

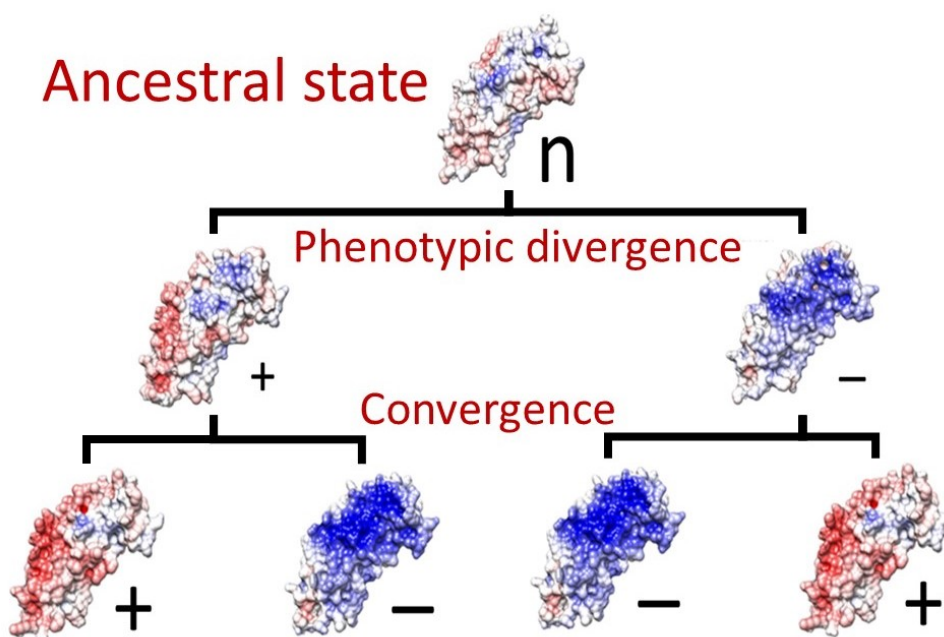


CHARLES UNIVERSITY  
Faculty of Science

# OPEN PhD position

Project: Does convergent evolution of molecular phenotypes shape immune responses in birds?

Four-year PhD position in Prague, Czech Republic starting from 1 October 2024  
Application deadline: 13 March 2024



The objectives of this PhD project are to employ a new approach to identify convergent evolution in avian inflammatory genes, to test for functional differences between selected convergent protein variants, and to bring evidence for the effects of molecular convergence on immune responses to microbial communities.

The successful candidate will generate and analyse immune gene sequence data (target gene sequencing), run tests of positive selection based on sequence alignments (dN/dS approach), perform clustering of protein structures based on their physicochemical properties, and get involved in analysis of recombinant protein function (in vitro), including differential gene expression analysis (RNA-seq, RT-qPCR).

Focusing on birds that host more diversified microbial communities than mammals, this PhD project opens new possibilities for interdisciplinary research in evolutionary immunology.

**Applications** are submitted through the STARS application system (<https://stars-natur.cz>).  
*Applications via postal service or e-mail will not be considered.*

**Further information:**

<http://web.natur.cuni.cz/zoologie/biodiversity/eei/opportunities/>

For closer details contact Prof. Michal Vinkler ([michal.vinkler@natur.cuni.cz](mailto:michal.vinkler@natur.cuni.cz)).