

# ROBERT HOFFMANN, PhD

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## RESEARCH / PROFESSIONAL EXPERIENCE

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**Post-doctoral research fellow - Massachusetts Institute of Technology (MIT), Computer Science and Artificial Intelligence Laboratory (CSAIL), Cambridge USA.**

PI: Tim Berners-Lee and Danny Weitzner. 2006 - 2008.

**Post-doctoral research fellow - Memorial Sloan-Kettering Cancer Center (MSKCC), Computational Biology Center, New York, USA.**

PI: Chris Sander. 2005 - 2008.

**Marie Curie Research Fellow - European Bioinformatics Institute (EBI), Cambridge, United Kingdom.**

PI: Rolf Apweiler and Henning Hermjakob. 4/2004.

**PhD candidate - National Center of Biotechnology (CNB), Madrid, Spain.**

PI: Alfonso Valencia and Peter Schuster. 2001 - 2005.

**IT consultant and software developer, Vienna, Austria. 1999 - 2000.**

## PUBLICATIONS

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### PEER REVIEWED, FIRST AUTHOR

- A wiki for the life sciences where authorship matters. **Hoffmann, R.** *Nature Genetics* 40, 1047 - 1051 (2008) - [www.wikigenes.org](http://www.wikigenes.org)
- Temporal patterns of genes in scientific publications. Pfeiffer, T. & **Hoffmann, R.** *PNAS* 104 (29), 12052-12056 (2007)
- Implementing the iHOP concept for navigation of biomedical literature. **Hoffmann, R.**, Valencia, A. *Bioinformatics* 21(suppl. 2), ii252-ii258 (2005)
- Text mining for metabolic pathways, signaling cascades, and protein networks. **Hoffmann, R.**, Krallinger, M., Andres, E., Tamames, J., Blaschke, C., Valencia, A. *Science STKE* 283, 21 (2005)
- HCAD, closing the gap between breakpoints and genes. **Hoffmann, R.**, Dopazo, J., Cigudosa, J.C., Valencia, A. *Nucleic Acids Research* 33, D511-3 (2005)
- A gene network for navigating the literature. **Hoffmann, R.**, Valencia, A. *Nature Genetics* 36, 664 (2004) - [www.ihop-net.org](http://www.ihop-net.org)
- Protein interaction: same network, different hubs. **Hoffmann, R.**, Valencia, A. *Trends in Genetics* 19(12), 681-683. (2003)
- Life cycles of successful genes. **Hoffmann, R.**, Valencia, A. *Trends in Genetics* 19(2), 79-81. (2003)

### PEER REVIEWED

- Introducing Meta-Services for Biomedical Information Extraction. Leitner, F. et al. *Genome Biology* 9 S6 (2008)
- iHOP web services. Fernandez, J.M., **Hoffmann, R.**, Valencia, A. *Nucleic Acid Research* 35 (2), W21-W26 (2007)
- MINT: an inferred human network based on orthology mapping of protein interactions discovered in model organisms. Perisco, M., Ceol, A., Gavrila, C., **Hoffmann, R.**, Florio, A., Cesareni, G. *BMC Bioinformatics* 6 Suppl 4:S21 (2005)

- TIS7 interacts with the mammalian SIN3 histone deacetylase complex in epithelial cells. Victor, I., Vadivelu, S. K., Wick, N., **Hoffmann, R.**, Cotten, M. et al. *Embo Journal* 21, 4621-31 (2002)
- Extracting information automatically from the biological literature. Blaschke, C., **Hoffmann, R.**, Oliveros, J.C. and Valencia, A. *Comp. Funct. Genom.* (2), 310-313. (2001)

#### BOOK CHAPTERS

- Using the iHOP Information Resource to Mine the Biomedical Literature on Genes, Proteins, and Chemical Compounds. **Hoffmann, R.** *Current Protocols in Bioinformatics*, John Wiley & Sons (2007)
- Text Mining in Genomics and Proteomics / Fundamentals of Data Mining in Genomics and Proteomics. **Hoffmann, R.** *Springer* (2006)

#### THESES

- Creation of Biological Knowledge through the Integration of Textual and Large-Scale Experimental Information, PhD Thesis. National Center of Biotechnology (CNB), Madrid / Institute for Theoretical Chemistry, University of Vienna (2005)
- The importance of short structural motifs in protein structure analysis, Master Thesis. Institute of Molecular Pathology, Boehringer Ingelheim / Institute for Theoretical Chemistry, University of Vienna (1999)

#### TUTORIALS

- Gene Expression Levels as Traits in Genetic Linkage Analysis. Moeller, S., **Hoffmann, R.** *ISMB* (2005)

#### POSTERS

- Simultaneous exploration of existing knowledge and novel experimental data. **Hoffmann, R.** Sander, C., Valencia, A. *ISMB* (2005)
- iHOP: A gene network for navigating PubMed. **Hoffmann, R.**, Valencia, A. *ISMB/ECCB* (2004)
- Transcriptional control of epithelial cell polarity and motility by TIS7. Wick, N., Victor, I., Cotten, M., Bister, M., **Hoffmann, R.**, Beyrer, A., Zatloukal, K., Huber, L. A. *IMP Recess* (2000)
- Analysis of TIS7 Effects on Epithelial Cell Morphology and Gene Expression. Wick, N., **Hoffmann, R.**, Victor, I., Cotten, M., Huber, L. A. *IMP Recess* (1999)

#### PRESENTATIONS

- Towards collaborative publishing in biomedicine. *Human Variome Project Meeting*. San Feliu de Guixols, Spain (2008)
- Implementing the iHOP concept for navigation of biomedical literature. *ECCB* (2005)
- iHOP. *E-BioSci/ORIEL Annual Workshop*. Cambridge, UK (2004)
- Navigating PubMed. *E-BioSci/ORIEL Annual Workshop*. Varenna, Italy (2003)
- Text discovery tools, Application to cancer research. *Katholieke University, Leuven, Belgium* (2002)
- Mining the Biomedical Literature. *ISMB tutorial* (2001)

#### AWARDS AND HONORS

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- Society in Science, The Branco Weiss Fellowship, ETH Zurich, Switzerland. 2006 - 2011.
- Marie Curie Research Fellowship, European Commission. 2004.
- Performance Scholarship, University of Vienna. 1997 - 1998.

## EDUCATION

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**National Center of Biotechnology (CNB) / Institute for Theoretical Chemistry, University of Vienna,**  
Madrid, Spain.

PhD in Computational Biology. 2001 - 2005.

**Institute of Molecular Pathology, Boehringer Ingelheim (IMP) / Institute for Theoretical Chemistry,**  
**University of Vienna,** Vienna, Austria

MSc, Master Thesis. 1998 - 1999.

**University of Vienna,** Vienna, Austria

MSc, Genetics. 1994 - 1998.

## AD HOC REVIEWER

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PLoS Computational Biology, Bioinformatics, BMC Bioinformatics, Nucleic Acids Research, Drug Discovery Today

## AFFILIATIONS

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International Society for Computational Biology (ISCB)

## COMPUTER SKILLS AND PROFICIENCY

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Scope	Specific tools/ languages	Level of expertise
Object oriented languages	Java C++	Expert Proficient
Data exchange	XML, XSL	Expert
Web design and coding	HTML, CSS	Expert
Scripting languages	JavaScript	Expert
Database design	SQL, PostgreSQL, MySQL, Jdbc, ORACLE	Expert Proficient
Server-side	XSP, JSP, Tomcat, Cocoon, Apache, PHP	Expert Proficient
Shell scripting	BASH	Expert
Project management	Microsoft Project	Knowledgeable
Operating system administration	Linux, Unix, Win, OS X	Expert Proficient
Statistical analysis	R, SPSS	Knowledgeable Proficient
Office applications	Word processor, Spreadsheet	Expert
Graphics and animation	Photoshop, Illustrator, Final Cut	Expert Proficient

## LANGUAGES

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**English** (fluent), **German** (native), **Spanish** (fluent), **French** (knowledgeable)