

Department of Anesthesia and Critical Care

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George Q. Daley, M.D., Ph.D. Dean of the Faculty of Medicine Harvard Medical School 25 Shattuck Street Boston, Massachusetts 02115

Dear Dean Daley:

We are delighted to propose the appointment of **XXX**, **Ph.D.** as Assistant Professor of Anaesthesia at Harvard Medical School. Dr. XXX's Area of Excellence is Investigation. She was identified after a rigorous search (report attached) in accordance with the policies of Harvard Medical School. Given her substantial investigative activities, her multiple first-authored original research articles, her teaching, and her awards for scholarship, we believe Dr. XXX demonstrates the achievements of an Assistant Professor

Background and Training

Dr. XXX obtained her Ph.D. at Texas A&M University. She was a postdoctoral researcher at the University of British Columbia before undertaking a postdoctoral fellowship at the University of Colorado School of Medicine. She is currently a postdoctoral researcher in the Weddell Seal Physiology Department at the Alaska Seal Life Center. Her research examines the physiologic mechanisms supporting environmental adaptation in mammals that live in environments well outside the limits of human homeostasis.

Area of Excellence: Investigation

Contribution, achievements and impact

Dr. XXX has worked throughout her career to link the physiology and biochemistry of wild species using modern molecular techniques and biomedical analysis. As part of her Ph.D. research, she was the first to demonstrate cell-level aging in a wild animal by describing histological senescence in the skeletal muscles of old Weddell seals. Her experience studying these diving animals also utilized whole-animal physiological techniques, including documenting significant pressure effects on the diving reflexes of captive Steller sea lions trained to dive to pre-determined depths in the open ocean. Currently, her research aims to unravel the metabolic consequences of hibernation in 13-lined ground squirrels. This research was the basis for several

Jeanine P. Wiener-Kronish, M. D.

Anesthetist-in-Chief Massachusetts General Hospital Henry Isaiah Dorr Professor of Anaesthetics and Anaesthesia Harvard Medical School significant publications with medical implications for muscle disuse atrophy as well as cerebral and coronary ischemia. This experience studying unusual wild animals using the tools of physiology, genomics and proteomics gives Dr. XXX the ability to integrate information from molecule to tissue to whole organism. This background suggests that she will have a wonderful fit with the clinical and basic research strengths in the Laboratory of Professor XXX here at MGH.

XXX has worked with a variety of mammals, focusing on the physiology of diving in marine and freshwater species (seals, sea lions, muskrats, water shrews). She has physiology and molecular biology experience in the laboratory but has also worked with animals in their natural environments, with fieldwork ranging from Prince William Sound, Alaska to McMurdo Sound, Antarctica. Her work has been published in leading physiology journals; she is first author on 11 of her 19 peer-reviewed publications. She has served as an *ad hoc* grant reviewer for the NSF Office of Polar Programs and the International Research Fellowship Program. She is also an *ad hoc* reviewer for six scientific journals, including *The Journal of Experimental Biology* and *The Journal of Comparative Physiology*. XXX is currently working as Co-P.I. on an NSF-sponsored research project exploring thermoregulatory responses of Weddell seals exposed to altered environments in Antarctica. She is also diligently seeking additional grant support through the organismal physiology program at NSF. She is a Co-P.I. on a newly submitted grant dealing with the genomic and metabolic basis of the dive response in the Weddell seal, and she is lead P.I. on a grant proposing a molecular and metabolomic assessment of oxidative stress during apneustic exercise.

Teaching

Dr. XXX is an excellent teacher and mentor. She has over five years of laboratory teaching experience with undergraduates, including course coordination for Cell Biology as well as Human and Comparative Animal Physiology teaching roles at both the University of Manitoba and Texas A&M University. Her non-university teaching experience includes numerous science outreach activities such as high school summer research experience programs, Boy Scouts, Elderhostel and work with the BBC. At the University of British Columbia she supervised an off-site research program, which entailed daily coordination of a research technician and animal husbandry teams, mentoring a graduate student conducting a portion of her research at the facility, and supervising three volunteers. She has gained additional mentorship experience at the University of Colorado School of Medicine with undergraduate and post-baccalaureate researchers.

Review of Solicited Letters

Letters of reference were solicited from noteworthy basic science investigators. Each was asked to comment upon the proposed appointment. Without exception, all evaluators concluded that she is an outstanding candidate for appointment as Assistant Professor and that she has all the qualities to pursue an exceptional scientific career.

Summary

Dr. XXX is an outstanding researcher with an Area of Excellence of Investigation in respiratory physiology. Based on her superb work thus far, in laboratory and field research and her fine teaching and mentoring, we are confident that Dr. XXX is admirably qualified for appointment to the rank of Assistant Professor of Anaesthesia at Harvard Medical School.

Dr. XXX was approved with highest enthusiasm for appointment as Assistant Professor by Investigation Criteria by the Harvard Anaesthesia Executive Committee on DATE. We look forward to your review and favorable response.

Sincerely yours,