Synthetic Study on ADP-ribosylation

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Proposition (Stellingen)

Accompanying the thesis

Synthetic study on ADP-ribosylation

1. The use of ‘‘parobiose’’ for the disaccharide in linear PAR and “parotriose” for the trisaccharide in branched PAR favors the scientific communication.
This Thesis

2. A solid-phase synthesis of ADPr-oligomers is preferred compared to a solution-phase approach.
J. Am. Chem. Soc. **2015**, 137, 10, 3558, *This thesis*.

3. The branched structure elements in poly-ADP-ribose, of which the function is unknown, may determine the overall conformation of poly-ADP-ribose.
Miwa *et al*, *J. Bio. Chem.*, **1981**, 256, 2916.

4. The introduction of multiple pyrophosphate linkages is the biggest challenge in the synthesis of ADPr-oligomers.
This Thesis

5. Although it was discovered 40 years ago, branched poly-ADPr (PAR) has always been an enigma in the ADPr biology.
This Thesis

6. The detection of PAR (poly ADP-ribose), as a biomarker, could be useful for the future early diagnosis of neurodegeneration disorders.
Kam *et al*, *Science*, **2018**, 362, 557.

7. Because the sensitivity of tumors for PARP inhibitors does not overlap with that for PARG inhibitors, a combination therapy is a viable option.
Pillay *et al*, *Cancer Cell*, **2019**, 35, 519.

8. It is the duty of chemists to persuade ADPr-biologists to draw the structures of ADP-ribose with correct stereochemistry.

Acknowledgment

Upon the finish of this thesis, a sense of luck and happiness comes into my mind. Especially when I look back the past four years PhD life at Leiden, I feel lucky that I have met so many nice people who helped me. First of all, I would like to thank my promotor Prof. Gijs van der Marel and my supervisor Dr. Dmitri Filippov. I am grateful for the opportunity my promotor Gijs offered me 4 years ago, making my dream of pursuing my PhD abroad come true. He is always giving key insight and suggestions to my projects and encouraging me to attempt new things. Special thanks to my supervisor Dima, who imparted chemistry knowledge to me, guided me through "ADPr world" and cheered me up after failures. Thanks to Gijs and Dima's patient guidance and great contribution to my projects, I could publish several high-quality papers. Their generous help for my post-doc hunt is also sincerely acknowledged.

I would like to thank Prof. Herman Overkleeft for his kind help during my stay in Bioorganic Synthesis Group. I would like to thank our group technician Nico Meeuwenoord for tremendous help in solid-phase synthesis and final product purification, Hans van den Elst for his contribution in HRMS data, Rian van den Nieuwendijk for his help in hydrogenolysis, Bobby Florea, Dr. Jeroen Codee and other researchers in our group for their kind help.

All of my colleagues are kindly acknowledged. I feel so lucky to have these Chinese compatriots as colleagues and friends: (current) Ming, Zhen, Liming, Sizhe, Yongzhen, Bing, Qing, Yurong, Zirui and (previous) Qingju, Jianbing, Hui, Botao & Juan and Yunyu. In addition, I would like to thank Dr. Hans Kistemaker for his kind help and suggestions at the beginning of my PhD and Dr. Gerbrand van der Heden van Noort for the nice collaboration in Chapter 7. I would like to thank all the support from colleagues in the old L.126 lab, including Michel, Sander, Thomas van den Ende, Thomas Hansen, Elko, Bharat, Jalindar and colleagues in DM3 lab, including Elmer, Jim, Pascal, Xingzao, Hessel, Ward, Hugo, Patrick and colleagues in EE4, including Dr. Patrick Wisse, Stefan, Jerre, Dennis, Mark and other Biosyn colleagues. Also, I would like to thank my previous students Stanley and Gianni. Karthick and Fons are kindly acknowledged for their generous help in NMR measurements.

Here, I would like to express my gratitude to Chinese Scholarship Council (CSC) for funding my PhD study.

As an ending remark, I would like to thank my parents and sister for their support and my girlfriend for the company all the way.