



## **Biostatistics**

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Pope L. Moseley, M.D. Executive Vice Chancellor, UAMS Dean, College of Medicine University of Arkansas for Medical Sciences 4301 West Markham Little Rock, Arkansas 72202-3591

Re: Promotion of Dr.

to Associate Professor with Tenure

Dear Dr. Moseley,

It is with great pleasure that I write this letter in support of Dr. 's promotion to Associate Professor with Tenure on the Basic Science pathway. Dr. received her doctorate in Bioinformatics under the mentorship of Dr. David Wishart, a bioinformatics expert and a pioneer of Human Metabolomics research. She was the first Bioinformatics graduate in the joint Bioinformatics program of the University of Arkansas at Little Rock and UAMS. Dr. is unique in that she is the only Bioinformatician within the department of Pediatrics and ACRI.

Dr. joined the Department of Pediatrics as an Assistant Professor in 2012 after a short stint in industry and subsequently serving as a Commissioner's Fellow and Staff Fellow at NCTR, FDA. Dr. has been a highly productive researcher. She has authored or co-authored 30 peer-reviewed publications, 10 as first author and 2 as senior author. She has written 2 book chapters and 2 technical documents.

was recruited to UAMS with Arkansas Biosciences Institute funds. Dr. Her effort was allocated as 40% to the Birth Defects section, 40% for the Clinical Pharmacology section and the remaining 20% was reserved for her own research and other collaborative work. Dr. has been a productive member of the Clinical Pharmacology section. In the last five years, she has authored or coauthored 9 peer-reviewed journal papers (3 as the first author) with investigators in this section. She has also actively participated in the preparation and submission of multiple NIH and intramural grants. She will continue to be actively involved in research and grant development in the Clinical Pharmacology section. Within the Birth Defects section, Dr. has managed, processed and generated genotype data for a large scale ongoing GWAS study involving approximately 8000 subjects. She has been instrumental in preparing these data for advanced statistical data analysis by our team of statistical geneticists. Her involvement in this project will continue for at least another year. Furthermore, Dr. will remain involved in projects from the CDC's National Children's Birth Defects Prevention Study and BD-STEPS. Dr. was also able to foster her own research. She procured a Marion B. Lyon Revocable Trust, New Scientist Development Award as PI to examine microRNA Expression in Pediatric Acetaminophen Toxicity. Additionally, leveraging the infrastructure of BD-STEPS, she was awarded an intramural CUMG as a PI for a pilot project entitled, 'Establishing a link between maternal lipid homeostasis and congenital heart defects'. This work continues in

collaboration with Dr. Bruce Kristal, a leading lipid expert, at the Brigham Women's Hospital, Harvard Medical School. Dr. has also developed long term collaborations with other sections within and outside the Department of Pediatrics. She is currently involved in collaborative research with the Division of Allergy, Arkansas Children's Nutrition Center and the Arkansas Center for Environmental Exposure Research.

Although Dr. has no classroom teaching obligations, she has been actively involved in presenting didactic lectures, seminars, and has been an invited speaker in various training and educational venues. She has mentored summer interns and masters level biostatisticians in our program. She has served on Ph.D. dissertation committees for two graduate students in the Interdisciplinary Biomedical Sciences Graduate Program at UAMS, served as a laboratory rotation mentor for a Bioinformatics student, and is currently serving on the Ph.D. dissertation committee of a third graduate student. She is the bioinformatics consultant for the Metabolomics Core Laboratory at ACRI and is actively involved in guiding and educating investigators in bioinformatics study designs and analyses at ACNC and ACRI. Dr. served as a member of the curriculum committee for the new graduate program in Biomedical Informatics at UAMS and plans to direct/teach two courses in the Translational Bioinformatics program beginning spring 2018.

has been recognized nationally as an expert in "big data" Dr. processing, especially in the field of "Omics," using advanced statistical and machine learning approaches. She is currently collaborating as a bioinformatician with two national consortia: the Alzheimer's Disease Metabolomics Consortium and the Mood Disorders Precision Medicine Consortium. Additionally, she has been invited by NIH to co-facilitate a think-tank session in "Integration of Metabolomics in Population based Research" and currently serves as the Vice Chair of Pharmacometabolomics Network at the American Society for Clinical Pharmacology and Therapeutics (ASCPT). In 2016 she served on an ASCPT 3-member panel steering committee for early career members in pharmacometabolomics. In that capacity, she organized and was a speaker at a workshop session on "Challenges of Omics Data Integration" meeting in Washington, DC. She also organized a workshop on "Statistics and Data Modelling" at the 8th Metabolomics Society Meeting in Washington DC, July 2012. She has also been a judge for the Metabolomics Society Meeting Poster Award Competition and served as pilot grant reviewer for the Center for Clinical and Translational Science, UAB during 2015 and 2016.

Dr. 's service to the Department of Pediatrics and UAMS includes serving on faculty recruitment committees for the Biostatistics Program as well as for the Pediatrics Clinical Pharmacology and Toxicology section. Dr. also served as a judge for the Oral Presentation and Poster Sessions for the Pediatric Fellows' Research Day and as a statistical consultant to Dr. Debra Fiser and the Evidence Based Medicine (EBM) monthly journal club meetings. For several years, Dr. has interviewed medical school applicants for the College of Medicine and served as a judge for poster sessions at the UAMS Research Day. Dr. is also a member of the Informatics Core at ACNC, the mission of which is to develop interactive open source tools for proteomics, transcriptomics, metabolomics, and epigenomics research. Unquestionably Dr. 's achievements meet or exceed the criteria for promotion to Associate Professor with tenure. She is an exceptional collaborator and researcher with a remarkable set of unique analytic skills geared to processing and dissecting large datasets. As big data and precision medicine continue to become mainstream, her value to our program, ACRI, the DOP and UAMS will undoubtedly increase. Consequently, without bias or apprehension, I whole-heartedly and enthusiastically support the well-deserved promotion of Dr. to the rank of Associate Professor with tenure. Please feel free to contact me if you have any questions or would like to discuss her application further. Thank you for your consideration. Sincerely,

Mario A. Cleves, PhD Professor Director and Section Chief, Pediatrics Biostatistics Department of Pediatrics, UAMS College of Medicine 13 Children's Way, Slot 512-43 Little Rock, Arkansas 72202-3591