

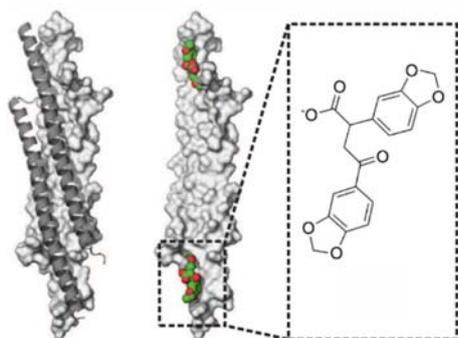
NRW and EU fund towards commercialisation of pharmaceutical patents

Promising anti-leukaemia drug candidate

Researchers led by Professor Holger Gohlke at the Institute for Pharmaceutical and Medicinal Chemistry of Heinrich Heine University Düsseldorf (HHU), together with colleagues at Georg-Speyer-Haus in Frankfurt/Main, have developed a potential drug candidate that could act against leukaemia. Use of the respective patents to develop a therapeutic product is now being financed from NRW and European Union funds.

Acute Myeloid Leukemia (AML) is a form of blood cancer which accounts for 80 percent of all acute leukemia in adults. It is particularly prevalent in middle-aged patients and has an unfavourable prognosis and a high relapse rate of 45 percent after standard chemotherapy. The protein RUNX1/ETO plays an important role in the onset and maintenance of AML. Suppressing or inhibiting this protein's function thus could be a promising step to target this dangerous form of cancer.

Together with their colleagues in Frankfurt, the research group led by Professor Gohlke has succeeded in identifying a group of substances that act against RUNX1/ETO. The underlying mechanism of these inhibitors differ from other substances and is thus very interesting for targeted anti-cancer therapy.



Left: The newly discovered inhibitor targets the tetramer of the RUNX1/ETO protein. On the right is the inhibitor, which binds at the interface of a dimer of the RUNX1/ETO protein and prevents its tetramerization, that way interfering with the RUNX1/ETO function (centre). (Figure: Modified version from J. Chem. Inf. Model. 2013, 53, 2197; Alexander Metz)

HHU has filed a patent for the mode of action of the substance group. In the framework of the third round of calls in the "NRW Patent Validation Competition", the Gohlke group applied for funding to further investigate the practicability and marketability of a potential drug candidate based on these substances. The Federal State of North Rhine-Westphalia and the European Union are supporting these next steps with funds from the European Regional Development Fund. These steps include further optimisation of the inhibitor's chemical structure and pre-clinical trials.