Anatomy and Neuroscience 2019 Seminar Series

The fossil record of hominin brain evolution: From *Australopithecus* to Albert Einstein

Prof. Dean Falk
Evolutional Anthropologist
Florida State University
Tallahassee, Florida 32306-7772, USA
School for Advanced Research
Santa Fe, New Mexico 87505, USA
dfalk@fsu.edu

Location: Frederic Wood Jones Theatre, Level 3 East, Medical Building
Date: July 5th, 2019
Time: 3:30 – 4:30 pm

Abstract
The origin and evolution of language in our ancestors likely paved the way for the subsequent evolution of other advanced cognitive skills in *Homo sapiens*. Analyses of casts of the interiors of hominin braincases (endocasts) provide a window into the evolution of both brain size and cortical reorganization. The same methods used to analyze the bumps and grooves on ape and hominin endocasts were applied to photographs of Albert Einstein’s brain. Results showed that, although the size of Einstein’s brain was average, the morphology of his cerebral cortex was extraordinary compared to our ancestors and to most living people. Various features of Einstein’s brain suggest that, despite the importance of brain enlargement during hominin evolution, alterations in the brain’s wiring were crucial for the emergence of complex abstract thinking. The evolution of hominin cognition is also reflected in the archeological record of material culture, which has progressed from simple stone tools in australopithecines to the relatively recent emergence of reading in *Homo sapiens* and the subsequent invention of atomic weapons, based partly on Einstein’s theoretical discoveries. Human brains are still evolving, but it remains to be seen whether our species will survive the material culture that it continues to invent.