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The design of transcription factor-based inhibitors to target Myc: drop the Myc!

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List of publications



Part of this thesis

B. D. Ellenbroek,[‡] J. P. Kahler,[‡] S. R. Evers, S. J. Pomplun, “Synthetic Peptides: Promising Modalities for the Targeting of Disease-Related Nucleic Acids” *Angewandte Chemie International Edition* **2024**, 63

B. D. Ellenbroek,[‡] J. P. Kahler,[‡] D. Arella, C. Lin, W. Jespers, E. A. Züger, M. Drukker, S. J. Pomplun, “Development of DuoMYC: a synthetic cell penetrant miniprotein that efficiently inhibits the oncogenic transcription factor MYC” *Angewandte Chemie International Edition* **2025**, 64

J. P. Kahler, **B. D. Ellenbroek**, V. E. van der Noord, B. van de Water, S. J. Pomplun, “ReCHEMbinant stapling enhances intracellular delivery and bioactivity of engineered protein inhibitors” *Chem* **2025**, 102839.

B. D. Ellenbroek, A. S. S. Tirtosentono, S. J. Pomplun, “AlphaFold-Guided Discovery of an Overlapping MYC/Miz-1 Interface Enables Peptidomimetic Disruption of MYC/MAX” *ChemMedChem* **2025**, e202500740

[‡]Contributed equally

Other publications (not part of thesis)

G. L. McLelland, M. Lopez-Osias, C. R. C. Verzijl, **B. D. Ellenbroek**, R. A. Oliveira, N. J. Boon, M. Dekker, L. G. van den Hengel, R. Ali, H. Janssen, J. Y. Song, P. Krimpenfort, T. van Zutphen, J. W. Jonker, T. R. Brummelkamp, “Identification of an alternative triglyceride biosynthesis pathway” *Nature* **2023**, 621, 171–178.

J. Braun, M. I. Ariëns, B. T. Matsuo, S. de Vries, E. D. H. van Wordragen, **B. D. Ellenbroek**, C. M. L. Vande Velde, R. V. A. Orru, E. Ruijter, “Stereoselective Synthesis of Fused Vinylcyclopropanes by Intramolecular Tsuji-Trost Cascade Cyclization.” *Org Lett* **2018**, 20, 6611–6615.

Oral and poster communications

- 2025 **ChemBioParis** (oral)
Paris, France
- 2025 **Leiden Early Drug Discovery & Development (LED3) symposium** (oral)
Leiden, the Netherlands
- 2025 **LACDR Spring symposium** (poster)
Leiden, the Netherlands – Awarded with Poster Competition Prize
- 2025 **KNCV - SOC-MCCB symposium** (oral)
Lunteren, the Netherlands
- 2024 **European Peptide Conference** (poster)
Florence, Italy
- 2024 **Oncode Annual Meeting** (poster)
's-Hertogenbosch, the Netherlands
- 2024 **LACDR Spring symposium** (poster)
Leiden, the Netherlands
- 2024 **EFMC-ACSMEDI Medicinal Chemistry Frontiers symposium** (poster)
Utrecht, the Netherlands
- 2023 **LACDR Spring symposium** (poster)
Leiden, the Netherlands
- 2023 **Dutch Peptide Symposium** (poster)
Leiden, the Netherlands
- 2022 **LACDR Spring symposium** (poster)
Leiden, the Netherlands

Curriculum Vitae

Brecht Ellenbroek was born in Amsterdam, the Netherlands, on 20th of June 1995. He finished his high school education at the Sint Nicolaas Lyceum in Amsterdam (Noord-Holland, the Netherlands) in 2014. He started with the joint degree bachelor in Chemistry at the University of Amsterdam (UvA, Amsterdam, the Netherlands) and the Vrije Universiteit Amsterdam (VU, Amsterdam, the Netherlands). He did his bachelor internship in organic chemistry at the Synthetic and Bio-organic Chemistry group under supervision of Prof. Dr. Eelco Ruijter, Prof. Dr. Ir. Romanu Orru and John Braun resulting in a co-authorship on a publication (not part of this thesis).

After graduating in 2018, he began his master's program in Drug Discovery and Safety (now Drug Discovery Sciences) at the VU (Amsterdam, the Netherlands). Within his master's program he did three internships belonging to three disciplines: Biomolecular simulations, peptide/protein chemistry and molecular/cellular biology. He did his four-month biomolecular simulation internship under the supervision of Dr. Jocelyne Vreede (UvA) and his five-month internship in peptide chemistry under the supervision of Prof. Dr. Tom Grossmann and Dr. Niall Mcloughlin (VU). He followed his major internship of seven months in molecular and cellular biology under the supervision of Prof. Dr. Thijn Brummelkamp and Dr. Gian-Luca McLelland at the Netherlands Cancer Institute. This resulted in a co-authorship on a publication in Nature (not part of this thesis). He obtained his master's degree *cum laude* in 2021.

He began his PhD in January 2022 at the Division of Medicinal Chemistry (Leiden Academic Centre for Drug Research (LACDR), Leiden University) under the supervision of Dr. Sebastian Pomplun, Prof. Dr. Nathaniel Martin and Prof. Dr. Miranda van Eck. His research focused on how to exploit endogenous transcription factors (TF) to design artificial DNA-binding proteins or TF-based inhibitors to target the oncogenic TF Myc. His aim is to pursue his scientific career in industry.



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