

A complex metabolic pathway diagram, likely a portion of a larger map, showing various biochemical reactions and molecules. Key molecules visible include Glucose-6-P, Fructose-6-P, Fructose-1,6-bisP, and various amino acids like Aspartate, Glutamate, and Lysine. The diagram is color-coded and includes enzyme names and cofactors like NADPH and ATP.

Deliang Guo, PhD

Dr. Guo is currently a tenured Associate Professor in the Department of Radiation Oncology at The Ohio State University Medical Center. His research focuses mainly on understanding metabolic reprogramming in malignancy and aims to identify novel molecular targets and effective therapeutic strategies for cancer therapy. In the last 10 years, he has spent significant effort studying metabolic alteration in malignancies. He has made important contribution to the understanding of lipid metabolism regulation in cancer cells, which opened a very promising new direction for cancer therapy.

Dr. Guo received his PhD training in molecular cell biology at Beijing Normal University in China from 1999 to 2004. He then came to the University of California at Riverside for a two-year postdoctoral training in biomedical research (2005-2007). After this training, he moved to the University of California at Los Angeles (UCLA) as a postdoctoral fellow to study brain tumors in Dr. Paul Mischel's laboratory in the Department of Pathology (2007-2011). While there, he made the novel discovery that oncogenic signaling, EGFR/PI3K/Akt, drives the reprogramming of lipid metabolism in GBM to promote tumor rapid growth. In 2011, Dr. Guo joined The Ohio State University James Comprehensive Cancer Center to establish his independent laboratory and focus on investigating cancer lipid metabolism. Dr. Guo and his team made important discoveries reporting for the first time the underlying molecular mechanism that links glucose to lipid metabolism activation in cancer cells. This study was featured as one of "Ten Breakthroughs and Insights for Cancer Research" in 2015 by the American Cancer Society. In 2016, Dr. Guo was promoted to tenured Associate Professor at The Ohio State University. His group further uncovered that brain tumor cells contain large amounts of special lipid-storing organelles, lipid droplets, which are rarely detected in low grade brain tumors.

Dr. Guo has received multiple NIH R01 grants and American Cancer Society Scholar Awards for his research. He has also provided outstanding service to his own academic institution as well as to the scientific community at large. He has been invited to review for multiple grant agencies, including NCI, DoD, Cancer Research UK, The Brain Tumour Charity/Smantha Dickson Brain Tumour Trust in the UK. He has also been invited as Session Chair and Speaker for the Society of Neuro-Oncology Annual Meeting, and a visiting professor or speaker by many US and foreign institutions.