

Audio Clip Transcript

Structure of blood-clotting receptor identified: Findings may speed drug discovery

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Recorded April 30, 2014

Clip 1: What is a Receptor?

In case you're not familiar with the concept of a receptor, a receptor is a large molecule on the surface of a cell that receives a chemical signal and transmits it to other molecules.

Clip 2: Understanding the P2Y12

You might picture a receptor as a tiny machine that is unlocked by the drug molecule. This set of two publications in *Nature* for the first time shows how this particular receptor on platelets differs in its locked and unlocked forms. So we can picture a dynamic of the little machine's actions. This way we can figure out much better how to control that machine with small molecules for future drugs.

Clip 3: NIH's Impact on Drug Development

The impact to the public of the work we do here at NIH is very clear because we provide the conceptual basis for pharmaceutical companies to develop the practical application.

Clip 4: Significance of the Research

Now with this major step forward in determining the three-dimensional structure of the nucleotide receptor that is involved in platelet aggregation, we can hope to make greater advances that will benefit the public with antithrombotic agents or other agents – for example, treatment of chronic pain.

Source Information -

The transcript's corresponding audio clips can be found at: <http://www.niddk.nih.gov/news/research-updates/Pages/structure-blood-clotting-receptor-identified.aspx>. To read about the study, see *Nature* [March 23](#) and [April 30](#) editions.