical head of the division „Endocrinology“ at the Clinical Institute of Medical and Chemical Laboratory Diagnostics
2000 – present associate Professor at the Clinical Institute of Medical and Chemical Laboratory Diagnostics, Medical University of Vienna
2000 “venia docendi” for Laboratory Medicine
1992 - present University Assistant, Clinical Institute of Medical and Chemical Laboratory Diagnostics, Medical University of Vienna
1991 - 1992 Research fellow at the Institute of General and Experimental Pathology and the Institute of Specific Prophylaxis and Tropical Medicine at the (Medical) University of Vienna

Career-related Activities
2001 – 2002 Postgraduate University Course for Medical Leaders at the University of Salzburg
2004 Section leader "Science and Development", Austrian Society for Clinical Chemistry

**Awards**

2001 ERA-EDTA Award of the European Dialysis and Transplantation Association

1999 Preis der Österreichischen Gesellschaft für Nephrologie Award der National Kidney Foundation

1998 Young Investigator Award of the American Society of Transplant Physicians

Best Scientific Abstract of the International Society of Peritoneal Dialysis

1996 Preis der Österreichischen Gesellschaft für Labormedizin

**Memberships**

Austrian Society for Endocrinology and Metabolism
Austrian Society for Laboratory Medicine and Clinical Chemistry
Austrian Society for Good Analyses and Laboratory Praxis
Society for Nephrology

**Sources of funding (since 2000)**

<table>
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<tr>
<td>1998 – 2001</td>
<td>Else-Kröner-Fresenius-Stiftung, Germany</td>
<td>Effect of homocysteine on vascular endothelial cells</td>
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**Supervision of doctoral students (since 2000)**

<table>
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<tr>
<th>Name</th>
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<tr>
<td>Anita Jallitsch</td>
<td>Molecular background of Anderson-Fabry disease</td>
<td>2007 – (2009)</td>
<td>(Dr. scient. med.)</td>
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**Publications**

78 and 13 peer reviewed publications and reviews, resp., in scientific journals,
2 editorials, 3 book contributions

**Peer reviewed manuscripts since 2000 (original research and reviews)**

*First, last or corresponding author manuscripts:*

Sunder-Plassmann G, Winkelmayer WC, Födinger M. 2006. Genetic aspects of


*Co-author manuscripts:*


Type 2 diabetes, glucose metabolism, and the role of skeletal muscle.

Abstract
Changes in environment and lifestyle presently cause a worldwide distinct increase in diabetes mellitus, which is particularly due to increasing numbers of patients afflicted by type 2 diabetes. This disease is strongly associated with sedentary lifestyle and obesity. A better understanding of the natural etiology and the metabolic disturbances of type 2 diabetes, as well as the development of new therapeutic strategies and drugs is therefore among the most important challenges in medical research.

In type 2 diabetes, the predominant cause of increased blood glucose, which defines the diabetic state, is resistance of target tissues to the actions of insulin, i.e., target tissues stimulated by the hormone fail to take up an appropriate amount of glucose from circulating blood. Hence, it is important to understand, how tissue insulin sensitivity is regulated and can be manipulated. In this regard, skeletal muscle is of particular interest, because muscle is the quantitatively most important target tissue for insulin-stimulated glucose lowering and accounts for up to 80% of glucose disposal under insulin-stimulated conditions.

Since many years our research is focused on several aspects of the problem: (i) the description of antidiabetic potentials of new compounds in the whole organism (experimental animal); (ii) analysis of the modes and mechanisms of actions of new as well as of established antidiabetic drugs, particularly with regard to their effects on muscle insulin sensitivity; (iii) the investigation of mechanisms involved in the physiological regulation of insulin sensitivity, e.g., via adipocyte-derived hormones.

More specifically, we have studied the role and demonstrated the importance of the cellular energy state for the long-term modulation of muscle insulin sensitivity. In this context, we have developed a working hypothesis that a reduced cellular energy load can serve as a trigger for delayed insulin sensitization leading to an amelioration of deranged glucose homeostasis (“the energy charge hypothesis of insulin sensitivity”).

We are experienced in metabolic studies on whole animals (e.g. rat models for type 2 diabetes) and in the use of native rat soleus muscle strips in a pharmacological setting. The latter allows to analyze in detail the substrate flux rates through the most important biochemical pathways of muscle fuel metabolism and can be used for many different experiments including, e.g., ex vivo as well as in vitro approaches.

Thesis Subjects
Effects of antidiabetic agents on glucose metabolism of rat skeletal muscle in vivo and in vitro.

Techniques and infrastructure
Incubation of native rat skeletal muscle strips; analysis of muscle metabolism with radionlabelled substrates and enzymatic methods; basic methods for animal experimentation; hormone analysis; Northern and Western blotting; all necessary infrastructure and equipment available


**Curriculum Vitae**

**Clemens FÜRNSINN**
Division of Endocrinology & Metabolism, Department of Internal Medicine III, Medical University of Vienna, Waehringer Guertel 18-20, A-1090 Vienna, Austria; Phone +43 1 40400 4785; Fax +43 1 40400 7790; Email clemens.fuernsinn@meduniwien.ac.at

**Personal Data**
Date of Birth: 6.3.1964
Place of Birth: Vienna, Austria
Nationality Austria

**Education**
1982 – 1990 studies of Biology (zoology/botany)
1970 – 1982 school

**Career History**
2000 – present Associate Professor at the Department of Internal Medicine III, Medical University of Vienna. Basic medical research on fuel metabolism and antidiabetic agents
X/1997 “venia docendi” for Metabolic Physiology
1991 – present University Assistant at the Clinical Division of Endocrinology Metabolism, Department of Internal Medicine III, (Medical) University of Vienna, Austria
X/1990 – V/1991 Civil Service
V/1990 – X/1990 University Assistant at the Division of Endocrinology & Diabetes Mellitus, 1st Medical Department, Vienna
3.4.1990 Ph.D. Graduation
1985 7 Months of Research at the Laboratory of Animal Physiology, University of Groningen, the Netherlands.
1982 Begin of Study of Biology (Zoology/Botany) at the University of Vienna

**Career-related Activities**
1998 – present2003 Member of the Editorial Board, Diabetologia

**Awards**
1996  Winner of the Poster-Prize at the Diabetes Three Countries Meeting at Basel, Switzerland (organized by German, Swiss, and Austrian Diabetes Associations)

1992  Winner of the Award of the HOECHST-Company

**Memberships**
Austrian Society for Endocrinology and Metabolism
Austrian Diabetes Society
German Diabetes Society
European Society for the Study of Diabetes

**Sources of funding in last 5 years (2000-2005)**

<table>
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<tr>
<th>Period</th>
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<tr>
<td>2006 – 2007</td>
<td>FFG (Nr.812095)</td>
<td>Investigation of antidiabetic activities of established medical plants. (Project Leader: B. Brunmair)</td>
<td>175</td>
</tr>
<tr>
<td>2003 – 2005</td>
<td>FWF (P16352-B08)</td>
<td>Antidiabetic effects caused by inhibition of cell respiration?</td>
<td>63</td>
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<td>1998 – 2000</td>
<td>FWF (P13049-MED)</td>
<td>Osmosis, insulin sensitizers, and muscle glucose metabolism.</td>
<td>31</td>
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**Supervision of doctoral students (since 2000)**

<table>
<thead>
<tr>
<th>Name</th>
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<tbody>
<tr>
<td>Susanne Neschen</td>
<td>&quot;Effect of GLP1/GLP1 analogues, lithium ions, and troglitazone on rat glucose metabolism; University of Vienna (Zoology)</td>
<td>– 2000</td>
<td>Dr. rer. nat.</td>
</tr>
<tr>
<td>Barbara Brunmair</td>
<td>Wirkung und Wirkungsmechanismen von Agonisten nukleärer Rezeptoren auf den Glukose- und Fettstoffwechsel der Ratte; University of Vienna (Zoology)</td>
<td>– 2001</td>
<td>Dr. rer. nat.</td>
</tr>
<tr>
<td>Name</td>
<td>Title of thesis</td>
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<tr>
<td>Thomas Kästenbauer</td>
<td>Prospektive, plazebokontrollierte, randomisierte und doppelblinde Studie zum Nachweis der Wirksamkeit einer Behandlung der peripheren diabetischen Polyneuropathie mit Ginkobiloba Extrakt Egb 761; University of Vienna (Zoology)</td>
<td>– 2003</td>
<td>Dr. rer. nat.</td>
</tr>
<tr>
<td>Florian Gras*</td>
<td>Vergleichende Untersuchung der Wirkung von Thiazolidindionen, einem Isoxazolidindion und Dexlipotam auf den Glukosestoffwechsel der Ratte, Humboldt University, Berlin Germany</td>
<td>– 2004</td>
<td>MD</td>
</tr>
<tr>
<td>Karin Stadlbauer*</td>
<td>Modulation von Glukosestoffwechsel und Insulinsignalkaskade durch Aminosäuren und Fettsäuren in Muskel und Leber der Ratte (Working Title); University of Vienna (Zoology)</td>
<td>– (2007)</td>
<td>Dr. rer. nat.</td>
</tr>
<tr>
<td>Zsuzsanna Szöcs*</td>
<td>Wirkung mutmaßlich antidiabetischer Naturheilmittel in einschlägigen Nagermodellen; University of Vienna (Zoology)</td>
<td>– (2008)</td>
<td>Dr. rer. nat.</td>
</tr>
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</table>

* Supervision together with B. Brunmair

**Publications**

42 peer reviewed publications in scientific journals,
4 invited lectures

**Peer reviewed manuscripts since 2000 (original research and reviews)**


An in vitro model of growth plate chondrocytes

Abstract
Longitudinal growth takes place at the growth plate (GP), or physis - a highly organized structure within the distal ends of long bones. Elongation of bone is established by the process of enchondral ossification, where a synchronized sequence of chondrocyte differentiation and proliferation is regulated by means of endocrine, paracrine and autocrine mechanisms. From a clinical point of view, a reduction or increase of relevant hormones (e.g., growth hormone, thyroid hormone, sex steroids, glucocorticoids) is accompanied by distinct pictures of growth failure or excess. At the level of the growth plate, the mechanisms underlying these growth disorders are poorly understood and concepts have derived from animal models, mainly rodents. While the local actions of growth stimulating factors like GH and IGF-I have been well documented, at least in animal models, the mode of action of skeletal maturation/closure of the growth plate during puberty is obscure. It has been shown that both estrogen receptors (ER) alpha and ER beta are expressed within the growth plate throughout childhood and puberty and that estrogen is the hormone mediating closure of the growth plate in both sexes. As estrogens can be synthesized locally by means of aromatization of precursors, even within the cell (intracrine), these processes are not mirrored by serum levels of hormones. Investigation of growth plate tissue has mainly been performed in rodents (which do not close their GPs completely), and human material is very limited.

In previous work our group has investigated the presence of ERs, matrix composition and the role of matrix degrading enzymes (metalloproteinases) in human childhood and adolescent growth plates in vivo by immunohistochemistry. For further studies, we are currently developing an porcine in vitro model of growth plate chondrocytes. After characterization of the model and comparison with in vivo findings, it is the aim to study the effects of relevant hormones and growth factors (GH, IGF-I, estrogens) and of different treatments (chemotherapy, irradiation) on chondrocyte proliferation, differentiation and matrix production.

Thesis Subjects
Characterization of a porcine in vitro model of growth plate differentiation, proliferation and matrix synthesis.
Effect of sex steroids on chondrocyte differentiation and matrix production in vitro.

Techniques and infrastructure
Tissue preparation, cell isolation, cell culture, immunohistochemistry, immunocytochemistry, quantitativeRT-PCR, Immunoblot. Collaborations within the Medical University and the University of Veterinary MedicineVienna.
Curriculum Vitae

Gabriele HÄUSLER
Department of Pediatric, Medical University of Vienna, Währinger Gürtel 18-20, A-1090 Vienna, Austria; Phone +43 1 40400 3238; Email: gabriele.haeusler@meduniwien.ac.at

Personal Data
Date of Birth: 28.04.1962
Nationality Austria

Education
June 1996 Habilitation
01.03.1996 Fully qualified in Paediatrics
1994-1995 Research scholarship of Austrian Ministry for Education & Science
Nov 1986 – Oct 1987 Postdoctoral research fellow
1980 – 1986 Medical School Vienna/Medical doctor

Career History
Since 2006 Head of the Endocrine Outpatient Clinic
Since 1996 Associate Professor
Since 01.06.1996 Consultant for Pediatric Endocrinology at the University Children’s Hospital Vienna
Since 1989 Registrar
Oct 1987-1989 Junior physician

Career-related Activities
Since 1987 Participation in several clinical trials in Endocrinology. Special fields: Growth and growth disorders.
Clinical Research: Growth and hormone deficiency in children with brain tumors, Ullrich-Turner-Syndrom,
Basic Research: Hormonal regulation of the growth plate.
05/2006 Opponent of PHD thesis at Karolinska Hospital
Since 2006 Board Member of Bone club ((ESPE)
Since 2003 Board Member of Growth plate working group (ESPE)

Memberships
ESPE
MESPE
Publications (since 2000)


Egerbacher M, Haeusler G: Integrins in growth plate cartilage (invited review). *Pediatric Endocrinology reviews 1: 2-8 (2003)*


Stress-induced hyperglycaemia: strategies for optimal perioperative risk management

Abstract:
Hyperglycemia is a frequent observation during acute illness such as myocardial infarction and after major surgery. The proportion of patients with hyperglycemia may be as high as 95-100% after cardiac surgery. Stress induced hyperglycemia has a detrimental effect on the outcome after myocardial infarction and cardiac surgery. Mortality may increase by a factor of 4 especially in previously non-diabetic patients. Control of hyperglycemia in order to normalize blood glucose is associated with a clear clinical benefit. This effect is most beneficial in previously non-diabetic patients with hyperglycemia. The exact target level of glycemic is still a matter of investigation, but normalization to values between 80-125 mg/dl is probably optimal.

The strategy to maintain normoglycemia has been challenged since recent findings in several categories of patients such as those in septic shock and with acute medical illnesses were less encouraging. In contrast to these patients in whom therapy can only start after injury, surgical patients have a scheduled injury where deviations can be anticipated and preventive interventions to stimulate insulin secretion or maintain insulin responsiveness can be implemented. Thus surgical patients allow a precise determination of the optimal timing of strategies to normalise glycemia.

Thesis subjects:
What is the time course and optimal target value for perioperative glycemia control?
Do preventive nutritional interventions (preoperative carbohydrates, arginine, etc) affect the metabolic status of surgical patients?

Techniques and infrastructure:
epidemiological analysis of 10.000 patients from a prospective database
intervention trial with preoperative nutritional supplements and determination of insulin resistance with clamp-techniques and metabolic rate with indirect calorimetry
Curriculum Vitae

Michael J HIESMAYR
Department of Cardiac Thoracic Vascular Anaesthesia & Intensive Care, Medical University Vienna, Waehringer Guertel 18-20, A-1090 Vienna, Austria;
michael.hiesmayr@meduniwien.ac.at

Personal Data
Date of Birth: 08.01.1954
Place of Birth: Bregenz, Vorarlberg, Austria
Nationality Austria

Education
10.07.1979 Graduation: Dr. med.
1973-1979 Medical School: University Innsbruck and Vienna
1960-1972 Primary, secondary School and College: Lycée francais de Vienna, Baccalauréat scientifique

Career History
10/2002-present Administrative Director, Department of Cardiac Thoracic Vascular Anaesthesia & Intensive Care, Medical University Vienna
1-3/2000 Visiting Professor, Department of Anaesthesia II, University Joseph Fourier, Grenoble France
Since 1992 Vice-Chairman Department of Cardiothoracic and Vascular Anaesthesia and Intensive Care
Since 1990 Director Cardiothoracic Intensive Care Univ, University Hospital
1987 – 1988 Research Grant Erasmus University Rotterdam (5+1 month) Pathophysiological Laboratory (Prof.A.Versprille)
1987 Board Certification Anaesthesia and Intensive Care
From 01.01.1984 Residency for Anaesthesia and General Intensive Care, University School of Medicine, Vienna
1981-1983 Residency for General and Family Medicine
Regional Hospital Feldkirch, Bregenz and Dornbirn, Vorarlberg, Austria
1979-1980 Postpromotional fellowship: Department Internal Medicine, University of Zürich (Prof.W.Siegenthaler)
Career-related Activities

Organisation and Participation in the Programming of Postgraduate Educational Programs:

- AKE (Association for clinical nutrition): Workshop for nutritional and infusion therapy:
- Interactive Workshops for Clinical Epidemiology and Evidence Based Medicine since 1998 in Hittisau, Vorarlberg, 11th Workshop October 2004.
- Section Perioperative Intensive Care of the ESICM: Chairman 2003
- Lecturer University of Vienna:
  - Theory and Practice of Artificial Ventilation
  - Clinical Symptoms in Intensive Care
  - Evidence Based Medicine: Application in Intensive Care
  - Malnutrition & acute illness
  - Heart failure in the ICU
  - Fluid replacement in the ICU
  - Sepsis & septic shock

Awards

- 1999 Hoechst Price of the Medical Faculty

Sources of funding (since 2000)

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<tr>
<td>1997</td>
<td>Medical Scientific</td>
<td>Fuzzy-KBWEAN – Expert System for</td>
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Foundation of the Federal Capital Vienna  

Weaning from the Ventilator

Areas of research and interest:
- Continuous quality assessment in Intensive Care
- Performance comparison in Intensive Care between Institutions
- Organ specific metabolic and nutritional interventions
- Stress-induced hyperglycemia
- Malnutrition in hospitals
- Evidence Based Medicine

Publications
6 publications

Peer reviewed manuscripts since 2000 (original research and reviews)

First, last or corresponding author manuscripts:


Gestational diabetes (GDM) - a model of type 2 diabetes (DM2)

Abstract
Women with prior GDM display a wide range of abnormalities in insulin secretion and action postpartum. The cumulative incidence of DM2 in subjects with a history of GDM ranges from 5% to 70% depending on applied diagnostic criteria, ethnicity and the length of follow-up. GDM is a heterogeneous disease reflecting any cause of diabetes emerging during pregnancy. DM2 results from a decline in insulin sensitivity associated with a β-cell defect. However, it is still unclear whether the molecular mechanisms that underlie the metabolic defects of DM2 are also effective in GDM, which displays an identical metabolic profile throughout pregnancy and in part also afterwards.

The Viennese Post-Gestational Diabetes Project (VPGDP) therefore describes prospectively a cohort of middle European women with prior GDM with well defined glucose metabolism both during pregnancy and postpartum and aims to determine their risk to develop an impaired glucose metabolism or type 2 diabetes (DM2) within the first ten years after delivery. We will study changes in beta-cell function and insulin sensitivity and predictive factors for the progression to prediabetes or DM2. These results should help to better understand the pathophysiology of the disease and to establish prevention programs.

Furthermore, insulin secretion and sensitivity as well as lipid metabolism are studied throughout pregnancy in women with GDM compared to women with normal glucose tolerance during pregnancy. The relationship between metabolic parameters and adipocytokines, cytokines and inflammatory parameters will be studied in order to elucidate the changes occurring during pregnancy and the factors responsible for development of diabetic fetopathy.

Thesis Subjects
- Adipocytokines and cardiovascular disease in Diabetes mellitus Type 2
- Gestational Diabetes – a model of Type 2 Diabetes: vascular dysfunction, atherosclerosis, inflammation in relation to changes in adipocytokines and hormones in the natural course of the disease
- Diabetic pregnancy: impact of maternal metabolism on diabetic fetopathy

Techniques and infrastructure
oGTT + FSIGT with mathematical models for evaluation of insulin secretion and sensitivity parameters; clamp technique; indirect calorimetry; IMT measurements; RIA, ELISA
Curriculum Vitae

Alexandra KAUTZKY-WILLER

Division of Endocrinology & Metabolism, Department of Internal Medicine III, Medical University of Vienna, Waehringer Guertel 18-20, A-1090 Vienna, Austria; Phone +43 1 40400 2126; Email alexandra.kautzky-willer@meduniwien.ac.at

Personal Data

Date of Birth: 1962
Place of Birth: Vienna, Austria
Nationality: Austria

Education

1999 Subspecialty/Boards: Endocrinology and Metabolism
1998 – present Associate Professor (a.o. Univ.-Prof.)
1997 Habilitation (Univ.Doz.)
1996 Specialist in Internal Medicine
1988 Doctor Medicinae Universae Diploma (MD): Medical School, University of Vienna

Career History

1998 - present Associate Professor, tenured position, Department of Internal Medicine III, Div. of Endocrinology and Metabolism, Medical University of Vienna

Career-related Activities

Reviewer:

Member of the Board: Austrian Diabetes Association

2003 - 2005 - First Secretary
2001 - 2003 - Member
1999 - 2001 - Auditor

Federation of International Danube Symposia (FID)

2003 – 2007 - First Secretary

Member of Expert Panels:
Diabetes Guidelines (Austrian Diabetes Association
Diabetes and Pregnancy Guidelines (German Diabetes Association)

**Awards**

2003  
Poster Award of the Austrian Diabetes Association

1995  
Hoechst Award (AGDP)

**Memberships**

Austrian Diabetes Association; Initiation: Diabetes and Pregnancy Study Group

Austrian Obesity Association

Austrian Society of Internal Medicine

EASD (European Association for the Study of Diabetes)


**Sources of funding (since 2000)**

<table>
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<th>Period</th>
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| 2001 – 2003 | FWF, Austrian Science Foundation | P14515-B08  
Austrian Diabetes Association/Clin Project Award | |

**Supervision of doctoral students (since 2000)**

<table>
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<tr>
<td>Thomas Prikoszovich</td>
<td>Inflammation und endotheliale Dysfunktion bei Patientinnen 5 Jahre nach Gestationsdiabetes</td>
<td>2005 – (2007)</td>
<td>(Dr. scient. med.)</td>
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<tr>
<td>Ammon Handisurya</td>
<td>Dynamic profile of plasma ghrelin, obestatin, visfatin and retinol-binding protein 4 concentrations in relation to parameters of insulin resistance in women with gestational diabetes mellitus</td>
<td>2006 – (2008)</td>
<td>(Dr. scient. med.)</td>
</tr>
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</table>


39. Haptoglobin phenotype and gestational diabetes. S Mustafa, Th Vukovich, Th
Prokiszovich, Ch Winzer, B. Schneider, H. Ester-bauer, OF Wagner, A. Kautzky-Willer
Diabetes Care 2004, 27: 2103-2107

Reviews
1. Epidemiologie, Ätiologie und neue therapeutische Konzepte bei Adipositas. B Ludvik,
Hepatic glycogen metabolism and profiles of glucose and glucoregulatory hormones in patients with type 1 diabetes mellitus after pancreatic transplantation

Abstract
Background: Subjects with poorly controlled type 1 diabetes mellitus have a major defect in postprandial hepatic glycogen synthesis resulting in lower hepatic glycogen content and higher hepatic glucose output. Pancreatic transplantation is an effective treatment of diabetes mellitus and results in postprandial glucose metabolism similar to that in nondiabetic subjects on comparable immunosuppressive agents. However, in contrast to the physiological secretion of insulin into the portal vein, insulin is usually drained into the systemic circulation in pancreas transplanted patients. Therefore, this operation results in peripheral hyperinsulinemia and relative low portal insulin concentrations.

Hypothesis: An optimized peripheral insulin supplementation achieved by pancreas transplantation might correct not only hyperglycaemia but also defects in postprandial glycogen synthesis in liver associated with type 1 diabetes. Alternatively, peripheral hyperinsulinemia and portal insulin deficiency associated with pancreas transplantation and systemic drainage of insulin might augment the impairment in postprandial hepatic glycogen storage observed in patients with type 1 diabetes treated with s.c. insulin. The successfully pancreas transplanted type 1 diabetic patients might also serve as a model to elucidate the question whether an optimized peripheral insulin therapy (including s.c. insulin application which is the current standard of care) is in principal able to correct impaired hepatic glycogen metabolism observed in type 1 diabetes.

Objectives: To evaluate glycogen metabolism in liver, rates of endogenous glucose production as well as day-time profiles of plasma glucose and glucoregulatory hormones in patients with type 1 diabetes mellitus after pancreas-kidney transplantation compared to nondiabetic patients after successful kidney transplantation and healthy humans.

Population: Three groups will be studied: 10 patients with type 1 diabetes mellitus and functioning pancreas-kidney transplants with systemic venous drainage, 10 nondiabetic subjects with functioning kidney transplants, and 10 healthy control subjects.

Outcome Variables: Postprandial glycogen synthesis (µmol·l-1 liver·min-1) in liver as calculated from the slope of the glycogen concentration over time before and after ingestion of a standardized meal. Repetitive in vivo NMR spectroscopy of natural abundance 13C glycogen in the liver to calculate net hepatic glycogen synthesis after standardized test-meals. Rates of fasting endogenous glucose production will be calculated as the tracer (D-[6,6-2H2]-glucose) infusion rate divided by the average percentage of 2H2 enrichment in C6 of plasma glucose under steady-state conditions.

Thesis Subjects
- Hepatic glycogen metabolism and profiles of glucose and glucoregulatory hormones in patients with type 1 diabetes mellitus after pancreatic transplantation
- Morbid obesity and weight reduction: Impact on molecular mechanisms of insulin resistance

Techniques and infrastructure
metabolic research ward; various clamp techniques, nuclear magnetic resonance spectroscopy, tracer studies -glucose turnover, analysis of signaling events in biopsies of skeletal muscle by immunoblotting, all equipment available
Curriculum Vitae

Michael KREBS
Division of Endocrinology & Metabolism, Department of Internal Medicine III, Medical University of Vienna, Waehringer Guertel 18-20, A-1090 Vienna, Austria; Phone +43 1 40400 4310; Fax +43 1 40400 7790; Email thomas.stulnig@meduniwien.ac.at

Personal Data
Date of Birth 28.07.1971
Place of Birth:
Nationality Austria

Education
1996-07-02 MD degree
Jan 1994 – June 1996 Research work for my MD-thesis „Function of heparin cofactor II outside the hemostatic system at the Department for Vascular Biology and thrombosis Research (Head: Prof.B.R. Binder, MD)
Nov 1992 – Feb 1993 Research training in the Laboratory for Clinical & Experimental Physiology
Oct 1990 – July 1996 University of Vienna Medical School

Career History
Oct 2005 Associate Professor of Internal Medicine
Aug 1999 – Aug 2005 Residency in Internal Medicine at the Division of Endocrinology and Metabolism, Department of Internal Medicine III, (Head: Prof.W.Waldhäusl) with rotations in Endocrinology and Metabolism, Gastroenterology and Hepatology, Hematology, Nephrology and Transplantation, Emergency Medicine and Intensive Care
Aug 1999 Successful participation at the EASD Clinical Scientist’s Training Course in Uppsala
Oct 1998 – Aug 1999 Post doctoral training in the group of Prof.M.Roden at the Dep. of Internal Medicine III, Div. of Endocrinology & Metabolism (Head: Prof.Dr.W.Waldhäusl)
July 1996 – Dec 1998 Postdoctoral training at the Department of Vascular
Biology and thrombosis Research (Head: Prof.BR Binder), Univ of Vienna, Medical School

Career-related Activities

Research experience:
I received an in depth training in all basic biochemical techniques (protein purification, affinity- and gel chromatography, FPLC, ELISA, PAGE, W - blot, various activity assays for enzymes and inhibitors). In addition I gained comprehensive experience in the field of tissue culture and cell biology (FACS, Northern-Blot, Immunohistochemistry). A major focus of my research work was the pathogenesis of vascular disease associated with the insulin resistance syndrome and renal insufficiency. During the recent years I performed studies on glucose metabolism in normal volunteers and diabetic subjects using NMR spectroscopy (non-invasive determination of glycogen concentrations in skeletal muscle and liver, muscular glucose-6-phosphate, and intracellular lipids). Our group also applies various tracer techniques and biopsies of skeletal muscle in combination with hyperinsulinemic- and pancreatic-clamp tests to determine rates of glucose turnover, gluconeogenesis, and molecular mechanisms insulin resistance. I am especially interested in elucidating the mechanisms of nutrient induced insulin resistance in humans.

Awards

1992, 1993, 1994, 1995 I received achievement awards from the Faculty of Medicine, University of Vienna for excellent performances in medical school

1994 Research award granted by the University of Vienna for the project „Inhibition of serine proteases of the alternative pathway of complement by heparin cofactor II

February, 1997 Best abstract award for „Complex formation of heparin cofactor II (HCII) and complement factor D (Adipsin)“ at the 41st Annual Meeting of the Society for
June, 2002  Thrombosis and Hemostasis Research  
Aventis-Award for: Effects of short-term improvement of insulin treatment and glycemia on hepatic glycogen metabolism in type 1 diabetes mellitus  

December, 2002  Theodor Billoth-Award for: Mechanism of amino acid-induced skeletal muscle insulin resistance in humans  

April, 2003  Theodor Körner-Award for: „Investigation of direct Effects of Amino Acids on Insulin Resistance and Glucose Metabolism in Humans.“  

November, 2003  Project award by the Austrian Diabetes Association (35,000 €) for: „Molecular mechanisms of amino acid induced insulin resistance in human skeletal muscle“  

April, 2004  Best abstract award of the European Society for Clinical Investigation for: Amino acid induced hepatic and skeletal muscle insulin resistance in humans.  

October, 2005  Josef Skoda-Project Award of the Austrian Society of Internal Medicine (40 000 €) for: “Morbid obesity and weight reduction: Impact on molecular mechanisms of insulin resistance”

**Memberships**

Austrian Society of Internal Medicine  
Austrian Diabetes Association  
Austrian Society of Nephrology  
European Association for the Study of Diabetes

**Sources of funding (since 2000)**

<table>
<thead>
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<th>Period</th>
<th>Organization</th>
<th>Short Title</th>
<th>K€</th>
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<tr>
<td>2005 -</td>
<td>Austrian Society of Internal Medicine</td>
<td>Morbid obesity and weight reduction: Impact on molecular mechanisms of insulin resistance</td>
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<td>2007 -</td>
<td>Austrian National Bank</td>
<td>Hepatic glycogen metabolism and profiles of glucose and glucoregulatory hormones in patients with type 1 diabetes mellitus after pancreatic transplantation</td>
<td>54</td>
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</table>
Supervision of doctoral students (since 2000)

<table>
<thead>
<tr>
<th>Name</th>
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</tr>
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Publications

A. Original research:


Krebs M, Brehm A, Krssak M, Anderwald C, Bernroider E, Nowotny P, Roth E,


*both authors equally contributed to this work


B. Reviews:

Geiger M, Krebs M, Jerabek I, Binder BR: Protein C inhibitor (PCI) and heparin cofactor II (HCII): Possible alternative roles of these heparin-binding serpins outside the hemostatic system. Immunopharmacology 36:279-284, 1997 (IP: 0.776)


Bernhard LUDVIK  
Dept. of Internal Medicine III, Clin. Div. Endocrinology & Metabolism  
bernhard.ludvik@meduniwien.ac.at

Metabolic, nutritional and endocrine characteristics of morbid obesity and their changes following weight loss

Abstract
Morbid obesity is characterized by an increased morbidity and mortality. The pathogenesis involves a variety of disturbed patterns of adipocytokines and satiety factors. The standard treatment of morbid obesity is bariatric surgery, which involves several methods such as gastric banding, gastric bypass or pace makers that help to reduce weight. The success rate of the respective methods is highly variable and not predictable. In addition, the enormous weight loss following bariatric surgery leads to profound changes in body composition, among them an undesirable loss of muscle mass.

Current research focuses on three major topics related to surgery-induced weight loss:

1. Profiles of satiety factors and adipocytokines before and following weight reduction. Among other factors, recent research in our laboratory focused on visfatin, which for the first time has been shown to decrease following weight loss as well as on adipocyte fatty acid binding protein (AFABP), which, again for the first time, has been found to be increased in morbid obesity and reduced following weight reduction.

2. A major focus lies on the changes in body composition and the nutritional status before and after weight loss. We have demonstrated that the decrease in muscle mass cannot be prevented by additional oral protein supplementation. In the future we plan to investigate the impact of several surgical approaches on nutritional status and body composition and whether they can be prevented by appropriate nutritional intervention.

3. Morbid obesity is characterized by an increased incidence of psychiatric comorbidity such as eating disorders, which have to be taken into account as regards to optimizing treatment outcome. Current research focuses on the quality of life in these patients and whether the health benefits following weight loss correspond with improvement in general well being.

Thesis Subjects
Assessment of endocrine (adipocytokines), nutritional and psychological parameters in morbid obesity and their impact on overall efficacy following bariatric surgery

Techniques and infrastructure
Measurement of body composition (MRI, DEXA, BIA), analysis of adipocytokines and satiety factors (RIA, ELISA), assessment of nutritional (eating questionnaire) and psychological status, measurement of parameters of insulin secretion and insulin sensitivity, all equipment at site
CURRICULUM VITAE
Bernhard LUDVIK

Department of Internal Medicine III, Division of Endocrinology and Metabolism, Waehringer
Guertel 18-20, A-1090 Vienna, Austria; Phone/Fax: ++43 (01) 40 400 4364,
Mobile: 0664-308 67 63; E-mail: bernhard.ludvik@meduniwien.ac.at,
Homepage: http://www.bernhard-ludvik.at

Personal Data
Date of Birth: June 21, 1961
Place of Birth: Vienna
Nationality: Austria

Education
June 19, 1979 High School, Schottengymnasium in Vienna, graduation
Languages: English, French
Feb. 7, 1985 Medical School, University of Vienna, graduation, MD

Career History
1985 – 1992 Internship and residency from March 1, 1985 to June 30, 1992 at the Medical Department II, University of Vienna
Since July 1, 1991 Specialist in Internal Medicine
1991 – 1992 Military Service in the Austrian Army Hospital
1992 - 1994 Research Fellow at the University of California San Diego
Since June 27, 1995 Assistant Professor of Medicine
Since 1996 Specialist in Endocrinology and Metabolism
Since October 01, 1998 Associate Professor of Medicine
current employment Associate Professor of Medicine, University of Vienna;
Attending in Internal Medicine and Endocrinology at the Division of Endocrinology and Metabolism, Department of Internal Medicine III, University of Vienna (Vienna
General Hospital)

**Leader of the working group on Obesity and Endocrinology**

**Honors and Awards**

1992  
Research Grant „Erste Österreichische Sparkasse“; presented by the Austrian Medical Association

1992-1994  
Fellowship Max Kade Foundation; Research at the University of San Diego, California

1995  
Hoechst Award presented by the Dean of the Faculty of Medicine of Vienna in

1995  
2nd Secretary of the Austrian Society of Internal Medicine

1996-1997  
1st Secretary of the Austrian Diabetes Association

1996-1999  
1st Secretary of the Federation of the International DONAU-SYMPOSIA on Diabetes mellitus

1996-1998  
Vice President of the Austrian Obesity Association

1998-2000  
President of the Austrian Obesity Association

2001  
Chairman of the European Congress of Obesity ECO 2001

2002  
2nd Secretary of the Austrian Society of Internal Medicine

2002-2003  
Vice President of the Austrian Obesity Association

1998-2003  
Assistant Editor of *DIABETOLOGIA*

2004  
Founding Fellow of the SCOPE program (EASO) 2004

**Memberships**

- Austrian Medical Association
- Austrian Society of Internal Medicine
- Austrian Society of Endocrinology
- Austrian Obesity Association
- Austrian Diabetes Association
- American Diabetes Association
European Association for the Study of Obesity (EASO)
European Association for the Study of Diabetes (EASD)
European Group on Insulin Resistance (EGIR)
Federation of International Donau Symposia on Diabetes mellitus
Lipidforum Austriacum

**Current Positions**

Member of the Editorial Board „Current Diabetes Reviews“
Advisory Board „Jatros. Zeitschrift für Diabetologie und Stoffwechsel“
Member of the Editorial Board and Editor in Chief of „Journal für Ernährungsmedizin“
2nd Secretary of the Austrian Society of Internal Medicine (2005)

**Sources of funding (since 2000)**

<table>
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<th>Period</th>
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<tr>
<td>2003 – 2007</td>
<td>Austrian National Bank Jubilee Fund Project no. 10329</td>
<td>Einfluß von akuter und chronischer Alkoholaufnahme auf Insulinsensitivität und Endothelfunktion bei Typ 2 Diabetes Mellitus</td>
<td>70</td>
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**Supervision of doctoral students (since 2000)**

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<th>Name</th>
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<tr>
<td>Barbara Trip</td>
<td>Der Einfluss einer proteinreichen (v.a. ovolactovegetabilen) Diät auf Parameter des Glukose- und Fettstoffwechsels bei mit Insulin behandelten Typ 2 Diabetikern</td>
<td>2004 – 2007</td>
<td>PhD</td>
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**Publications since 2000**

**Original papers and reviews**


**Ludvik B**, Hanefeld M, Pacini G: Improved Metabolic Control by Ipomoea (Caiapo) is Associated with Increased Adiponectin and Decreased High Sensitive C-reactive Protein and Fibrinogen Levels. *Diabetes Care*, 2006, submitted

**Chapters in Books**


**Books**


Anton LUGER  
Dept. Internal Medicine III, Div. Endocrinology and Metabolism;  
anton.luger@meduniwien.ac.at  

Non-genomic effects of glucocorticoids on carbohydrate metabolism  

Abstract  
Glucocorticoids are known to bind to intracellular receptors and initiate genomic signaling mechanisms leading to combined actions on glucose metabolism (suppression of insulin secretion, inhibition of glucose uptake in peripheral tissues and promotion of gluconeogenesis in the liver). The final result is an increase in blood glucose levels. Although glucocorticoids are released at high levels within minutes in response to any stress or threat to homeostasis (e.g. hypoglycemia), the discovery of intracellular receptors that translocate to the nucleus and modify the transcription of target genes has focused research on genomic signaling mechanisms, which lead to effects more than 30 min after glucocorticoid exposure. In the last decade, there is a booming research in the field of non-genomic steroid signaling whose effects occur within minutes. Nevertheless, very little is known about rapid effects of glucocorticoids on carbohydrate metabolism and there are no data on the respective signaling mechanisms. Such work dates many decades ago and is mainly focused on the rapid impact on insulin secretion in vivo and peripheral glucose uptake in vitro. Glucocorticoids are important therapeutics with, unfortunately, major metabolic side effects. A full knowledge of other signaling mechanisms and possibly receptors, mediating glucocorticoid effects would help in discovering novel drug targets with an optimized benefit-risk-ratio.  

Starting from this current knowledge, we began to study the rapid (within minutes) effects of glucocorticoids on carbohydrate metabolism and found a significant increase in insulin secretion from the INS-1E and Rinn5F rat beta-cell lines after stimulation with 100nM Dexamethasone for 15 minutes. Therefore, we plan to study the second messengers and other signaling mechanisms involved in this effect and to check the presence of possible glucocorticoid membrane binding sites using fluorescence correlation spectroscopy (FCS), a method recently established in our laboratory. At the same time we plan to study the rapid effects of glucocorticoids in the periphery, namely their effect on glucose uptake in primary cultures of adipocytes and muscle cells. Glucocorticoid membrane binding will be investigated in both these models using FCS. The 3T3-L1 fibroblast pre-adipocyte cell line will be used for studying the signaling mechanisms involved. In summary, this work could contribute to a hitherto unknown part of the physiology of glucocorticoid effects on carbohydrate metabolism.  

Thesis Subjects  
Rapid (non-genomic) effects of glucocorticoids on insulin release in beta cells and peripheral glucose uptake.  
Signaling mechanisms (receptors, second messengers, etc.) mediating these effects.  

Techniques and infrastructure  
Models: rat beta-cell lines, murine pre-adipocyte cell line, primary cultures of human adipocyte and muscle cells. Experiments: stimulation experiments, RIA, intracellular free calcium & cAMP measurement, Western Blotting. All required equipment available.
Curriculum Vitae

Anton LUGER
Division of Endocrinology & Metabolism, Department of Internal Medicine III, Medical University of Vienna, Waehringer Guertel 18-20, A-1090 Vienna, Austria; Phone +43 1 40400 4310; Fax +43 1 405 93 234; Email anton.luger@meduniwien.ac.at

Personal Data
Date of Birth: 03.10.1952
Place of Birth: Vienna
Nationality Austria

Education
June 1978 MD Degree, University of Vienna, Austria
1987 Habilitation

Career History
01.10.2005 – present Acting Head/Division of Endocrinology and Metabolism of the Department of Medicine III, University of Vienna, Austria
1991 – present Department of Medicine III, University of Vienna, Austria
1986 – 1991 Department of Medicine II, University of Vienna
1985 – 1986 Visiting Fellow at the Developmental Endocrinology Branch, National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, Maryland, USA
1980 – 1985 Resident, Departments of Medicine II and Cardiology, University of Vienna, Austria
1978 – 1980 Institute of Pharmacology, University of Vienna, Austria

Career-related Activities
1995 – 2005 Deputy Head/Division of Endocrinology and Metabolism/Department of Medicine III, University of Vienna, Austria
2005 – present Member of the Executive Committee of the European Neuroendocrine Association
2003 – 2004 President of the Austrian Society for Endocrinology and Metabolism
1999 – present Austrian Delegate at the Section of Endocrinology at the...
UEMS (European Union of Medical Specialists)
1998 – 2002 Deputy Chairman of the Medical Faculty Assembly, University of Vienna
1985 – 1986 Max Kade Fellowship

Awards
2004 Award of the Erste Bank
1986 Award of the Austrian Society of Nephrology
1986 Max Kade Fellowship
1985 Max Kade Fellowship
1985 Hoechst Award
1982 Hoechst Award

Memberships
Austrian Diabetes Society
European Society for the Study of Diabetes
Austrian Society for Endocrinology and Metabolism
Austrian Society for Internal Medicine

Sources of funding (since 2000)

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<tr>
<td>2002 – 2006</td>
<td>FWF (P15958-B08)</td>
<td>Membrane bound Glucocorticoid-Receptors</td>
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<td>2002 – 2003</td>
<td>Bürgermeisterfonds der Bundeshauptstadt Wien (2179)</td>
<td>Untersuchungen zur physiologischen und pathophysiologischen Regulation des Peptidhormons Ghrelin</td>
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Supervision of doctoral students (since 2000)

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<tr>
<td>Maier Christina (together with J. Smolen)</td>
<td>SLE &amp; IDDM – eine seltene Kombination</td>
<td>2000-2001</td>
<td>Thesis MD</td>
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<tr>
<td>Schmidt Adele</td>
<td>Untersuchungen zur Regulation der Ghrelin-Sekretion</td>
<td>2002-2003</td>
<td>Thesis MD</td>
</tr>
<tr>
<td>Altenberger Tibor (together with L. Wagner)</td>
<td>Aberrant Gene Expression Patterns in Pituitary Tumors</td>
<td>2004-2006</td>
<td>Thesis PhD</td>
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<tr>
<td>Kasses Dominik</td>
<td>Auswirkungen der Stoffwechseleinstellung auf das Endokrinium bei Diabetikern</td>
<td>ongoing</td>
<td>Diploma MD</td>
</tr>
<tr>
<td>Gorczyca Monika</td>
<td>Hypercortisolismus als Ursache einer unzureichenden Stoffwechseleinstellung bei Typ 2 Diabetikern</td>
<td>ongoing</td>
<td>Diploma MD</td>
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Publications

Peer reviewed manuscripts since 2000 (original research and reviews)

First, last or corresponding author manuscripts:


on chronic hemodialysis. J Nephrol, 17:87-94


The adipocytokines visfatin and retinol binding protein 4 (RBP-4) before and following 12 months of antiretroviral therapy in HIV infected subjects. Eur J Clin Invest 36: 640-646


Wolfgang MARKTL
Zentrum für Physiologie und Pathophysiologie der Medizinischen Universität Wien
wolfgang.marktl@meduniwien.ac.at

Curriculum Vitae

Geboren am 14. 5. 1944 in Waiern/Kärnten.
Besuch des Realgymnasiums in Klagenfurt von 1954 bis 1962,
Matura am 4. 7. 1962.
Promotion zum Dr.med.univ. am 15. 6. 1968 in Innsbruck.
Institut für allgemeine und experimentelle Pathologie der Universität Wien, vom 1. 1. 1970
Seit 1. 6. 1972 am Institut für Medizinische Physiologie der Universität Wien.
Erlangung des Ius practicandi im Jahre 1976.
Leiter der Abteilung für Umweltphysiologie und Balneologie am Zentrum für Physiologie
und Pathophysiologie der Med.Univ. Wien
Seit 1. 4. 1986 Leitung des Ludwig Boltzmann Institutes zur Erforschung physiologischer
Rhythmen in Bad Tatzmannsdorf.
Juni 1994 Anerkennung als Facharzt für medizinische Leistungsphysiologie
Ernennung zum tit.a.o.Univ.Prof. mit 4.10.1994
Verleihung des Ehrenkreuzes für Wissenschaft und Kunst, I. Klasse, durch den
Bundespräsidenten mit Datum von 28.09.2001

Wissenschaftliche Arbeitsgebiete: Ernährungs- und Stoffwechselphysiologie,
Balneologie und medizinische Klimatologie,
Chronobiologie

Funktionen in wissenschaftlichen Vereinigungen und Verbänden:
Leitung der Abteilung Wissenschaft im Österr. Heilbäder- und Kurorteverband,
Mitglied des erweiterten Vorstandes und Ehrenmitglied des Verbandes Österr. Kurärzte,
derzeit 1. Vorsitzender der Österr. Gesellschaft für Balneologie und
dezidinische Klimatologie,
Gründungsmitglied der European Society for Chronobiology,
Mitglied der International Society for Chronobiology,
Vorstandsmitglied der Österreichischen Gesellschaft für Ernährung,
korrespondierendes Mitglied der geologischen Bundesanstalt,
Mitglied der European Academy of Nutritional Sciences,
sowie Mitglied zahlreicher weiterer wissenschaftlicher Gesellschaften des In- und Auslandes.
Schriftleiter der Zeitschrift “Forschende Komplementärmedizin” des Karger-Verlags bis 2007
Mitglied des Redaktionskollegiums der Zeitschrift “Physikalische Medizin,
Rehabilitationsmedizin, Kurortemedizin” des Thieme-Verlags,
Vorsitzender des Akademischen Rates der Wr. Internat. Akademie für Ganzheitsmedizin; von
Juni 2000 bis Juni 2003 Vizepräsident der Wr. Internat. Akademie für Ganzheitsmedizin,
Seit 24.06.2003 Präsident der Wr. Internat. Akademie für Ganzheitsmedizin,
Mitglied der Codex-Kommission bis 2007
Seit 01.01.2002 Med.-Wiss. Leiter der Akademie für den Diätdienst und ernährungsmedizinischen Beratungsdienst im AKH Wien, Seit 29.01.2002 Vizepräsident des Akademischen Institutes für Ernährungsmedizin

Bruno NIEDERLE  
Section Endocrine Surgery, Division of General Surgery, Department of Surgery  
bruno.niederle@meduniwien.ac.at

Surgical strategy in thyroid nodules classified as "follicular neoplasia"

Abstract  
The surgical strategy in thyroid nodules classified as "follicular neoplasia" by fine-needle aspiration (FNA) is still under discussion. The treatment of follicular adenoma is hemithyroidectomy (lobectomy and isthmectomy) while follicular thyroid carcinoma has to be treated by total thyroidectomy. If follicular lesions cannot be classified in frozen-sections completion thyroidectomy has to be performed in a second procedure. Therefore the role of frozen section, gender, age and tumor size in the differentiation of follicular adenoma from carcinoma has to be analyzed retrospectively to define risk factors. As a consequence a prospective protocol for the surgical treatment of "follicular thyroid lesions" should be developed. Molecular genetic studies on fresh tissue and on tissue samples will help to differentiate follicular adenoma, follicular carcinoma and the follicular variant of papillary thyroid cancer.

Thesis Subjects  
Is it justified to treat follicular thyroid lesions larger than 25 mm by total thyroidectomy to avoid re-operations?

Techniques and infrastructure  
Retrospective multivariate analysis of demographic, clinical, surgical, histopathological and follow-up data of 150 patients with follicular thyroid lesions classified as "follicular lesions" by FNA: Correlation of FNA - frozen section - histopathology and clinical outcome
Curriculum Vitae

Bruno NIEDERLE

Department of Surgery, Division of General Surgery, Medical University of Vienna, Waehringer Guertel 18-20, A-1090 Vienna, Austria; Phone +43 1 40400 6943; 5621, 5622; Fax +43 1 40400 6827; Email bruno.niederle@meduniwien.ac.at

Personal Data
Date of Birth: 25-08-1953
Place of Birth: Steyr, Upper Austria
Nationality Austria

Education
Oct. 1st, 197 – May 20th, 1976 University of Vienna, Medical School - MD

Career History
May 1,1974 - April 30, 1976 Student Lecturer, Department of Anatomy, University of Vienna
June 1, 1976 - Sept 30, 1977 Assistant Lecturer, Department of Anatomy, University of Vienna
June 1, 1977 - Nov 30, 1977 Intern, Department of Internal Medicine, Cardiology, University of Vienna
Sept 19, 1978 – Sept 16, 1979 Resident, Department of Traumatology I, University of Vienna
March 1, 1982 - August 31, 1982 Resident, Department of Anesthesiology, Intensive Care Unit, University of Vienna
March 1, 1983 - September 1, 1983 Senior Resident, Department of Surgery (incl. traumatology, pediatric surgery) Provincial Hospital Oberpullendorf
March 1, 1987 - August 31, 1987 Intern, Department of Pediatric Surgery, Mautner Markhof'sche Kinderspital
Oct 1, 1988 - Feb 28, 1989 Resident, Department of Surgery II, University of Vienna (Thoracic/Heart Surgery)
Since Oct 1, 1977 - pres. Resident/Chief Resident/ Senior Resident Department of Surgery, Division of General Surgery, University of Vienna, Medical School
June 1, 1989/July 7, 1989 Assistant Professor of Surgery (Venia docendi)
Nov 25, 1992/Sept 8, 1993 Associate Professor of Surgery
Professor of Surgery (Endocrine Surgery)

Registration:
Registered to practice surgery in Austria
Registered to practice vascular surgery in Austria
Qualification for “Endocrine Surgery” - European Board of Surgery

Fellowships
Feb 1, 1977 - April 30, 1977 Research Fellowship at the University of Fribourg, Switzerland, Department of Anatomy

Career-related Activities
2002 – 2003 Management Training for Medical Leaders at the Univ. Salzburg
2004 – present Section leader "Obesity and Lipid Disorders", Austrian Society for Endocrinology and Metabolism
1980 Visiting Physician
National Institutes of Health, Cancer Institute, Surgical Branch, Bethesda, USA
Memorial Sloan Kettering Cancer Center, Department of Surgery, New York, USA
Toronto General Hospital, Division of Thoracic Surgery, Toronto, Canada
Mayo Clinics, Department of Surgery, Rochester, Minnesota, USA
Department of Surgery, University of Chicago, Chicago, USA
Department of General Surgery, Division of Endocrine Surgery, University of Michigan, Ann Arbor, USA
Department of General Surgery, Division of Endocrine Surgery, University of Michigan, Ann Arbor, USA
Baylor College of Medicine, Department of Surgery, Methodist Hospital and M.D. Anderson, Cancer Center, University of Texas, Houston, USA
Department Surgery II, University of Nagoya, Japan
Invited Guest Speaker - 1st International Postgraduate Course in Endocrine Surgery
Department of Surgery, The Mary Imogene Bassett
Hospital Cooperstown, New York, USA
1991 Faculty Member: 2nd International Postgraduate Course in Endocrine Surgery (British Virgin Islands)
1993 Faculty Member/Organizer: 3rd International Postgraduate Course in Endocrine Surgery (Austria)
1993 Invited Guest Speaker - 26th Annual Meeting of the Japanese Society of Thyroid Surgeons, Nagoya
1993 Department of Endocrine Surgery, Tokyo Women's Medical College, Tokyo, Japan
1995 Surgical Training Course “Endocrine Surgery”, Department of Surgery, Martin Luther University Halle Wittenberg, Germany
1997 Surgical Training Course “Endocrine Surgery”, Department of Surgery, Heinrich Heine University Düsseldorf, Germany
1997 Surgical Training Course “Endocrine Surgery”, Department of Surgery, Martin Luther University Halle Wittenberg, Germany
1999 1st Postgraduate Course in Endocrine Surgery, Chirurgische Arbeitsgemeinschaft für Endokrinologie (CAEK), German Association of Surgery, Braunlage/Harz, Germany
1999 Surgical Training Course “Endocrine Surgery”, Department of Surgery, Philipps University Marburg, Germany
2001 2nd Postgraduate Course in Endocrine Surgery, Chirurgische Arbeitsgemeinschaft für Endokrinologie (CAEK), German Association of Surgery, St. Johann, Austria
2001 4th International Post-graduate Course of Minimal-invasive Endocrine Surgery, IRCAD/EITS Strasbourg, France
2002 Faculty Member: 7th International Postgraduate Course in Endocrine Surgery, France
2003 3nd Postgraduate Course in Endocrine Surgery, Chirurgische Arbeitsgemeinschaft für Endokrinologie (CAEK), German Association of Visceralsurgery, Wernigerode, Germany
2003 5th International Post-graduate Course of Minimal-invasive Endocrine Surgery, IRCAD/EITS Strasbourg, France


2005 (6th) International Post-graduate Course of Minimal-invasive Endocrine Surgery, IRCAD/EITS Strasbourg, France

**Coordinator/Organizer of International Congresses and Workshops**

1992 How to treat parathyroid hyperplasia, Vienna, Austria

1993 3rd Postgraduate Course of the International Association of Endocrine Surgeons (IAES), St. Johann, Austria

1996 Carcinoids (Jejunum, ileum, colon, rectum, other localization), 15. u– CAEK, Feldkirch – Austria

1996 How to treat lymph node metastases in differentiated thyroid cancer, Vienna, Austria

1996 8th Annual Meeting of Euro-MEN, Vienna, Austria

2001 2nd Postgraduate Course in Endocrine Surgery, Chirurgische Arbeitsgemeinschaft für Endokrinologie (CAEK), German Association of Surgery, St. Johann, Austria

**Member of Organizing- and Scientific Committee of International Congresses and Workshops**

1997 International Conference on the Management of “Non-functioning” Adrenal Tumors, Athens, Greek

1998 Advanced Course on Endocrine Surgery, Rome, Italy

1999 Local Organizer “IAES-International Surgical Week”, Vienna, Austria

2000 Thyroid Two, Linz, Austria
Member of International Consensus Conferences

2005
Consensus Conference on the ENETS:
Guidelines for the Diagnosis and Treatment of
Neuroendocrine Gastrointestinal Tumors

Awards
1985 Theodor Billroth Preis, Österreichische Gesellschaft für Chirurgie
1986 Wissenschaftlicher Förderungspreis der Österreichischen Gesellschaft für Gefäßchirurgie
1986 Wissenschaftlicher Förderungspreis der Ersten Österreichischen Sparkasse
1987 Austrotransplantpreis
1987 Wissenschaftlicher Anerkennungspreis des Landes Niederösterreich
1988 Wissenschaftlicher Förderungspreis der Ersten Österreichischen Sparkasse
1989 Billroth Preis, Ärztekammer für Wien
1991 Wissenschaftlicher Förderungspreis der Österreichischen Gesellschaft für Gefäßchirurgie
1998 BRAHMS Forschungspreis für Schilddrüsenerkrankungen together with the Österreichischen Gesellschaft für Nuklearmedizin
2003 BRAHMS Forschungspreis für Schilddrüsenerkrankungen together with the Österreichischen Gesellschaft für Nuklearmedizin
2004 Sandoz Forschungspreis für Schilddrüsenerkrankungen together with the Österreichischen Gesellschaft für Nuklearmedizin
2005 Sandoz Forschungspreis für Schilddrüsenerkrankungen together with the Österreichischen Gesellschaft für Nuklearmedizin

Editorial Board
2002 - present  British Journal of Surgery

**Consultant Board**

1998 - 2002  Minimal Invasive Chirurgie (Germany)
2001 – 2002  The European Journal of Surgery (Sweden)
1998 - 2002  Onkologie Aktuell (Germany)
1998 - present  Langenbeck’s Archives of Surgery (Germany)
2006 - present  Wiener Klinsiche Wochenschrift – Middle European Journal of Medicine (Austria)

**Invited Reviews for**

Surgery (USA)
World Journal of Surgery (USA)
Onkologie (Germany)
Transplant International (Germany)

European Journal of Endocrinology (Switzerland)
European Journal of Clinical Investigation (Great Britain)
European Journal of Surgical Oncology (Great Britain)

Wiener klinische Wochenschrift (Austria)

**Memberships**

Member of National Societies:
1978 - Vienna Medical Association
1979 - Austrian Society of Surgeons
1979 - Austrian Society for Gastroenterology
1981 - Society of Surgeons in Vienna
1985 - Austrian Society of Surgical Research
1987 - Austrian Society of Vascular Surgeons
1990 - Austrian Society of Bone and Mineral Electrolyte Metabolism
1994 - Austrian Society of Endocrinology and Metabolism

**Member of International Societies**

1984 - International Association of Endocrine Surgeons (IAES)
1985 - International Society of Surgery (ISS)
1985 - German Society of Surgeons
1985 - German Association of Endocrine Surgeons (CAEK)
1987 - German Society of Endocrinology
2002 - Fellow of the Royal College of Surgeons – FRCS (London)
2003 - German Society of Viszeral Surgery
2003 - Fellow of the American College of Surgeons - FACS
2004 - European Neuroendocrine Tumour Society (ENETS)

**Corresponding Member of International Societies**
1992 - Society of Head and Neck Surgeons, USA
1994 - American Association of Endocrine Surgeons (AAES); USA

**Council Member of National Societies**
1992 – pres. Austrian Society of Surgical Oncology (ASSO)
[1992-1996 Chairman “Thyroid Section”; Secretary General 2003 -]
1994 – pres. Austrian Society of Endocrinology and Metabolism
[2002-pres Coordinator: Section “Endocrine Surgery”]
1996 – pres. Society of Surgeons in Vienna
[President 1999 – 2000; Past-President 2000-2001]

**Council Member of International Societies**
1991 - 1997 International Association of Endocrine Surgeons (IAES)
1991 - 1996 Member of the Scientific Committee European School of Oncology (ESO) Vienna Office
2003 - European Society of Endocrine Surgeons (ESES) – [Member of the founding committee; 2003 - Secretary Treasurer]

**Sources of funding (since 2000)**

<table>
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<th>Short Title</th>
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<tr>
<td>2001-2003</td>
<td>Hochschuljubiläumsfonds (project no. H-144/2001; together with M. Schindl/K. Kaczirek)</td>
<td>Irinotecan (Campt®) und Paclitaxel (Taxol®) in der Behandlung neuroendokriner Tumore</td>
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2001-lfd Austrian National Bank Jubilee Fund (project no. 9307; together with K. Kaczirek, G. Prager) Intraoperatives Parathormon-Monitoring: Untersuchungen zur Parathormonkinetik bei primärem und sekundärem Hyperparathyreoidismus

**Supervision of doctoral students (since 2000)**

<table>
<thead>
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<th>Name</th>
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<th>Period (expected)</th>
<th>Acad.Title</th>
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<tr>
<td>Philipp Riss</td>
<td>Primärer Hyperparathyreoidismus – intraoperatives PTH-Monitoring</td>
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</tbody>
</table>
Publications

586 peer reviewed publications in scientific journals (263 Original Papers, 10 invited Commentaries, 6 Letters, 66 Short Papers, 29 Invited Reviews)

List of Original Publications (since 2000)


177 Raber, W., Kaserer, K., Niederle, B., Vierhapper, H., Raber, W., Kaserer, K., Niederle, B., Vierhapper, H.: Risk factors for malignancy of thyroid nodules initially identified as follicular neoplasia by fine-needle aspiration: results of a prospective study of 120 patients. THYROID 10, 709 - 712 (2000)


179 Raber, W., Raffesberger, W., Bischof, M., Scheuba, Ch., Niederle, B., Gasic, S., Waldhäusl, W., Roden, M.: Diagnostic efficacy of unconjugated plasma metanephrines
for the detection of pheochromocytoma. ARCH INTERN MED 160, 2957 - 2963 (2000)


187 Prager, G., Czerny, Ch., Kurtaran, A., Passler, Ch., Scheuba, Ch., Bieglmayer, Ch., Niederle, B.: Minimally invasive open parathyroidectomy in an endemic goiter area. ARCH SURG 136, 810 - 816 (2001)


189 Passler, Ch., Avanessian, R., Kaczirek, K., Paregr, G., Scheuba, Ch., Schindl, M., Niederle, B.: Schilddrüsenchirurgie im Alter. ACTA CHIR AUSTRIACA 33, 288-293 (2001)


191 Prager, G., Heinz-Peer, Gertraud Passler, Ch., Kaczirek, K., Schindl, M., Scheuba, Ch., Niederle, B.: Surgical strategy in adrenal masses. EUR J RADIOL 41, 70-77 (2002)


194 Steurer, M., Passler, Ch., Denk, Doris M., Schneider, Berit Niederle, B., Biegenzahn, W.: Advantages of recurrent laryngeal nerve identification in thyroidectomy and parathyroidectomy and the importance of preoperative and postoperative laryngoscopic examination in more than 1000 nerves at risk. LARYNGOSCOPE 112, 124-133 (2002)


208 Bieglmayer, C., Prager, G., Niederle, B.: Kinetic analyses of parathyroid hormone clearance as measured by three rapid immunoassays during parathyroidectomy. CLIN CHEM 48, 1731-1738 (2002)

209 Passler, Ch., Avanessian, R., Kaczirek, K., Prager, G., Scheuba, Ch., Niederle, B.: Thyroid surgery in the elderly. ARCH SURG 137, 1243 - 1248 (2002)
N790 Program "Clinical Endocrinology, Metabolism and Nutrition"


239 Passler, C., Scheuba, C., Asari, R., Kaczirek, K., Kaserer, K., Niederle, B: Importance of tumour size in papillary and follicular thyroid cancer. BR J SURG 92, 184-189 (2005)


242 Gartner, W., Mineva, I., Daneva, T., Baumgartner, Parzer, Sabine, N., Weissel, M., Wagner, L: A new identified RET proto-oncogen polymorphism is found in a high number of endocrine tumor patients. HUM GENET 117, 143-153 (2005)


246 Vierhapper, H., Niederle, B., Bieglmayer, C., Kaserer, K., Baumgartner-Parzer, S: Early Diagnosis and Curative Therapy of Medullary Thyroid Carcinoma by Routine Measurement of Serum Calcitonin in Patients with Thyroid Disorders. THYROID 15, 1267-1272.(2005)"


page 100 of 168
Osteoblastic gene expression patterns and microarchitecture of bone in male osteoporosis

Abstract
Osteoporosis is defined as a skeletal disorder characterized by compromised bone strength predisposing a person to an increased risk of fracture. Bone strength primarily reflects the integration of bone density and bone quality. In osteoporosis histomorphometric findings typically include reduced trabecular bone volume, low trabecular number, reduced trabecular thickness and poor connectivity. Osteoporosis results from an imbalance of bone resorption and bone formation and traditionally has been regarded as a disease of postmenopausal women. Nevertheless, although definitely underestimated, osteoporosis in men is a frequent and severe disease. In the European Vertebral Osteoporosis Study, which enrolled over 15,000 men and women from 36 countries, the mean prevalence of vertebral deformities was 12% in women and 12% in men. The prevalence increased with age in both sexes, nevertheless, the curve was steeper in women than in men. Moreover, poor outcome following hip fracture is gender-dependent; it has been reported that male gender increases mortality risk after hip fracture by fourfold.

No pathogenetic model for idiopathic male osteoporosis has reached common consent yet; nevertheless a number of factors influencing the male skeleton have been discussed. Estrogen deficiency traditionally has been associated with postmenopausal osteoporosis but also plays a prominent role in the pathogenesis of male osteoporosis. Several studies have suggested that increased serum levels of sex hormone binding globulin lead to a decrease in free androgens and estrogen. Moreover, calcium absorption is low in osteoporotic men; renal calcium loss and hypercalciuria may be further pathogenetic aspects. In addition, low plasma levels of insulin-like growth factor-I have been found. In studies on bone histomorphometry in idiopathic osteoporosis in men, some authors described an impaired bone formation while others found that bone resorption is increased. Studies from our laboratory on biochemical markers demonstrated that in men with idiopathic osteoporosis bone resorption is increased and exceeds bone formation.

In order to further elucidate the pathogenesis of male osteoporosis, we will analyze osteoblastic gene expression patterns in bone from men with hip fractures due to primary osteoporosis. Femoral heads will be obtained from men undergoing hip arthroplasty either for hip fracture or osteoarthritis (as a control group). We will assess the gene expression of osteoblast specific transcription factors (such as runx2 or osterix) as well as cytokines that control osteoclast generation (e.g. RANKL and osteoprotegerin at the mRNA and protein level). Gene expression patterns will be related to parameters that reflect the microarchitecture of bone as assessed by bone histomorphometry and microCT.

Thesis subjects
Molecular mechanisms of excessive bone resorption and defective bone formation in male osteoporosis. / Relationship between the microarchitecture of bone and gene expression patterns of osteoblasts. / Pathogenesis of osteoporosis in elderly subjects. / Bone metabolism in a model of ankylosing spondylitis

Techniques and infrastructure
Cell and RNA isolation from tissues, primary culture, quantitative real time PCR, Western blotting, FACS analysis, bone histomorphometry, microCT; all required equipment available.
Curriculum Vitae

Peter PIETSCHMANN
Department of Pathophysiology, Medical University of Vienna, Waehringer Gürtel 18-20, A – 1090 Vienna, Austria, Phone +43-1-40400-51-22; Fax: +43-1-40-400-51-30; E-mail peter.pietschmann@meduniwien.ac.at

Personal Data
Date of Birth: May 13, 1960
Place of Birth: Vienna
Nationality Austria

Education
2006-present Deputy Head of the Department of Pathophysiology
2006-present Head of the Division of Molecular and Biochemical Pathology
2002 Appointment as Associate Professor of Pathophysiology, Medical School, University of Vienna
2001 Certification as Specialist of Pathophysiology
1994 Certification as Specialist of Rheumatology
1992 Appointment as Associate Professor of Internal Medicine, Medical School, University of Vienna
1990 Certification as Specialist of Internal Medicine
1984 Graduation as Medical Doctor
1979 – 1984 Medical School, University of Vienna
1978 – 1979 Military Service
1970-1978 Secondary School (Vienna)
1966-1970 Elementary School (Vienna)

Career History
2002 – present Associate Professor of Pathophysiology at the Department of Pathophysiology, Medical University of Vienna
1999-present Head of the “Bone, Cartilage and Connective Tissue Research Group”
1998-present Department of Pathophysiology (former Department of
General and Experimental Pathology), University of Vienna (since 2004: Medical University of Vienna)

1997-1998
Institute of Immunology, University of Vienna

1992-1997
Division of Rheumatology/Department of Internal Medicine 3, University of Vienna

1992-present
Associate Professor of Internal Medicine,(Medical) University of Vienna

1991-1992
Rheumatic Diseases Division, Department of Internal Medicine, Southwestern Medical Center at Dallas, University of Texas, Dallas, TX, USA

1990-1991
Department of General and Experimental Pathology, University of Vienna

1984-1990
Department of Medicine 2, University of Vienna

Career-related Activities
2000-present
Treasurer of the Austrian Society for Bone and Mineral Research

1998-present
Board member of the Austrian Society for Geriatrics and Gerontology

1993-present
Scientific collaboration with the Ludwig Boltzmann Institute of Aging Research, Vienna

Awards
1986
Paracelsus Award Austrian Society for Internal Medicine

1996
Young Investigator Award World congress on Osteoporosis

Memberships
International Bone and Mineral Society
Austrian Society for Bone and Mineral Research (Member of the Board)
Austrian Society for Geriatrics and Gerontology (Member of the Board)
Society for Internal Medicine of Vienna and Lower Austria
Austrian Society for Rheumatology
Austrian Society for Endocrinology and Metabolism
Austrian Society for Cytometry
Austrian Diabetes Society
Medical Society of Vienna
Affiliation with the Ludwig Boltzmann Institute for Aging Research, Vienna
Sources of funding in last 5 years (2000-2005) Only FWF and equivalent projects

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<th>Period</th>
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<tr>
<td>2002-2004</td>
<td>Medizinisch-wissenschaftlicher Fonds des Bürgermeisters der Bundeshauptstadt Wien, Projekt # 2240</td>
<td>Die Wirkung von Bone morphogenetic protein-5 auf die Generation von Osteoklasten in Knochenmarkskulturen.</td>
<td>26</td>
</tr>
<tr>
<td>2002-2004</td>
<td>Hochschuljubiläumsstiftung der Stadt Wien, Projekt # H-1166/2003</td>
<td>The role of lymphocyte subpopulations in osteoclast generation in murine bone marrow cultures.</td>
<td>4</td>
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<tr>
<td>2001–2006</td>
<td>FWF Forschungsprojekt P16060-B05 (Co-applicant)</td>
<td>Extended studies on the modulation of the ageing processes in the rat by physical exercise and food restriction</td>
<td>204</td>
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<tr>
<td>2001</td>
<td>Medizinisch-wissenschaftlicher Fonds des Bürgermeisters der Bundeshauptstadt Wien</td>
<td>Die Bedeutung des Vitamin D-Rezeptors für die Zytokinproduktion von T-Lymphozyten</td>
<td>6</td>
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<td>2000-2001</td>
<td>Jubiläumsfonds der Österreichischen Nationalbank</td>
<td>The relationship of cytokines, sex steroids and bone turnover in aging men and women.</td>
<td>36</td>
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Supervision of doctoral students (since 2000)

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<tr>
<td>Ing. Susanne Brosch</td>
<td>Die Wirkung von Bisphosphonaten auf die Osteoklastogenese und das Immunsystem</td>
<td>1999-2001</td>
<td>MD</td>
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<tr>
<td>Maria Winzer</td>
<td>The effects of phytoestrogens on the</td>
<td>2003-2006</td>
<td>MD</td>
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<tr>
<td>Name</td>
<td>Topic</td>
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<tr>
<td>Dipl. Ing. (FH) Martina Rauner</td>
<td>Molecular mechanisms of osteoblast differentiation: Relevance to senile osteoporosis</td>
<td>2006-2008</td>
<td>Dr. scient. med.</td>
</tr>
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</table>

**Publications**

99 original publications and 28 reviews in peer reviewed scientific journals, 9 book chapters, >100 invited lectures,

**Peer reviewed manuscripts 2000-2005 (original research and reviews)**

*First, last or corresponding author manuscripts:*


human monocytes. Osteol 15: 188-196


Co-author manuscripts:


Reviews:


Influence of bariatric surgery on gastrointestinal hormones

Abstract
In the last decades there has been a dramatic increase in the incidence of morbid obesity in the western world. Bariatric surgery is the most effective current treatment of morbid obesity. Different surgical approaches (restrictive, malabsorptive, gastric pacing) are nowadays applied to achieve permanent weight loss. Although bariatric surgery provides excellent results concerning weight loss and improvement of comorbidities its exact mode of action is still not completely understood. Several recently discovered gastrointestinal peptide hormones play an important role in the regulation of hunger and satiety. Only little is known about the regulation of these hormones after different bariatric procedures. Based on that knowledge we plan to determine the levels of different gastrointestinal (GI) hormones (ghrelin, glucagon-like peptide (GLP) 1, GLP 2, gastric inhibitory polypeptide (GIP), apelin, etc.) before and after bariatric surgery (gastric banding, gastric bypass, gastric stimulation) to improve and optimize our understanding of current procedures and gain further insight in the regulation of hunger and satiety. Determination of GI hormones is done in cooperation with the lab facilities of Dept. Internal Medicine III.

Thesis Subjects
GI hormones play a key role in satiety-hunger control. Bariatric surgery has significant impact on the levels of different GI hormones.

Techniques and infrastructure
More than 100 patients per year operated. Blood samples from the surgical department. Analysis and determination in cooperation with Dept. Internal Medicine III. All required equipment available.
Curriculum Vitae

Gerhard PRAGER

Address: Clinical Division of General Surgery, Department of Surgery, Medical University of Vienna, Waehringer Gürtel 18-20, A-1090 Vienna, Austria;
Email gerhard.prager@meduniwien.ac.at

Born 11th July 1967 in Vienna; Austrian citizen; married with DI Silvia Prager née Ertl; architect), 1 daughter, 1 son

Graduation Doctor of Medicine, 08th July 1992

1st October 1992 – 31st Mai 1993 Military service (military anesthetist)

Resident, Hospital Mistelbach, Dept of Surgery (Chief: Univ. Prof. Dr. E. Schima)

14th April 1997 – 30th September 1997 Guest surgeon, Surgical Endocrinology, Univ. Prof. Dr. B. Niederle, at the Clinical Division of General Surgery (Chief: o. Univ. Prof. Dr. R. Jakesz), University Clinics for Surgery, Vienna

Since 1st March 1998 Resident at the Clinical Division of General Surgery, University Clinics for Surgery, Vienna

30th April 1999 Certificate in Surgery of the Austrian Medical Association

April 2003 Appointment Consultant at the University Clinics for Surgery

23rd March 2004 Habilitation at the Medical University of Vienna (Univ. Doz.)

April 2004 Chief Working Group “Bariatric Surgery“ at the Clinical Division of General Surgery, Dept of Surgery

April 2005 Chief Working Group “Minimal Invasive Surgery“ at the Clinical Division of General Surgery, Dept of Surgery
List of Publications (since 2000)

**First Author**


**Coauthor and Senior Author**


22 Biegelmayer, C. Prager, G. Niederle, B.: Kinetic analyses of parathyroid hormone clearance as measured by three rapid immunoassays during parathyroidectomy. CLIN CHEM 48, 1731-1738 (2002)


Michael RODEN
1st Med. Dept. & Landsteiner-Institute, Hanusch Hospital
michael.roden@meduniwien.ac.at

Pathogenesis of insulin resistance, obesity and diabetes in humans

Abstract
Obesity and type 2 diabetes are becoming the most important health problems all over the world. Although treatment and prevention can be effective the underlying causes defining success or failure of lifestyle intervention are still not well understood. We have previously contributed to the current hypothesis that increased lipid availability is mainly responsible for insulin resistance in obesity and type 2 diabetes. Now, we focus our research on the mechanisms underlying these defects in lipid metabolism, particularly on the role of mitochondrial energy metabolism by noninvasive measurement of ATP synthesis. We test the efficacy of various forms of intervention (diet, exercise and antidiabetic drugs) in patient groups with different genetic risk to develop diabetes mellitus. Further, we analyze changes in hormone secretion in those patients as well as in morbidly obese before and after severe weight loss.

Thesis Subjects
Effects of exercise on mitochondrial function
Assessment of early defects in energy metabolism in the development of fatty liver disease
Effects of different dietary composition on insulin action

Techniques and infrastructure
Clinical metabolic lab, stable isotope dilution techniques to assess whole body glucose and lipid metabolism, noninvasive measurement of intracellular lipids and glucose metabolites as well as quantification of tissue specific metabolic fluxes using magnetic resonance spectroscopy, tissue biopsies
Curriculum Vitae

Michael RODEN

1. Medical Department, Hanusch Hospital, Heinrich Collin Strasse 30, A-1140 Vienna, Austria; Phone +43 1 91021 85011; Fax +43 1 91021 85019;
Email michael.roden@meduniwien.ac.at

Personal Data
Date of Birth: 11.02.1961
Place of Birth: Vienna, Austria
Nationality Austria

Education
2004 Certificate of Achievement, Continuing Research Education Credit Program (CREC) in compliance with NIH, Case Western Reserve University, Cleveland, OH
1997 Specialist in Endocrinology and Metabolism
1994 Specialist in Internal Medicine
1993 Certificate in Emergency Medicine
1986 Graduation as Medical Doctor (Dr.med.)

Career History
2005 – present Director of the Karl-Landsteiner-Institute for Endocrinology and Metabolism; Vienna
2003 – present Head of the I. Medical Department, Hanusch Hospital, Vienna
1997 Associate Professor of Medicine, University of Vienna
1994-1995 Max-Kade Fellowship, Division of Endocrinology, Department of Internal Medicine, Yale University, New Haven, CT, USA
1994 “Venia docendi” in Internal Medicine, Univ. Vienna
1988 – 2003 University Assistant, Division of Endocrinology Metabolism, Department of Internal Medicine I, then III, (Medical) University of Vienna, Austria
1986-1988 University Assistant, Pharmacological Institute, University of Vienna
1982-1984 Instructor, Anatomical Institute, University of Vienna
1979 and 1986 Regular Military Service
Career-related Activities
1996-present EU Liason Person, Council Member, Advisory Board Member of the Annual Meeting, European Association for the Study of Diabetes (EASD)
2000-2007 Past-President, President, Vice-President and Councillor, Austrian Diabetes Association (ÖDG)
2000-2007 Councilor, Treasurer, First Secretary, Federation of International Danube Symposia (FID)
1996-2002 Vice-President, Honorary Secretary-Treasurer, Councilor, European Society for Clinical Investigation (ESCI)
1997-present Assistant Editor Diabetologia (-2003)
Associate Editor Eur. J. Clin. Invest. (present)
Associate Editor Diabetic Medicine (present)
Editorial Board Am. J. Physiol. (present)
1995 Management Training for Leadership in Medicine, University of Vienna and University of Salzburg

Awards
2006 ESCI (formerly Mack-Foster) Award for Excellence in Clinical Sciences, European Society for Clinical Investigation
2004 International Novartis Award for Innovative Patient Oriented Research - Young Investigator, Europe-USA
2002 Novartis (formerly Sandoz) Award for Chemistry, Biology and Medicine, Austria
2001 Ferdinand-Bertram Award, German Diabetes Association
1999 Kardinal-Innitzer Award, Austria
1996 Joseph-Skoda-Research Award, Austrian Society of Internal Medicine
Hoechst Award, Faculty of Medicine, University of Vienna
1994 Theodor Körner Award
Austria Research Award, City of Vienna by the Mayor of the City of Vienna
1992 Friedrich Wewalka Memorial Award by the Austrian Society for Gastroenterology and Hepatology

Memberships
Diabetes Associations: USA, Europe, Germany, Austria
Endocrinology / Obesity: USA, Germany, Austria
European Society for Clinical Investigation
Austrian Society for Internal Medicine

Sources of funding (since 2000)

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<td>2006 – present</td>
<td>Juvenile Diabetes Research Foundation International (JDRF), New York, NY</td>
<td>Noninvasive measurement of hepatic glycogen synthesis kinetics in type 1 diabetics</td>
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<td>2002-2004</td>
<td>European Foundation for the Study of Diabetes (EFSD)</td>
<td>Metabolic effects of long-term suppression of lipolysis</td>
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Supervision of doctoral students (since 2000)

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<tr>
<td>Martin Krassak</td>
<td>Applications of 1H-NMR methods in the experimental liver transplantation</td>
<td>– 2000</td>
<td>Dr. rer. nat.</td>
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<td>(Mitbetreuer, ormal-</td>
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<td>und Naturwissenschaftl. Fakultät, 2000)</td>
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<td>Harald Stingl</td>
<td>Die Bedeutung freier Fettsäuren für die Regulation der hepatischen Glukoneogenese des Menschen</td>
<td>– 2000</td>
<td>MD</td>
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<tr>
<td>Elisabeth Bernroide</td>
<td>Hepatischer Glykogenstoffwechsel bei Patienten mit Diabetes mellitus Typ 1</td>
<td>– 2000</td>
<td>DM</td>
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<tr>
<td>Daniel Weghuber</td>
<td>Effekte freier Fettsäuren auf muskulären Glukosetransport / phosphorylierung und den intramyozellulären Lipidgehalt beim Menschen</td>
<td>– 2001</td>
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<tr>
<td>Christian Anderwald</td>
<td>Die residuale Insulinresistenz von Leber und Muskel bei Diabetes mellitus Typ 2</td>
<td>– 2002</td>
<td>MD</td>
</tr>
<tr>
<td>Attila Breh</td>
<td>Regulation des postprandialen Leberglykogenstoffwechsels bei Typ-2 Diabetes</td>
<td>– 2003</td>
<td>MD</td>
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<tr>
<td>Rainer Englisch</td>
<td>Effects of insulin-like growth factor I on basal and stimulated glucose fluxes in rat liver</td>
<td>– 2004</td>
<td>Dr. rer. nat. techn.</td>
</tr>
<tr>
<td>Goran Mitkovski (Mitbetreuer)</td>
<td>Nutrient dependent regulation of signal transduction in human skeletal muscle</td>
<td>– 2006</td>
<td>MD</td>
</tr>
<tr>
<td>Christian Toth</td>
<td>The role of mitochondrial dysfunction in muscle insulin resistance of type 2 diabetes mellitus</td>
<td>– 2007</td>
<td>MD</td>
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<tr>
<td>Romana Stark</td>
<td>Automated applications of high resolution magnetic resonance spectroscopic imaging (MRSI) in metabolic studies</td>
<td>2005 - (2007)</td>
<td>Dr. scient med.</td>
</tr>
<tr>
<td>Michaela Kacerovsky</td>
<td>Noninvasive measurement of liver glycogen kinetics in type 1 diabetes</td>
<td>2006 - (2009)</td>
<td>PhD</td>
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</table>

Publications
More than 100 original papers in peer reviewed journals
More than 30 reviews in peer reviewed journals
More than 90 invited lectures

Only original and published papers (since 2000)


Clin Endocrinol Metab 86:2153-2160


Liver 22:356-362


59. Lechleitner M, Roden M, Haehling E, Müller M (2005) Insulin glargine in...
combination with oral antidiabetic drugs as a cost equivalent alternative to conventional insulin therapy in type 2 diabetes mellitus. *Wien Klin Wschr* 117:593-598


**Erich ROTH**
Surgical Research Laboratory, Surgical University Clinic  
erich.roth@meduniwien.ac.at

**Metabolism and Clinical Nutrition in Critically Ill Patients**

**Abstract**
Clinical nutrition is of high importance for the outcome of critically ill patients. Recently it was shown that certain macronutrients have an immunomodulating capacity. Therefore immunonutrition contains several potentially immunomodulating agents such as glutamine, arginine, omega-3 fatty acids, and nucleotides. In general, results with these agents demonstrate a reduction in rate of infectious complications, reduction in the number of days in hospital, but no effect on mortality. Our research unit was mainly interested to investigate the effect of glutamine on metabolism and immunoreactivity. The amino acid glutamine (Gln) plays a central role in nitrogen transport within the body and is a fuel for rapidly dividing cells, such as in the gut and the immune system. The plasma Gln levels decline during critical illness and therefore these cells suffer from Gln-starvation under these conditions. Gln-starvation leads to energy depletion, which is associated with a reduced responsiveness to exogenous stimuli. In addition, Gln-starving cells show a reduced expression of the 70 kDa heat shock protein, which is an important factor for cell survival and contain a reduced level of the antioxidant glutathione. Recent findings show that the extracellular Gln level affects the susceptibility of cells to different apoptosis triggers: while Gln-starving cells are more sensitive to Fas-ligand mediated apoptosis they are desensitized against the cytotoxic effects of TNF-alpha. In addition, we are interested in the investigation of the molecular mechanisms of Gln-sensing and the role of AMP-activated protein kinase, the cellular redox state, osmosignaling, regulation of translation, and amino acyl tRNA synthetases.

Moreover, there is increasing evidence that oxidative stress plays an important role during development and progression of inflammatory diseases. Recent publications have shown that an oxidized cytosolic environment amplifies activation of nuclear factor kappa B (NFkB), which plays a critical role during inflammatory processes by activating many genes encoding for proinflammatory cytokines and immunoregulatory mediators. The cytosolic redox state of a cell depends on the equilibrium between oxidative and antioxidative substances. One of the most important intracellular antioxidative defense systems against oxidative stress is the tripeptide glutathione (GSH), which is oxidized to glutathione disulfide (GSSG) while it scavenges free radicals. As during inflammatory diseases reduced levels of GSH and/or increased levels of free radicals are detected, recent therapies against inflammatory diseases focus on antioxidant administration to diminish oxidative stress and thereby arrest inflammatory processes. Therefore we are interested in investigating new substances with antioxidative capacities especially of natural polyphenols such as cachexins, curcumine, alpha-lipoic acid, which has become already of particular clinical interest.

**Thesis Subjects**
Immunomodulating nutrients - mode of action and clinical relevance  
Influence of natural antioxidants on the redox potential

**Techniques and infrastructure**
Inflammatory models: Critically ill patients, endotoxic mouse model, cell cultures models.  
HPLC Lab, immunomonitoring by FACS, ELISA techniques, Western plot, proteomic analysis, genomic analysis
Curriculum Vitae

Erich ROTH
Surgical Research Laboratory, Department of Surgery, Medical University of Vienna, Waehringer Guertel 18-20, A-1090 Vienna, Austria; Phone +43 1 40400 6949; Fax +43 1 40400 6782; Email: erich.roth@meduniwien.ac.at

Personal Data
Date of Birth: 17.08.1946
Place of Birth: Trofaiach, Austria
Nationality Austria

Education
1977 – present Specialist for Nutritional and Metabolic Research
2000 – 2006 Study of Social- and Cultural Anthropology, University of Vienna”
1973-1976 PhD degree in Natural Science at the University of Agronomics of Vienna. Doctoral thesis work at the Vienna Sandoz-Research Institute (now: Novartis Research Institute) on “Enterotoxines of Escherichia coli: Determination of single Parameters for the Production of Vaccine”
1967-1973 Combined studies of Microbiology and Biochemistry at the University of Agronomics of Vienna, University of Vienna, Technical University of Vienna
1957 – 1966 secondary school in Leoben, Styria, Austria

Career History
1993 – present Associate Professor at the Department of Surgery, Surgical Research Laboratory, Medical University of Vienna.
1994 Administrative director of the Surgical Research Laboratory
1993 Conferment of the title “Associate Professor”
1986 “venia docendi” for Medical Biochemistry
1977 Research State at the St. Eric Hospital Stockholm
1976-1977 Biochemical Adviser for the Kontron company, Vienna
1973 Graduation: Engineer of Microbiology and Biochemistry,
Diplomawork: “Autoinhibitory and Autostimulating Substances of Aspergillus orycae”

1966-1967
Regular Military Service

1993 – 1994
Temporary University Assistant at the Clinical Division of Endocrinology & Metabolism, Univ. of Vienna

Career-related Activities
1998- 2003
President of the Austrian Society for clinical Nutrition

2003
Organizer of the International Congress on Nutrition

2000
Congress President of the International Nutrition Congress, Hofburg, Vienna

Awards
2006
Honorary Cuthbertson Lecture of the European Society of Enteral, Parenteral Nutrition and Metabolism, Istanbul, Turkey

1985
Conferment of the Konrad Lang Award of AKE/DAKE in Heidelberg for: “fundamental investigations on the metabolism of amino acids and proteins of critically ill patients”

1986-2005
Several research awards in Austria

Editorial Board
Clinical Nutrition
Journal Parenteral Enteral Nutrition
Nutrition
Current Opinion in Clinical Nutrition and Metabolic Care
European Journal of Nutrition
Aktuelle Ernährungsmedizin
Journal für Ernährungsmedizin

Sources of funding (since 2000)

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<tr>
<td>2007 - 2003</td>
<td>Fresenius Kabi Deutschland</td>
<td>Influence of substances with antioxidative capacity on the cellular redox potential</td>
<td>150</td>
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<td>2000 – 2003</td>
<td>Novartis Nutrition Austria/International</td>
<td>Glycine as an immunomodulator</td>
<td>148</td>
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<td>2002</td>
<td>Abbot Laboratory</td>
<td>Immune enhancing effects of FOS</td>
<td>40</td>
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<tr>
<td>Alexander Gornikiewicz</td>
<td>Catecholamine induced immunomodulation in sepsis</td>
<td>1998-2000</td>
<td>Dr. rer. nat. techn</td>
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<td>Carmen Ludwig</td>
<td>P53 Status and response to neoadjuvant therapy in breast cancer patients</td>
<td>1999-2002</td>
<td>Dr. rer. nat. techn</td>
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<td>Barbara Wessner</td>
<td>Influence of nutritive antioxidants on the cellular redox potential under inflammatory conditions</td>
<td>2002-2004</td>
<td>Dr. rer. nat. techn</td>
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<tr>
<td>Brigitte Wolf</td>
<td>Importance of individual gene profiles and mismatch repair genes in colorectal cancer biology</td>
<td>2002-2005</td>
<td>Dr. rer. nat. techn</td>
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<tr>
<td>Melanie Baumgartner</td>
<td>Polyunsaturated fatty acids enhance arsenic trioxide-mediated cytotoxicity in tumor cells by increasing oxidative stress</td>
<td>2003-2005</td>
<td>Dr. rer. nat. techn</td>
</tr>
<tr>
<td>Sonja Kappel</td>
<td>Genetic tumor profiling using the p53 tumor suppressor gene as diagnostic and predictive marker</td>
<td>2002-2005</td>
<td>Dr. rer. nat. Techn.</td>
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<tr>
<td>Anja Bernhardt</td>
<td>Influence of hepatic growth factor on wound healing and tumor growth</td>
<td>2007</td>
<td>Dr. med. sci.</td>
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</table>
Publications

170 peer reviewed publications and reviews, in scientific journals, over 100 plenary, invited or guest lectures on national or international congresses, workshops, and symposia in the field of clinical nutrition and metabolism

Original Publications since 2000


132. Zellner M., Hergovics N., Roth E., Jilma B., Spittler A., Oehler R. Human monocyte...


166. Wessner B., Strasser EM., Manhart N., Roth E. Supply of R-alpha-Lipoic acid and glutamine to casein-fed mice influences the number of B lymphocytes and tissue glutathione levels during endotoxemia. Wien Klin Wochenschr. In press 2006


Polyunsaturated fatty acids in morbid obesity

Abstract
Obesity is associated with a chronic state of subclinical inflammation that resides in adipose tissue. This subclinical inflammation is associated with the development of metabolic disorders such as insulin resistance and diabetes mellitus and cardiovascular complications. Therefore, obesity-associated adipose tissue inflammation has become a novel aspect of the pathophysiology of type 2 diabetes and its complications. Molecular mechanisms underlying macrophage immigration and activation are currently investigated in order to discover novel drug targets.

Polyunsaturated fatty acids (PUFAs), particularly those of the n-3 series, ameliorate insulin resistance and development of diabetes mellitus type 2. Previous studies in our laboratory revealed that feeding a diet rich in saturated and monounsaturated fatty acids to obese diabetic mice leads to extensive adipose tissue infiltration with macrophages together with increased expression with a number of inflammatory genes. Notably, macrophage infiltration of adipose tissue in obese diabetic mice under high-fat diet could be totally prevented by including marine n-3 PUFA in the diet. Moreover, adipocytes of animals on high-fat diets showed signs of dedifferentiation by reduced expression of cell type-specific genes and those involved in lipid metabolism that were also prevented by n-3 PUFA. Since macrophage infiltration and activation selectively occurs in adipose tissue and only in obese mice, adipocytes that are heavily loaded with lipids appear to provoke macrophage infiltration by unknown mechanisms.

Starting from this knowledge from animal models, effects of n-3 PUFA on metabolic regulation and adipose tissue inflammation are to be analyzed. Within a clinical study, morbidly obese patients are to treated with n-3 PUFA or not immediately prior to a planned bariatric operation. Within the thesis, metabolic control is studied before and at the end of the treatment period. Moreover, samples from visceral and subcutaneous adipose tissue are taken at the bariatric operation in order to study possible effects on adipose tissue inflammation. Tissue specimens obtained during these clinically oriented investigations will facilitate studies on the factors underlying n-3 PUFA effects in adipose tissue of morbidly obese patients. These studies will not only allow translation of basic research into clinical application but also training of students with various methods to investigate body composition, metabolic control and nutrition in an increasingly prevalent population of patients.

Thesis Subjects
PUFA effects on metabolic control in morbidly obese patients
PUFA effects on adipose tissue inflammation in morbidly obese patients

Techniques and infrastructure
Assessment of insulin sensitivity; dietary assessment and interventions; explant and primary cell culture; analyses of cytokines by ELISA and bead assays; immunofluorescence analyses; immunoblotting; FACS analysis; quantitative real-time RT-PCR; all required equipment is available.
Curriculum Vitae

Thomas STULNIG
Division of Endocrinology & Metabolism, Department of Internal Medicine III, Medical University of Vienna, Waehringer Guertel 18-20, A-1090 Vienna, Austria; Phone +43 1 40400 4368; Fax +43 1 40400 7790; Email thomas.stulnig@meduniwien.ac.at

Personal Data
Date of Birth: 31.05.1964
Place of Birth: Burghausen, Obb., Germany
Nationality Austria

Education
2003 – present specialist in Endocrinology and Metabolism
1999 specialist in Internal Medicine
1991 Educational Commission for Foreign Medical Graduates (ECFMG) test passed
1982 – 1990 studies of Human Medicine
1974 – 1982 secondary school

Career History
2002 – 2005 principal Investigator of the CeMM – Center of Molecular Medicine of the Austrian Academy of Sciences (ID#20020)
2001 – 2002 Marie-Curie Individual Fellowship of the European Commission at the Karolinska Institute, Dept. of Medical Nutrition at Novum Research Center, Huddinge, Sweden with Prof. Jan-Åke Gustafsson
2000 – present Associate Professor at the Department of Internal Medicine III, Medical University of Vienna. Clinical duties and supervising physician at the inpatient and various outpatient departments
2000 “venia docendi” for Internal Medicine
1998 – 2003 Coapplicant in the Interdisciplinary Cooperation Project “Molecular Medicine” at the University of Vienna
1995 – present University Assistant at the Clinical Division of Endocrinology Metabolism, Department of Internal Medicine III, (Medical) University of Vienna, Austria
1994 – 1995 regular Military Service
1993 – 1994  temporary University Assistant at the Clinical Division of Endocrinology & Metabolism, Univ. of Vienna
1991 – 1993  University Assistant at the Institute for General and Experimental Pathology, Univ. of Innsbruck
1990 – 1991  Research Assistant at the Institute for General and Experimental Pathology, Univ. of Innsbruck
1986 – 1989  Doctoral Thesis at the Institute for Medical Biology and Genetics, Univ. of Innsbruck

Career-related Activities
2002 – 2003  Training Course for Medical Management at the University of Salzburg
2004 – present  Section leader "Obesity and Lipid Disorders", Austrian Society for Endocrinology and Metabolism

Awards
2005  Novartis Prize 2004 for Medicine
2003  Research Award of the Erste Österreichische Sparkasse in cooperation with the Medical Association of Vienna
2003  Josef-Skoda Research Award of the Austrian Association of Internal Medicine (research grant)
2000  Ludwig-Heilmeyer Medaille in Silver of the Association for Progress in Internal Medicine
1995  Johannes-Tuba-Prize of the Tyrolean Medical Association
1991  Talentförderungsprämie of the country Upper Austria

Memberships
Austrian Society for Allergology and Immunology
Austrian Society for Biochemistry and Molecular Biology
Austrian Diabetes Society
European Society for the Study of Diabetes
American Diabetes Association
Austrian Society for Endocrinology and Metabolism
Austrian Society for Internal Medicine
Sources of funding (since 2000)

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<th>Period</th>
<th>Organization</th>
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<tr>
<td>2007</td>
<td>European Science Foundation (EW06-007)</td>
<td>Exploratory Workshop on Targeting Obesity-driven Inflammation</td>
<td>14</td>
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<td>2006 – 2009</td>
<td>Austrian Science Fund (FWF) Doctoral program (W1205-B09)</td>
<td>Cellular communication in health and disease (own share)</td>
<td>129</td>
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<td>2006 – 2008</td>
<td>FWF (P18776-B11)</td>
<td>The role of osteopontin in adipose tissue inflammation</td>
<td>296</td>
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<td>2003 – 2006</td>
<td>FWF (P16788-B13)</td>
<td>Polyunsaturated fatty acids and dendritic cells</td>
<td>191</td>
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<td>2003 – 2005</td>
<td>Austrian Society for Internal Medicine, Joseph-Skoda</td>
<td>Proteomic analysis of insulin signaling via adipocyte lipid rafts</td>
<td>40</td>
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<td>2002 – 2005</td>
<td>CeMM (ID# 20020), Austrian Academy of Sciences</td>
<td>Fatty acids as molecular modulators of insulin sensitivity in adipocytes</td>
<td>600</td>
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<td>2001 – 2002</td>
<td>Marie-Curie-Fellowship, European Commission</td>
<td>The biological role of nuclear oxysterol receptors LXRa and LXRb</td>
<td>78</td>
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<tr>
<td>1999 – 2003</td>
<td>FWF (P13507-B01)</td>
<td>The role of lipid rafts for lymphocyte activation</td>
<td>290</td>
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Supervision of doctoral students (since 2000)

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<thead>
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<th>Name</th>
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<tr>
<td>Maximilian Zeyda</td>
<td>Molecular mechanisms of T cell inhibition by polyunsaturated fatty acids</td>
<td>1998 – 2001</td>
<td>Dr. nat. techn.</td>
</tr>
<tr>
<td>René Geyeregger</td>
<td>Impact of polyunsaturated fatty acids on the formation of the immunological synapse</td>
<td>2001 – 2005</td>
<td>Dr. rer. nat.</td>
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**Name** | **Title of thesis** | **Period (expected)** | **Acad. Title**
---|---|---|---
Florian Kiefer | Role of MCP-1 and osteopontin in adipose tissue inflammation | 5.2006 – (2.2009) | (PhD)

**Publications**
61 and 6 peer reviewed publications and reviews, resp., in scientific journals, 7 invited lectures,

**Peer reviewed manuscripts since 2000 (original research and reviews)**

*First, last or corresponding author manuscripts:*


Co-author manuscripts:


Endometriosis, a sequel of diseased eutopic endometrium

Abstract
Endometriosis is a common, benign, estrogen dependent, chronic gynecological disorder associated with pelvic pain and infertility. It is characterized by the presence of uterine endometrial tissue outside of the normal location (i.e. ectopic sites) — mainly on the pelvic peritoneum, but also on the ovaries and in the rectovaginal septum, and more rarely in the pericardium, pleura, and even in the brain. The prevalence of pelvic endometriosis approaches 6–10% in the general female population in the reproductive age (Giudice and Kao, 2004). The answer to the question how uterine endometrial tissue following retrograde menstruation is able to migrate towards and to invade extraterine sites is presently missing. However, it implies the existence of a not yet described mechanism responsible for this process. Due to recent findings that eutopic endometrium of endometriosis patients, in contrast to endometrium of healthy patients, contains the enzyme aromatase (also known as CYP19) (Noble et al., 1996; Kitawaki et al., 1997; Wolfler et al. 2005), we speculate aromatase expression is a major hallmark of this disease.

Understanding the links between aromatase expression, abnormal cell migration and invasion may give us the additional possibility to speculate on other facets of endometriosis, e.g., how ectopic lesions survive apoptosis, but do not become metastatic. Furthermore, such investigations could disclose novel early eutopic markers of endometriosis that can help to identify the disease out of menstrual discharge, which makes uninformative, invasive procedures, i.e. laparoscopy or laparotomy unnecessary.

Thesis Subjects
Does the eutopic endometrium of endometriosis vs. healthy patients contain a fully developed principle making endometrial cells able to proliferate, migrate and translocate towards ectopic sites?

Techniques and infrastructure
Primary endometrial cell culture, Western blotting, Raf-1 kinase assay, immunohistochemistry, immunofluorescence, RT-PCR and Real-Time RT-PCR, FACS analysis, migration assay, transfection of cells, all required equipment available.
CURRICULUM VITAE

Walter TSCHUGGUEL

Medical University of Vienna, Department of Obstetrics & Gynecology, Division of Gynecological Endocrinology & Reproductive Medicine, A-1090 Vienna/Austria,
Waehringer Guertel 18-20 ☏ +43 1 40400 7828, +43 676 924 2 924; FAX +43 1 40400 7842
walter.tschugguel@meduniwien.ac.at

Personal Data
Date of Birth: 02-06-1966
Place of Birth: Vienna, Austria
Nationality: Austria

Education
1972 - 1976 Primary School, Vienna, Austria
1976 - 1984 High School, Vienna, Austria, Matura
1984 - 1990 Medical School, University of Vienna, Austria, MD degree

Career History
1986 - 1990 Academic Tutor, Institute of Anatomy, University of Vienna
1991 Resident, Department of Urology, University of Vienna School of Medicine
1992 Military Service in the Austrian Armed Force
1992 - 1993 Coordinator for Liver and Kidney
1993-1996 Rotation Internship, Departments of Surgery and Internal Medicine, Krankenhaus Floridsdorf, Vienna, Austria
1996 General Physician’s degree
1992 - 1996 Postdoc, Department of General & Experimental Pathology, Division of Cellular Pathology, University of Vienna
1996 - 2000 Resident, Department of Obstetrics and Gynecology, University of Vienna School of Medicine
2000 - Present Fellow, Department of Obstetrics and Gynecology, Division of Gynecological Endocrinology & Reproductive Medicine, University of Vienna School of Medicine
2000  Habilitation (Universitätsdozent), Associate Professor, Department of Obstetrics and Gynecology, Division of Gynecological Endocrinology & Reproductive Medicine, University of Vienna School of Medicine

Career-related Activities
2003  Chief Officer for Education and Training of Residents at the Department of Obstetrics and Gynecology, Division of Gynecological Endocrinology & Reproductive Medicine, Medical University of Vienna
2005  Education in the program Klinischer Studienleiter”, part I, collaboration between the Medical University of Vienna and the Vienna school of Clinical Research (VSCR)

Awards
1998  International Organon Award for Assisted Reproduction
2002  Wyeth’s President’s Presenter Award of the Society for Gynecologic Investigation (SGI), Toronto, Canada, USD $ 1000. - to Mentee Dr. Felix Stonek
2005  Wyeth’s President’s Presenter Award of the Society for Gynecologic Investigation (SGI), Los Angeles, CA, USD $ 1000. - to Mentee Dr. Monika Wölfler
2005  Wyeth’s President’s Presenter Award of the Society for Gynecologic Investigation (SGI), Toronto, Canada, USD $ 1000. - to Mentee Mag. Cristina Rubiolo

Memberships
Austrian Society of Gynecology and Obstetrics (OEGGG)
Society for the Study of Reproduction (SSR)
Society for Gynecological Investigation (SGI, Full Member)

Reviewing Activities
British Journal of Cancer (since 1999)
Molecular Human Reproduction (since 2000)
Human Reproduction (since 2000)
Breast Cancer Research and Treatment (since 2001)
Molecular Endocrinology (since 2004)
Lancet (since 2005)

**Sources of funding (since 2000)**

<table>
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<tr>
<td>1998</td>
<td>Jubilee Fund of the Austrian National Bank</td>
<td>Inducible Nitric Oxide Synthase (iNOS) Induction in Human Endometrium</td>
<td>18</td>
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<tr>
<td>2000</td>
<td>Jubilee Fund of the Austrian National Bank</td>
<td>Inducible Nitric Oxide Synthase (iNOS) as a Regulator of Apoptosis and Collagenolysis in Cultured Steroid-hormone treated Endometrial Stromal Cells</td>
<td>22</td>
</tr>
<tr>
<td>2007 – 2009</td>
<td>Austrian Science Fund (P19327-B02)</td>
<td>Endometriosis, a Sequel of Diseased Eutopic Endometrium</td>
<td>328</td>
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**Supervision of doctoral students (since 2000)**

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<tr>
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<tr>
<td>Gudrun Brunnmayr</td>
<td>The Psychiatric Co-morbidity (DSM-IV) between Chronic Pelvic Pain Patients (CPP) and Chronic Polysymptomatic Patients is equal</td>
<td>2004 – 2005</td>
<td>MD</td>
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<tr>
<td>Joanna Pong</td>
<td>Comparison of the Methylation Status of the CpG-island neighboring Exon 1 of the Aromatase Gene in Human Myomas and their adjacent Myometria by using Methylation-specific PCR</td>
<td>2004 – 2006</td>
<td>MD</td>
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</tbody>
</table>

**Publications**


6. Fuchsjaeger-Mayrl, G., Nepp, J., Schneeberger, C., Sator, M., Dietrich, W., Wedrich, A., Huber,


Influence of green tea extract on immunological and redox parameters during endotoxemia

Abstract
Both clinical and experimental studies have shown that intestinal dysfunction and failure of the gut barrier function are involved in the development of distant organ injury under septic conditions. Generally the portal venous route is considered as the primary route of translocating bacteria and the liver has become one of the most intensively studied organs during septic conditions. On the other hand it has been proposed that translocation to the mesenteric lymph and subsequent lung injury plays a role in the onset of multiorgan failure. With respect to gut dysfunction during sepsis the intestinal immune system has gained particular interest. Previous studies in our laboratory revealed that endotoxemia induces an atrophy of Peyer’s patch (PP) lymphocytes, which is associated with a decrease in PP glutathione content. We showed that PP lymphocytes react very sensitively to different dietary interventions and that diets rich in immune modulatory substances are able to diminish PP atrophy and glutathione depletion. From this data we assumed that not only inflammation but also oxidative stress plays an important role.

Recently it has been shown that green tea extract (GTE) exerts antioxidative as well as anti-inflammatory effects. These effects are attributed to the high flavonoid content of green tea. The main flavonoids in green extract are epigallocatechingallat, epicatechin, gallocatechin, and catechin. Several experimental studies show that catechins inhibit cellular signaling of the NF-kB pathway thereby reducing the production of pro-inflammatory mediators. This turns GTE into an interesting dietary additive during endotoxemia. In contrast to the described antioxidative effects of GTE, recent studies reveal a potent prooxidative potential of this extract. Therefore we want to evaluate the pro/anti-oxidative and anti-inflammatory effects of GTE under endotoxemic conditions.

In a current project the effect of GTE on inflammatory as well as on oxidative parameters is to be investigated during murine endotoxemia. In particular, the most effective concentration of GTE and the most appropriate feeding time has to be evaluated. We focus on the main inductive site of the intestinal immune system, the PP lymphocytes, and the remote organs lung and liver. Methods to evaluate pro- or anti-oxidative effects on PP lymphocytes as well as on lung and liver tissues have to be established. Furthermore, anti-inflammatory properties of GTE are to be investigated on molecular level.

Thesis Subjects

Techniques and infrastructure
Mouse model of endotoxemia, dietary intervention, cell isolation from tissues, primary culture, FACS analysis, ELISA, real-time PCR, western blot, HPLC
CURRICULUM VITAE

Unger-Manhart Nicole

Division of Surgery, Department of surgical research laboratories, Medical University of Vienna, Waehringer Guertel 18, A-1090 Vienna, Austria;
Phone + 43 1 40400 6959, Fax +43 1 40400 6782;
E-mail: Nicole.Unger-Manhart@meduniwien.ac.at

Personal data:
Date of birth: 26.04.1970
Place of Birth: Vienna
Nationality: Austria

Education:
2004-present Assistant professor since 2004

2000 Doctor rerum naturalium technicarum
University of agricultural sciences, Institute of applied microbiology, Vienna

1997 Master of science (April 1997); University of Vienna, Department of Surgical Research, Vienna

1991-1997 Study of Nutritional Science, University of Vienna, Institute of Nutritional Science, Vienna

Career History:
2002 – present University of Vienna, Department of Surgical Research
➢ Modulation of the mucosal immunsystem by antioxidative nutrients
➢ Islet cell transplantation
➢ Collaborations and support of clinical studies
➢ Training of ungraduated students

2001 – 2002 University of Bonn, Department of Nutritional Science

University assisent
Training of ungraduated students in basics of nutrition (performance of lectures, seminars and practical training)
Collaboration and support of physicians in accomplishing clinical nutritional studies

1997 – 2000  University of Vienna, Department of Surgical Research

**Ph.D. student:**
Set-up of a mouse model to investigate mucosal and systemic immune response
Application of methods to investigate immune response (ELISA, flow cytometry, real time PCR)
Support of diploma theses
Support of clinical studies

1998  University of Memphis Tennessee, Department of Traumatology

**Research training**
Training of experimental parenteral administration of nutrients and pharmaceuticals to mice

1996 -1997  University of Vienna, Department of Surgical Research

**Undergraduate student**
Establishment of a flow cytometrical method to measure the respiratory burst of immune cells
Performance of cell culture

**Awards:**
2000  Best original article published in Clinical Nutrition during the year 2000
2000  Travel fellowship for the ESPEN congress
1999  Travel fellowship for the ESPEN congress

**Membership**
Arbeitsgemeinschaft für klinische Ernährung

**Career-related Activities**
- Laboratory training (February 1996) in the routine laboratory of the hospital Wr. Neustadt, Austria
• Seminar on nutrition assessment, planning and communication in developing countries (February 1996 – March 1996) University of Giessen, Institute of Nutritional Science, Germany

• Laboratory training (July 1995 - August 1995) in the laboratory of the health insurance organisation Vienna, Wr. Gebietskrankenkasse, Vienna, Austria

• Laboratory training (August 1994) in the laboratory of the health insurance organisation Vienna, Wr. Gebietskrankenkasse, Vienna, Austria

• Practical training (July 1994) in the dietitian group of the hospital Rudolfstiftung, Vienna, Austria

• secretary (July 1993) Semperit technical products GmbH, Wimpassing, Austria


• executive officer (October 1990 – June 1991) Wichem International GmbH, Vienna, Austria

Publications:
11 and 9 peer reviewed publications and reviews, resp., in scientific journals, 15 invited lectures

Original Manuscripts:

The relationship between the anti-inflammatory effects of Curcumin and cellular glutathione content in myelomonocytic cells Strasser EM., Wessner B., Manhart N., Roth E. Biochem.Pharmacl 15: (70):552-559 2005


Reviews:


Heinrich VIERHAPPER
Clinical Division of Endocrinology and Metabolism, Department of Internal Medicine III
heinrich.vierhapper@meduniwien.ac.at

Curriculum Vitae

Date and place of birth: April 29, 1951; Ernstbrunn, Austria
Nationality: Austrian
Civil status: married, to Maria Sofia Puelma-Lugones

Studies:
1. Primary school in Ernstbrunn, Austria (1956-1960).
2. Realgymnasium der Theresianischen Akademie, Vienna, Austria (1960-1968)
3. University of Vienna Medical School, Vienna, Austria (1968-1974); M.D.: March, 1974.

Training in Internal Medicine:
I. Medizinische Universitätsklinik,
University of Vienna Medical School (1974-1980).

Training in Laboratory Medicine:
I. Medizinische Universitätsklinik and Institute of Clinical Chemistry
University of Vienna Medical School (1980-1985).

Scientific work:
Since 1976, predominantly in the field of Endocrinology;
at the Division of Clinical Endocrinology and Diabetes mellitus; I. Med. Univ.-Klinik
University of Vienna Medical School.
Mechanism of action of mutated RUVBL1/TIP49a versions in neuroendocrine tumorigenesis

Abstract
Neuroendocrine tumors (NETs) are a heterogeneous group of neoplasms, which arise from the system of neuroendocrine cells. In general, oncogenesis is caused by an imbalance between cell death and cell proliferation. A reduced rate of cells undergoing apoptosis is the reason for the development of NETs. Three genes (bcl-2, c-myc, p53) are mainly involved in deregulation of the homeostasis between cell proliferation and apoptosis observed in NETs. TIP49a, a DNA-helicase, is a newly identified interaction partner of c-myc and β-catenin. Its name originates from the property to play a role in the RNA-polymerase II holoenzyme complex. Due to its homology to the bacterial protein RuvB, it was also termed RUVBL1. Remarkable presence of this predominantly intranuclear protein in cytoplasm was one of our previous interesting findings. Immunofluorescence microscopy using the recently developed anti-RUVBL1/TIP49a mAb IB3 demonstrated that in apoptotic cells the characteristic staining was lost. Using these immunoreagents we found that RUVBL1/TIP49a can interact with microtubules during mitosis of U937 cells. The correct formation of the mitotic spindle is a central point for mitotic rates and cell proliferation. These data and tumor-specific overexpression as well as results from other authors demonstrated that the molecule might play an important role in carcinogenesis. We performed Southern analysis, using DNA from various NET samples. These exhibited a characteristic band pattern, which was comparable to genomic DNA obtained from leukocytes. Strikingly, the RFLP derived from one carcinoid tumor differed from the other analyzed NETs. This patient had been diagnosed with a carcinoid tumor and, having already metastasis, he died shortly after surgery due to rapid tumor growth. The deranged findings in the Southern blot motivated us to investigate the protein-morphology in this tumor. Immunoblots comparing this tumor with other NETs presenting with normal RUVBL1/TIP49a RFLP patterns, identified a truncated version of this protein. Therefore, we aim at identifying the mutated sequence of RUVBL1/TIP49a in the tumor and to continue to perform RFLP analyses in a larger number of tumors. In addition, malignancy associated mutations were identified in adult leukemias.

Thesis Subjects
Biological relevance of identified tumor-specific mutations within the RUVBL1/TIP49a gene in tumorigenesis.

Techniques and infrastructure
RLFP, tumor DNA analysis, long range PCR, cDNA cloning, cellular overexpression of mutants, cell cycle analysis, expression analysis, protein analysis (immunoblot, 2D-gel and proteomics),
Curriculum Vitae

Ludwig Wagner
Department of Internal Medicine III, Medical University of Vienna, Waehringer Guertel 18-20, A-1090 Vienna, Austria; Phone +43 1 40400 4319; Fax +43 1 40400 7790; Email ludwig.wagner@meduniwien.ac.at

Personal Data
Date of Birth: 16.04.1955
Place of Birth: Waidhofen/Ybbs, NÖ., Austria
Nationality Austria

Education
1997 – present Ass. Professor of Internal Medicine
1989 specialist in Internal Medicine
1977-1982 studies in Medicine
1975 – 1977 studies of Human Human Sciences
1967 – 1975 secondary school

Career History
1982-85 Training at the Department of Medicine I in order to specialize in Internal Medicine (Head Prof. Deutsch), University of Vienna.

1986-87 Postgraduate training at the University College Hospital London (immunohematological laboratory: Head: Prof. Goldstone)

1987-92 Clinical and part time research work at the Department of Medicine I, University of Vienna.

1993 Postgraduate training at the Harvard Medical School in the Laboratory of Infectious Disease, Massachusetts General Hospital East.

1994-95 Research at the laboratory of the Department of Medicine III, Div. of Clinical Endocrinology & Metabolism (Head:
o. Prof. Waldhäusl). **University of Vienna.**

**1996-97**
Research at the Infectious Disease Laboratory, Massachusetts General Hospital East, **Harvard Medical School**, Boston.

**1997-2000**
Part-time research and clinical work at the Department of Medicine III, **University of Vienna** (Head o. Prof. Waldhäusl)

**1998 and 1999**
During the summer months, research at the Infectious Disease Laboratory, Massachusetts General Hospital East, **Harvard Medical School**, Boston

**2000**
September-December: Research at **National Center of Biotechnology**, Campus Cantoblanco, Madrid

**2001-**
Part-time research at the Research Laboratory and clinical work at the Department of Medicine III, **University of Vienna** (Head o. Prof. Walter Hörl)

**Awards and Fellowship**
Research fellowship from the Austrian Ministry of Science 1986-1987
Research fellowship of the Max Kade foundation 1993
Biochemie-Research award for Thyroid disease 2002

**Memberships**
European Society for Calcium binding Proteins
Austrian Society for Internal Medicine

**Sources of funding (since 2000)**

<table>
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<tr>
<th>Period</th>
<th>Organization</th>
<th>Short Title</th>
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<tr>
<td>2001– 2003</td>
<td>Akademie der Wissenschaften: Doc Stipendium</td>
<td>Phänotypische und Genotypische Klassifizierung neuroendokriner Neoplasien</td>
<td>21</td>
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<td>2002</td>
<td>Biochemie-Forschungspreis für Schilddrüsen-</td>
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Collaborative research agreement between University of Vienna and Biosite:
Neurobiochemical Marker proteins indicative for brain microembolism. 2003-2005

Collaborative research agreement between Medical University of Vienna and Biosite:

Supervision of doctoral students (since 2000)

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<tr>
<th>Name</th>
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<tr>
<td>Barbara Zierhut</td>
<td>Phänotypische und genotypische Klassifizierung neuroendokriner Neoplasien</td>
<td>– 2003</td>
<td>MD</td>
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<td>Teodora Daneva</td>
<td>The involvement of calcium binding proteins, DREAM/Calsenilin and Secretagogin in pancreatic beta cell function</td>
<td>– 2004</td>
<td>PhD</td>
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<td>Tibor Altenberger</td>
<td>Aberrant gene expression patterns in pituitary tumors</td>
<td>– 2004</td>
<td>PhD</td>
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<tr>
<td>Ivelina Mineva</td>
<td>Differential expression of alphaB-crystallin and Hsp27-1 in anplastic thyroid carcinomas because of tumor-specific alphaB-crystallin gene silencing (Univ. Sofia)</td>
<td>– 2007</td>
<td>PhD</td>
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<tr>
<td>Anastasiya Nabokikh</td>
<td>Genes influencing insulinoma growth</td>
<td>pending</td>
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<tr>
<td>Aysegul Ilhan</td>
<td>Molecular cloning and renal expression analysis of the C20orf3 gene product</td>
<td>pending</td>
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Publications
57 peer reviewed publications in scientific journals.


41) Grisar J, Aringer M, Koller MD, Stummvoll GH, Eselbock D, Zwolfer B, Steiner CW,


Kurt M. WIDHALM  
Div.of Clin Nutrition and Metabolism, Dept of Pediatrics, Med.Univ Vienna  
kurt.widhalm@meduniwien.ac.at

Early detection and treatment of children and adolescents affected with familial hypercholesterolemia (FH)

Abstract (area of research, most recent results; ≤3000 characters)

Thesis Subjects
Association between genotype and phenotype in families affected with FH  
Effect of ApoE pattern on the effect of diet on serum lipoproteins in children with FH  
Dose effect of soy proteins and isoflavons  
Clinical characteristics of Apo-B-100-Defect  
Postprandial Hypertriglyceridemia in parents with familial comb. Hyperlipidemia  
Effekt of w-3 fatty acids in infants and children with homozygous LPL-deficiency  
Intima Media thickness in young children with homozygous familial hypercholesterolemia undergoing LDL-apheresis

Techniques and infrastructure
Outpatient clinic for lipid and lipoprotein disorders  
Dietary intervention for affected subjects.  
Lipoprotein research laboratory including ultracentrifuge, isoelectric, focusing, electrophoresis etc.  
Cooperations to detect LDL-receptor gene mutations  
Unit for clinical drug trials
CURRICULUM VITAE
Kurt WIDHALM, Dr.med.
Professor for Clinical Nutrition, Head, Div. Nutrition and Metabolism, dept. of Pediatrics, Med.Univ. of Vienna, Waehringer Guertel 18-20, A-1090 Vienna, Austria, Phone: +43-1-404002337 or 3232, Fax: +43-1-40400 2338 or 3194, E-Mail: kurt.widhalm@meduniwien.ac.at

Personal Data
Date of Birth : 02.02.1946
Place of Birth: Linz, Austria
Nationality: Austria

Education:
1964: Graduated at Academic Gymnasium Linz, with honors;
Jan.1998: Board Certification: Clinical Chemistry ("Facharzt für medizinische und chemische Labordiagnostik")

Brief Chronology of Employment:
Feb.1971-May 1973: Dept.of Physiology, Univ. Vienna
1973-1992: Dept.of Pediatrics, Univ.Vienna
1992-1994: Director and Head of Internal Dept. Mautner Markhof Childrens Hospital Vienna
1994-: Dept. of Pediatrics, Med. Univ. of Vienna

Career History:
Since 1974: Head of Outpatient Clinic for Obesity, Feb.1978: Senior Lecturer in Pediatrics Lipid Disorders and Nutrition Conseling
1980: Assoc.Prof.of Pediatrics
July 1986: Professor for Pediatrics
1987: Head of the "Academy of Clinical Nutrition" of the Austrian Nutrition Society and of the Physicians Board of Vienna
1.1.1988-1992: Director of the Austrian Screening Program for Inborn Errors of Metabolism (incl.Treatment Program), located on the Dept. of Pediatrics, Univ.Vienna
15.10.1992: Director and Head of Internal Department of the Mautner Markhof Children's Hospital, Vienna
1994: Professor for Clinical Chemistry
1995: Professor for Pediatrics, Dept. for Pediatrics, Univ.Vienna
1997: President Austrian Academy for Medical Nutrition
2003: Full Professor for Clinical Nutrition and Head of Dept. Nutrition and Metabolism

**Foreign studies:**
- Oct.1985: Children's Hospital Melbourne
- Oct./Nov.1988: University Riberao Preto, Sao Paulo, Brasil
- Jan.1992: Inst.for Genetic Diseases, Academy of Science, Moscow

**Military Service:**
- July/August 1976

**Committees and Boards:**
- Secretary of the Austrian Society for Pediatrics (1982-86)
- Council Member and Vice President (1992-96) of the Austrian Society for Nutrition (1990-2000)
- President Austrian Medical Academy of Nutrition (since 1997)
- President of the Austrian Lipid Society (until 1994)
- Member of the Health Council of the City of Vienna (1991-1999)
- President of the Federation of European Societies of Nutrition (FENS) 1995-99
- President European Childhood Obesity Group (since 2003)

**Editorial Scientific Boards:**
- Aktuelle Ernährungsmedizin (G.Thieme, Stuttgart)
Nutrition Research (Pergamon Press)
Klinische Pädiatrie (F. Enke-Verlag)
J. Amer. Coll. Nutrition
Int. Pediatrics
Editor: J. für Ernährungsmedizin (Wien)

**Publications:** (Alan R. Liss, New York) K. Widhalm, H.K. Naito

**Books**
Ernährungsmedizin, Verlag d. Österr. Ärztekammer, Wien, 2000, 2006
Kinderernährung, Verlag d. Österr. Ärztekammer, Wien, 2002
350 scientific papers, most of them in International Journals

**Reviewer:**

**Sources of funding (since 2000)**

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<tr>
<td>2005 – 2008</td>
<td>EU (partner Project no. 007034)</td>
<td>HELENA – Healthy Lifestyle in Europe by Nutrition in Adolescence</td>
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<td>– 2007</td>
<td>Medpace</td>
<td>Randomized Double-Blind Placebo-Controlled Efficacy and Safety Study of Colesevelam HCl Administered to Pediatric patients with Heterozygous Familial Hypercholesterolemia on a Stable of Statins or Treatment Naive to Lipid-Lowering Therapy</td>
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2003 – 2006  Fresenius, Graz  Ernährungszustand/Malnutrition bei hospitalisierten Patienten

- 2005  Alpro Foundation, Brüssel  Effekt von Sojaprotein bei Kinder und Jugendlichen mit familiärer Hypercholesterinämie

- 2005  Numico Int., Wageningen, The Netherlands  Glucosestoffwechsel bei übergewichtigen Jugendlichen

- 2005  Rudolf Mach  CLA Studie

- 2005  Abbott  Anwendungsbeobachtung der Wirkung von Sibutramine bei morbid adipösen Jugendlichen

- 2004  EU (QULRT-2000-00716)  QULRT – Quality of life in chronically ill children

- 2004  Agrana, BM, FGÖ (Projektnummer 323/III/48)  PRESTO – Prevention Study of Obesity

- 2004  Nährstoffakademie Salzburg  Mikronährstoffe in Österreich

- 2004  ARC Seibersdorf  Altersabhängigkeit – HF Strahlungsabsorption

finished  Nestlé  Familial Hypercholesterolemia

Supervision of doctoral students (since 2000)

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<tr>
<th>Name</th>
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<tr>
<td>Irene Mann</td>
<td>Homozygote, familiäre Hypercholesterinämie: Klinik, Diagnose und Therapie an Hand von drei pädiatrischen Fällen</td>
<td>– 2006</td>
<td>Dr.</td>
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<tr>
<td>Michaela Kiss</td>
<td>Glucosetoleranz bei morbid obesem Patienten</td>
<td>– 2006</td>
<td>Dr.</td>
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<tr>
<td>Marie-Therese Heine-Geldern</td>
<td>Malnutrition: Ernährungszustand von ambulanten Patienten</td>
<td>– 2005</td>
<td>Dr.</td>
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<td>Christina Denninger</td>
<td>Mögliche Assoziation zwischen unterschiedlichen Mutationen des LDLR - Gens u. des Gesamtcholesterins bzw. LDL - Cholesterins</td>
<td>– 2005</td>
<td>Dr.</td>
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<td>Philipp Kahl</td>
<td>Anwendungsbeobachtung der Wirkung von Sibutramine bei morbid adipösen Jugendlichen</td>
<td>– 2005</td>
<td>Dr.</td>
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<tr>
<td>Iris Ciba</td>
<td>Nonalcoholic Fatty Liver Disease* und deren Korrelation mit Insulinresistenz bei adipösen Kindern und Jugendlichen</td>
<td>– 2005</td>
<td>Dr.</td>
</tr>
<tr>
<td>Barbara Öller</td>
<td>Das Polycystische Ovarialsyndrom und die nicht-alkoholischen Fettlebererkrankungen im Kindes- und Jugendalter</td>
<td>– 2005</td>
<td>Dr.</td>
</tr>
<tr>
<td>Eva Rettenbacher</td>
<td>Mutationsanalyse des Melanocortin-4-Rezeptorgens bei extrem adipösen Kindern und Jugendlichen (Univ. Marburg, Germany)</td>
<td>– 2004</td>
<td>Dr.</td>
</tr>
<tr>
<td>Bettina Bandur</td>
<td>Bericht über in Österreich durchgeführte Untersuchungen zur Versorgung der Bevölkerung mit Vitaminen und Spurenelementen</td>
<td>– 2004</td>
<td>Dr.</td>
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<tr>
<td>Andrea Preisinger</td>
<td>Pediatric Obesity – A review of literature and 3,5-year-follow-up of an outpatient weight reduction program in obese children and adolescents</td>
<td>– 2002</td>
<td>Dr.</td>
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**Publications**


