Imaging technique could be game changer for pharma

June 7 2017

In drug development, the body can be something of a black box. We take medicine and observe the overall effects, but what happens inside the body largely remains a mystery. To help clear up this picture, researchers are turning to imaging techniques in tissue and animal testing. The step has gained ground in the drug industry, according to a story in *Chemical & Engineering News*, the weekly newsmagazine of the American Chemical Society.

Celia Henry Arnaud, a senior editor at C&EN, reports that imaging mass spectrometry can fill in glaring blanks in drug development from early-stage drug discovery to preclinical research. When Genentech, for example, was testing a drug candidate targeting lung tissue, the data weren't adding up. Cell-based assays suggested that the test compound was potent, and analyses of extracted tissue suggested it was getting into the lungs, but the agent wasn't consistently producing the expected effects in animals. Imaging mass spectrometry allowed the researchers to see how different formulations and administration techniques changed the distribution and effects of the drug.

Other pharmaceutical companies have had similar experiences with the method. In some cases, it has fleshed out how drug candidates might produce off-target effects by observing their distribution over time in tissues and animals. It has also helped inform safety guidelines for potential treatments designed for children. Experts in the field say the technique could be an industry game changer.

More information: Pharma Embraces Imaging Mass Spec, cen.acs.org/articles/95/i23/Ph … aging-mass-spec.html

Provided by American Chemical Society