

Insights: Publications

Protecting Deuterated Drugs

Intellectual Property Magazine

February 24, 2021

Deuterium (^2H) is a nonradioactive isotope of hydrogen that contains a neutron in addition to hydrogen's proton and electron. Deuterium can covalently bind to other atoms in the same manner as hydrogen. Because deuterium and hydrogen are essentially the same size, a deuterated compound and its hydrogen-containing (proteo) counterpart may bind similarly to a biological target, such as a protein relevant to treating disease. However, deuterium is heavier than hydrogen and can form stronger bonds with carbon. These differences can give rise to differences in pharmacological properties.