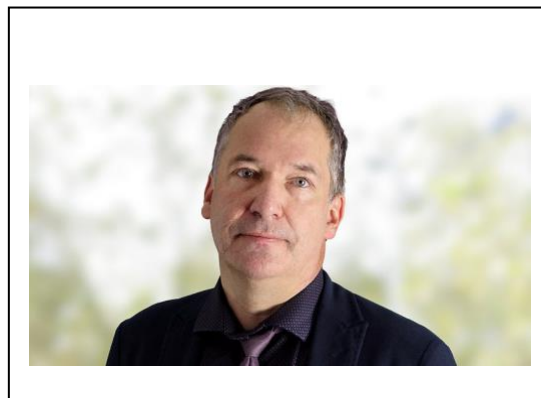


DR. MATTHIAS NEES

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Dr. MATTHIAS NEES, Ph.D.

Date of Birth: 21.05.1966; Mannheim, Germany

Nationality: German

Family: married to Susanne Nees; 2 adult children (22 und 19)

Email: neesmatthias@yahoo.com

CURRICULUM VITAE

01/2015 – now: Adjunct Professor, University of Turku, Dept. Biomedicine and Anatomy;
Coordinator of High Content Screening Laboratory (HCSLab)

- coordinator of laboratory operations, principal investigator (PI) and team leader
- physiologically relevant models for translational oncology and personalized medicine
- advanced 3D cell & tissue-culture models for early stage drug discovery, functional drug target validation (siRNA, shRNA, CRISPR/cas), in vitro chemosensitivity testing
- phenotypic & high content screening, automated image analyses for personalized medicine (AMIDA program), elucidation of MOA and functional validation of diagnostic biomarkers

09/2016 – 10/2018 Docent at SRH Fernhochschule „The Mobile University“: Bachelor Degree
Program Pharmaceutical Management & Technologies

- Preparation of teaching materials for eLearning platforms, text books, podcasts and ePubs
- continued adult education: lectures, workshops, coaching of students – online and on-site
- electronic media for teaching (Panopto, AdobeConnect, Moodle) and workshops
- coaching of bachelor students, supervision of multiple bachelor theses within industry

03/2005 – 12/2014 Group Leader and Principal Investigator, VTT Technical Research Centre of
Finland OY, Turku (Teams “Systems Biology” and “Cell Culture Model Systems”)

- cell- and tissue-based model systems (3D organoid and tissue cultures) for phenotypic high content screening, automated image analysis & machine learning; proteomics and diagnostics
- management of interdisciplinary research groups with up to 15 team members (IT, Programmers, Biologists, Medical Students, Technicians, Masters’ and PhD students)
- project management: contract research with partners in pharmaceutical industry and CROs
- public/private partnerships with industry partners mainly funded by European Community (IMI, FP7, EuroTransBio, Marie Curie Training Networks, etc.), or Business Finland (formerly TEKES)

04/2002 – 02/2005: Staff Scientist - Molecular Medicine Partnership Unit – European Molecular
Biology Laboratory EMBL & University Hospital Heidelberg

- laboratory operations and management: gene expression analyses (microarrays), personalized medicine (childhood leukaemia and sarcomas), biobanking, genetic analyses (DNA sequencing)
- biobanking: live cell freezing & genetic characterization of primary leukemic and blood cells
- proteomics: clinical protein biochemistry (MALDI-TOF, ELISA, IHC) for diagnostics and research

06/2000 – 03/2002 – Staff Scientist – Clinical Cooperation Unit German Cancer Research Center (DKFZ) and University Hospital Heidelberg, Germany

- translational oncology and personalized medicine: characterization of patient virus load and virus typing (HPV); primary cell- and tissue cultures, *in vitro* models for organotypic assays
- genome research: microarray studies, functional and diagnostic biomarkers, DNA sequencing
- clinical cooperation unit with basic research scientists, pathologists, and clinicians

06/1997 – 05/2000: Postdoctoral Fellow – National Cancer Institute NCI, National Institutes of Health NIH – Bethesda, Maryland, USA

- personalized medicine: *in vitro* model systems for disease progression, based on primary patient tissues and cell cultures, immortalization of primary cells by viral vectors & oncogenes
- retroviral vector systems for gene transfer into primary cells and cell cultures, safety level 2 & 3
- analytics and virology: new ELISA-assays for detection of virus-related biomarkers, expression of secreted cytokines, chemokines and growth factors in bodily fluids, cells, media etc.

11/1993-04/1997: PhD thesis at German Cancer Research Center (DKFZ) Heidelberg, Germany – Dept. Applied Tumour Virology/Prof. Harald zur Hausen

- translational oncology: primary cell culture models for cancer initiation and progression
- virology: characterization of viral and host oncogenes (HPV), DNA cloning & sequencing
- large scale gene expression analyses (RNA differential display, qRT-PCR, microarrays, FISH)

08/1992 - 10/1993: Master's Thesis at the University Hospital Heidelberg, Germany – Molecular Biology Laboratory of the Ear, Neck & Throat Clinics HNO

- translational oncology: analysis of mutations in primary patient materials, DNA sequencing,
- biomarker validation: immune histochemistry (IHC) and in situ hybridization on tissue sections
- virology: analysis of HPV and other tumor-associated viruses in primary cancer lesions

08/1990 – 07/1992 Scientific Research Assistant University Hospital Heidelberg/Germany

- histology and immune histochemistry: staining of primary (frozen) and paraffin-embedded tissue sections, ELISA, protein biochemistry from patient materials; biobanking

10/1987 – 07/1992: Student of Biology at the University of Heidelberg, Germany

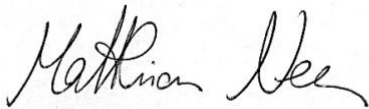
- main topics: molecular biology, genetic, physiology & anatomy; organic and biochemistry

ACADEMIC DEGREES

- 27. 08. 2010: promotion to Docent (Adjunct Professor) at University of Turku/Finland; Dept. Genetics and Natural Sciences
- 1997 – 2000: Postdoctoral Fellow; grant from Fogarty International Center; Bethesda/Maryland
- 1993 - 1997: thesis and promotion to Doctor of Philosophy PhD (Dr. rer. nat. “magna cum laude”), Heidelberg University
- 1987- 1993: Diploma or Master’s thesis at Heidelberg University, Germany
- 1985: Graduation (Baccalaureate or Abitur), Hebel Gymnasium Schwetzingen, Germany

LANGUAGE SKILLS

- German: mother tongue
- English: fluent, proficient user (C2 level mastery)
- French: intermediate level (B1 level)
- Finnish: basic level A

A handwritten signature in black ink, reading 'Matthias Nees' in a cursive script.

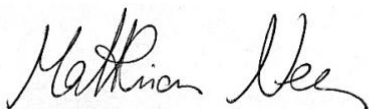
Dr. Matthias Nees

PERSONAL SKILLS AND EXPERIENCES

My CV represents long-standing experience with primary cells, tissues and cell lines – mainly for early stage drug discovery and chemosensitivity testing. Many years of project management and hands-on experience in contract and basic research, including multiple collaborations with large-scale research institutions, universities, pharmaceutical companies, or contract research organizations (CROs).

QUALIFICATIONS AND EXPERIENCE

- 15+ years of experience in English-speaking laboratories and research institutions, in Germany, USA and Finland (DKFZ, EMBL, NIH/NCI, VTT, University of Turku etc...)
- 10+ years of experience in matrix organizations (VTT) and line management, project management
- Technical proficiency: 20+ years of experience in primary cell culture methods, 2D, 3D cell- and tissue-based model systems for high content and high throughput screening (web page: hcslab.fi)
- Translational oncology: partner in several clinical cooperation units, biobanking, projects dedicated to genomics and the systems biology of cancer (Center of Excellence “Canceromics”)
- Leadership skills and personnel management: responsible for interdisciplinary research groups between 5 to 15 members (biologists, MDs, IT, technical assistants; Masters’ and PhD candidates)
- International networking: invited speaker to numerous meetings, workshops, symposia; teaching and coaching of students/co-workers in English and German language
- Financial management: budget responsibility for public and commercial projects up to 1.2 Mio €; incl. contract research with pharmaceutical and biotech companies, CROs, public-private partnerships (PPP), and public/academic funding
- Scientific Writing: numerous publications, review articles, book chapters, patents, also non-academic project reports and technical summaries, business plans, white papers and flyers etc.
- Combination of basic and applied research: coordination & partner in national & international consortia (funded e.g. by European Community like FP7, IMI, EuroTransBio, Marie Curie ETN, etc.). Public Private Partnerships with Big Pharma and CROs.



Dr. Matthias Nees

Appendices

- professional references
- peer-reviewed publications and citations
- records and certificates

REFERENCES

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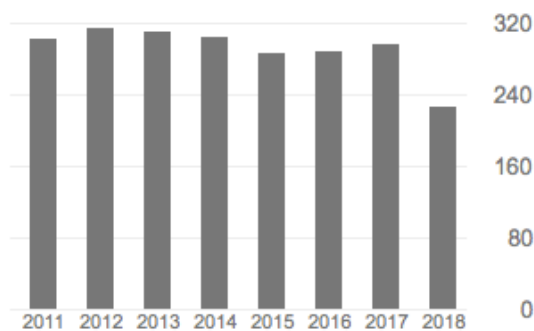
Senior Researcher at Finnish Medicines,
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Peer-reviewed Publications

Google Scholar Statistics – Citations accumulated

	Alle Artikel	Artikel seit 2013
<u>Citations</u>	3645	1715
<u>h-index</u>	28	19
<u>i10-index</u>	40	33

Google Scholar – Annual Citations



*Equal contribution first or last author

Nassa G, Salvati A, Tarallo R, Gigantino V, Alexandrova E, Memoli D, Sellitto A, Rizzo F, Malanga D, Mirante T, Morelli E, **Nees M**, Åkerfelt M, Kangaspesä S, Nyman TA, Milanese L, Giurato G, and Weiss A: Inhibition of histone methyltransferase DOT1L silences ER α gene and blocks proliferation of antiestrogen-resistant breast cancer cells. *Science Advances* 2019 (under review)

Desai D, Åkerfelt M, Prabhakar N, Toriseva M, Näreoja T, Zhang J, **Nees M**, Rosenholm JM: Factors affecting intracellular delivery and release of hydrophilic vs hydrophobic cargo from mesoporous silica nanoparticles on 2D and 3D cell cultures. *Pharmaceutics*, 2018 (accepted, in press)

Åkerfelt, M, and **Nees M**: Beyond "Simple" Biology – turning Organoids, Spheroids, and 3D Tissue Models into Physiologically Relevant High Content Assays for Drug Discovery. *Drug Target Review*, 2018 (in press)

Björk JK, Ahonen I, Mirtti T, Erickson A, Rannikko A, Bützow A, Nordling S, Lundin J, Lundin M, Sistonen L, **Nees M***, Åkerfelt M*: Increased HSF1 expression predicts shorter disease-specific survival of prostate cancer patients following radical prostatectomy. *Oncotarget*. 2018 Jul 27; 9(58): 31200–31213.

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Amaro A, Esposito AI, Gallina A, **Nees M**, Angelini G, Albini A, Pfeffer U: Validation of proposed prostate cancer biomarkers with gene expression data: a long road to travel. Cancer Metastasis Rev. 2014 Sep; 33(2-3):657-71.

Björkman M, Östling P, Härmä V, Virtanen J, Mpindi JP, Rantala J, Mirtti T, Vesterinen T, Lundin M, Sankila A, Rannikko A, Kaivanto E, Kohonen P, Kallioniemi O, **Nees M**: Systematic knockdown of epigenetic enzymes identifies a novel histone demethylase PHF8 overexpressed in prostate cancer with an impact on cell proliferation, migration and invasion. Oncogene. 2012 Jul 19;31(29):3444-56.

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identification of novel drug targets by RNAi screening of epigenetic enzymes. *Epigenomics*. 2010 Oct;2(5):683-9.

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