

31 January 2017

College of Arts and Sciences
Kansas State University
Manhattan, KS 66506

To Whom It May Concern:

Please find herein my application materials for the position of Associate Dean for Research in the College of Arts and Sciences. I view the ADR position as vital to advancing research, scholarship, creative activity and discovery (RSCAD) in the College, and continued excellence in RSCAD is fundamental to faculty success and satisfaction and, in turn, the general wellbeing of the College. I would value the opportunity to contribute to the advancement of Arts and Sciences and thereby the success of K-State as a whole.

I joined the Division of Biology in 2000, and my present position is Professor and Curator of the Herbarium. My research expertise lies in plant systematics, the evolutionary study of plant diversity. My current research program focuses on phylogenetic relationships and taxonomy of the plant genus *Phlox*, with particular interests in the contributions of polyploidy (genome doubling) to aspects of diversity in plants. I have a strong record of funding success, publications and training; I enjoy and value my research; and I look forward to continued contributions to my field throughout my career.

I have also been highly involved in interdisciplinary initiatives at K-State. A recent project that highlights my leadership and administrative skills was a graduate training program through NSF's Graduate STEM Fellows in K-12 Education (GK-12) program. NSF's GK-12 program aimed to enhance the training of science, technology, engineering and mathematics (STEM) graduate students to make them better communicators and collaborators. It was unique as a graduate training program in that the public schools were a mechanism for improving communication: graduate students collaborated with public school teachers to bring their research experiences into classrooms, enhancing student learning as well as ties between the schools and universities in the process. The K-State project for which I was Director and PI was titled *Evidence-based inquiry into the distant, remote, or past (EIDRoP): from evidence to inference in the Kansas science classroom*. Our theme focused particularly on nature of science, and how we make scientific inferences about processes and objects we cannot "directly" observe or manipulate. Through this program, I fostered a true partnership among diverse participants (from scientists [in units including Biochemistry and Molecular Biophysics, Biology, Chemistry, Geography, Geology and Physics] to our Department of Philosophy to the College of Education to teachers to school district and university administrators). I successfully built relationships among collaborators, identified and linked participants, and, critically, ensured that all participants were valued contributors who also gained themselves from the project.

Throughout my time at K-State, I have served as Curator of the Herbarium, a research natural history museum of approximately 180,000 dried plant specimens dating from the 1800s to present. Research natural history collections are fundamental to basic research and training in organismal biology, provide unique data for broader studies examining biological change over time (e.g., in chemistry and

genetics, phenology, vegetation patterns), and are a critical resource for applied workers (e.g., the K-State Herbarium has an important connection with the Agricultural Experiment Station and Cooperative Extension Service, including plant diagnostics). An effective herbarium director must on the one hand protect and preserve the collections, and also, crucially, facilitate and promote research use of the specimens. In my capacity as Curator, I have co-led (as a PI and Co-PI) initiatives to digitize the collections (with databasing of label data and high resolution imaging of representative specimens) and make that information broadly available. I have also fostered a broader initiative to link our on campus research natural history museums (the Herbarium, Division of Biology, College of Arts and Sciences; and the entomological collections, Department of Entomology, College of Agriculture) with the KSU Libraries and their resources. Through this work, the Herbarium has seen greatly increased activity and visibility, and the value of the collections is recognized both within the institution and broadly within the systematics research community.

Much of my additional, prior experience in leadership also highlights my abilities to collaborate with broader groups. I was Co-PI on KSU's Robert Noyce Teacher Scholarship program (K-State Teach), which supported STEM content majors pursuing teaching certification. I served as President of the KSU Chapter of Sigma Xi, which fosters scientific research and outreach through annual awards, public lectures and discussions. I was Co-Director of the Center for the Understanding of Origins, an interdisciplinary program that advanced research and outreach on evolution in the broad sense (cosmology to evolutionary biology); colleagues and I successfully built on the "Origins" program to obtain the EIDRoP GK-12 graduate training grant discussed above. Key to success in all of these endeavors has been the bringing together of excellent and diverse teams of colleagues, cooperative development of clear goals and ongoing fostering of collaborative interactions so that we're working together toward goals to the benefit of an entire project team.

Through my interactions with faculty in the College, from the interdisciplinary research and outreach noted above to my current service as a Faculty Senator representing Arts and Sciences, I have gained a sense of the high quality and breadth of scholarship in the College. The ADR position is particularly attractive to me because I would enjoy learning about, supporting and advancing the diversity of RSCAD within the College, from the humanities to the sciences. I would value the opportunity to work collaboratively with the Dean and administrative staff, with members of the Associate Deans for Research Council, and with faculty throughout the College.

Overall, as Associate Dean for Research in Arts and Sciences, I would bring an excellent academic and research background, demonstrated leadership and collaboration skills, and a commitment to advancing scholarship for the ongoing success of the College and of K-State. Please don't hesitate to contact me if I can provide further information. Thank you for your consideration.

Sincerely,



Carolyn J. Ferguson
Professor and Curator of the Herbarium