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Modulating the activity of CRISPR/Cas9 genome editing by small molecules

Chen, Siwei

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APPENDICES **A**

Acknowledgement

List of Publications

About the author

Acknowledgment

I think the most correct decision I made four years ago was to seize the opportunity to pursue my PhD study in this lovely city and leading international university, where I have met so many wonderful people. I am grateful to everyone who came into my life, supported me in different ways through all this time. I would also like to appreciate those who contributed to this thesis and assisted me during my PhD journey. All experiences become valuable memories forever.

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APPENDICES

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Siwei

August 2021

Groningen

List of Publications

1. Bin Liu*, **Siwei Chen***, Anouk La Rose, Deng Chen, Fangyuan Cao, Martijn Zwinderman, Dominik Kiemel, Manon Aissi, Frank J. Dekker, Hidde J. Haisma. Inhibition of Histone deacetylase 1 (HDAC1) and HDAC2 enhances CRISPR/Cas9-mediated gene editing. *Nucleic Acids Res.* **2020** Jan 24; 48(2): 517–532. doi: 10.1093/nar/gkz1136
2. Bin Liu*, **Siwei Chen***, Xin Li, Deng Chen, Frank J. Dekker, Alexander Dömling, Hidde J. Haisma. Potent Small molecular inhibitors for CRISPR/Cas9 genome editing. **2021** (Under Review, *Nature Communications*)
3. **Siwei Chen***, Xin Li*, Bin Liu, Deng Chen, Frank J. Dekker, Alexander Dömling, Hidde J. Haisma. A Potent Small Molecular Enhancer for CRISPR/Cas9-mediated Genome Editing. **2021** (Under Revision, *Molecular Therapy Nucleic Acids*)
4. **Siwei Chen**, Yafeng Song, Xin Li, Alexander Dömling, Wim J. Quax, Hidde J. Haisma. Modulating CRISPR/Cas9-mediated Genome Editing by Small Molecules in *Bacillus Subtilis*. **2021** (Submitted)
5. **Siwei Chen**, Deng Chen, Bin Liu, Hidde J. Haisma. Modulating the CRISPR/Cas9 Genome Editing Activity by Small Molecules. **2021** (Under Review, *Drug Discovery Today*)
6. Bin Liu, Shanshan Song, Rita Setroikromo, **Siwei Chen**, Wenteng Hu, Deng Chen, Anthonie J van der Wekken, Barbro N. Melgert, Wim Timens, Anke van den Berg, Ali Saber, Hidde J. Haisma. Cx chemokine receptor 7 contributes to survival of kras-mutant non-small cell lung cancer upon loss of epidermal growth factor receptor. *Cancers (Basel)*. **2019** Apr; 11(4): 455. doi: 10.3390/cancers11040455
7. Bin Liu, Olivia Adaly Diaz Arguello, Deng Chen, **Siwei Chen**, Ali Saber, Hidde J. Haisma. CRISPR-mediated ablation of overexpressed EGFR in combination with sunitinib significantly suppresses renal cell carcinoma proliferation. *PLoS One*. **2020**; 15(5): e0232985. doi: 10.1371/journal.pone.0232985

8. Fangyuan Cao, Zhangping Xiao, **Siwei Chen**, Deng Chen, Hidde J. Haisma, Frank J. Dekker. HDAC/MIF dual inhibitor inhibits NSCLC cell survival and proliferation by blocking the AKT pathway. **2021** (Under Review, *Bioorganic Chemistry*)
9. Olivia A. Diaz Arguello, Petra E. van der Wouden, **Siwei Chen**, Hidde J. Haisma. Enhanced apoptosis in cancer cells by simultaneous targeting of Epidermal Growth Factor Receptor (EGFR) and TRAIL death receptors (DR4 and DR5) by adenoviral expressed fusion proteins. **2021** (Submitted)
10. Ting Wang*, **Siwei Chen***, Shihui Wang, Liang Shi, Chenggong Wang, Jingxin Zhang, Yanfeng Gao, Guodong Li, Yuanming Qi, Xiuli An, Lixiang Chen. Targeting neurokinin-3 receptor: a novel anti-angiogenesis strategy for cancer treatment. *Oncotarget*. **2017** Jun 20; 8(25): 40713–40723. doi: 10.18632/oncotarget.17250
*Authors contributed equally

Patents

1. Ting Wang, **Siwei Chen**, Liang Shi, Lixiang Chen, Chenggong Wang, Xiuli An, Yuanming Qi, Yanfeng Gao, Guodong Li. Synthetic peptide NK3R-A1 based on NK3 receptor and application thereof. Publication No.: CN106008673B
2. Lixiang Chen, **Siwei Chen**, Liang Shi, Ting Wang, Chenggong Wang, Yuanming Qi, Xiuli An, Yanfeng Gao, Guodong Li. Synthetic peptide NK3R-A2 based on NK3 receptor and application thereof. Publication No.: CN106008672B
3. Lixiang Chen, Yajuan Wang, Ting Wang, **Siwei Chen**, Xiuli An, Yuanming Qi, Yanfeng Gao, Guodong Li. FAP-targeted anti-angiogenesis peptide Z-GP-V1 and application thereof. Publication No.: CN106046121B
4. Ting Wang, Yajuan Wang, Lixiang Chen, **Siwei Chen**, Xiuli An, Yuanming Qi, Yanfeng Gao, Guodong Li. FAP-targeted anti-angiogenesis peptide Z-GP-V2 and application thereof. Publication No.: CN105949282B

About the author

Siwei Chen was born on 3rd November 1990 in Zhengzhou city, Henan province, China. She obtained her Bachelor's degree in Computer Science and Technology from Zhengzhou University (ZZU) in June 2014. In the same year, she started her master study in the Department of Life Sciences, ZZU under the supervision of Prof. Lixiang Chen. During the first one and a half years, she mainly focused on taking courses as well as investigating anti-tumor effects of synthesized peptides targeting to the tumor blood vessels at Henan Immunology Key Laboratory, ZZU. In the last one and a half years, she started to study the role and mechanism of DNMT1 in regulating specific stages of human erythropoiesis at the Institute of Systems Biology of Erythrocyte Development, ZZU. In June 2017, she gained her Master's degree in Cellular Biology. Then she moved to Groningen to start her PhD study in the Department of Chemical and Pharmaceutical Biology under the supervision of Prof. Hidde J. Haisma and Prof. Frank J. Dekker. Her research was aiming to modulate the activity of CRISPR/Cas9 genome editing by small molecules, of which the results are described in this thesis.