

*Dear Faculty, Postdocs, Students, and Friends:*

***You are cordially invited to the  
Distinguished Noel T. Keen Lecture presented by***



**Dr. Jan Leach  
Agricultural Biology Department  
Colorado State University**

**Title:  
“Pursuing durable, broad-spectrum disease  
resistance in plants”**

**DATE: Friday, December 11, 2020  
TIME: 12:00 PM (PST)**

**Zoom Link  
MEETING ID: 929 1247 4758  
PASSCODE: 644865**

***Host: Dr. Julia Bailey-Serres***

**Abstract:** Disease resistance is the foundation for managing many plant diseases, because resistant varieties have the strongest impact with minimal environmental effects or cost. Sources of broad-spectrum resistance (BSR), or resistances that are effective against multiple and/or diverse pathogens, are of particular interest. Frequently, BSR are quantitative traits, which, due to their complexity, can be difficult to identify and to transfer into elite germplasm. To guide improvement of BSR in rice, we have used novel genetic resources, such as Multi-parent Advanced Generation Inter-Cross (MAGIC) populations, advances in genomics and associated computational tools, and knowledge of plant disease defense responses. These resources and tools have improved detection of BSR QTL, enabled identification of the genes contributing to QTL function, and, importantly, allowed discovery of how those genes contribute to disease resistance. Overall, this progress provides steps forward to improving BSR, and possibly durable disease resistance, in rice.