Committee on Molecular Metabolism and Nutrition

Chair

• Matthew Brady

Professors

• Maria-Luisa Alegre, Medicine
• George Bakris, Medicine
• Graeme Bell, Medicine
• Deborah Burnet, Medicine
• Eugene Chang, Medicine
• Alexander Chervonsky, Pathology
• Anita Chong, Surgery
• Suzanne Conzen, Medicine
• Anna DiRienzo, Human Genetics
• David Ehrmann, Medicine
• Murray Favus, Medicine
• Godfrey Getz, Pathology (Emeritus)
• Bana Jabri, Medicine
• James Liao, Medicine
• J. Michael Millis, Surgery
• Deborah Nelson, Pharmacological and Physiological Sciences
• Louis Philipson, Medicine
• Victoria Prince, Organismal Biology and Anatomy
• Eve Van Cauter, Medicine
• Yingming Zhao, Ben May Department for Cancer Research
• Xiaoxi Zhuang, Department of Neurobiology

Associate Professors

• Marc Bissonnette, Medicine
• Matthew Brady, Medicine
• Ronald Cohen, Medicine
• Yan Chun Li, Medicine
• Kay Macleod, Ben May Department for Cancer Research
• Jeremy Marks, Pediatrics
• Silvana Pannain, Medicine
• Vivek Prachand, Surgery
• Carol Semrad, Medicine

Assistant Professors

• Lev Becker, Ben May Department for Cancer Research
• Eunice Chen, Psychiatry & Behavioral Neuroscience
• Dianne Deplewski, Pediatrics
• Alexandra Dumitrescu, Medicine
• Yun Fang, Medicine
• Helen Kim, Obstetrics and Gynecology
• Brian Roman, Radiology
• Esra Tasali, Medicine

Research Associate (Professor)

• Catherine Reardon Alulis, Pathology

Research Associate (Assistant Professor)
Mark Musch, Medicine

The Committee on Molecular Metabolism and Nutrition is a dynamic and interactive research unit of the University of Chicago offering interdisciplinary doctoral training in the molecular basis of biological processes as they relate to nutrition and human disease. The graduate program in molecular metabolism and nutrition offers a program of study leading to the Doctor of Philosophy in Molecular Metabolism and Nutrition. Faculty expertise includes the areas of insulin secretion, diabetes genetics, nutritional regulation of epithelial cell biology, intestinal absorption, adaptation, and malabsorption, water/nutrient/electrolyte transport, nutriceuticals, atherogenesis, abnormalities in lipid and lipoprotein metabolism, vitamin D research, insulin metabolic signaling, transcription factors and adipogenesis, impact of nutrition on reproductive biology, glucocorticoid action and sleep research. A mixture of nationally recognized senior faculty and dynamic junior faculty provide a stimulating and supportive environment designed to guide graduate students through course work and research training. Major resources include transgenic mouse facilities, flow cytometry, microscope imaging suites, microarray and gene chip facilities, computational labs and facilities for human research. The committee works closely with the government sponsored Diabetes Research and Training Center, Digestive Disease Research Core Center, Training Program in Digestive Diseases and Nutrition, and the Clinical Research Center to offer a broad array of choices for research topics.

The Committee on Molecular Metabolism and Nutrition is a member of the Biomedical Sciences Cluster, which also includes graduate programs from the Committee on Cancer Biology, the Committee on Immunology, and the Committee on Microbiology. The four academic units share several common courses, a seminar series, and additional common events for students and faculty within the cluster. The goal of the cluster system is to encourage interdisciplinary interactions among both trainees and faculty, and to allow students flexibility in designing their particular course of study.

ADMISSION

Students interested in obtaining the Ph.D. in Molecular Metabolism and Nutrition should submit an application to the Biological Sciences Division by December 1st of each year; indicate their cluster of interest as Biomedical Sciences and select Molecular Metabolism and Nutrition as their proposed degree program.

THE DEGREE OF DOCTOR OF PHILOSOPHY

Ph.D. requirements include:
• Completion of 9 course credits consisting of basic science, metabolism and elective courses.
• A preliminary exam in the form of a mock NIH-style grant proposal.
• A dissertation based on original research.
• A final thesis examination.

COMMITTEE ON MOLECULAR METABOLISM AND NUTRITION COURSES

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOMN 30901</td>
<td>Molecular Basis of Metabolic Disease</td>
<td>100</td>
</tr>
<tr>
<td>MOMN 30910</td>
<td>Grant Writing</td>
<td>100</td>
</tr>
<tr>
<td>MOMN 31000</td>
<td>BMSC All Stars</td>
<td>50</td>
</tr>
<tr>
<td>MOMN 31100</td>
<td>Ethics in Scientific Research</td>
<td>50</td>
</tr>
<tr>
<td>MOMN 34310</td>
<td>Cellular Engineering</td>
<td>100</td>
</tr>
<tr>
<td>MOMN 36500</td>
<td>Molecular Nutrition I</td>
<td>100</td>
</tr>
<tr>
<td>MOMN 36600</td>
<td>Molecular Nutrition II</td>
<td>100</td>
</tr>
<tr>
<td>MOMN 39900</td>
<td>Readings: Metabolism</td>
<td>100</td>
</tr>
<tr>
<td>MOMN 40100</td>
<td>Research: Metabolism</td>
<td>300</td>
</tr>
<tr>
<td>MOMN 40400</td>
<td>New Insights into Metabolic Research</td>
<td>50</td>
</tr>
</tbody>
</table>