**Motivation for the Rolf Luft Award 2017**

Dr. Drucker is a physician-scientist who receives the Rolf Luft Award 2017 for his pioneering studies of gut hormone action. He was the first scientist to discover the biological actions of glucagon-like peptide-2 (GLP-2).

Dr. Drucker synthesized all peptides liberated from proglucagon, and carefully assessed their biological actions. These studies uncovered the previously unknown actions of GLP-2 as a potent intestinal growth factor. Dr. Drucker discovered that GLP-2 increases nutrient absorption enhances crypt cell proliferation and decreases gut permeability. Further, he cloned the GLP-2 receptor and identified pathways mediating GLP-2R signal transduction. He generated and characterized Glp2r-/- mice, enabling elucidation of a novel gut microbial-GLP-2R axis, linking GLP-2 liberated from entero-endocrine cells to the control of nutrient absorption, gut permeability, epithelial-microbiome interactions, and mucosal integrity. He found that native GLP-2 was degraded by dipeptidyl peptidase-4 (DPP-4), synthesized and characterized over a hundred GLP-2 analogues which led to the selection of an optimized DPP-4-resistant analogue, teduglutide.

In human studies, teduglutide significantly reduced the need for parenteral nutrition (PN) in patients with shorty bowel syndrome (SBS). In 2012, the FDA Advisory Committee voted approval of teduglutide for the sustained treatment of SBS. Dr. Drucker also pioneered the study of glucoregulatory incretin hormones. After demonstrating in 1987 that GLP-1 stimulates insulin secretion, he generated Glp1r-/- mice, identifying multiple new cardiometabolic actions of GLP-1 and other new roles for GLP-1 and DPP-4 in the control of cardiovascular function, inflammation, gut growth, pancreatic and beta cell function, innate immunity and cellular protection.

 In summary Dr. Drucker is being recognized for his contributions to GLP biology including the identification of GLP2 as a hormone which regulates intestinal growth and the demonstration that it has clinical benefits in patients with short bowel syndrome. This is now an approved therapeutic indication for short bowel syndrome with potential efficacy for a number of other intestinal disorders. Drucker has also made important contributions to our understanding of the mechanisms underlying the antidiabetic and other effects of GLP1 analogues.

The Prize ceremony and lecture will be held in May 2017.