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Chemical synthesis of fragments of streptococcal cell wall polysaccharides

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Curriculum Vitae

Zhen Wang was born on 5th Dec. 1989 in Shangqiu, Henan province, China. After finishing high school education in Shangqiu, he was enrolled in Zhengzhou University in 2007, majoring in chemistry. He obtained his Bachelor of Science in 2011 and joined in Renmin University of China in the same year, majoring in organic chemistry. In 2014, he received his Master of Science degree after finishing the thesis “Diazoacetate’s Carbene Transfer Reaction via NHC-Ag⁺ Catalysis” under the supervision of Prof. Dr. Zili Chen. Then, he moved to National Institute of Biological Sciences as a research assistant in Prof. Dr. Xiaoguang Lei lab to do some total synthesis work focusing on *Incarviate* and *Jungermannenones* until Aug. 2015.

He started his Ph.D. study on “Chemical Synthesis of Fragments of Streptococcal Cell Wall Polysaccharides”, presenting in this thesis, in the bio-organic synthesis group of Leiden University from September 2015. His doctoral studies were under the supervision of Dr. Jeroen Codée and Prof. Dr. Gijs van der Marel sponsored by the Chinese Scholarship Council (CSC) – Leiden University joint scholarship. Parts of his research were presented as posters at the annual Dutch chemistry conference “CHAINS” (2016, 2017, 2018). A poster was presented at the 19th European Carbohydrate Symposium 2017 in Barcelona, Spain. A poster was presented at the 29th International Carbohydrate Symposium 2018 in Lisbon, Portugal. And Parts of his work were presented as an oral presentation at the 20th European Carbohydrate Symposium 2019 in Leiden, the Netherlands, and the Chains 2019 in Veldhoven, the Netherlands.

From Sept. 2020, he will continue his postdoctoral career, focusing on the synthesis of complex carbohydrates under the supervision of Prof. Dr. Jeroen Codée and Prof. Dr. Gijs van der Marel in Bio-organic Synthesis group of Leiden University.

List of Publications

1. Wang, Z.; Enotarpi, J.; Overkleeft, H. S.; Marel, G. A. van der and Codée, J. D. C.*. Chemical Synthesis of Fragments of the Multiantennary Group-Specific Polysaccharide of Group B *Streptococcus*, **2020**, *Manuscript in preparation*.
2. Wang, Z.; Zhang, Q.; Overkleeft, H. S.; Marel, G. A. van der and Codée, J. D. C.*. The First Total Synthesis of Acetylated Zwitterionic Polysaccharide Sp1 Fragments. **2020**, *Manuscript in preparation*.
3. Wang, Z.; Overkleeft, H. S.; Marel, G. A. van der and Codée, J. D. C.*. The First Total Synthesis of Repeating Units of Glycerol Phosphate Modified Capsular Polysaccharides from Group A *Streptococcus*. **2020**, *Manuscript in preparation*.
4. Zhang, Q.; Gimeno, A.; Santana, D.; Wang, Z.; Valdés-Balbin, Y.; Rodríguez-Noda, L. M.; Hansen, T.; Kong, L.; Shen, M.; Overkleeft, H. S.; Vérez-Bencomo, V.; Marel, G. A. van der; Jiménez-Barbero, J.; Chiodo, F.; and Codée, J. D. C.*. Synthetic, Zwitterionic Sp1 Oligosaccharides Adopt a Helical Structure Crucial for Antibody Interaction. *ACS Cent. Sci.* **2019**, 5, 1407-1416.
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9. Wang, Z.; Wen, J.; Bi, Q.; Xu, X.; Shen, Z.; Li, X.; and Chen, Z.*. Oxirane Synthesis from Diazocarbonyl Compounds via NHC-Ag⁺ Catalysis. *Tetrahedron Lett.* **2014**, 55, 2969-2972.
10. Wen, J.; Zhu, L.; Bi, Q.; Shen, Z.; Li, X.; Li, X.; Wang, Z.; and Chen, Z.*. Highly *N*²-Selective Coupling of 1,2,3-Triazoles with Indole and Pyrrole. *Chem. Eur. J.* **2014**, 20, 974-978.
11. Li, G.; Zhou, W.; Li, X.; Bi, Q.; Wang, Z.; Zhao, Z.; Hu, W.; and Chen, Z.*. Gold Catalyzed Enantioselective Intermolecular [3 + 2] Dipolar Cycloaddition of *N*-allenyl Amides with Nitrones. *Chem. Comm.* **2013**, 49, 4770-4772.

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Zhen