Platelet Aggregation Inhibitors

Novel antagonists of the P2Y_{12}-receptor with antithrombotic effect

Invention
Purinergic receptors have been in the focus of drug discovery for many years. Modulation of P2 receptors in platelets is of paramount importance in regulating platelet function, and, as a consequence, in controlling thrombotic diseases, which are the most common cause of morbidity and mortality in the Western world.

The P2Y_{12}-receptor on blood platelets is the target of known antithrombotic drugs (e.g. clopidogrel). The receptor is therefore validated for this therapeutic use. Furthermore, the P2Y_{12}-receptor is expressed in certain parts of the brain, which opens new routes for the treatment of neuroinflammatory and neurodegenerative diseases.

This invention provides novel antagonists of the P2Y_{12}-receptor. The disclosed novel compounds show reversible and selective binding to the P2Y_{12}-receptor. The molecules do not require bioactivation. Further the patent application discloses synthesis of the compounds with optimised product yield.

Competitive Advantages
- Innovative group of compounds for a validated target
- No bioactivation for faster onset of action
- Reversible binding to the receptor
- Small molecules for inexpensive production process.

Commercial Opportunities
We offer a patent license as well as a research collaboration with licensing option to innovative companies.

Current Status
A patent application for the invention has been filed in Europe.

An invention of Rheinische Friedrich-Wilhelms-Universität Bonn (UniBonn).

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