



Europass Curriculum Vitae

Personal Information

First names / Surname **Thomas (Tom) Hendrikus Antonius Ederveen, PhD**

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The Netherlands

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Nationality Dutch

Year of birth 1987

Webpage (profession) <http://ederveen.science>

Linked-In profile nl.linkedin.com/in/tederveen 

Desired Employment / Occupational Field

Biomedical and/or Molecular Biology (Bioinformatics)

I see myself as a biologist applying public bioinformatics tools and approaches in order to make sense out of microbial samples from various biological sources, in the field of (medical) biology and food and nutrition. Much of my own work relates to the analysis of the human microbiome in both healthy and disease status, in order to identify desirable and undesirable bacteria respectively. In the end, by understanding these processes we hope to come up with interventions to cure diseases underlying an imbalance (dysbiosis) in the human microbiome.

Work Experience

Dates 03/01/2014 – current

Name of organisation / company **Center for Molecular and Biomolecular Informatics (CMBI), RIMLS, Radboudumc**

Department **Bacterial Genomics**

Occupation or position held Senior Scientist

Main activities and responsibilities I'm involved in various research projects primarily focusing on bacterial strain tracking, microbiome studies of (human) gut and skin, (meta)genome sequencing (i.e. 16S rRNA by Illumina, metagenomics, Shotgun sequencing), genome assembly and annotation (i.e. gene prediction), gene-trait matching and comparative genomics

Dates 10/15/2012 – 03/01/2014

Name of organisation / company **Radboud Institute for Molecular Life Sciences (RIMLS), Radboudumc**

Department **Experimental Rheumatology**

Occupation or position held Junior Scientist

Main activities and responsibilities Research project on the role of commensal intestinal microbiota in arthritis, autoimmunity and immune regulation

Education and Training

Dates	03/01/2014 – 03/28/2019
Title of qualification awarded	Doctor of Philosophy
Principal subjects and occupational skills covered	I graduated for my PhD on March 28 (2019) as a joint candidate of the CMBI (bioinformatics) and Department of Dermatology. Title: <i>On the role of host microbiota associated with health and disease - a metagenomics survey through marker-gene sequencing and genomics approaches</i> . (see Thesis digital copy)
Name and type of organisation providing education and training	Radboud University Nijmegen / Radboudumc (RIMLS Graduate School)
Dates	09/01/2009 – 07/01/2012
Title of qualification awarded	Master of Science
Principal subjects and occupational skills covered	MSc Courses: Biochemistry, Bioinformatics, Biotechnology, Cell Biology, Endocrinology, Genetics, Immunology, Medical Biology, Molecular Biology, Physiology
Name and type of organisation providing education and training	Radboud University Nijmegen – Medical Biology (Research Program)
Dates	09/01/2005 – 02/01/2010
Title of qualification awarded	Bachelor of Applied Life Sciences
Principal subjects and occupational skills covered	BSc courses: Biochemistry, Bioinformatics, Cell Biology, Immunology, Social Communicative Skills, Statistics, Microbiology, Physiology, Virology
Name and type of organisation providing education and training	HAN University – Lab Technician Education (Major Biochemistry)
Dates	09/01/1999 – 07/01/2004
Title of qualification awarded	HAVO degree (*)
Principal subjects and occupational skills covered	Profiles Nature & Technology and Nature & Health (*)
Name and type of organisation providing education and training	Maaswaal College Wijchen (*) Dutch Education System

Publications



For the most recent publications, please see resources above.

Certificates

2012	Dutch Law on Animal Experimentation (Wet op Dierproeven; WoD) Article 9 certified; course provided by the Central Animal Laboratory (CDL) Nijmegen; according to European guidelines and requirements by FELASA
2012	Dutch Radiation Law (Kernenergiewet; KeW) Radiation Expertise Level 5B certified; course provided by the Department of Occupational Health & Safety and Environmental Service of the Radboud University/Medical Centre Nijmegen; according to Dutch guidelines for the accreditation of training experts on radiation emitting devices and materials (Stcrt nr. 227)

SUPPLEMENT

Internships

Dates	09/01/2011 – 07/01/2012
Name of organisation / company	Centre for Molecular and Biomolecular Informatics (CMBI), NCMLS, UMC St Radboud
Department	Bacterial Genomics
Subject of research	<i>Comparative Genome Annotation in Prokaryotes by COMPANION</i>
Main activities	Research on the application of combining multiple automated genome annotation engines for improvement of current gene prediction in prokaryotes; analysis of genome- and sequence data; programming in Perl; manual genome annotation and curation; research into factors influencing gene prediction outcomes; bioinformatical tool development (COMPANION) for a more accurate gene annotation in prokaryotes; complete genome annotation of new (exotic) microbiological species
Dates	09/01/2010 – 06/01/2011
Name of organisation / company	Nijmegen Centre for Molecular Life Sciences (NCMLS), UMC St Radboud
Department	Molecular Biology
Subject of research	<i>Histone H3 Knock-Down System in Human U2OS</i>
Main activities	Transfection- and nucleofection experiments in human cells; siRNA and RNAi techniques; qPCR gene expression profiling; DNA sequencing; agarose gel electrophoresis; eukaryotic tissue culture; prokaryotic cell culture; PAGE- and western blot analysis; vector cloning
Dates	02/10/2009 – 07/01/2009
Name of organisation / company	Schering-Plough, Oss
Department	Department of Pharmaceutics, Section Biologicals
Subject of research	<i>Development and Feasibility of a Capillary Electrophoresis Method for Stability Monitoring of Protein Pharmaceuticals</i>
Main activities	Various applications of capillary electrophoresis: capillary gel electrophoresis, capillary iso-electric focusing and capillary zone electrophoresis; (chemical) analysis techniques such as hydrophobic interaction chromatography, ion-exchange HPLC and reversed-phase HPLC
Dates	09/01/2008 – 02/01/2009
Name of organisation / company	Intervet Schering-Plough Animal Health, Boxmeer
Department	Bacteriological Research and Development, Section Expression
Subject of research	<i>Vaccine Development for Application in the Veterinary Industry</i>
Main activities	Prokaryotic cell culture; protein expression; protein purification; DNA construct/vector development by PCR and restriction enzyme reactions; DNA sequencing; prokaryotic cell transformation; agarose gel electrophoresis; PAGE- and western blot analysis

Personal Skills and Competences

Mother tongue

Dutch

Other language

English

Self-assessment

European level (**)

Language

Understanding				Speaking				Writing	
Listening		Reading		Spoken Interaction		Spoken Production			
C2	Proficient User	C2	Proficient User	C1	Proficient User	B2	Independent User	C2	Proficient User

(**) [Common European Framework of Reference for Languages](#)

Social / organisational skills and competences

- I like working in a team and have no problem with constructive criticism;
- In my bachelor I have acquired the necessary meeting- and presentation skills.

Technical / laboratory skills and competences

- I am familiar with all basic biochemical and molecular biological techniques;
- I am familiar with basic laboratory equipment in many research fields;
- I have experience with q(RT)-PCR and conventional PCR equipment, (fluorescence) microscopy, capillary- and agarose electrophoresis (PAGE) and HPLC equipment;
- I am experienced in setting-up and maintaining various prokaryotic and eukaryotic cell- and tissue cultures;
- I have some experience with virus culture techniques in baculoviral systems;
- I am well informed about the general GLP (Good Laboratory Practice) and (Dutch) GMT/VMT (Good/Safe Microbiological Techniques) guidelines and regulation, as well as with the Dutch law on Animal Experimentation and Radiation.

Computer (Bio-IT) / software skills and competences (**extended list**)

- I have basic skills with **Linux systems** and software, Linux kernel- and server interaction;
- I have basic knowledge of **Perl and Python programming** languages;
- I know how to perform and interpret (!) basic **uni- and multivariate statistics following (big) data analysis**, such as: regular t-tests, MWU (Kruskal-Wallis test), (M)ANOVA, Wilcoxon signed-rank test, various clustering algorithms, correlation analyses such as Spearman and Pearson's, PCA and redundancy (RDA) analysis, random forest (also for modeling), multiple-testing correction methods, re-sampling methods such as bootstrapping and permutation-based testing, and many more ;
- I am familiar with the basics of the **R statistics language**, but, alternatively, also use Windows-based programs such as GraphPad Prism or Excel™ for both statistics on and visualization of the data;
- I have a lot of experience with **Windows™ systems**, software and applications and of general internet usage because of personal interests. I am an advanced user of the **Microsoft Office™ package** programs Excel™, Word™ and PowerPoint™;
- With regard to general bioinformatics, here is a list of (command-line) **bioinformatics tools** that are commonly used by me: DistMat (sequence distance calculation), FastTree (maximum-likelihood phylogenetics), Genesis (various clustering), FigTree and iTOL (phylogenetic visualization), Clustal, Kalign and MUSCLE (DNA and protein alignment), Cytoscape (network construction and visualization), orthAgo and OrthoMCL (genome orthology calculation), PEAR (sequencing read assembly), PICRUST (function prediction of complex microbiota mixtures), Primer Prospector (*in silico* PCR), Primer3 (*in silico* primer design), Prokka and RAST (automated genome annotation), Sundquist (taxonomy visualization), QIIME (16S marker-gene sequencing analysis), Canoco5 (for PCA, RDA and CCA analysis), and many, many more ;
- I can work with and maintain **Virtual Machines**, including **Docker** images;
- I know my way around basic and popular **bioinformatical DNA, RNA, genome, protein and microbiota databases**, such as: NCBI (i.e. Nucleotide, Gene, Protein, Genome, Taxonomy, etc.), KEGG Orthology (KO), KEGG Pathways, GO (Gene Ontology), UCSC (genome browser), EMBL / EBI (European Bioinformatics), ENA (sequencing European nucleotide archive), Ensembl (genome database), MG-RAST (shotgun metagenomics), PDB and UniProt (protein databases), WGS (single-colony whole genome shotgun database), RDP and SILVA (16S rRNA databases), and I know how and when to use various relevant (*web*) **applications and tools** such as NCBI (Primer) BLAST, BLAT, Clustal (Omega), IDT OligoAnalyzer, and RFSout and PhenoLink (random forest statistics) and many more ;
- I am familiar with various databases to search for **scientific literature** such as PubMed, Medline, Web of Knowledge, Scopus, ResearchGate and Google Scholar;
- I have basic knowledge of applications for **graphical design** such as Adobe Photoshop™ and Adobe Illustrator™;

Other skills and competences

In general, I consider communication to be my main asset, which is something I also usually hear back from coworkers. **I believe my background as laboratory technician is invaluable for my current focus as bioinformatician, considering the many interactions I have with research partners in the wet-lab.** Furthermore, I am a very perfectionistic person in the way that when I begin with something (profession related or not) I want to do it perfect right from the start. On a personal level, I have a broad interest in both technology and computer sciences, but also in medicine, health and biology. In my spare time I practice Bujinkan, a Japanese martial art.

Driving license

I own a Dutch driving license; Category B vehicle

Additional Information

Please contact me for any additional information required