Second Laureate Fundamental Research

- **Research Work Title:** Dissection of the Molecular Pathogenesis of Obesity and Fat Distribution
- **Researcher:** Prof. Cecilia Lindgren
- **Country:** Sweden
- **Field:** Biotechnology & Basic Medical Sciences
- **Scientific Affiliation:** University of Oxford, United Kingdom

Abstract:

Obesity and its consequences are growing challenges for health care worldwide. Recently, we have identified >140 common variants, which influence overall obesity. These findings should lead to improved understanding of the mechanisms regulating overall energy balance. However, not all obese individuals are equally vulnerable to adverse consequences of obesity, and it has long been appreciated that the distribution of fat (particularly the degree of central/ visceral obesity) is an additional and independent determinant of many comorbidities. Thus, applying a range of genomic approaches, we expect to identify genetic variants influencing fat distribution, and to illuminate some of the biological pathways involved, in the belief that an appreciation of these mechanisms will complement advances in understanding of overall energy balance. This knowledge should support translational advances in the management of obesity through development of novel diagnostic and therapeutic options.

Biography:

Dr. Cecilia Lindgren is a Senior Group Leader at the Big Data Institute (BDI), Li Ka Shing Centre for Health Information and Discovery at University of Oxford. She received a Ph.D. in Molecular Genetics from Lund University and continued her career as a visiting researcher at the Whitehead Institute, MIT, USA where she trained in statistical genetics. After post-doctoral work at the Karolinska Institute, she joined the Wellcome Trust Centre for Human Genetics at Oxford University, followed by three years as a Scholar in Residence at the Broad Institute of Harvard/MIT. She has previously been awarded the "Rising Star Award" from The European Association for the Study of Diabetes (EASD) (2010), the "Obesity and Cardiovascular Health Award" by Association for the Study of Obesity (ASO)'s, (2011) and the "Leena Peltonen Prize for Excellence in Human Genetics" (2013). The last three years, she has been listed amongst Thomson Reuters 100 "most highly cited researchers" in Molecular Biology and Genetics. Her research focuses on applying genomics to dissect the molecular pathogenesis of obesity to achieve a better understanding, more effective prevention and treatment of obesity.