



College of Science
Department of Biological Sciences

8/30/21

To whom it may concern,

It is my distinct pleasure to provide a letter supporting the promotion of Associate Professor Pavel Pospíšil to the rank of Full Professor. I have known Pavel for nearly eight years and have been aware of his outstanding research program for a much longer period of time. Pavel and I have had a highly productive research collaboration which has resulted in the publication of two papers in the *Proceedings of the National Academy of Sciences (USA)*. Let me say at the outset that I strongly recommend Pavel's promotion to Full Professor.

In making this recommendation, I should first tell you of my background. I was a Professor at Louisiana State University for thirty-three years, having recently retired, and I currently hold the rank of Moreland Family Professor of Basic Sciences, Emeritus. During my tenure, I served as Chairman of both the Department of Microbiology and, subsequently, Department of Biological Sciences. The latter is a large department which had about 70 faculty members during my time as Chairman. I additionally served on many Promotion & Tenure Committees at the College level. From a scientific perspective, I was continuously funded for 34 years from federal sources (United States Department of Energy, National Science Foundation and/or United States Department of Agriculture), and have published 110 papers. I have an h-index of 40 with over 4,500 citations (Google Scholar). I am currently Editor-in-Chief of *Photosynthesis Research* (5 year IF = 3.674).

Pavel's research focuses on Reactive Oxygen Species (ROS), principally in plant systems. These are produced by the partial reduction of dioxygen (forming superoxide and hydrogen peroxide), the partial oxidation of water (forming hydroxyl radical) or by the interaction of photosensitizers with ground state dioxygen (forming singlet oxygen). ROS are formed under a variety of abiotic stress conditions (high and low temperature, high light intensity, wounding, disease and herbivory, etc.). ROS can damage proteins, lipids and nucleic acids. Interestingly, these species can also act as intra- and inter-cellular signaling molecules in a variety of systems and are also involved in normal plant development.

Pavel has an impressive publication record. Both the quality and quantity of his publications are excellent. He has been highly productive having published more than 75 peer-reviewed papers. The majority of these have appeared in high Impact Factor journals (IF ≥ 4.0 , about the top 90% of journals) including: *Scientific Reports*, *Plant, Cell and Environment*, *Free Radical Biology and Medicine*, *Biochemica et Biophysica Acta*, and *Proceedings of the National Academy of Sciences (USA)*. The quality of his contributions has been uniformly excellent with Pavel presenting seminal papers

¹ I should point out that both of the PNAS papers which I have published with Pavel were primarily his contributions. While we were both listed as "Corresponding Authors", the research presented was designed and originated in Pavel's laboratory, my lab only provided mass spectrometry and editorial support.

concerning the identification of the types of ROS damaging Photosystem II (PS II), their sites of production both on the reducing- and oxidizing-sides of the photosystem, and the locations of protein damage. Importantly, he has presented mechanistic interpretations which explain the pattern(s) of oxidizing damage observed. Pavel has also contributed extensively to developing methodologies to study ROS in plant and other systems. Recently, these have included near real-time imaging of plant systems during the production of ROS *in vivo*. The accumulation of superoxide anion, hydroxyl radicals and protein-centered radicles can all be imaged by confocal microscopy. Previously, these were detected *in vitro* by EPR spectroscopy. These new techniques open important new vistas in the examination of ROS and will undoubtedly be utilized by other investigators. Earlier, Pavel was instrumental in the development of other *in vitro* methodologies including the detection of protein centered radicals by immune-spin trapping. Clearly, Pavel is one of the leaders in this important and developing field.

Google Scholar indicates that Pavel has been cited an annual average of over 350 times for the past five years (he will undoubtedly eclipse this number for 2021). His h-index is 35 and his i10-index is 64. Both of these metrics are consistent with his promotion to Full Professor (many of the Full Professors at my institution have lower h-indices even though they have been in Full Professors for a number of years). More importantly, after examining my rather extensive reprint collection over this period of time, I have determined that the most publications dealing with the ROS production in PS II have cited Pavel's work. In virtually all of these instances the citations are complementary. This is highly impressive and indicates that his research is extremely well respected and recognized by the international community. Clearly, Pavel is one of the leaders in this important and expanding field. Additionally, his service has been quite strong. Pavel has reviewed numerous manuscripts for top tier scientific journals including *Biochemica et Biophysica Acta*, *Biochemistry*, *FEBS Journal*, *Journal of Experimental Botany*, *Photosynthesis Research*, *Scientific Reports*, etc. He has also served as Guest Editor for several Special Issues of *Frontiers in Plant Science*, the *Journal of Photochemistry and Photobiology B: Biology*, and others. Finally, he has won a variety of awards for his research including the Prize of the Minister of Education of the Czech Republic, the Dean's Award within the Faculty of Science and the Director's Award from the Centre for Biotechnological and Agricultural Research. These are very impressive and fully consistent with promotion to Full Professor.

In addition to his research prowess, Pavel is a strong educator, mentor and role model for students. He has taught continuously for 17 years in both formal and informal venues. He has trained numerous B.Sc. and M. Sc. students and has graduated 8 Ph.D. students. I am quite familiar with one of these students, Dr. Ravindra (Ravi) Kale. Ravi visited my laboratory for a semester while he was a graduate student in Pavel's laboratory. It was clear from the very onset that he was extremely well trained under Pavel's tutelage, exhibiting a very strong work ethic and asking important and insightful questions. I was so impressed by Ravi's training that I hired him as a postdoctoral researcher after his graduation. He did not disappoint and I attribute much of Ravi's development as a productive scientist to Pavel's training and leadership.

In summary, Pavel is truly excellent scientist whose interests and expertise are very broad. He has made numerous important and, in many instances, truly groundbreaking discoveries in his field. He is also an excellent educator and mentor. I cannot think of a better candidate for promotion to Full Professor than Pavel Pospíšil. If you need any further information, please contact me at (225) 284-5954 or via E-mail at btbric@lsu.edu.

Sincerely,

Terry M. Bricker, Ph.D., FAAAS
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