



**Barbara Corkey**

Barbara E. Corkey is Vice-Chair for Research and Professor of Medicine and Biochemistry in the Department of Medicine at Boston University School of Medicine, where she is also Director of the Obesity Research Center of Boston Medical Center and the Principal Investigator of the multi-institutional NIH-funded Boston-Obesity/Nutrition Research Center. She is was Chair of the Board of AdipoGenix, a start-up drug company that she co-founded to develop drugs to treat obesity. She just completed a term as Editor-in-Chief of the journal Obesity. She has chaired the program committee for the national annual meeting of the American Diabetes Association, served on the National Peer Review Oversight Committee for the American Heart Association and served on review committees of the NIH and the Juvenile Diabetes Foundation.

Professor Corkey received her PhD in 1981 from the University of Pennsylvania, Department of Biochemistry and Biophysics for studies focusing on branched chain amino acid metabolism. She has published over 100 manuscripts and been invited to speak at numerous national and international institutions and symposia.

The main questions in the Corkey laboratory concern how fuels regulate insulin secretion and how the fat cell determines whether to store or burn fat. We seek to answer these questions by studying the fuel-induced signals that modulate secretion, electrical activity, metabolism and gene expression. Recent discoveries include a role for reactive oxygen species in insulin secretion, digital calcium signaling in pancreatic  $\beta$ -cells and a role for inhibition of the respiratory chain in regulating fat storage in adipocytes. The main tools used in the laboratory include measurement of intracellular ions such as  $Ca^{2+}$  and  $H^+$ , plasma and mitochondrial membrane potential, oxygen consumption, the signaling consequences of cellular energy state, the influence of fatty acids on protein kinases and the role of fatty acids and long chain fatty acyl CoA on signal transduction. Work is supported by three NIH RO1 grants and done in collaboration with scientists at Boston University, Tufts University, the Karolinska Institute, the Universities of Montreal and Pennsylvania and the CIIT Centers for Health Research.

Professor Corkey is also an avid painter, grandmother and wine connoisseur.