**Motivation to Rolf Luft Award 2018**

Professor Rudolph Zechner, Institute of Molecular Biosciences, Karl-Franzens-Universität Graz, Austria is awarded the 2018 Rolf Luft Award **for his discovery of adipose triglyceride lipase and its role in intracellular catabolism of fat.** After discovering adipose triglyceride lipase (ATGL) as the enzyme initiating fat catabolism in mammalian cells, Rudolph Zechner showed that comparative gene identification-58 (CGI-58) is an essential co-activator. These findings provided a molecular basis for understanding human neutral lipid storage diseases. He then revealed a crucial function for ATGL in lipid signaling by showing that the activity of the peroxisome proliferator-activated receptor (PPAR) family of transcription factors depends on ATGL-mediated fat catabolism. Further seminal discoveries connect ATGL to the pathogenesis of cancer cachexia and Zechner's work demonstrated that lipase deficiency inhibits the development of cachexia in mouse xenotransplant cancer models. His recent work elucidated the role of cardiac and brown adipose ATGL expression in cold-induced thermogenesis. Translational work by Zechner showed that the ATGL inhibitor Atglistatin reduces diet-induced obesity, improves glucose tolerance and prevents liver steatosis in mice, findings that identify ATGL as a target for treating metabolic diseases. Hence, Rudolf Zechner leads the field defining mechanisms for the intracellular catabolism of fat and his research has transformed textbook biochemistry, explained human genetic diseases and identified a promising strategy for treating metabolic disorders.