

# Curriculum Vitae

## Personal Information

Name: Markus Frericks  
Address: Fogdevreten 17C  
17165 Solna  
Date of Birth: 06.09.1977  
Place of Birth: Duisburg, Germany  
Gender: male  
Marital Status: unmarried  
Children: none

## Scientific Education

**Postdoc position (Karolinska-Stipendium)** 01.06.2008 ongoing

Joint postdoc position with Lorenz Poellinger  
(Department of Cell Biology) and Sven Petterssen  
(Department of Microbiology, Tumor and Cell Biology) at  
the Karolinska Institutet.

**Ph-D Thesis** 01.04 -04.2008

*"Primary and secondary signalling by the AhR-ARNT  
system: defining the tissue-specific gene expression  
signature in immune cells"*

In the institute of environmental research (IUF),  
Department Immunotoxicology  
Supervised by Prof. Dr. C. Esser

Mark: magna cum laude (1.0)

**Diploma Thesis** 2.03 – 11.03

"Transcriptional profile of T suppressor cells"

In the institute of environmental research (IUF),  
Department Immunotoxicology  
Supervised by Prof. Dr. C. Esser  
Mark: 1.3

**University studies** 10.98 - 11. 03

At the Heinrich-Heine-University, Duesseldorf  
Branch of study: Biophysics, Physical Chemistry, Plant  
Biochemistry

**University entrance qualification** 08.88 - 05.97

Abitur  
Fichte Gymnasium Krefeld  
Mark: 2.1

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## **Additional Training**

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Because of my interest in toxicology, I am taking part in the education program of the “Deutsche Gesellschaft für experimentelle und klinische Pharmakologie und Toxikologie” (DGPT). These courses and final graduation qualify for the rank of Eurotox registered toxicologists. The taken courses are listed below (p.2)

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## **Publication/Abstracts**

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A full list of publications and presentations is listed below.

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## **Foreign Laboratory Research Projects**

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One part of my PhD thesis was performed at the Michigan State University, USA, in the working group of Prof.Dr. Zacharewski.

This research project was financed by the Boehringer Ingelheim Foundation.

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## **Skills**

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Languages	German	native speaker
	English	fluent (spoken and written)
	Swedish	Basic

Good knowledge in Microsoft Powerpoint, Word and Exel. Extensive knowledge in standard bioinformatics tools used in sequence analysis, transcription profiling and promoter analysis, Basic skills in the statistical language R and SQL as well as the statistical software tool Minitab.

Additionally, experiences on graphic analyses software (Adiobe Photot Shop, Adobe Illustrator) and Linux are present.

## Toxicological training

Courses taken:

10164: Molecular cell toxicology

21.02. – 25.02.2006:

Institut für Toxikologie,

GSF - Forschungszentrum für Umwelt und Gesundheit

München-Neuherberg

10166: Basic organ toxicology and -pathology II

(Organs: Nervous system, lung, gastrointestinal tract, skin, blood and haematopoietic system)

20.06. – 24.06.2006

Klinikum der FSU Jena, Institut für Pharmakologie und Toxikologie/ Bereich Erfurt

Erfurt

10160: Basic organ toxicology und -pathology I

(Organs: Liver, kidney and urogenital system, heart, eye, endocrine system)

06.02. – 10.02.2006

Klinikum der FSU Jena, Institut für Pharmakologie und Toxikologie/ Bereich Erfurt

Erfurt

10182: Regulatory Toxicologie

18.09. - 22.09.2007

Niedersächsisches Landesgesundheitsamt (NLGA) Hannover

Hannover

10180: Xenobiotic metabolism/toxicokinetics

27.08. – 31.08.2007

Institut für Pharmakologie und Toxikologie

Universität Zürich, in Zürich

10185: Animal handling (theoretical course) and biostatistics (part I)

15.10. – 19.10.2007 Klinikum der FSU Jena, Institut für Pharmakologie und Toxikologie/ Bereich

Erfurt, in Erfurt

10017 Animal handling (practical course)

16.06. – 20.06.2008 Institut für Versuchstierkunde, Klinikum der Friedrich-Schiller-Universität

Jena, in Jena

## List of publications

- A. Temchura VV, **Frericks M**, Nacken W, Esser C  
Role of the aryl hydrocarbon receptor in thymocyte emigration in vivo.  
Eur J Immunol. 2005 Sep;35(9):2738-47

- B. Majora M, **Frericks M**, Temchura V, Reichmann G, Esser C.  
Detection of a novel population of fetal thymocytes characterized by preferential emigration and a TCR gamma delta + T cell fate after dioxin exposure  
Int Immunopharmacol. 2005 Nov;5(12): 1659-74. Epub 2005 Mar 28
- C. **Frericks M**, Temchura VV, Majora M, Stutte S, Esser C.  
Microarray analysis of the AHR system: tissue-specific flexibility in signal and target genes.  
Toxicol Appl Pharmacol. 2007 May 1;220(3):320-32. Epub 2007 Feb 6.
- D. **Frericks, M.** Meissner, M., Esser, C.  
Transcriptional signatures of immune cells in aryl hydrocarbon receptor (AHR)-proficient and AHR-deficient mice.  
Biol Chem. 2006 Sep;387(9):1219-26.
- E. **Frericks, M.**, Esser, C.  
A toolbox of novel murine house-keeping genes identified by meta-analysis of large scale gene expression profiles.  
Biochim Biophys Acta. 2008 Dec;1779(12):830-7. Epub 2008 Aug 27.
- F. **Frericks M**, Burgoon LD, Zacharewski TT, Esser C  
Promoter analysis of TCDD-inducible genes in a thymic epithelial cell line indicates the potential for cell-specific transcription factor crosstalk in the AhR response.  
Toxicol Appl Pharmacol. 2008 Oct 15;232(2):268-79. Epub 2008 Jul 19.
- G. Andreas Goergens, **Markus Frericks**, Charlotte Esser  
Arylhydrocarbon receptor activation contributes to caspase 3/7 induction by the anti-leukemic AhR-ligand curcumin, but not by quercetin or indirubin.  
(Submitted)

Abstracts:

Oral presentations:

- H. **Frericks M**, Esser C.  
NC-GED: A Normalized Comparative Gene Expression Database.  
15<sup>th</sup> Annual Meeting of the German Society for Cytometry,  
Leipzig (19-22.10.2005)
- I. **Frericks M**, Esser C.  
NC-GED: A Normalized Comparative Gene Expression Database.  
Sixth Duesseldorf Symposium on Immunotoxicology  
Biochemistry and Function of the Aryl hydrocarbon receptor and other PAS-bHLH proteins. Düsseldorf (28.30.9.2005)
- J. **Frericks M**, Esser C.  
Transcriptome analysis using NC-GED.  
47. Frühjahrstagung der DGPT,  
Mainz (4.-6.4.2006)
- K. **Frericks, M.** Meissner, M., Esser, C.  
Meta-Analysen globaler Transkriptionsprofile mit Focus auf den AhR  
48. Frühjahrstagung der DGPT,  
Mainz (13. – 15. 3.2007)

Poster presentations:

- L. **Frericks M**, Larssen C, Majora M, Esser C.  
Quantification of the tissue specific expression of the Aryl hydrocarbon receptor in C57Bl/6 mice by RT-PCR.  
44. Frühjahrstagung der DGPT, Mainz (17.-20.3.2003)
- M. **Frericks M**, Majora M, Esser C.  
Gene expression profiling of a thymocyte subset after exposure to 2,3,7,8-TCDD reveals secondary signalling events after AHR-induction.  
Molecular Research in Environmental Medicine  
1<sup>st</sup> International Conference, Düsseldorf (MRIEM 2004, 18.-20.3.)
- N. **Frericks M**, Majora M, Esser C.  
Gene expression profiling of a thymocyte subset after exposure to 2,3,7,8-TCDD reveals secondary signalling events after AHR-induction.  
45. Frühjahrstagung der DGPT, Mainz (9.-11.3.2004)
- O. Esser C, **Frericks M**, Nacken W, Temchura VV.  
Role of the Aryl hydrocarbon receptor and S100A9 in thymocyte emigration in vivo.  
ThymUS, San Juan, Puerto Rico (5.-10.10., 2004)
- P. Majora M, **Frericks M**, Temchura VV, Esser C.  
Preferential emigration of CD4<sup>+</sup>CD8<sup>-</sup>γδ<sup>+</sup> T cells from the murine thymus after ligand induced AHR activation.  
Molecular Research in Environmental Medicine  
1<sup>st</sup> International Conference, Düsseldorf (MRIEM 2004, 18.-20.3.)
- Q. **Frericks M**, Brunzel S, Temchura VV, Majora Marc, Esser C.  
Differential transcription profiling suggests greater role of the AHR in lymphoid cell development than previously thought.  
1st Joint Meeting of European National Societies of Immunology  
16<sup>th</sup> European Congress of Immunology, Paris (6.-9.9.2006)
- R. Esser C, **Frericks M**, Goergens A, Jux B.  
Transcriptional reprogramming of cells by AHR signalling: focus immune system.  
Molecular Research in Environmental Medicine  
2<sup>nd</sup> International Conference, Paris (MRIEM 2006, 7-8.9.)
- S. **Frericks M**, Burgoon L. D., Zacharewski T, Esser C  
Transcription factor crosstalk controls the transcriptional response to AhR over activation by TCDD in thymic epithelial cells.  
EUROTOX 2007, Amsterdam (7.-10.10.2007)