

Department	Marine Mammal Institute (MMI)
Job Title	Postdoctoral scholar – epigenetic aging of beluga whales
Appointment Type	Postdoctoral scholar
Job Location	Hatfield Marine Science Center, Newport, Oregon
Position Appointment Percent	100%
Appointment Basis	12 month
Pay Method	Stipend
Recommended Full-Time Salary Range	The minimum rate for Postdoctoral Scholars with no prior postdoctoral experience is \$47,484/year with annual increments for each year of experience following NIH guidelines, http://gradschool.oregonstate.edu/postdocs/stipends-and-benefits
Position Summary	<p>The Marine Mammal Institute invites applications for a full-time (1.00 FTE), 12-month, fixed-term Postdoctoral Scholar position, funded by a grant from the North Pacific Research Board (http://www.nprb.org/). Reappointment is subject to funding and at the discretion of the Principal Investigator. This position will help validate methodology for epigenetic aging of cetaceans using next-generation sequencing to measure the levels of cytosine methylation in candidate genes. The assay will be calibrated using a large set of samples with estimated ages from growth-layer groups in teeth. The age assay will then be applied to biopsy samples from living beluga whales of unknown age to better understand the life history and age structure of the endangered Cook Inlet population of beluga whales. Depending on funding, the incumbent will extend the methods developed for the beluga to other species, subspecies or populations of cetaceans.</p> <p>The primary responsibilities for this position include the analysis of methylation assays for epigenetic aging by next-generation sequencing and population modeling of age structure.</p> <p>The Scholar is expected to engage in innovative research development, data collection, assimilation and analysis, including the development of novel methods and literature review. The Scholar is also expected to keep organized research records, present his/her data at academic conferences and prepare manuscripts for publication in peer-reviewed journals.</p>

Position Duties

The position is located at Oregon State University's Hatfield Marine Science Center in Newport, Oregon where the Scholar will work with Scott Baker in the Cetacean Conservation and Genomic Laboratory and, remotely, with collaborators, Paul Wade (NOAA), Simon Jarman (Curtin University, Western Australia) and Steve Horvath (UCLA).

For further information please contact Scott Baker by email, using the subject '**NPRB beluga postdoc information**'
email: scott.baker@oregonstate.edu

60% Scholarly Research

- Work with the Principal Investigator (PI) to coordinate the exchange and evaluate the quality of archived genetic samples to be used in the calibration dataset.
- Work with the PI, collaborators and commercial providers to develop an epigenetic aging assay, including bisulfite conversion of genomic DNA, selection of candidate genes for methylation assay, design of primers for amplification of target genes and mapping of candidate genes to reference genomes.
- Develop a pipeline for the filtering and parsing of reads from next-generation sequencing to calculate the percentage of converted cytosines at each of the CpG sites in the candidate genes.
- Quantify the relationship of methylation at individual CpG sites to the estimated age from the calibration set by linear regression or similar statistic analysis.
- Use the estimated age information to improve the modeling of the population dynamics of Cook Inlet belugas and other endangered cetaceans.

25% Publication and Presentation

- Synthesize data and present research findings through technical reports and publications in high impact, peer-reviewed scientific journals.
- Attend and present at the Alaska Marine Science Symposium, Anchorage, Alaska in January 2019 (travel supported)

10% Mentoring, Grant Development and Outreach

- Provide general support and collaboration towards scholarly advancement in the Oregon State University Marine Mammal Institute.
- Develop or assist in writing grants for continued research into genomics and epigenomics of endangered cetaceans
- Communicate with the local community and stakeholders in regards to progress of the research and the implications for management of Cook Inlet beluga whale.

5% Supervision of graduate students or undergraduate interns, including planning, assigning, and approving work.

Minimum/Required Qualifications	<p>A PhD in biological sciences (genetics, ecology or evolution) with an emphasis in molecular ecology, genomics, statistics, bioinformatics or population modeling.</p> <p>Demonstrated publication record in peer-reviewed journals.</p> <p>Willingness to work collaboratively with the PI and other investigators involved in the technical development of methods</p> <p>Effective communication skills and a professional demeanor.</p>
Preferred (Special) Qualifications	<p>Experience with programming in R, Python or other languages used in statistical analysis or bioinformatics</p> <p>Experience with Unix/Linux and management of large datasets typical of next-generation sequencing, see http://cgrb.oregonstate.edu/biocomputing</p> <p>Willingness to communicate with management authorities (e.g., NOAA, ADF&G) and stakeholders on biological implications of the research.</p> <p>A demonstrable commitment to promoting and enhancing diversity.</p>
Working Conditions / Work Schedule	<p>The scholar will have access to shared bench space for laboratory analysis, local facilities for conventional sequencing and genotyping, core facilities for next-generation sequencing and computer cluster through OSU's Center for Genome Research and Biocomputing, and a shared office environment for analysis and preparation of reports, grants, and manuscripts.</p> <p>Temporary housing is available through the Hatfield Marine Science Center, http://hmsc.oregonstate.edu/facilities/housing-0</p>

Posting Detail Information

Posting Number	
Number of Vacancies	1
Anticipated Appointment Begin Date	15 January 2018 (negotiable)
Anticipated Appointment End Date	15 January 2019
Posting Date	16 October 2017

Full Consideration Date	1 December 2017
Closing Date	Until a suitable candidate is appointed
Indicate how you intend to recruit for this search	Competitive / External - open to ALL qualified applicants
Instructions to Applicants	<p>When applying you will be required to attach the following two electronic documents with identifying filenames (e.g., 'lastname_CV' and 'lastname_cover'):</p> <ol style="list-style-type: none">1) A resume/CV and the names of at least three professional referees, their e-mail addresses and telephone numbers. The referees must be willing to provide a written letter of reference and to speak by phone in regards to the candidate's qualifications.2) A cover letter describing how your qualifications and experience have prepared you for this position. <p>Submit resume/CV and cover letter to Scott Baker by email, using the subject 'NPRB beluga postdoc application' email: scott.baker@oregonstate.edu</p> <p>OSU commits to inclusive excellence by advancing equity and diversity in all that we do. We are an Affirmative Action/Equal Opportunity employer, and particularly encourage applications from members of historically underrepresented racial/ethnic groups, women, individuals with disabilities, veterans, LGBTQ community members, and others who demonstrate the ability to help us achieve our vision of a diverse and inclusive community.</p>