Thomas Chris Smits

tsmits@hms.harvard.edu ▪ LinkedIn ▪ ResearchGate

Education

Master of Biomedical Informatics **Aug. 2021 – March 2023**
Harvard Medical School

- Relevant coursework: Genomic Data Manipulation, Deep Learning for Biomedical Data, Cancer Genome Data Science, Biological Systems Modelling [MIT]

Transfer program in Computer Science **Sept. 2020 – Aug. 2021**
Delft University of Technology

- Relevant coursework: Object-Oriented Programming, Logic, Algorithms, Web- and Database Structures, and Microservices Software Engineering

Bachelor of Science in Life Science & Technology *(Honours & Summa cum Laude)* **Sept. 2017 – Aug. 2020**
Delft University of Technology & Leiden University (joint degree)

- Honours program Beta & Life Sciences at *Leiden University* with relevant coursework in computer science
- Study abroad at *University of British Columbia* with relevant coursework in computational neurobiology
- Relevant coursework: Bioinformatics, Calculus, Statistic

Relevant work experience

Associate Bioinformatics **February 2022 – present**
Harvard Medical School

- Department of Biomedical Informatics, Gehlenborg Lab, under dr. Nils Gehlenborg
- Key projects in accessibility of data visualization, single-cell spatial visualization and integrated analyses in Data Portal of HuBMAP consortium.

Graduate Student Researcher **March 2022 – December 2022**
Harvard Medical School

- Department of Biomedical Informatics, Gehlenborg Lab, under dr. Nils Gehlenborg
- Accessibility of data visualization
- Key project: Development of automatic feature extraction in JavaScript for written descriptions of visualisation in grammar-based genomic visualization tool Gosling

Graduate Student Researcher **Nov. 2021 – December 2022**
Dana-Farber Cancer Institute

- Department of Data Science, multiple myeloma genomics lab, under dr. Mehmet Samur
- Investigation into (epi)genetic modifications of multiple myeloma
- Key projects:
    - Investigating the role of somatic processes and mutational burdens around hyperdiploidy in multiple myeloma with WGS
    - Investigation of role of PHF19 on chromatin accessibility with ChIP-seq
    - Investigation of role of BCL7A with ATAC-seq
    - Investigation of RNAs associated with proteasomes with CLIP-seq and RNAs-seq

Vaccine Preparer in Vaccination Program **April – July 2021**
Red Cross Netherlands

- Vaccination preparation and administration in various locations at municipal health services 'GGD Haaglanden' and 'GGD Hollands Midden' in vaccination program of the Netherlands.

Teaching Assistant **Jan. – April 2021**
Delft University of Technology

- Teaching assistant for Biotechnology at Bachelor program Life Science & Technology. Provided set-up of course for 200 students, and assisted during biweekly seminars.

Undergraduate Researcher **April – Aug. 2020**
Delft Bioinformatics Lab

- Under dr. Thomas Abeel and dr. ir. Robert Mans
- Prediction models of susceptibility for SARS-CoV-2 hosts
- Key project: Developing various models in Python for prediction of potential hosts of SARS-CoV-2 by analysing ACE2 receptor sequences

Teaching Assistant & Coach **Aug. 2018 – Nov. 2020**
Leiden University

- **Teaching/laboratory assistant** for Biochemistry 1 at Bachelor program Bio-Pharmaceutical Sciences. Guided 21 students in their first laboratory experience, working with DNA vectors, antibiotic resistance, and protein purification.
- **Teaching assistant** for Calculus 2 at Bachelor program Life Science & Technology. Instructed 30 students in a classroom setting.
- **Student coach** at Life Science & Technology. Assisted 15 students during their first year of the program.
- **Teaching assistant** for Biotechnology summer school at Bachelor program Life Science & Technology. Intensively tutored 7 students during summer, in classroom setting and with individual contact.

Tutor & coach **2015 – 2017**
Christelijk Gymnasium Utrecht

- **Tutor** in Mathematics, English, Latin and Chemistry, working individual or paired students on the subjects they struggled in
- **Student coach**, assisting struggling students with personal and academic matters

Conference presentations

Oral presentations

- **Thomas Smits**, Anil Aktas Samur, Romain Lannes, Mariateresa Fulciniti, Masood Shammas, Jill Corre, Kenneth Anderson, Giovanni Parmigiani, Hervé Avet-Loiseau, Nikhil Munshi, Mehmet Samur (2022, August). *OAB-017: Mutations accumulated before and after hyperdiploidy reveal timing and impact of chromosomal gains on multiple myeloma.* 19th International Myeloma Society Annual Meeting, Los Angeles, CA. https://doi.org/10.1016/S2152-2650(22)00290-7
- Tengteng Yu, Hailin Chen, Kenneth Wen, Tingjian Wang, Phillip Hsieh, **Thomas Smits**, Mehmet Samur, Lijie Xing, Liang Lin, Mu Hao, Lugui Qiu, Yu-Tzu Tai, Kenneth Anderson (2022, August). OAB-031: PHF19 promotes multiple myeloma cell resistant to daratumumab/isatuximab via upregulation in immunosuppressive microenvironment and reduced CD38 target expression. 19th International Myeloma Society Annual Meeting, Los Angeles, CA. https://doi.org/10.1016/S2152-2650(22)00304-4
- Chandraditya Chakraborty, Srikanth Talluri, Eugenio Morelli, Sanika Derebail, Yan Xu, Charles Epstein, **Thomas Smits**, Moritz Binder, Kenneth Anderson, Masood Shammas, Mehmet Samur, Mariateresa Fulciniti, Nikhil Munshi (2022, August). OAB-013: Universal loss of BCL7A allows release of its binding partner IRF4 inducing its transcriptional activity promoting MM cell growth. 19th International Myeloma Society Annual Meeting, Los Angeles, CA. https://doi.org/10.1016/S2152-2650(22)00286-5
- Tengteng Yu, Mu Hao, Hailin Chen, Kenneth Wen, Tingjian Wang, **Thomas Smits**, Mehmet Samur, Eugenio Morelli, Lijie Xing, Liang Lin, Jun Qi, Gang An, Nikhil Munshi, Yu-Tzu Tai, Lugui Qiu, Kenneth Anderson (2022, December). PHF19 Inhibits Multiple Myeloma Cell Response to Immunotherapy Via Promoting Immunosuppressive Microenvironment. 64th ASH Annual Meeting and Exposition, New Orleans, LA. https://doi.org/10.1182/blood-2022-159137

Poster presentations

- **Thomas Smits,** HuBMAP Harvard HIVE-TC, HiDIVE Lab (2023. May). *Workspaces in Portal (in progress): templates allow for easy cell type composition exploration*. HuBMAP Annual Meeting, Nashville, TN.
- **Thomas Smits**, Anil Aktas Samur, Romain Lannes, Mariateresa Fulciniti, Masood Shammas, Jill Corre, Kenneth Anderson, Giovanni Parmigiani, Hervé Avet-Loiseau, Nikhil Munshi, Mehmet Samur (2022, December). *Somatic Changes Prior to the Development of Hyperdiploidy Expose Mutation Accumulation Rate and Activated Processes in Multiple Myeloma*. 64th ASH Annual Meeting and Exposition, New Orleans, LA. https://doi.org/10.1182/blood-2022-168837

Awards

- American Society of Hematology **Abstract Achievement Award** (2022) *(awarded to 659 participants, total number of participants ~25 000)*
- International Myeloma Society **Young Investigator Award** (2022) *(awarded to 25 participants, total number of participants ~ 2000)*
- ***Summa cum laude*** jurisdiction for BSc. Life Science & Technology (2020) *(top 1 out of 100 students)*
- HOLLAND **scholarship** 2019 for exchange at University of British Columbia *(top ~10%)*
- Royal Holland Society of Sciences and Humanities (KHMW) **Young Talent Award** in the discipline Chemistry of Life (2018) *(awarded to 67 out of ~10 000 students)*
- ***Summa cum laude*** jurisdiction for 'propedeuse' (first year) of Life Science & Technology (2018) *(top 2 out of 150 students)*