María Muñoz-Amatriaín – Teaching Statement

I believe that teaching and training are some of the most important responsibilities for a scientist and I hope to use my experience, motivation and enthusiasm to provide students with the same tools that stimulated my will to learn. I am committed to excellence in teaching while maintaining a high degree of research productivity.

I think that teaching plant sciences has two main goals. One is to engage students in the understanding and appreciation of the vital role that plant organisms play in our lives. Knowing the present and future challenges to food and agriculture and believing one can contribute to improve people's lives is key to inspire a future generation of plant scientists. The other is to guide students in their development as critical thinkers and problem solvers, and to show them ways to continually acquire new skills and generate novel ideas. Meeting these goals is possible if classes provide examples and problems that students can relate to the real world. It is also very important that teaching offers a careful balance between challenging and accessible material, active and passive learning, and individual and collective work.

I have had the chance to interact with students from different countries and backgrounds, and I have experienced the training systems in different countries. These experiences exposed me to different teaching philosophies and helped me to integrate their best elements into my own philosophy. For example, strong theoretical background and analytical abilities are the most desired skills in many European countries, including Spain. As an undergraduate student in a Spanish university I received solid background knowledge but I experienced a lack of active learning in the classroom. In contrast, students in the United States impress me with their enthusiasm, self-confidence, and with their ability to express their ideas. I have learnt from the American system the value of having students participate in discussions and the sharing of ideas. I also have a new appreciation for the importance and value of out-of-class learning. My approach is to integrate the best of the Spanish and American systems by balancing enthusiasm and creativity with development of analytical skills and rigorous hypothesis testing. The ability to engage people in critical thinking about a topic, rather than simply being provided an answer, leads to a deeper understanding of the information.

I have been very involved in the mentoring and supervision of several undergraduate and graduate students and I have experienced how rewarding this process can be. My caring personality has helped me to give the time and support that my students needed. Two of the undergraduates I mentored during my time at the University of Minnesota (Brian Rhodes and Joshua Sleper) pursued degrees related to agricultural sciences, ant it is satisfying to feel that I may have had some influence on their decisions. I am currently mentoring UC Riverside graduate students Ira Herniter and Sassoum Lo, and I'm advising Javier Hernandez Vasquez, graduate student from Oregon State University. I am particularly involved in the supervision of Sassoum Lo, who came from Senegal with a World Bank Scholarships Program to pursue a graduate degree in the U.S. Also, I have provided training to students and researchers that were visiting the lab, including several scientists from Africa who came to UCR learn how to utilize SNP data and other genomic and genetic resources in their breeding programs. I have also helped international students such as Marcia Carvalho to obtain the funds needed to visit our group. As a Spanish graduate student who benefited from a research experience at UC Riverside, I understand the importance that short-term visits at U.S. universities have for students coming from

countries with more limited resources. My wish is to provide them with the opportunities and support that I had.

Apart from my mentoring and advising experiences, I have taught a course to graduate students of Agronomy at the University of Uruguay. The course involved lectures and hand-on activities on the use of genomic tools and resources for crop breeding. This has been a great experience, which exposed me to the challenges that students in agricultural sciences from outside the U.S. face. During the same trip to Uruguay, I also taught a short course offered by the XVI Latin-American Conference of Genetics to a group of professors, young researchers and students from different countries. In addition, I have given many seminars in scientific venues and I have participated in workshops where I have explained the use of molecular breeding techniques for crop improvement to diverse student audiences. I am confident that I can teach a range of topics related to plant genetics, genomics and breeding at various levels. I consider it very important to train the next generation of scientists to utilize the newest tools and resources available to improve our crops while protecting the environment, and I am committed to that goal.