

2023 C.D. Nelson Award: Dr Guanqun (Gavin) Chen

Dr. Gavin Chen is currently serving in the Faculty of Agricultural, Life and Environmental Sciences at the University of Alberta. Dr Chen started his independent research as a tenure-track Assistant Professor at the University of Manitoba in September 2015, and then moved to the University of Alberta in 2017. He was promoted to Associate Professor in July 2021, less than six years after beginning his original tenure track position. Dr. Chen also holds a Canada Research Chair (Tier 2) in Plant Lipid Biotechnology.

Since his appointment as a faculty member in 2015, Dr. Chen has become a leader in the field of plant lipids and has made outstanding contributions to plant biology. Dr. Chen has brought a unique background in biochemical engineering and biotechnology to his independent research programme. He has developed an innovative research agenda that uses sophisticated techniques to investigate plant lipid biochemistry and biotechnology. This research programme is advancing the basic scientific understanding of the lipid metabolism and its regulation in tandem with developing novel biotechnology strategies that aim to enhance desirable lipid traits in agronomic crops. This research is important at economic, environmental and societal levels due to rapidly increasing demands for vegetable oils and value-added fatty acids to meet growing demands for food, biofuel, and oleochemical products. The unique research niche that Dr. Chen has created, together with embracing collaborations with other researchers and with industrial partners to extend the scope of his research, has enabled Dr. Chen to be highly successful in obtaining enviable levels of research funding from a variety of different agencies.

He has published 83 peer-reviewed research articles, including 50 since 2015, in leading journals such as Plant Biotechnology Journal, Plant Physiology, Plant Journal, Plant Cell, Journal of Biological Chemistry, Bioresource Technology, Metabolic Engineering, Biochemical Journal, and Progress in Lipid Research. His research has been cited more than 2000 times by his peers and has also attracted the interest of leading agricultural chemical companies for collaboration. Dr. Chen has successfully secured ~\$6M research grants as PI and Co-PI since 2015 from NSERC, Alberta Innovates, CFI, the Canola Council of Canada, and Genome Canada.

Dr. Chen's research program is world-class, innovative and forward-thinking through the multi-layered, and multi-faceted experimental approaches. His research program has already generated novel and important insights into plant lipid biosynthesis and regulation. He is translating the outcomes of this fundamental research into biotechnological applications that are already having an impact. The CSPB/SCBV is delighted to honour Dr. Chen with the C.D. Nelson Award.