POSTDOCTORAL POSITION IN PENGUINS GENOMICS AND ECOLOGY

The western Antarctic Peninsula can be classified into two distinct climactic regimes that are characterized by differences in sea ice conditions, oceanography, primary productivity and terrestrial climate. Gentoo penguins, one of the three pygoscelid penguin species, have excelled across both these climactic regimes, while Adelie and Chinstrap penguins have declined in numbers. Using a novel combination of genomic tools, electronic instrumentation, biogeochemistry, morphological and physiological assessment, we are interested in understanding the phenotypic signals of individual quality, how these translate into fitness, that is, success both reproductively and from a foraging perspective, and finally whether these phenotypic signals are genetically heritable traits.

We seek a postdoctoral candidate who is inquisitive about the process of natural selection and how it manifests in behavioural ecology. The candidate will be responsible for collecting the individual samples in the field to determine phenotype and genomic information and data related to fitness such as feeding and breeding ecology from four Gentoo penguin breeding colonies along the western Antarctic Peninsula. Consequently, the ideal candidate will possess strong quantitative analytical capabilities, experience and interest with analyzing genomic molecular data for selection, experience operating in the field (preferably within polar environments). The ideal candidate is likely to be well published, relative to career stage, and be competitive for a CONICYT Postdoctoral Scholarship. The selected candidate will work closely with scientists specialized in ecology, molecular ecology, marine biology, bioinformatics, and a group of world-renowned international collaborators.

Candidate profile
- Completed PhD in Genomics, Computational Biology, Evolutionary Biology, Ecology or related disciplines.
- Strong computing background, prior experience with handling large-scale data and use of bioinformatics and statistical tools would be an advantage.
- Strong ability to work in the field.
Experience with NGS molecular data, and an interest in evaluating selection in populations.
Some experience in species distribution and niche modeling is also expected.
Excellent communication, organizational and teamwork skills.
Fluent in written and spoken English.

Position specific responsibilities
Collection and analysis of morphological, molecular, telemetric and biogeochemical data from individual breeding Gentoo penguins at four breeding colonies along the western Antarctic Peninsula,
Characterization of phenotypic markers of individual quality and relating them to genetic signals of selection.
Multivariate and integrative analysis of SNPs data through bioinformatic pipelines.
Assistance in the supervision and training of graduate and undergraduate students.
Collaboration with principal investigators and international researchers.
Primary authorship of publications in ISI journals and scientific communications in national and international congresses.

Conditions
Duration: 24 months (Full-time), extended to another 12 months on successful award of a CONICYT Postdoctoral Scholarship.
Month salary: 1.500.000 Chilean pesos – 2.500 US$ approx.
Host laboratory: Laboratorio de Biodiversidad Molecular, Universidad Católica de Chile.
Supervision: Dr Juliana Vianna (P. Universidad Católica de Chile) Dr. Andrew Lowther (Norwegian Polar Institute), Dr. Andrés Barbosa (Museo Nacional de Ciencias Naturales, CSIC).
Mobility: Participation in remote field camp expeditions in Antarctica for protracted periods over two austral seasons. Attendance at national and international congresses. Probable research stays Norwegian Polar Institute and the Museo Nacional de Ciencias Naturales in Spain and other partner laboratories.

Applications: Please contact Juliana Vianna (jvianna@uc.cl) with your CV and a brief overview of the research program / questions you are interested in pursuing in our lab. Please be prepared to provide scientific references (e.g. advisor /thesis committee members). Preliminary enquiries are welcome (Andrew.Lowther@npolar.no and jvianna@uc.cl).

Closing date for application: September 10th, 2019.