



2018 C.D. Nelson Award Winner

Jaswinder Singh

McGill University, Québec

Dr. Jaswinder Singh's research contributions are prolific, high-calibre and multi-faceted, blending molecular biology, biochemistry, genetics and plant breeding, and deploying tools of genomics, proteomics and genetic engineering to significantly advance our understanding of basic plant biology with promising socio-economic benefits. Highlights of Dr. Singh's research include: (1) the introduction of the *Ac/Ds* transposable element system into barley to make this crop amenable to transposon-mediated insertional mutagenesis; (2) the first demonstration of the "re-awakening" of a transposable element following its previous silencing, which is a milestone in our understanding of epigenetic reprogramming during plant development from generation to generation; (3) use of the transposon system to dissect important genes in barley and other cereals, notably the revelation of a novel regulatory switch in the "RNA-dependent DNA methylation" pathway that controls seed dormancy and post-harvest sprouting, providing a new approach to increasing cereal yields and decreasing losses due to excessively humidity; and (4) most recently, discovery of a thaumatin-like protein that plays a major role in determining the malting quality in barley – a finding of major interest for the brewing industry.

Dr. Singh is an author on 47 original peer-reviewed research papers, including 34 since the start of his independent research position in 2008 at McGill University, and 11 peer-reviewed book chapters. The diversity of high impact journals in which his research articles have been published is a testament to this quality and breadth. He is the President Elect of the Canadian Society of Agronomy.