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To the members of the National HAB Committee,

It is our great pleasure to nominate Dr. Don Anderson for the National HAB Committee (NHC) Lifetime Research and Service Award. Don has been a leader in the field of harmful algal blooms (going back to when they were still "red tides") for more than 40 years, starting with his first publication in 1976 predicting red tides from temperature patterns. While his research record is exemplary, Don is also an outstanding advocate and unceasing champion for recognition of HABs and support of HAB research, and has done so for his entire career. Don has testified 9 times before Congressional committees and was a founding member of the Global Ecology and Oceanography of Harmful Algal Blooms (GEOHAB) IOC/SCOR working group and the U.S. National HAB Committee. Currently Don serves as Director of the U.S. National Office for Harmful Algal Blooms and is the U.S. representative to the IOC Intergovernmental Panel for Harmful Algal Blooms (IPHAB). His accomplishments and tireless efforts on behalf of the HAB community have led to recognitions and awards including the Bostwick H. Ketchum Award (2017), the ISSHA Yasumoto Lifetime Achievement Award (2006), the IOC Bruun Memorial Medal (2005), and the NOAA Environmental Hero Award (1999). It is only fitting that his contributions be recognized by the U.S. HAB community for his lifetime of research and service.

Don's research on HABs ranges from molecular and physiological studies of growth, sexuality, and toxin production to the large-scale oceanography and ecology of the "blooms" of these microorganisms, including numerical modeling, forecasting, and a range of monitoring and management strategies, many reliant on novel instrumentation and biosensors. Don's early work focused on life cycles (particularly cysts) and general ecology of key dinoflagellate species, with *Alexandrium fundyense* becoming a model organism for his lab's extensive work on genetics, physiology, toxicity, ecology, and global biogeography. Don has refined his focus as new methods and technologies become available, and his lab has pioneered the use of cutting-edge technology such as the Environmental Sample Processor and Imaging Flow Cytobot to fundamentally change our view of how these dinoflagellates interact within the environment. Don successfully bridges the basic-to-applied (and operational) research gamut, and he is equally comfortable arguing about the correct name and lineage of HAB species and explaining the value and need for regional HAB forecasting systems to monitoring agencies, Congress, and the public.

Don has chartered and communicated research paths for addressing some of the most pressing scientific questions in the HAB community, and has actively contributed to many research programs and projects designed to answer these questions. Don is the author, co-author, or editor of over 330 publications and 14 books in addition to leading the development of the first U.S. National HAB Plan, the ECOHAB science plan, and the U.S. decadal plan for HAB research (HARRNESS). His publications include contributions on various aspects of nearly every HAB organism and their impacts, including *Alexandrium*, *Aureococcus* brown tides, *Dinophysis*, *Gambierdiscus*, *Heterosigma, Margalefidinium, Noctiluca, Pfisteria, Pseudo-nitzschia*, *Pyrodinium*, ciguatera, fish kills around the world, marine mammal mortalities, ballast water introductions, clay flocculation, desalination, molecular biogeography, toxin physiology, etc. Don's most highly cited papers draw attention to the link between eutrophication and HABs, but he is perhaps equally well-known in non-academic circles for publicly accessible articles and quotes in *Scientific American*, *National Geographic*, and the *New York Times*, among others.

Don's legacy includes the many students he has mentored who have gone on to become leaders in their own right, with many remaining in the HAB field and making significant contributions to the U.S. HAB community. Don has trained and inspired countless next generation HAB researchers as an advisor and

mentor to MIT/WHOI Joint Program students, post-doctoral investigators, guest students, and summer student fellows from around the world. Don aptly described the benefits of mentoring and collaboration: "I have always felt it was important to open up my laboratory and its resources to scientists from all over the world. At any given time in my lab, there are usually one or more foreign visitors working with us for weeks, months, or even years".

Familiar names of students and post-docs that have been in Don's lab include Peter Franks, Chris Scholin, Mario Sengco, Gires Usup, Esther Garcés, Greg Doucette, Mike Brosnahan, Juliette Smith, Deana Erdner, Sherwood Hall, Andrew Juhl, Mindy Richlen, and many others. As highlighted in the Yasumoto Lifetime Achievement nomination, in Don's own words: "I have a great job and am blessed with the opportunity to do exciting research, supported by a long list of smart, talented, and hard-working students, postdocs, research staff, and collaborators. My successes are theirs as well."

Beyond the immediate HAB community Don has been a productive member and contributor to the American Society for Limnology and Oceanography (ASLO), the Phycological Society of America (PSA), and The Oceanography Society (TOS). He served as both an Editorial Board Member and Associate Editor for the *Journal of Phycology*, and has been a member of the Editorial Board for *Protist*, *Harmful Algae*, and *Marine Biology and Biotechnology*. Don currently serves as the Director for the Cooperative Institute for the North Atlantic Region (CINAR) and is past Director for the Coastal Ocean Institute (WHOI). This breadth of service has enabled Don to identify and forge new collaborative relationships across disciplines to further all aspects of HAB science, from bloom forecasting to socioeconomic impacts.

Throughout Don's career he has served as an outstanding colleague, mentor, and friend to many in the HAB community. Don hosted the first, second, and fourth U.S. HAB Symposia in Woods Hole, which many of us fondly remember for the often-cold weather and always-warm Captain Kidd where Don would frequently hold court after vigorous days of scientific discussion and debate. Don is perhaps one of the best-recognized names in HAB research around the world, and continues to provide guidance and recommendations for research programs in China, Hong Kong, Chile, Singapore, and numerous other regions. Don has been widely recognized for his pioneering research and numerous contributions to both science and society. Outside the U.S. he has been hailed as "… undoubtedly…the nation's most vocal voice for HAB issues, addressing public officials (Congress, agency staff, and national boards), academic and federal researchers, private corporations, and policy makers for state and health organizations." We are honored to put Don Anderson forward as a recipient of the NHC Lifetime Research and Service Award so that the U.S. HAB community may also acknowledge and thank Don for his many contributions to the field as an outstanding researcher, mentor, and advocate.

Sincerely,

Raphael Kudela
Professor of Ocean Sciences, UC Santa Cruz
Vice-Chair, GlobalHAB (IOC/SCOR) Programme
New Zealand Catalyst Fellow

Stephanie Moore
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