


Publications by Ralf Dahm

 Denotes key publications

Books

Ralf Dahm: "Modellorganismen" [*Model organisms*]. Birkhäuser Verlag, Basel, Switzerland (in preparation). ISBN: 3764367709.

Ralf Dahm: "Embryonen, Stammzellen und Klone" [*Embryos, stem cells and clones*]. 112 pages. Stark Verlagsgesellschaft, Freising, Germany, 2004. ISBN: 3-89449-708-4.

 **Christiane Nüsslein-Volhard and Ralf Dahm** (eds.): "Zebrafish, A Practical Approach". 303 pages. Oxford University Press, Oxford, 2002. ISBN Hardcover: 0199638098; ISBN Paperback: 019963808X.

EDITED REVIEW VOLUMES

Michael Kiebler and Ralf Dahm (eds.): "Mechanisms and Biological Significance of RNA Localisation". *Seminars in Cell and Developmental Biology*, Vol. 18. Issue 2, 285 pages, Elsevier/Academic Press, Exeter, 2007. ISSN: 1084-9521.

Book chapters


Scientific book chapters

Perez-Dominguez and **Dahm R**: Methods for Assessing Growth. In "Larval Fish Nutrition and Physiology", G. Joan Holt (ed.), Wiley-Blackwell, John Wiley & Sons, 2010. (invited chapter; submitted).

Dahm R, Zeitelhofer M, Götze B, Kiebler M and Macchi P: Visualising mRNA localisation and local protein translation in neurons. p. 293-327 in "Fluorescent Proteins" (Methods in Cell Biology, Volume 85) Kevin F. Sullivan (Serial Volume Editor), 570 pages, Elsevier/Academic Press, 2008. ISBN: 9780123725585.

Vessey JP, **Dahm R** and Macchi P: Silence please, Pumilio speaks: Translational silencing by Pumilio proteins. p. 75-106 in "RNA Binding Proteins in Development and Disease", Robert B. Denman (ed.), 214 pages, Research Signpost, Kerala, 2008. ISBN: 9788130802213.

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The intermediate filament systems in the eye lens. p. 597-624 in "Intermediate Filament Cytoskeleton" (Methods in Cell Biology, Volume 78), Bishr Omary and Pierre A. Coulombe (Serial Volume Editors), 855 pages, Elsevier/Academic Press, San Diego, CA, 2004. ISBN: 0-12-564173-7.

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Nüsslein-Volhard C, Gilmour DT, and **Dahm R**: Zebrafish as a system to study development and organogenesis. p. 1-5 in "Zebrafish, A Practical Approach", Christiane Nüsslein-Volhard and Ralf Dahm (eds.), 303 pages, Oxford University Press, Oxford, 2002. ISBN: 0199638098.

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- ▶ **Dahm R** und Nüsslein-Volhard C: Von der Eizelle zum Embryo - Entwicklung auf dem Weg ins Leben. p. 24-31 in "Wohin die Reise geht... - Lebenswissenschaft im Dialog", H.-J. Jacobsen (vdbiol-Verband Deutscher Biologen) (Hrsg.), 114 pages, Wiley-VCH, Weinheim, 2002. ISBN: 3-527-30567-X.

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“Neil Shubin: *Der Fisch in uns: Eine Reise durch die 3,5 Milliarden Jahre alte Geschichte unseres Körpers*. 281 Seiten, Fischer, Frankfurt, 2009. ISBN-13: 978-3596174423.”

and

“Sean B. Carroll: *Evo Devo: Das neue Bild der Evolution*. 380 Seiten, Berlin University Press, Berlin, 2008. ISBN-13: 978-3940432155.”

In: *BIOspektrum* (2009), Vol. 7, p. 816.

Dahm R: Review of

„Harold Varmus: *The Art and Politics of Science*. 315 Seiten, W. W. Norton & Company,

New York, 2009. ISBN-13: 978-0393061284.”
In: *BIOspektrum* (2009), Vol. 6, p. 701.

▶ **Dahm R:** Nicht die Gene machen den Unterschied. Review of
“Sean B. Carroll: *Evo Devo - Das neue Bild der Evolution*. 318 pages, Berlin University
Press, Berlin, 2008. ISBN-13: 978-3940432155.”
In: *Spektrum der Wissenschaft* (2009), Vol. 9, p. 102-103.

Dahm R: Review of
“Jochen Graw: *Genetik*. 4th edition, 845 pages, Springer-Verlag, Berlin, 2006. ISBN: 3-
540-24096-9.”
In: *biologen heute* (2006), Vol. 5/6, p. 38.

Other topics

Dahm R: Spottt den Rasfetmrou! - Rechtschreibreform wird nicht lange halten. *Saarbrücker
Zeitung*, 15. März 2004, Seite A2 [= Seite 2].

Dahm R und Schwarz U: Nachruf auf F. Alfred Anderer (4.6.1916 – 8.8.2002). In: Jahrbuch
der Max-Planck-Gesellschaft 2003. Hrsg. Generalverwaltung der Max-Planck-Gesellschaft.
K.G. Saur Verlag, München, 2003. ISBN: 3-598-24930-6.

Dahm R: Beitrag über die Forschung der Nobelpreisträgerin Christiane Nüsslein-Volhard, S.
502-504 in "Landesgeschichten - Der deutsche Südwesten von 1790 bis heute", Buch zur
Dauerausstellung im Haus der Geschichte Baden-Württemberg, 584 Seiten, Stuttgart, 2002.
ISBN: 3-933726-16-6.

Dahm R und Rasper M: Die Farbpalette des Körpers. *natur & kosmos* (April 2002),
Ausgabe 4, S. 60-66.

Presentations at scientific meetings (*Selection*)

▶ **Denotes invited oral presentations**

XVIIIth International Congress of Eye Research (ICER), 2008, Beijing, China:

Bo Q, **Dahm R**, Prescott AR, Landsbury A, Gibbons T, Liu Y and Quinlan RA: Assembly-
important domains for the beaded filament protein 2 (BFSP2).

5th Forum of European Neuroscience (FENS), 2006, Vienna, Austria:

Zeitelhofer M, **Dahm R**, Xie Y, Kiebler M and Fabian Tübing: Staufin1-dependent transport
of *Septin7* mRNA into dendrites of living hippocampal neurons.

7th International Conference on Zebrafish Development & Genetics, 2006, Madison, USA:

Schonthaler HB, **Dahm R**, Fleisch V, Harris M, Biehlmaier O, Makhankov Y, Rinner O,
Bahadori R, Schwarz H and Neuhauss SCF: The zebrafish mutant HD034 models human
multi-systemic disorders caused by aberrant vesicle trafficking.

Scientific Winter Meeting of the Schweizerische Ophthalmologische Gesellschaft
(SSO/SOG), 2005, Brunnen, Switzerland:

Schonthaler HB, Makhankov YV, Rinner O, Bahadori R, Geisler R, **Dahm R** and Neuhaus SCF: Modelling Hermansky-Pudlak Syndrome and related diseases in zebrafish.

6th International Conference on Zebrafish Development & Genetics, 2004, Madison, USA:

Avanesov A, **Dahm R**, The Tubingen 2000 Screen Consortium and Malicki, J: Mutations that affect amacrine cells in zebrafish: A new class of genetic defects in the vertebrate retina.

3rd European Conference on Zebrafish and Medaka Genetics and Development, 2003, Paris, France:

Rojas-Muñoz A, **Dahm R** and Nüsslein-Volhard C: Neural retina lamination is independent of retinal pigment epithelium development in tag zebrafish mutants. (abstract P-168)

Avanesov A, **Dahm R**, The Tubingen 2000 Screen Consortium, Malicki, J: Mutations affecting amacrine cells in the zebrafish retina. (abstract P-5)

▶ 8th Annual Meeting of the German Society for Neurogenetics (DGNG), 2002, Ulm, Germany:

Dahm R: The zebrafish as a model organism for brain and eye development.

Annual Meeting of the European Association for Vision and Eye Research (EVER), 2002, Alicante, Spain:

▶ **Dahm R**: Mutagenesis screens as a way of identifying genes involved in eye development, function and pathology. *Ophthalmic Research*, Vol. 34, S1, September 2002, p. 184.

Dahm R, Rojas-Muñoz A and Nüsslein-Volhard C: Characterization of zebrafish mutants showing abnormal RPE development leading to malpositioned and partially fused eyecups. *Ophthalmic Research*, Vol. 34, S1, September 2002, p. 52.

EMBO Fellows meeting, 2002, EMBL Heidelberg, Germany:

Dahm R, Hooge J, The Tuebingen 2000 screen consortium and Christiane Nüsslein-Volhard C: A large-scale screen for genes regulating eye development in the zebrafish.

Annual Meeting of the European Association for Vision and Eye Research (EVER), 2001, Alicante, Spain:

▶ **Dahm R**: The zebrafish as a model organism for eye development and ocular diseases. *Ophthalmic Research*, Vol. 33, S1, September 2001, p. 112.

Dahm R, Glass A, Rojas-Muñoz A, Hooge J, The Tuebingen 2000 screen consortium and Nüsslein-Volhard C: Large-scale mutagenesis screen for zebrafish eye mutants. *Ophthalmic Research*, Vol. 33, S1, September 2001, p. 68.

14th International Congress of Developmental Biology, 2001, Kyoto, Japan:

Dahm R, Hooge J, Nüsslein-Volhard C: The Tuebingen 2000 screen for zebrafish eye mutants. *Development, Growth & Differentiation*, Vol. 43 Supplement, July 2001, S49.

Annual Meeting of the European Association for Vision and Eye Research (EVER), 2000, Mallorca, Spain:

Van Marle J, **Dahm R**, Vrensen GFJM, Willekens B: Membrane architecture of zebrafish lenses. *Ophthalmic Research* (2000), Vol. 32, S2, p. 244.

▶ Annual Meeting of the German Genetic Society, 1999, Neuherberg, Germany:

Dahm R, Schwarz H, Nüsslein-Volhard C: Characterisation of normal and mutant lens development in zebrafish.

Biochemical Society (UK) Meeting, 1998, Sheffield, UK:

Dahm R, Gribbon C, Quinlan R A, Prescott A R: Susceptibility of Lens Epithelial and Fibre Cells at Different Stages of Differentiation to Apoptosis. *Biochemical Society Transactions*, 1998, S.

XIII International Congress of Eye Research, 1998, International Society for Eye Research (ISER), Paris, France:

Dahm R, Gribbon C, Quinlan R A, Prescott A R: Susceptibility to Apoptosis of Isolated Lens Cells at Different Stages of Differentiation. *Experimental Eye Research*, Vol. 67, Suppl. 1, July 1998, abstract 479.

Quinlan R A, **Dahm R**, Gribbon C and Prescott A R: Transcriptional Shutdown Precedes Lamina Reorganisation and Chromatin Breakdown in the Adult Bovine Lens. *Experimental Eye Research*, Vol. 67, Suppl. 1, July 1998, abstract 369.

Prescott AR, **Dahm R**, Procter JE, Hutcheson AM and Quinlan RA: Cytoskeletal and other Changes during the Early Phases of Fibre Cell Differentiation in the Eye Lens. *Experimental Eye Research*, Vol. 67, Suppl. 1, July 1998, abstract 687.

Association for Research in Vision and Ophthalmology (ARVO) 1998, Fort Lauderdale, USA:

Prescott A R, Procter J E, **Dahm R**, Sandilands A, Hutcheson A M, Mogensen M, & Quinlan R A: The Microtubule Cytoskeleton of the Eye Lens Undergoes Dramatic Reorganisation during Fibre Cell Differentiation.

13th European Cytoskeleton Forum, Strasbourg, France, 1998:

Procter J, **Dahm R**, Quinlan R, Mogensen M, Prescott A: The Dramatic Reorganisation of the Microtubule Cytoskeleton in Lens Fibre Cell Differentiation.

2nd Congress of the Internet Ophthalmological Society, 1997:

Dahm R, van Marle J, Prescott A R: Aqueous Humour/Lens Solute Exchange and Lens Transparency - Distribution of Gap Junctions in the Adult Bovine Lens.

Association for Research in Vision and Ophthalmology (ARVO) 1997, Fort Lauderdale, USA:

Dahm R, Gribbon C, Quinlan R A, Prescott A R: Spatial Pattern of the Organelle Loss during Fibre Cell Differentiation in the Ocular Lens - Comparison with the Apoptotic Process. *Investigative Ophthalmology & Visual Science*, 1997, Vol.38, No.4 Pt1, p.207.

European Cell Biology Organisation (ECBO) Conference 1997, Brighton, UK:

Dahm R, van Marle J, Vrensen G, Quinlan R A, & Prescott A R: Localisation of Gap Junctions in the Bovine Lens.

Basic Eye Research Conference 1997, Liverpool, UK:

Gribbon C, **Dahm R**, Prescott A R, & Quinlan R A: Changes in Organelle Morphology and Composition during Fibre Cell Differentiation in the Vertebrate Lens.

Biochemical Society (UK) Meeting, 1997, Dundee, UK:

Dahm R, Gribbon C, Prescott A R, & Quinlan, R A: Lens Cell Organelle Loss During Differentiation *versus* Stress-induced Apoptotic Changes. *Biochemical Society Transactions*, 1997, S584.

25th Scottish Microscopy Group Symposium, 1997, Dunblane, UK:

Dahm R, Gribbon C, Quinlan R A, Prescott A R: 3D Reconstructions of Degrading Organelles in Differentiating Lens Cells - A Confocal LSM Study.



European Concerted Action for the Role of Membranes in Cataract and Ageing, Annual Conference 1996, Neuherberg, Germany:

Dahm R, Prescott A R, Hutcheson A M, Quinlan R A, van Marle J, & Vrensen G: Connexin 43 is Differentially Expressed in Lens Epithelial Cells and is Located in Putative Heterotypical Gap Junctions at the Lens Epithelial-Fibre Cell Interface.

Joint European Research Meeting in Ophthalmology and Vision (JERMOV) 1995, Montpellier, France:

Prescott A R, **Dahm R**, Hutcheson A M, Quinlan R A, van Marle J, Vrensen G: Epithelium-Fibre Cell Coupling in the Eye Lens, *Vision Research*, 1995, 35: S73.

Invited scientific talks (*Selection*)

Trinity College, University of Dublin, Ireland; Department of Zoology Seminar Series: Studying gene function in zebrafish: From mutants to mechanisms. 28th October 2009.

Center for Integrative Biology (CIBIO), University of Trento, Italy: Fishy prospects: Zebrafish models for human development and disease, 24th January 2008.

School of Optometry & Vision Sciences, University of Cardiff, Wales, UK: An eye for an eye: The Tübingen 2000 screen for zebrafish eye mutants, 5th November 2003.

School of Life Sciences, University of Dundee, Scotland, UK: Fishing for eyes: A large-scale mutagenesis screen for genes regulating eye development in the zebrafish, 3rd November 2003.

Department of Cell and Organism Biology, Lund University, Sweden: Eyeing the eyes: A large-scale mutagenesis screen for genes regulating eye development in the zebrafish, 24th April 2003.

Department of Biochemistry, Institute for Developmental Research, Aichi Human Service Center, Kasugai, Aichi, Japan: The zebrafish as a model organism to study eye development, 16th September 2001.

GSF – National Research Centre for Environment and Health, Institute of Developmental Genetics, Neuherberg/Munich, Germany: An eye for an eye: The Tübingen 2000 screen for zebrafish eye mutants, 7th December 2000.

IOI, University of Amsterdam, The Netherlands: Lens Cell Differentiation – A Link with Apoptosis?, 28th April 1998.

Centre des Sciences de l'Environnement, Université de Metz, France: Exchange of Solutes between the Aqueous Humour and the Lens – The Role of Gap Junctions in the Eye Lens, 7th March 1996.

Interdisciplinary and popular-scientific lectures (*Selection*)

“Das siehst Du falsch. – Was sehen wir noch, wenn unsere Augen krank sind?“ [*You’re seeing this wrong. – How our vision changes when we have an eye disease*“], two lectures during the open day at the Carl Zeiss AG, Jena, Germany, 31st May 2008.

“Gene und Gehirn: Moderne Methoden zur Erforschung des Gehirns“ [*Genes and the Brain: Modern Methods in the Neurosciences*], lecture as part of the Brain Awareness Week 2008, Vienna, 12th March 2008.

Lecture "Getrübte Fenster zur Welt - Wie Alter & Augenleiden unsere Sicht der Welt ändern und wie sich dies im Werk berühmter Maler zeigt" [*Clouded windows to the world - How age and eye diseases affect our vision and the work of famous artists*], Vienna, 3rd March 2008.

Lecture as part of the “University meets Public” initiative 2008:

- "Getrübte Fenster zur Welt - Wie Alter & Augenleiden unsere Sicht der Welt ändern und wie sich dies im Werk berühmter Maler zeigt" [*Clouded windows to the world - How age and eye diseases affect our vision and the work of famous artists*], Vienna, 26th February 2008.

▶ Lecture "Clouded vision: The effect of eye disease on visual perception and the works of famous painters" at the Center for Zoology and Anthropology, University of Vienna, 17th January 2008.

Four lectures as part of the “University meets Public” initiative 2007:

- "Getrübte Fenster zur Welt - Wie Alter & Augenleiden unsere Sicht der Welt ändern und wie sich dies im Werk berühmter Maler zeigt" [*Clouded windows to the world - How age and eye diseases affect our vision and the work of famous artists*], Vienna, 5th March, 30th October and 6th December 2007,
- "Der Homunkulus im Spermienkopf - Wie Wissenschaftler die Entwicklung von Lebewesen erforschen" [*The homunculus in the sperm head - How scientists study the embryonic development*], Vienna, 22nd March 2007

▶ Lecture “DNA & RNA: Von der Entdeckung im Tübinger Schloss bis zum Medizin-Nobelpreis 2006” (*DNA & RNA: From the discovery in Tübingen’s castle to the 2006 Nobel Prize in Medicine*) held in the Knight’s Hall of Tübingen castle as part of the award ceremony of the German Federal Government’s “Land der Ideen” competition, 27th August 2007.

Two lectures “Kannst Du Deinen Augen immer trauen? - Optische Täuschungen und verschleierte Blicke” (*Can you always trust your eyes? - Optical illusions and clouded sight*) at the Kinderuni Wien (Children’s University Vienna) 11th & 12th July 2007.

“Getrübte Fenster zur Welt - Wie Augenleiden das Werk von Künstlern beeinflusst haben” [*Clouded windows to the world - How eye diseases affected the work of artists*], 1.5 hr. lecture at the Hilfsgemeinschaft der Blinden und Sehschwachen Österreichs [*Austrian Alliance of the Blind and Visually Impaired*], Vienna, 19th June 2007.

"Von Fischen und Fliegen lernen: Wie steuern Gene die Entwicklung des Gehirns?" [*Learning from flies and fishes: How genes control the development of the brain.*], lecture as part of the Brain Awareness Week 2007, Vienna, 12th March 2007.

▶ "Painting the world with blunted sight: How eye diseases affected the works of famous artists", University “Lucian Blaga” of Sibiu, Sibiu (European Capital of Culture 2007), Romania, 25th February 2007.

▶ "Painting the world with blunted sight: How eye diseases affected the works of famous artists", Università degli Studi dell’Insubria, Busto Arsizio - Varese, Italy, 15th November 2006

- ▶ "Clouded Lenses & Blind Spots - How Eye Diseases Affect the Works of Artists", State Art Gallery Stuttgart, 20th July 2006.

"Our Window to the World: How Vision Works", lecture as part of the Brain Awareness Week 2006, Vienna, 13th March 2006.
- ▶ "Painting the World with Different Eyes", Max-Planck-House am Hofgarten of the Max Planck Society (MPG), Munich, Germany, 17th November 2005.

Public lecture in the lecture series PERCEPTION as part of the initiative »Art and Science at the Marstallplatz« of the Bayerische Staatsoper, Max-Planck-Gesellschaft and Haus der Kunst, Munich, Germany.

Matinée discussion with Dr. Martin Hellmold (Kunsthalle Tübingen): "*Can we trust our eyes? – How ocular diseases and visual illusions affect our perception.*" at the art museum *Kunsthalle*, Tübingen, 25th July 2004.

"*Embryos, stem cells and clones – Science & Fiction*", Protestant Academy Bad Boll, 30th June 2004.

"*The fish within – Why can you learn something about humans from a fish?*" Lecture as part of the science writing workshop *Science and Fiction* in the Literaturhaus Stuttgart, 26th April 2004.
(Organiser: Claudia von See, Editor-in-Chief, *Biologie in unserer Zeit*; funded by the Robert-Bosch-Stiftung)
- ▶ "*Stem cell therapies and cloned humans – the science behind the headlines*", European School (Schola Europaea) Karlsruhe, 29th April 2003.

"*Stem Cells – Hope and Hype*", Academy of the Monastery Untermarchtal, 11th November 2002.
- ▶ "*From Fish to Physician – The zebrafish as a model for human development and disease*", at the 10th World Congress of Science Producers, Berlin, 25th October 2002.

"*Stem Cells – Therapies of the Future?*", Evangelische Akademie Bad Boll, 11th October 2002.

"*The stem cell and cloning debate from the point of view of a life scientist*" at the Center for Ethics in the Sciences and Humanities (CESH), University Tübingen, 19th June 2002.
- ▶ Duncan of Jordanstone College of Art, University of Dundee, UK: Why we can see - The basis of eye lens transparency, 24th April 1998.

Publication of scientific images

Scientific images I generated were chosen **as illustrations for books**, e.g.

- **cover picture** of the textbook *Principles of Development* by L. Wolpert et al., 3rd edition, Spektrum Akademischer Verlag, Heidelberg, 2007
- one picture in *Sustaining Life: How Human Health Depends on Biodiversity* by E. Chivan and A. Bernstein, 1st edition, Oxford University Press, Oxford/New York, 2008
- two pictures in *Kurzes Lehrbuch der Zoologie* [Brief textbook of zoology] by V. Storch and U. Welsch, 8th edition, Elsevier/Spektrum Akademischer Verlag, München, 2005

or as **cover illustrations for scientific journals**, e.g. for *The EMBO Journal* (2009), *Marine Biotechnology* (2006), *Ophthalmic Research* (1999 and 2004) and *Biologie in unserer Zeit* (2003).

Scientific pictures I took have won two **major scientific image competitions**:

- **1st prize** in the competition “**Bilder der Forschung**” (“Images of Research”) organised by the national German news magazine *Focus* and the Verband forschender Arzneimittelhersteller (*German Association of Research-Based Pharmaceutical Companies*) in 2005; prize: € 10,000.- (shared with Jürgen Berger, MPI for Developmental Biology, Tübingen)
- **1st prize** in the **Jeol (UK) Micrograph Competition** in 1997; my images also won the Life Sciences category and the Cryo Electron Microscopy category in this competition

Furthermore, 14 scientific images by me were chosen to be included in **BioMed Central (BMC)’s Biology Image Library**.
