

THE ROLE OF THE CDC20-ANAPHASE PROMOTING COMPLEX SIGNALING PATHWAY IN CEREBELLAR GRANULE CELL PRECURSOR DEVELOPMENT AND MEDULLABLASTOMA MIGRATION

ALBERT KIM, MD, PHD

Dr. Kim's research focused on discovering pathways in a normal healthy brain to help him understand how brain tumors grow.

The basic research performed in the lab—involving cell cultures as well as in vivo experiments—has led to some exciting data about the early development of the brain.

“The scientific community is excited about our discovery involving dendrites, which are the information receiving ends of a neuron and play an important role in how the brain is wired. We actually discovered new pathways for how dendrites are formed, and it turns out that these pathways are also used for cell division. This is significant to brain tumors as it demonstrates how we can use insights from brain development to confront tumors,” stated Dr. Kim.

Dr. Kim published two major papers in two highly-regarded journals, *Cell* and *Science*, where he describes the discoveries of the lab and their significance for brain connectivity and, potentially, brain tumors. “The discovery of these pathways gives us a much needed common ground between brain tumors and early neural development,” said Dr. Kim.

Thanks to the support from the BSF and the Ponton Fund, Dr. Kim was able to employ a skilled technician who managed all of his experiments in the lab. “I am both a neurosurgeon and a researcher, and I would not have been physically able to pursue my research without a full-time technician to carry out all the planned experiments,” said Dr. Kim. Dr. Kim added that this grant helped him to better combine his surgical duties with his responsibilities at the lab. “I learned to make a successful transition between research and surgery.”