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Design and synthesis of next generation carbohydrate-mimetic cyclitols: towards deactivators of inverting glycosidases and glycosyl transferases

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List of publications

Conformational and electronic effects of 1,2- and 1,7-cyclophellitols on α -glucosidase activities

Ofman, T. P.*; Heming, J. J. A.; Nin-Hill, A.; Moran, E.; Küllmer, F.; Steneker, R.; Klein, A.-M.; Ruijgrok, G.; Kok, K.; Aerts, J. M. F. G.; van der Marel, G. A.; Rovira, C.; Davies, G. J.; Artola, M.; Codée, J. D. C.; Overkleeft, H. S.

Manuscript in preparation.

Cyclic sulphate inhibitor of ER α -glucosidase II activity blocks replication of SARS-CoV-2 and other coronaviruses

Thaler, M.*; Ofman, T. P.*; Kok, K.; Heming, J. J. A.; Salgado-Benvindo, C.; Leijs, A.; Snijder, E. J.; Artola, M.; Overkleeft, H. S.; van Hemert, M. J.

Manuscript in preparation.

Design and synthesis of exocyclic cyclitol aziridines as potential mechanism-based glycosidase inactivators

Ofman, T. P.; van der Marel, G. A.; Codée, J. D. C.; Overkleeft, H. S.

Eur. J. Org. Chem. **2023**, 26, e202300186.

An orthogonally protected cyclitol for the construction of nigerose- and dextran-mimetic cyclophellitols

Ofman, T. P.; Küllmer, F.; van der Marel, G. A.; Codée, J. D. C.; Overkleeft, H. S.

Org. Lett. **2021**, 23, 9516–9519.

Reactivity–stereoselectivity mapping for the assembly of *Mycobacterium marinum* lipooligosaccharides

Hansen, T.*; Ofman, T. P.*; Vlaming, J. G. C.*; Gagarinov, I. A.; van Beek, J.; Goté, T. A.; Tichem, J. A.; Ruijgrok, G.; Overkleeft, H. S.; Filippov, D. V.; van der Marel, G. A.; Codée, J. D. C.

Angew. Chem. Int. Ed. **2021**, 60, 937–945.

*equal contribution

Structure-activity relationship studies of α -ketoamides as inhibitors of the phospholipase A and acyltransferase enzyme family

Zhou, J.*; Mock, E. D.*; Al Ayed, K.; Di, X.; Kantae, V.; Burggraaff, L.; Stevens, A. F.; Martella, A.; Mohr, F.; Jiang, M.; van der Wel, T.; Wendel, T. J.; Ofman, T. P.; Tran, Y.; de Koster, N.; van Westen, G. J. P.; Hankemeier, T.; van der Stelt, M.

J. Med. Chem. **2020**, 63, 9340–9359.

Curriculum Vitae

Tim Ofman was born on October 1st, 1994, in Zaandam, The Netherlands. He attended high school at the Sint Michael College in Zaandam. In 2013, he graduated with the specialization “Natuur en Techniek”. His academic journey started at the Leiden University and Delft University of Technology, where he pursued a bachelor's degree in Molecular Science and Technology.

After the minor “Modern Drug Discovery”, he completed his major with a thesis on the synthesis of novel α - and β -glucosidase inhibitors bearing cycling C-phosphonates. This pivotal phase of his education was conducted under the guidance of dr. Sybrin Schröder, Prof. dr. Jeroen Codée and Prof. dr. Gijs van der Marel at the Bio-organic synthesis group in Leiden.

With his bachelor's degree in hand by 2016, Tim embarked on the Chemistry master's program at Leiden University, specializing in Chemical Biology. As part of this program, he performed a master's internship at the Bio-organic synthesis group in Leiden under supervision of dr. Thomas Hansen, Prof. dr. Jeroen Codée and Prof. dr. Gijs van der Marel. Research focused on the total synthesis of LOS-IV fragments, a vital constituent of the cell wall of *mycobacterium marinum*. In the fall of 2018, he obtained his master's degree (*cum laude*).

Subsequently, Tim transitioned into the next phase of academic exploration. Beginning in 2018, within the same group, he commenced the research presented in this Thesis, during which he was guided by Prof. dr. Hermen Overkleeft and Prof. dr. Jeroen Codée. Parts of the research described here were presented either as oral presentations or on posters at the Annual ABPP meeting 2019 in Leuven, Belgium, NWO Chains 2019 in Velthoven, The Netherlands, and the Annual ERC synergy symposium in Leiden, The Netherlands (2020 and 2022) and Barcelona, Spain (2022).

Tim is currently continuing his research in the group of Prof. dr. Hermen Overkleeft as a postdoctoral fellow.

