Diabetes and Obesity: Wellness and Translational Science

Inaugural Cedars-Sinai Symposium

February 18-19, 2016
Richard N. Bergman, PhD
Richard N. Bergman, PhD, is the Alfred Jay Firestein Chair in Diabetes Research, professor in the Cedars-Sinai Department of Biomedical Sciences, director of the Cedars-Sinai Diabetes and Obesity Research Institute and professor in residence in the UCLA Department of Medicine.

Originally trained as an electrical engineer, Dr. Bergman soon appreciated how systems composed of different components can work together to achieve a common goal, and believed this “systems approach” had wider applicability. During PhD studies in physiology, he was influenced to apply systems biology to study the causes of diabetes. Application of the systems approach led Dr. Bergman and colleagues to understand blood glucose regulation in quantitative terms. His team demonstrated a stereotypic hyperbolic relationship between insulin action and insulin secretion, and the parameter defining that relationship (the disposition index) is the most powerful predictor of diabetes risk. Dr. Bergman’s team has applied its ideas to large epidemiologic and genetic studies. The lab is studying the relationship between obesity and diabetes, and why bariatric surgery can cure diabetes. It also is investigating the role of insulin disappearance in the pathogenesis of diabetes. The Bergman lab has studied the mechanisms underlying how several drug classes (cannabinoid antagonists, SGLT2 inhibitors, antipsychotics) interact to change diabetes risk.

LOUIS J. ARONNE, MD
Louis J. Aronne, MD, is a leading authority on obesity and its treatment. He is the Sanford I. Weill Professor of Metabolic Research at Weill-Cornell Medical College, where he directs the Comprehensive Weight Control Center. He has an adjunct associate professor of Clinical Medicine at Columbia University. Dr. Aronne is founder and CEO of 8MG, a cloud-based weight management system that is delivered by healthcare providers to their patients during office visits. Dr. Aronne graduated Phi Beta Kappa from Trinity College with a BS in biochemistry and from Johns Hopkins University School of Medicine. He completed his internship and residency at Albert Einstein College of Medicine, followed by a Kaiser Foundation Fellowship at Weill-Cornell. He is a member of the AOA Medical Honor Society.

Dr. Aronne is former president of the Obesity Society and vice chair of the American Board of Obesity Medicine. He has performed more than 50 clinical trials of novel obesity treatments, authored more than 60 papers and book chapters on obesity and edited the National Institutes of Health Guide to the Identification, Evaluation, and Treatment of Overweight and Obesity. He served as a consultant in the development of the Veterans Administration MOVE program, the nation’s largest medically based weight control program. Dr. Aronne has won several awards for medical teaching. Since 2001 he has been ranked in Castle-Connolly’s Top Doctors in New York directory as a specialist in obesity and internal medicine. He is a member of the Alpha Omega Alpha medical honor society.

RICHARD N. BERGMAN, PhD
MIGUEL BURCH, MD
Miguel Burch, MD, received his doctorate from Medical College of Virginia in 1999. After completing residency at Boston Medical Center in 2004, he came to Cedars-Sinai for a fellowship in 2005. Dr. Burch was a principal investigator on the ENDO Trial, a randomized, multicenter study on the EndoBarrier Gastrointestinal Liner System.

SONIA CAPRIO, MD
Sonia Caprio, MD, is professor of Pediatric Endocrinology at Yale University. Dr. Caprio is internationally recognized for her research addressing fundamental mechanisms at the bed-side that are directly relevant to childhood obesity and Type 2 diabetes (T2D) in youth. Her translational research program has been continuously funded by two R01 grants from the National Institute of Child Health and Human Development, focusing on the identification of early metabolic disturbances implicated in the genesis of childhood obesity, the metabolic consequences of juvenile obesity and the pathogenesis of T2D in youth. She has been the recipient of a K24 Patient Oriented Award for 10 years. Realizing the need to understand the pathophysiology of T2D in obese youth, she has been investigating the role of insulin resistance and beta cell dysfunction at the earliest stage of T2D, namely impaired glucose tolerance. Her research in prediabetes in obese children and adolescents has brought into focus at the national level the magnitude of the obesity problem in children in the U.S. This research demonstrated a much faster progression of beta cell failure in obese adolescents, which helped to stimulate the funding of two current randomized clinical trials in obese youth: the TODAY and RISE studies, both supported by the National Institute of Diabetes and Digestive and Kidney Diseases.

In 2008, she was awarded the prestigious Distinguished Clinical Scientist Award from the American Diabetes Association. In 2015, she received the Distinguished Leader in Insulin Resistance Award from the International Committee for Insulin Resistance. She has served as the primary mentor for more than 30 trainees and postdoctoral fellows, most of whom are full-time faculty members and three of whom have achieved the rank of professor.

SUZANNE DEVKOTA, PhD
Suzanne Devkota, PhD, is assistant professor in the Cedars-Sinai Division of Gastroenterology, investigating the role of the gut microbiome in inflammatory bowel disease (IBD). Her research into dietary impacts on host-microbe interactions has led to some of the first mechanistic insights into why diseases such as IBD, diabetes and food allergies have rapidly increased over the past 50-100 years. Her ongoing research focuses on the role of pathobionts — symbiotic microbes that turn pathogenic under certain selective pressures — on host immune responses, and on counteractive nutritional therapies.
MARIANNE L. SCHMITT, MD

Marianne L. Schmitt, MD, is director of the Department of Surgery and director of the Metabolic Institute at Cedars Sinai Medical Center. She is board-certified in general surgery and bariatric surgery. Dr. Schmitt completed her general surgery residency at Duke University Medical Center and fellowship training in bariatric surgery and minimally invasive surgery at Cedars Sinai Medical Center. She is also a fellow of the American College of Surgeons and a member of the American Society for Metabolic and Bariatric Surgery. Dr. Schmitt’s research interests include the role of gut hormones and neural signaling on glucose metabolism and weight loss. She also focuses on the role of gut microbiota in the development of obesity and type 2 diabetes. Her research projects include studies to define the role of specific gut microbes in the development of obesity and insulin resistance.
became recognized as the regional and national expert in PCOS with metabolic syndrome, diabetes related to islet autotransplantation and glucose abnormalities after bariatric surgery. The latter condition was particularly intriguing to her, leading to her research effort for which she has obtained support from the National Institutes of Health, American Heart Association and American Society for Metabolic & Bariatric Surgery. She has been recognized nationally through invited presentations at international meetings such as those of the American Diabetes Association.

MICHAEL SCHWARTZ, MD

Michael Schwartz, MD, is Robert H. Williams Endowed Chair and professor of Medicine in the Division of Metabolism, Endocrinology and Nutrition at the University of Washington (UW) and director of the UW Medicine Diabetes and Obesity Center of Excellence. His research investigates brain mechanisms governing energy balance and glucose metabolism and how obesity and diabetes result from impairment of these brain systems. He has published more than 230 articles and book chapters related to these topics. His work has been cited more than 25,000 times, and he was recognized by the European Journal of Clinical Investigation as one of the most highly influential biomedical researchers from 1996-2011. Dr. Schwartz’s research has been continuously funded by the National Institutes of Health since he joined the faculty of UW more than 20 years ago, and he is a member of the editorial boards of the Journal of Clinical Investigation, Endocrine Reviews, Molecular Metabolism and Frontiers in Neuroendocrinology. Dr. Schwartz is a member of the Association of American Physicians, the Western Association of Physicians and the American Society for Clinical Investigation. He is the recipient of the 2007 Williams-Rachmiel Levine Award for Outstanding Mentorship from the Western Society for Clinical Investigation, the 2006 Naomi Berrie Award for Outstanding Achievement in Diabetes Research from Columbia University, the 2011 Solomon A. Berson Lectureship from the American Physiological Society, and the 2014 Levi J. Hammond Distinguished Lecturer of the University of Pennsylvania, among other awards.

THOMAS A. WADDEN, PhD

Thomas A. Wadden, PhD, is the Albert J. Stunkard Professor of Psychiatry at the Perelman School of Medicine at the University of Pennsylvania and director of the Center for Weight and Eating Disorders. He received his AB in 1975 from Brown University and his doctorate in clinical psychology in 1981 from the University of North Carolina at Chapel Hill.

Dr. Wadden’s principal research is on the treatment of obesity by methods that have included lifestyle modification, physical activity, very-low-calorie diets, medication and surgery. He also has investigated the metabolic and behavioral consequences of obesity and weight loss. His research has been supported for more than 30 years by the National Institutes of Health (NIH).

Dr. Wadden is past president of the Obesity Society and past associate editor of the journal Obesity. He has served on several NIH panels, including study sections, the Task Force on the Prevention and Treatment of Obesity, and the Obesity Clinical Guidelines Committee. He also has served as a consultant to the Department of Veterans Affairs, the Federal Trade Commission and the Institute of Medicine. His research has been recognized by several awards, including the George Bray Founders Award and the TOPS Research Award, both from The Obesity Society.