HIV Drug Abacavir Hypersensitivity Linked To Human Gene Allele

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http://www.asianscientist.com/health-medicine/hiv-drug-abacavir-hypersensitivity-hla-b5701-gene-allele/

AsianScientist (Jun. 15, 2012) - Researchers have published a new study in the *Proceedings of the National Academy of Science* that explains how some drugs cause allergies.

The study, led by Dr. Bjoern Peters from the La Jolla Institute for Allergy and Immunology in the United States, showed specifically how the HIV drug abacavir interacts with the human gene HLA-B*5701 to cause an immune rejection.

HLA are a group of genes that have evolved to help our immune system to identify when our bodies are infected by foreign invaders such as viruses and bacteria.

Individuals have different variations of HLA and many serious allergic reactions to drugs have been recently found to be linked to a specific HLA type.

> "HLA-linked hypersensitivity is a really big problem that can produce symptoms ranging from mild rashes with flu-like symptoms to life-threatening rashes of the magnitude of a severe burn, organ failure and even death," explained co-author Prof. Elizabeth Phillips from Murdoch's Institute for Immunology and Infectious Diseases.

Phillips hopes that the connection between HLA-B*5701 and abacavir hypersensitivity may provide clinician scientists a roadmap towards safer drug design and development.

The article can be found at: Ostrov DA et al. (2012) Drug hypersensitivity caused by alteration of the MHC-presented self-peptide repertoire.

Source: Murdoch University.
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