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

Ellenbroek, B.D.

Citation

Ellenbroek, B. D. (2026, June 10). *The design of transcription factor-based inhibitors to target Myc: drop the Myc!*. Retrieved from <https://hdl.handle.net/1887/4305022>

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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.



Acknowledgement

First and foremost I would like to show my gratitude towards **Sebastian**. I had the privilege of being your first PhD candidate and with your enthusiasm for science and great supervision we managed to make this PhD into a success. I learned a lot from you about how to start a project, how to plan projects, how to finish or when to abandon a project. It was not always easy, with proteins crashing out, behaving weird or refusing to be synthesized. But overall you helped me by keeping my spirit up and keeping me focused on the end goal. Since I started the lab expanded drastically and I am confident you will continue this progress. Thank you.

Nathaniel you always showed interest in my projects and in me personally, thank you. I also want to thank my other supervisors **Hubertus** and **Miranda**.

Jan (-Pascal) thanks, danke, bedankt, mercikes. Zonder jou was mijn PhD niet zo soepel verlopen. Met jouw hulp en je altijd vriendelijke en geduldige begeleiding stond je altijd klaar om met mij de discussie aan te gaan over onderzoek gerelateerde onderwerpen, maar ook over van alles en nog wat. Je hebt inderdaad gelijk. Het is VALdorpel. Ik wil ook graag **Khaled** en **Cas** bedanken. **Cas** het sparren over hardlopen, de fusie en fellowship avonden waren fantastisch. **Khaled** the past four years where amazing. Your relaxed attitude and you always being hyped about basically everything really inspired me. Additionally, I want to thank you for being my paranymph.

A special thanks to **Edith** and **Miguel**, together we were the first three members of this lab. Thanks for the fun times. Edith, good luck with your libraries, if somebody can do it, you can. Miguel I never met somebody with such a keen eye for detail when it comes to figure design like you. But more importantly, I am happy that somebody from Portugal likes bitterballen this much. To all other Pomplunlab members: **Jingming**, **Hugo**, **Thanasis**, **Sean**, **Monika**, **Mike**, **Gianluca**, **Patryk** thank you!

To all my students, without you guys I would not have been able to do all these projects. Thank you **Damiano**, **Cherina**, **Amardhiko**, **Sofie**, **Rozina** and **B'Elana**.

I also want to thank everyone who helped me with protein expression or peptide purification. Thank you **Vlad**, **Patrick**, **Anneloes** and **Monika**.

Of course I also want to thank the whole **Medchem** department. To prevent that I forget somebody I will not mention everybody by name. Everybody from **Gerards**,

Laura's, Daans and **Ads** group created such a supporting environment and made me feel welcome from my first day. A special thanks to **Linde** and **Inge**. **Linde** always stay this happy. **Inge** bedankt voor het luisteren naar Désenchantée ookal kon je er helaas niet van genieten. **Bert** ik ben blij dat ik nog iemand heb gevonden die zoveel flauwe woordgrappen maakt als ik.

Ik wil natuurlijk ook mijn familie en vrienden bedanken. Zonder jullie had ik dit niet gekund. **Pap, Mam** door jullie steun de afgelopen jaren ben ik hier gekomen. **Ward** en **Veerle** we zijn dan wel verschillend, maar dat brengt ons ook dichterbij elkaar. Bedankt voor jullie luisterend oor en advies tijdens de goede, maar ook de zwaardere momenten. **Veerle**, nu het mij is gelukt ben jij aan de beurt. Ik kan natuurlijk jou niet vergeten **Nienke**. Ik ben blij dat jij en **Ward** elkaar hebben gevonden. Ook wil ik jullie drie bedanken **Arjen, Ageeth** en **Maartje** voor jullie openheid en barmhartigheid vanaf dag één dat ik Anne heb leren kennen. Daarnaast wil ik natuurlijk al mijn vrienden bedanken. Wie had verwacht dat zoveel van ons een PhD zouden gaan doen. Bedankt **Stan, Lucien, Pim, Lars, Jelle, Dennis, David** en **Yorrick** en natuurlijk ben ik ook jullie niet vergeten **Rosa** en **Rhea**. Ook wil ik iedereen van Cohesie bedanken. Ik vind het fantastisch dat we na zoveel jaren nog zoveel met elkaar om gaan. Bedankt **Stef, Guido, Nordin, Jordan, Jente** en **Mees**. **Max** en **Thibo** ik wil jullie apart bedanken. Ondanks dat we compleet verschillende dingen zijn gaan doen, zijn we alleen maar dichterbij elkaar toe gegroeid. **Thibo**, mijn andere paranimf, bedankt. Als laatste wil ik Bijltjespad bedanken: **Sybre, Faan, Marnix** en **Nander**. Ik had mij geen betere huisgenoten kunnen wensen. **Mark** bedankt dat je mij aan de marathons hebt geholpen. Het is een cliché, maar een PhD is inderdaad vergelijkbaar.

Als laatste wil ik jou bedanken **Anne**. Bedankt voor je altijd luisterend oor, geduld, liefde en het aanhoren van mijn flauwe woordgrappen. Je bent mijn steun en toeverlaat en geeft mij een gevoel van rust.