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Novel insights into old anticancer drugs

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LIST OF PUBLICATIONS

Sabina Y. van der Zanden[#], Dennis P.A. Wander[#], Merijn B.L. Vriends, Branca C. van Veen, Joey G. C. Vlaming, Thomas Bruyning, Gijsbert A. van der Marel, Jeroen D.C. Codee, Herman S. Overkleeft, Jacques Neefjes. Synthetic (*N,N*-dimethyl)doxorubicin glycosyl diastereomers to dissect modes of action of anthracycline anticancer drugs.

Manuscript in preparation.

Thomas P. Brouwer, **Sabina Y. van der Zanden**, Jaap D.H. van Eendenburg, Bert A. Bonsing, Noel F.C.C. de Miranda, Jacques Neefjes, Alexander L. Vehrmeijer. The identification of the anthracycline aclarubicin as an effective cytotoxic agent for pancreas cancer.

Manuscript in preparation.

Dennis P.A. Wander[#], **Sabina Y. van der Zanden**[#], Gijsbert A. van der Marel, Herman S. Overkleeft, Jacques Neefjes, Jeroen D.C. Codee. Doxorubicin and aclarubicin: shuffling anthracycline glycans for improved cytotoxic agents.

Journal of Medicinal Chemistry, DOI: 10.1021/acs.jmedchem.0c01191, (2020).

Sabina Y. van der Zanden[#], Xiaohang Qiao[#] and Jacques Neefjes. New insights into the activities and toxicities of the old anticancer drugs doxorubicin.

FEBS J. DOI: 10.1111/febs.15583, (2020).

Xiaohang Qiao[#], **Sabina Y. van der Zanden**[#], Dennis P.A. Wander, Daniel M. Borràs, Ji-Ying Song, Xiaoyang Li, Suzanne van Duikeren, Noortje van Gils, Arjo Rutten, Tessa van Herwaarden, Olaf van Tellingen, Elisa Giacomelli, Milena Bellin, Valeria Orlova, Leon G.J. Tertoolen, Sophie Gerhardt, Jimmy J. Akkermans, Jeroen M. Bakker, Charlotte L. Zuur, Baoxu Pang, Anke M. Smits, Christine L. Mummery, Linda Smit, Ramon Arens, Junmin Li, Herman S. Overkleeft and Jacques Neefjes. Uncoupling DNA damage from chromatin damage to detoxify doxorubicin.

Proceeding of the National Academy of Science, 117 (26) 15182-15192, (2020).

Sabina Y. van der Zanden, Jolien J. Luimstra, Jacques Neefjes, Jannie Borst, Huib Ovaa. Opportunities for small molecules in cancer immunotherapy.

Trends Immunol. 41(6):493-511, (2020).

Elmer Maurits[#], Michel J. van de Graaf[#], Santina Maiorana, Dennis P.A. Wander, Patrick M. Dekker, **Sabina Y. van der Zanden**, Bogdan I. Florea, Jacques Neefjes, Herman S. Overkleeft, Sander I. van Kasteren. Immunoproteasome inhibitor-doxorubicin conjugates target multiple myeloma cells and release doxorubicin upon low-dose photon irradiation.

Journal of the American Chemical Society 142 (16), 7250-7253, (2020).

Marlieke L.M. Jongsma[#], Jeroen Bakker[#], Birol Cabukusta, Nalan Liv, Daphne van Elstrand, Job Fermie, Jimmy L.L. Akkermans, Coenraad Kuijl, **Sabina Y. van der Zanden**, Lennert Janssen, Denise Hoogzaad, Rik van der Kant, Ruud H. Wijdeven, Judith Klumperman, Ilana Berlin and Jacques Neefjes. SKIP-HOPS recruits TBC1D15 for a Rab7-to-Arl8b identity switch to control late endosome transport.

EMBO Journal 39: e102301, (2020).

Ruud H. Wijdeven[#], Baoxu Pang[#], **Sabina Y. van der Zanden**, Xiaohang Qiao, Vincent Blomen, Marlous Hoogstraat, Esther H. Lips, Lennert Janssen, Lodewyk Wesels, Thijn R. Brummelkamp and Jacques Neefjes. Genome-wide identification and characterization of novel factors conferring resistance to topoisomerase II poisons in cancer.

Cancer Research 75(19), 4176-4187, (2015).

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CURRICULUM VITAE

Sabina Yasmin van der Zanden was born on October 15th 1989, in Haarlem. She finished her VWO in 2008, at the Rudolf Steiner School in Haarlem. Directly after graduation she started with her Bachelor studies in Biomedical Sciences at the VU university in Amsterdam, which she finished in 2011. During the gap year that followed she worked as a quality officer at Sanquin Amsterdam and went traveling through Latin-America for 5 months. Sabina then went on to continue her studies in September 2012 at the VU university in Amsterdam, with the Master Biomolecular sciences, where she followed both the Molecular Cell biology and Biological Chemistry specialization. In September 2014 she graduated Cum Laude. During her masters, Sabina performed two internships. Her first internship was in the Structural Biology group of prof. dr. Holger Lill at the VU University, where she worked on optogenetic manipulation of bacteria. For her second internship she went to The Netherlands Cancer Institute in Amsterdam, where she worked on a project about bi-directional transport of late endosomes in the Cell biology group of prof. dr. Jacques Neefjes. After finishing her master's degree, Sabina continued to work in the group of professor Neefjes as a PhD candidate, first at the NKI, and after the move in June 2016 at the Leiden University Medical center in Leiden. During her PhD she focused on the working mechanism of the anticancer drugs doxorubicin and its analogs. The results of this research can be found in this thesis.

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