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CURRICULUM VITAE - BIOGRAPHICAL NOTES

Birth April 18, 1940 in München, Germany

Citizenship German; since 1987 in addition Austrian

School Elementary school and Gymnasium in München; Abitur 1959 (Oskar von Miller Award)

•University Education

1959 - 1962 LMU University of Munich; studies in zoology, botany, physics, chemistry and human physiology.

Member Studienstiftung des Deutschen Volkes

1962 - 1963 University of California at Los Angeles, UCLA; studies in neurobiology and research work with Professor Th. H. BULLOCK; supported by Studienstiftung des Deutschen Volkes and a Fulbright Award

1964 - 1967 Research in sensory physiology under Professor H. AUTRUM at the Zoology Department, LMU University of Munich (bioacoustics, electrophysiology); supported by Studienstiftung des Deutschen Volkes

1967 Ph.D. (Dr. rer. nat., summa cum laude), with zoology/genetics, botany, and human physiology as the main fields of study

•Habilitation

1971 LMU University of Munich; venia legendi; Privatdozent

•Positions

1968 – 1972 Assistant Professor, Wissenschaftlicher Rat and Professor, LMU University of Munich

1974 - 1987 Professor (full) of Zoology, University of Frankfurt, FRG

1987 - 2008 Professor (full) of Zoology/Neurobiology, University of Vienna, Austria

2008 - Professor emeritus, University of Vienna, Department for Neurobiology and Developmental Biology

•Research Fields

i *Neurobiology*; biology of sensory systems (with an emphasis on mechanoreception); neuroethology; neuroanatomy.

ii *Biomechanics, biomaterials*. Invertebrates, arthropods, spiders.

●Activities Abroad (selected)

- 1979 Research at the Gatty Marine Laboratory, St.Andrews , Scotland, GB
 1982 Guest Professor, Sri Venkateswara University, Tirupati, India
 1977, 1983, 1985, 1989, 1992, 1995, 2000, 2005, 2007 Research trips to Central America and Mexico (field work mainly related to behaviour and sensory ecology of *Cupiennius* spp., Araneae,Ctenidae)
 1989, 1990, 1991, 1992, 1993, 1994 Research at the University of California at Berkeley with Professor JAC Humphrey (Dept. of Mechanical Engineering)
 1990 Visiting Professorship, Yokohama City University, Department of Biology; Japan
 1991 Research at Yokohama City University, Japan
 1991 Russel S. Springer Professor of Mechanical Engineering, University of California at Berkeley
 1992 Research trip to Cuba and Guest Professorship at Biology Department of University La Habana
 1994 Guest Professor University of Sao Paulo, Brazil; Visiting Scientist in Japan, based at Yokohama City University; start of research cooperation with University of Sao Paulo at Ribeirao Preto on the communication behavior of Stingless Bees
 1995 Guest lectures in South Africa (Universities at Grahamstown, Capetown, Johannesburg)
 1996, 1998, 2000, 2002, 2004, 2006, 2008, 2010, 2012, 2014,2016, 2018, Lectures at International Summer Schools (Odense, DK; Lund, S)
 1996, 1998, 2001, 2002, 2004, 2005, 2007 Research trip to Ribeirao Preto / Brazil (research on the communication of stingless bees)
 2000 Visit and lectures at Institutes of Chinese Academy of Science in Beijing and Shanghai,
 2003 Institute of Advanced Studies, Shanghai (China)
 2005 Visit and lectures Chinese Academy of Science in Beijing, Nanjing, Kunming (China)
 2007 Visit and lectures at Chinese Academy of Science and Universities, Beijing, Hefei
 2007 Research on bee communication in Tapachula, Mexico;
 2007 Research on bee communication in Ribeirao Preto, Brazil
 2009- Collaboration with MPI for Colloids and Interfaces (Golm, D)
 2011 Lectures at International Academy Traunkirchen (A)
 2015 Lectures at Andean school of Neuroethology, Tambopato, Puerto Maldonado (Peru)

●Miscellaneous

● Positions and Functions

- 1968 - 1974 Head, Electron Microscopy Lab. at the Zoology Institute, University of Munich
 1976 - 1977 Director, Institute of Zoology, University of Frankfurt
 1977 – 1987 Wissenschaftliches Prüfungsamt für das Lehramt an Gymnasien (for biology)
 1981 - 1983 Dean, Faculty of Biology, University of Frankfurt
 1983 – 1989 Member, board of the German Zoological Society
 1994 – 1995 Founding President, Austrian Neuroscience Association
 2004 -... Member Governing Council International Brain Research Organisation IBRO
 2006 – 2008 President, Austrian Neuroscience Association
 2008 – 2010 Member Scientific Advisory Board MPI for Metals Research, Stuttgart (D)
 Member Numerous scientific committees
 2016, 2018 Advisory Committee Gordon Research Conference “Multifunctional materials and structures: bridging the gap between biological and synthetic systems”
 2018 Scientific Committee 2nd International Youth Conference of Bionic Engineering, Odense (Denmark)
 2019 Scientific Advisory Committee 6th International Conference of Bionic Engineering-ICBE2019

● *Erasmus Network Biology - Founding Coordinator Vienna (member EuroBio).
 Studienstiftung des Deutschen Volkes – Vertrauensdozent 1976 - 2009*

● Academies, Awards

- 1959 Oskar von Miller Award, Munich
 1959 – 1967 Member, Studienstiftung des Deutschen Volkes
 1962 Fulbright Award
 1987 - Member, Wissenschaftliche Gesellschaft an der Johann Wolfgang Goethe-Universität Frankfurt
 1991 Corresponding member (elected), Austrian Academy of Science
 1995 Full member, w.M. (elected), Austrian Academy of Science
 1996 - Member (elected), Academia Europaea
 1998 - Corresponding Member (elected), Bavarian Academy of Science
 1999 - Member Deutsche Akademie der Naturforscher Leopoldina, ML (elected)
 2007 - 2011 Leopoldina: Vice Senator, chairman of Zoology section
 2000 Karl Ritter von Frisch Medal and Award, German Zoological Society
 2000 Kardinal-Innitzer Preis, Vienna
 2007 City of Vienna Award for Science and Technology
 2019 Fellow, International Society for Bionic Engineering

● Publications

About 200 peer reviewed full scientific publications (see separate list)

Books

- Barth FG (1982) *Biologie einer Begegnung. Die Partnerschaft der Insekten und Blumen*. Deutsche Verlags-Anstalt, Stuttgart (304 pp)
 (1985) American edition: *Insects and Flowers. The Biology of a Partnership*. Princeton University Press, Princeton N J (299 pp)
 (1991) dto. Paperback edition, Princeton Science Library (408 pp)
 (1997) Japanese edition: *Insects and Flowers. The Biology of a Partnership*. Yasaka Publ Comp (392 pp)
- Barth FG (ed.) (1983) *Verhandlungen der Deutschen Zoologischen Gesellschaft. Proceedings of the German Zoological Society*. G. Fischer Verlag, Stuttgart New York
 dto. 1984, 1985, 1986, 1987, 1988
- Barth FG (ed) (1985) *Neurobiology of Arachnids*. Springer Verlag, Berlin-Heidelberg-New York Tokyo (385 pp)
- Elsner N, Barth FG (eds) (1988) *Sense Organs. Interfaces between Environment and Behaviour*. Proceedings of the 16th Goettingen Neurobiology Conference. G. Thieme Verlag, Stuttgart New York (382 pp)
- Barth FG (1996) (ed) *Biology at the University of Vienna*. Vienna University Press WUV
- Barth FG (2001) *Sinne und Verhalten: aus dem Leben einer Spinne*. Springer Verlag, Berlin Heidelberg New York Tokyo (424 pp)
- Barth FG, Schmid A (eds) (2001) *Ecology of Sensing*. Springer Verlag, Berlin-Heidelberg-New York Tokyo (341 pp)
- Barth FG (2002) *A Spider's World: Senses and Behavior*. Springer-Verlag, Berlin Heidelberg New York (394 pp)
- Barth FG, Humphrey JAC, Secomb TW (eds) (2003) *Sensors and Sensing in Biology and Engineering*. Springer Verlag, Wien New York (399 pp)
- Barth FG, Humphrey JAC, Srinivasan MV (eds) (2012) *Frontiers in Sensing: From Biology to Engineering*. Springer Verlag, Wien New York (438 pp)
- Barth FG, Giampieri-Deutsch P, Klein H-D (eds) (2012) *Sensory Perception: Mind and Matter*. Springer Verlag, Wien New York (404 pp)

Film

- Barth FG (1992) *Balz und vibratorische Kommunikation der Spinne Cupiennius salei Keys. (Ctenidae)*. Film C 2318,

Österreichisches Bundesinstitut für den wissenschaftlichen Film, Wien (25 min, Farbe, Ton)
 ----- dto. (1993) English version: *Courtship and Vibratory Communication in the Spider Cupiennius salei* Keys.
 (Ctenidae)

● *Teaching*

Comparative Anatomy (lecture, laboratory)
 Introductory Zoology/Biology (lecture, seminar)
 Comparative Animal Physiology (lecture, laboratory)
 Neurobiology (laboratory, seminar)
 Seminars on various and changing topics such as
 Pollination Biology,
 The Honey Bee,
 Spider Biology,
 Biology and Physics,
 Making Sense of Senses,
 Biology of Orientation,
 Senses and Behavior,
 The Brain,
 Sensory Perception-Mind and Matter,
 and others
 Field trips/student excursions: mainly arthropods/insects
 Field trips: Marine Biology (seminar, laboratory, field work)
 Field trips: Alpine Fauna and Flora (seminar, laboratory, field work)

● *Research Students*

33 Dr. rer. nat. (Ph.D.) theses completed (see separate list)
 62 diploma (M.Sc.) theses completed (see separate list)

● *Editorial Work (selected)*

1983 - 1988 Editor in Chief, Proceedings of the German Zoological Society, Fischer
 1996 – 2021 Editor in Chief, Journal of Comparative Physiology-A, Springer
 1991 - 1996 Editorial board, Biomimetics
 1995 - 20.. Editorial Board, J. Insect Behavior, Springer
 2007 - Editorial Board, Journal of Bionic Engineering. Springer
 2018- 2022 Editorial Board, Sensors, MDPI, ISSN 1424-8220

● *International Conferences*

Organization of international conferences and symposia

1. “Sense Organs – Interfaces between Environment and Behavior” 16th Göttingen Neurobiology Conference (1988)
2. "Invertebrate Sensory Systems" (ENA, Wien 1994)
3. "Sensory Ecology" (ISN, Cambridge, UK, 1995)
4. “Mechanics of Plants, Animals and their Environment: Integrative Perspectives“ (Engineering Foundation, Santa Barbara, USA, 1998)
5. “Sensory Ecology“ (Austrian Academy of Science, Vienna, 1999)
6. “Sensors and Sensing in the Natural and Fabricated Worlds “(Engineering Foundation, NSF, Il Ciocco, Italy, 2000)
7. “New Frontiers in Neurobiology” (Vienna, 2006)
8. “Sensors and Sensing in Biology and Engineering” (Engineering Foundation, NSF, Universities of Vienna and Charlottesville, Cetraro, Italy 2008)
9. “Stingless Bees” (Symposium, International Congress of Entomology, Durban, SA, 2008)
10. “Sensory Perception – Mind and Matter” (University of Vienna, Austrian Academy of Science, Wien, 2008)
11. International “Neurobiology Summer School Vienna: From Receptor Cells to Cognition” (Vienna, 2008)
12. Karl von Frisch Lectures “Die Biologie der Sinne – ein Beitrag zur integrativen Biologie“ (six lectures, 2001)

- / 2002) - international lecture series at the *Austrian Academy of Science*
13. Karl von Frisch Lectures “Die neue Biologie der Organismen – ein Beitrag zur integrativen Biologie” (six lectures, 2005 / 2006) -- international lecture series at the *Austrian Academy of Science*
 14. Karl von Frisch Lectures “ Die neue Biologie der Organismen – ein Beitrag zur integrativen Biologie“ (six lectures, 2006 / 2007) - international lecture series at the *Austrian Academy of Science*
 15. Karl von Frisch Lectures “Forschungsfronten organischer Biologie” (six lectures, 2015 / 2016) - international lecture series at the *Austrian Academy of Science*
 16. International Kerner von Marilaun Symposium “Insects and Flowers: new views of an old partnership”. October 20, 2017 at the *Austrian Academy of Science*
 17. “Wissenschaft für Alle” – drei öffentliche Vorträge (Michael Wagner, Rupert Seidl, Friedrich G Barth) f. ÖAW: Akademie in den Bundesländern, Land Salzburg. Lofer, 8., 15. und 22. Juni 2019
 18. “Wissenschaft für Alle” – vier öffentliche Vorträge (Stefan Dötterl, Andrea Fischer, Georg Brasseur, Thomas Bugnyar) f. ÖAW: Akademie in den Bundesländern, Land Salzburg, Lofer, 18., 19., 25., 26. September 2020
 19. “Wissenschaft für Alle” – vier öffentliche Vorträge (Elisabeth Oberzaucher, Friedrich G. Barth, Ille C. Gebeshuber, Wolfgang Bösch/ Rudolf Stollberger) f. ÖAW : Akademie in den Bundesländern, Land Salzburg, Lofer , 4., 11., 17., 18. September 2021
 20. “Wissenschaft für Alle” – vier öffentliche Vorträge (Rike Stotten, Christian Köberl, Hannes Paulus, Christoph Spötl), f. ÖAW : Akademie in den Bundesländern, Land Salzburg, Lofer, 3., 4., 11., 18. Juni 2022

● *Invited / Plenary Lectures (selected)*

1967 – 1984 – many, not recorded

- 1985 Bayreuth (D); Mainz (D); Frankfurt a.M. (D); Marburg (D); Göttingen (D)
- 1986 Ulm (D); München (D); Tübingen (D); Frankfurt a.M. (D); Göttingen (D); Jerusalem (Israel); Harvard Univ, Boston (USA); Yale Univ, New Haven (USA); Princeton Univ, Princeton (USA); UC Berkeley (USA); UC Los Angeles (USA); UC San Diego (USA); UC Riverside (USA); Univ of Wash, Seattle (USA)
- 1987 Marburg (D); Wien (A)
- 1988 Festive lecture at the occasion of Prof. H Autrum’s “Dr. h.c.”, University of Regensburg (D); Plenary lecture, Neurobiologentagung Göttingen (D); Zoological Seminar, University of Giessen (D); wissenschaftliche Gesellschaft a.d. Universität Frankfurt (D); Annual Meeting/Symposium International Union of Physiol. Sciences, Baton Rouge (USA); Plenary Lecture European Arachnological Colloquium, Berlin (D); Gesellschaft f. Neue Musik, Wien (A); Naturwiss.-Mediz. Verein, Universität Innsbruck (A); Biological Seminar, University of Bern (CH); Neuroscience Seminar, Institute for Neuropharmacology, University of Vienna (A)
- 1989 Studium Generale, Universität Würzburg (D); European Neuroscience Association, Torino (I); Leningrad (SU); Göttingen (D); Department of Mechanical Engineering, University of California at Berkeley (USA); Polytechnische Gesellschaft Frankfurt am Main (D)
- 1990 Institute of Zoology, University of Zürich (CH); Institute for Comparative Ethology, ÖAW, Vienna (A); Institute for Behavioral Physiology, Seewiesen (D); Köln (D), Tucson (USA), Frankfurt am Main (D), Yokohama (J), Kyoto (J), Fukuoka (J), Sapporo (J)
- 1991 Yokohama City University (Japan); Birmingham (UK); Bayreuth (D); Erlangen (D); Nancy (F); Salzburg (A); Darmstadt (D); UC-Berkeley, Department of Mechanical Engineering CA (USA); Tucson AZ (USA)
- 1992 Pommersfelden (D); Zürich, ETH (CH); La Habana, Universidad, Dept. of Biology (Cuba); Erlangen (D); Salzburg (A); Würzburg (D); Wien (A);
- 1993 Tübingen, MPI Biol. Kybernetik (D); Saarbrücken (D); Innsbruck (A); Salzburg (A)
- 1994 Ribeirao Preto SP (Brazil); Sao Paulo (Brazil); Göttingen (D); München (D); Wien (A); Graz (A); Nara (J); Okayama (J); Tsu (J); Yokohama (J); Kanazawa (J); Yokohama (J); Stuttgart (D); Lund (S)
- 1995 Johannesburg (SA); Grahamstown (SA); Cambridge (UK); Tucson (USA)
- 1996 Berlin (D); Odense (DK); Lund (S); Göttingen (D)
- 1997 Eilat (Israel); Bonn (D); Wien (A); München (D); Edinburgh (UK)

- 1998 Santa Barbara CA (USA); Zürich (CH); Lund (S); Gozd Martuljek (SLO)
- 1999 Yokohama (J); Vienna (A); Vienna (A)
- 2000 Lewisburg-Bucknell PA (USA); Xalapa (Mexico); Beijing and Shanghai (China); Lund (S); München (D)
- 2001 Charlottesville, UVA, Department of Mechanical Engineering VA (USA); Charlottesville, UVA, Biology VA (USA); Tlaxcala, UA , UNAM , Internat'l Course (Mexico); Xalapa, Universidad de Veracruz, UA-Neuroethology (Mexico); Bonn, Internat'l Soc Neuroethology ISN (D); Seggau, Austrian Neuroscience Ass ANA (A)
- 2002 Charlottesville, UVA, Engineering, Biology VA (USA); Tsukuba, Jap. Soc. Comp. Biochem. Physiol., Plenary Lecture (Japan); Yokohama, YCU (Integrated Science) (Japan); Stuttgart, Universität, Plenary Lecture, Tag der techn. Biol. (D); Halle, Deutsche Zoolog.Gesellschaft, Annual Meeting, Plenary Lecture (D); Lund, Internat'l Course in Sensory Ecology (Sweden)
- 2003 Stuttgart, MPI für Metallforschung (D); Tirupati, Annual Conference of the Indian Society for Comparative Animal Physiology AP (India); Vellore, University, Dep't of Physiology, TN (India); Mannheim VDI Conference, Plenary Lecture (D); Shanghai, China, Institute for Advanced Studies, Chinese Academy of Sciences (China); Bonn, Plenary Lecture, Deutscher Kälte- und Klimatechnik Verein (D); Ulm Universität / Biologie (D); Wien, ORF Passwort Wissenschaft (A); Wien, University (A)
- 2004 Wien, Ministry for Innovation, Technology and Traffic (A); Graz, University (A); Erlangen, University Festvortrag Retirement O v Helversen (D); Brisbane QLD (Australia); Lund (S)
- 2005 Tapachula, Ecosur (Mexico); Nanjing, University of Aero- and Astronautics (China); Kunming, Institute of Zoology, Chinese Acad. of Science (China); Tours, University (F); Woods Hole MA (USA); Roscoff (F); Zürich (CH); Obergurgl, Austrian Neuroscience Association (A)
- 2006 Toulouse, University (F); München (D); Wien (A); Saalfelden (A); Lund (S); Aachen, RWTH (D); Wien (A); Washington DC (USA)
- 2007 San Francisco (USA); Glasgow (UK); Beijing (China); Hefei (China)
- 2008 Arlington VA (USA); Charlottesville VA (USA); Graz (A); Sant Feliu de Guixols (Spain); Taormina (Italy); Durban (SA), Wien BMVIT (A); Lund (S); Mainz (D); Cetraro (Italy)
- 2009 Boston MA (USA); Frankfurt a.M. (D); Berlin H-U (D); Arlington VA (USA); Charlottesville VA (USA), Bonn (D), Salzburg (A)
- 2010 Vienna (A); Prague (CZ); Siedlce (Poland); Lund (S); ÖAW-Vienna (A); February ORF radio- 5 broadcasts on "The senses of small animals"
- 2011 Bonn (D); Zürich (CH); Traunkirchen (A); Montenegro (Colombia)
- 2012 San Diego CA (USA); Kiel (D); Janelia Farm / Ashburn VA (USA); Konstanz (D); Lund (S); MPI Potsdam/Golm (D)
- 2013 Atlanta, Georgia Tech GA(USA); Atlanta, Georgia State Univ. GA (USA); LEOPOLDINA Lecture Halle (D); Glasgow (UK); Nanjing (China); Leoben (A); Frankfurt a.M. (D)
- 2014 Halifax (Canada); Würzburg (D); Nanjing 4 lectures (China); Boston MA (USA); Lund 2 lectures (S); Chengdu (China); Leshan (China); Mossoró RN (Brazil)
- 2015 Wien, Österr. Akad. d. Wiss. (A); Puerto Maldonado, Tambopata (Peru); München (Chin.-Dtsch. Symp. Biomimetics) (D); Festive Lecture, 125 years German Zoological Society, Graz (Festvortrag DZG) (A); Institute of Zoology, Chinese Acad. Sci., Beijing (China); Internatl. Symp. Biomimetic Engin., Beihang University Beijing (China)
- 2016 Gordon Research Conference on Multifunctional Materials and Structures Inspired by Biology, Ventura CA (USA); MPI of Colloids and Interfaces, Meeting Usedom (D); Keynote Lecture at 5th Conference of Bionic Engineering, Ningbo (China); Plenary Lecture, 1st International Symposium on Biotremology, San Michele all'Adige (Italy); International Postgraduate Course on Sensory Ecology, Lund (Sweden); Center for Biological Physics, University of California, UCLA (USA)
- 2017 Sino-German Symposium on Biomimetics, Nanjing (China)
- 2018 Invited Discussion Leader at Gordon Research Conference "Multifunctional Materials and Structures: Bridging the Gap between Biological and Synthetic Systems", Ventura CA, USA; lecture at Max-Planck-Institute of Colloids and Interfaces, Potsdam / Golm (Germany) ; two lectures at International Postgraduate Course on Sensory Ecology, Lund (Sweden); lecture at University of Kiel (Germany); invited plenary lecture at 40th anniversary conference of Japanese Society of Comparative Physiology and Biochemistry at Kobe (Japan); lecture at SOKENDAI, Hayama (Japan); lecture at Kobe University (Japan)
- 2019 Universität Rostock (D), Institut für Biowissenschaften/Allgemeine und spezielle Zoologie; ÖAW "Wissenschaft für Alle", Lofer (A); Keynote Lecture, 6th International Conference of Bionic Engineering, Changchun (China)

2021 ÖAW “Wissenschaft für Alle”, Lofer (A); DFG Rundgespräch: Perspektiven der Strömungsmechanik, TU Wien; NUAU,
Nanjing University of Aero- and Astronautics, China (per ZOOM);

●●**Family** Married to Ortrun Barth since 1967, with two children
(Natalie, born 8-26-68, and Raphael, born 7-6-71)