

Crossing the species line

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A recent article published in *Developmental and Comparative Immunology*, the official journal of the International Society of Developmental and Comparative Immunology (ISDCI), draws attention to the fact that the plant immune system is not restricted to a fixed set of broad spectrum responses – rather, it is flexible, resilient, and possesses elements of specificity and responsiveness to disease causing agents. Properties quite reminiscent of those of immunity in animals.

All multicellular organisms are in an arms-race against the vast armies of rapidly mutating microbial pathogens that are seeking access to their rich stores of nutrients. The challenges for the organism are two-fold. First to develop appropriate immune defense molecules, and second to generate the diversity needed to combat a rapidly changing pathogen population. Immunologists have had much success in determining the varied means by which animals accomplish this, but this integrated vision of immunity generally does not stray across the line that divides animals from plants.

However, it is obvious that plants can resist many infectious disease agents very effectively, and in their article John McDowell and Stacey Simon from Virginia Polytechnic Institute and State University in Blacksburg, USA (*Developmental and Comparative Immunology*, doi:10.1016/j.dci.2007.11.005) review the multiple lines of defense that plants use against pathogenic microbes. Preliminary evidence leads them to conclude that the rate at which diversification occurs in the plant immune surveillance genes is stimulated by the presence of pathogens, a new and intriguing aspect of plant immunity.

“I have followed plant immunity research for quite some time and have seen the progress in this area. It is important to publish this article in our journal because it provides a very exciting immunological insight”, said Kenneth Söderhäll, one of the Editors-in-Chief of the ISDCI journal.

Source: Elsevier

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