

**Robert A Barton (Durham University, UK)**

## **Brains growing on the tree of life: a phylogenetic approach to brain structure and function**



Recent developments in comparative methods are providing unprecedented insights into how traits evolved through time. I apply these methods to the mammalian brain, with a particular focus on primates. The results overturn some simplistic ideas about brain evolution that have taken root in the literature, providing a more complex and nuanced picture in which different kinds of structural change occurred at different times in response to different selection pressures. The complexity of the patterns of brain evolution give the lie to single-factor hypotheses and in particular undermine attempts to explain cognitive evolution as the product of selection on 'general intelligence' and executive control. Instead, the results suggest that the brains of different species support specialized forms of embodied cognition closely associated with their sensory-motor adaptations.

**Where?** Dpt. Zoology, Charles University, Viničná 7, Praha 2; 2<sup>nd</sup> floor, Large zoology lecture hall.

**When?** on Tuesday October 16<sup>th</sup> at 15 00.