Abstract

Here's a look at what's coming up in the June 2017 issue of JoVE: The World's Premier Video Journal

A "handy" method to test the efficacy of sanitizing techniques is our first feature this month, from JoVE Immunology and Infection. Here, our Authors first "spike" the gloved hands of volunteers with a test organism, and then employ a hand-washing technique of interest. Then, the remaining organisms are collected, and unwashed and test samples are compared. These results allow researchers to provide recommendations for best cleanliness practices during emerging infectious disease outbreaks. We can all hi-five with confidence to that!

As spring is in full bloom so are allergies, and these are the subjects of our next video highlight. In JoVE Medicine, our Authors describe a novel diagnostic approach for determining specific types of grass pollen allergy using a cohort of patients from Southern China - an area with previously limited data on local allergens. Here, the researchers employed component-resolved diagnostics involving recombinant or purified allergens, to detect sensitization to specific types of grass pollen in test and control individuals. This allows for more targeted treatment of allergic airway diseases in patients with allergic rhinitis or asthma, and that's nothing to sneeze at!

From grassy gametes to adult plant cells, next we showcase a method for visualizing plant cell wall components, from JoVE Biochemistry. Here, our Authors demonstrate a technique for accurately distinguishing and quantifying cell wall constituents - including those with similar chemical structures such as lignin, cellulose and hemicellulose - using a combination of Raman imaging and multivariate analysis. This method overcomes the barriers to studies of dynamic changes in cell wall components during chemical, physical or biological treatments.

Finally this month we move from the sessile to the mobile and examine motor neuron development with JoVE Neuroscience. Studying late stage-16 Drosophila embryos, our Author details an immunohistochemistry method to analyze axonal motor neuron projections. By positioning fixed embryos in a filleted arrangement and staining with FasII antibody, the resulting preparations are ideal for the characterization of genes involved in motor axon path-finding and target recognition. It's a neat little technique, with lots of muscle.

You've just had a sneak peek of the June 2017 issue of JoVE. Visit the website to see the full-length articles, plus many more, in JoVE: The World's Premier Video Journal.
This work describes a protocol that uses a component-resolved approach to study sensitization to grass pollen allergens in a cohort of patients from southern China with allergic rhinitis and/or asthma.

A Method to Test the Efficacy of Handwashing for the Removal of Emerging Infectious Pathogens

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Handwashing is widely recommended to prevent infectious disease transmission. However, there is little evidence on which handwashing methods are most efficacious at removing infectious disease pathogens. We developed a method to assess the efficacy of handwashing methods at removing microorganisms.

Combining Raman Imaging and Multivariate Analysis to Visualize Lignin, Cellulose, and Hemicellulose in the Plant Cell Wall

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This protocol aims to present a general method to visualize lignin, cellulose, and hemicellulose in plant cell walls using Raman imaging and multivariate analysis.

Disclosures

No conflicts of interest declared.