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# CV

## **Dr. rer. nat. Markus Hönicka**

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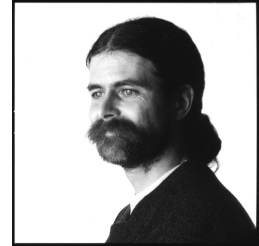
Germany

Born 22/11/1965 in Sonthofen, Germany

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## **Academic Positions**

January 2003–Present

### **Research Associate**

*Clinic for Cardiothoracic Surgery, University Hospital of Regensburg, Germany*

Directed a workgroup overseeing the work of two technicians

#### *Projects:*

- Develop a method to create small-caliber vessel grafts from human umbilical veins
- Develop a cryopreservation procedure for vessels and vessel grafts
- Investigate the effects of benzyl indazoles on human vessels

#### *Achievements:*

- Seeded human umbilical veins and decellularized scaffolds with human endothelial cells
- Developed a cryopreservation procedure for vessels (patent application in preparation)
- Analyzed the vasomotoric properties of human umbilical veins
- Elucidated mechanism of YC-1 induced contractions in human vessels

May 1999–May 2002

### **Research Instructor**

*The University of Texas Medical School at Houston, Houston, TX, USA*

#### *Projects:*

- Analyze the structure and function of soluble guanylyl cyclase
- Analyze the cellular effects of soluble guanylyl cyclase using retroviral vectors

#### *Achievements:*

- Created a series of baculoviruses containing native human as well as point-mutated or fused guanylyl cyclase subunits
- Optimized the overexpression of soluble guanylyl cyclase in Sf9 cells using a bioreactor
- Created a series of retroviral vectors carrying the soluble guanylyl cyclase subunits

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October 1995–April 1999

**Research Associate**

*Institute of Aerospace Medicine, German Aerospace Center, Cologne, Germany*

*Projects:*

- Overexpressed and purified soluble guanylyl cyclase
- Investigated the suitability of Jurkat cells for zero-g experiments

*Achievements:*

- Purified soluble guanylyl cyclase in milligram quantities with the highest specific activity at that time
- Established the overexpression of soluble guanylyl cyclase using the baculovirus/Sf9 system in a bioreactor

## Sabbaticals

November 1998–February 1999

**Research Fellow**

*Imgenex, San Diego, CA, USA*

Cloned baculoviruses carrying the subunits of human soluble guanylyl cyclase

May 1996–July 1996

**Research Fellow**

*Department of Biotechnology, Bayer AG, Wuppertal, Germany*

Established the overexpression of soluble guanylyl cyclase using the baculovirus/Sf9 system in bioreactors

## Education

January 1992–May 1995

**Dr. rer. nat. / Ph.D. in Biology**

*Ludwig-Maximilians-Universität, Munich, Germany (thesis); RWTH University Aachen, Germany (defense)*

Doctoral thesis entitled "The mechanism of nitric oxide release from organic nitrates in the vasculature"

November 1986–December 1991

**Diploma / M.S. in Biology**

*Technische Universität, Munich, Germany*

## Scientific Skills

*Tissue Engineering*

- Operate perfusion devices for the engineering and maintenance of vessel grafts
- Seed scaffolds or cryopreserved vessels with isolated cells
- Cell culture
- Cryopreserve cells and tissues

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*Vascular Pharmacology*

- Analyze vascular function in a myograph
- Analyze metabolic and paracrine function by means of ELISA and activity tests

*Biotechnology*

- Run bioreactors for the overexpression of proteins
- Clone and transfect expression vectors, e.g. for the baculovirus/Sf9 system

*Enzymology*

- Protein purification (low pressure and FPLC)
- SDS-PAGE
- Western Blot
- Radioactive and non-radioactive kinetic analyses
- Tagging overexpressed proteins by means of molecular biology

## **Computer skills**

*Install and run operating systems*

- BSD-Unix
- Linux
- Windows

*Programming and query languages*

- C
- Perl
- Lisp
- SQL

*Electronic Publishing*

- HTML, XHTML, CGI programming
- SGML and XML markup languages
- DSSSL and XSL programming
- TeX/LaTeX
- Office and imaging programs

Last modified 26/12/2007.