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## **CURRICULUM VITAE**

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**Jukka JERNVALL**

**Phone: +358-40-740-3478, Email: [jernvall@fastmail.fm](mailto:jernvall@fastmail.fm)  
<http://www.biocenter.helsinki.fi/bi/evodevo/index.shtml>**

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### **Current Positions:**

Academy Professor (Institute of Biotechnology, University of Helsinki, Finland)

Group Leader (Institute of Biotechnology, University of Helsinki, Finland)

### **Education:**

1999: Docent (Habilitation) in Evolutionary Biology, Department of Ecology and Systematics, University of Helsinki, Finland

1995: Ph.D. in Zoology, Department of Ecology and Systematics, University of Helsinki, Finland

1990: M.Sc., University of Helsinki, Finland (major: Zoology)

### **Professional Experience:**

Director of the Academy of Finland Center of Excellence (CoE) in Experimental and Computational Developmental Biology Research, 2014-2019

Academy Professor, Institute of Biotechnology, University of Helsinki, Finland, 2010–2014, 2015-2019

Professor of Evolutionary and Developmental Biology, Institute of Biotechnology, University of Helsinki, Finland, 2005–2009

Academy of Finland Senior Research Fellow & Research Group leader, Institute of Biotechnology, University of Helsinki, Finland, 2000–2005

Group Leader, Institute of Biotechnology, University of Helsinki, Finland, 2000–present

Stony Brook University, Stony Brook, NY, USA: Adjunct assistant professor 1996–99 (Dept. Anthropology), Research Professor 2005–08, Professor 2008–09 (Dept. Ecology and Evolution), Faculty 2008–11 (Interdepartmental Doctoral Program in Anthropological Sciences, IDPAS).

Academy of Finland Junior Research Fellow, Institute of Biotechnology, University of Helsinki, Finland, 1997–2000

Acting Curator of Division of Palaeontology, Finnish Museum of Natural History, University of Helsinki, 1989

### **Memberships in Scientific Committees, Boards, etc.:**

A co-organizer: Workshop on the biological challenges in morphogenesis, Mathematical Biosciences Institute, The Ohio State University, OH, USA, 2017

Panel member, European Research Council LS8 Advanced Grants, 2016

Member of the Supervisory Board, Finnish Cultural Foundation, 2016–19

Chair of Viikki Research Groups in Biosciences (VRGO), 2015–

Chair of the Biology Section, Finnish Academy of Science and Letters, 2014–

Member of the panel evaluating the Paleontological Institute and Museum at the University of Zurich, Switzerland, 2014

A guest editor of a manuscript invited by the Editorial Board, Proc. Natl. Acad. Sci. USA, 2013

Member of the editorial board of Journal of Experimental Zoology (Molecular and Developmental Evolution), 2013–

Chair of the evaluation panel of Helsinki Graduate Program in Biotechnology and Molecular Biology, 2012  
 Member of Finnish Zoological and Botanical Publishing Board, 2011–  
 Session planner and moderator, ESOF2010 (EuroScience Open Forum), Torino, Italy, 2010  
 Scientific committee member and symposium organizer, 2nd European Society for Evolutionary Developmental Biology Conference, 2008  
 Council member of European Society for Evolutionary Developmental Biology, 2006–  
 Member of the editorial board of *Evolution & Development*, 2006–  
 Member of the steering committee of the 'Towards an Integrative Biology' (TAIB) program of the International Union of Biological Sciences (IUBS), 2005–08  
 Member of the program committee for the 7th International Congress of Vertebrate Morphology, Boca Raton, FL, USA, 2003–04  
 Session organizer, Gordon Research Conference, Craniofacial morphogenesis and tissue regeneration, Ventura, CA, USA, 2004  
 Member of the Advisory Board, Neogene of the Old World (NOW) Database of fossil mammals (Univ. Helsinki), expertise: data development, 2003–

### Major Research Grants:

| Year    | Source: Project  |
|---------|--|
| 2017-20 | Jane and Aatos Erkko Foundation: Lake Saimaa Seal as a model for genome research (PI with Petri Auvinen)   |
| 2017-19 | Sigrid Juselius Foundation: Is regulation of tooth pattern and size linked by IGF1R?   |
| 2015-19 | Academy of Finland: Academy Professor research expenses (PI)   |
| 2014-19 | Academy of Finland: Centre of Excellence in Experimental and Computational Developmental Biology Research (Director, PI with Marja Mikkola, Irma Thesleff, Isaac Salazar-Ciudad, Osamu Shimmi) |
| 2013-16 | Jane and Aatos Erkko Foundation: Genomics of the Lake Saimaa Seal (PI with Petri Auvinen)  |
| 2010-14 | Academy of Finland: Academy Professor research expenses (PI)   |
| 2008-13 | Sigrid Juselius Foundation: Ectodermal organ development and regeneration (with Irma Thesleff, PI, and Marja Mikkola)  |
| 2007-10 | NSF: Losing the Edge: Senescence Schedules and Longevity in Malagasy Rain Forest Primates (with Patricia C. Wright, PI, and Laurie Godfrey)  |
| 2006-09 | Academy of Finland: On the cusp of an adaptive radiation: developmental mechanisms of rodent dental diversity (PI)   |
| 2004    | Academy of Finland: Data mining of mammalian tooth shape and gene expression: integration of three existing databases (with Mikael Fortelius, PI, and Irma Thesleff)                           |
| 2004-06 | Academy of Finland: Systems biology program: Linking developmental, computational and evolutionary biology of mammalian teeth (PI, with Irma Thesleff and Mikael Fortelius)                    |
| 2003-05 | Academy of Finland: Ecological and developmental determinants of tooth shape evolution (PI)  |
| 2003-05 | Academy of Finland: Eurasian Land Mammals in Deep Time: Environment, Climate and Evolutionary Dynamics (with Mikael Fortelius, PI)   |
| 2002-04 | European Union: Marie Curie postdoctoral fellowship (sponsor, fellow: Isaac Salazar-Ciudad)  |
| 2000-02 | Academy of Finland: Ecological and developmental determinants of tooth shape   |

- evolution (PI)
- 1997-00 Academy of Finland: Ecological and developmental determinants of tooth shape evolution (PI)
- 1997-00 Academy of Finland: Identification of genes controlling the developmental basis of tooth shape evolution (with Irma Thesleff, PI, and Mikael Fortelius)

**Awards and Honors:**

- 2016 Commander of the Order of the Lion of Finland
- 2014 Elected member of the European Molecular Biology Organization (EMBO)
- 2008 Elected member of the Finnish Society of Sciences and Letters
- 2008 Research Paper of the Year Prize, Finnish Society of Developmental Biology
- 2008 Elected member of the Finnish Academy of Science and Letters
- 2004 Science book of the year 2003 prize. The prize was granted by the Federation of Finnish Learned Societies and Finnish science publishers' league on the grounds of text book "Kehitysbiologia. Solusta yksilöksi" (in Finnish), Hannu Sariola et al.
- 2001 Research Paper of the Year Medal, Finnish Society of Developmental Biology
- 1995 Björn Kurtén Prize, Ph.D. publication award

**Invited Lectures and Workshops:** 109 conference or departmental lectures

- 2018 Workshop on Morphometrics, Morphogenesis and Mathematics, Center of Mathematical Sciences and Applications, Harvard University, Cambridge, MA, USA
- 2018 *Keynote lecture*, Gordon Research Conference, Biomineralization, New London, NH, USA
- 2018 Craniofacial Seminar Series, UC San Francisco, CA, USA
- 2018 *Keynote lecture*, Gordon Research Conference, Craniofacial morphogenesis and tissue regeneration, Il Ciocco, Barga, Italy
- 2017 2nd Biennial Meeting Pan-American Society for Evolutionary Developmental Biology, Calgary, USA
- 2017 Symposium in Evolutionary Anthropology, University of Zurich, Switzerland
- 2016 Argumenta Seminar on Evolution, University of Oulu, Oulu, Finland
- 2016 Workshop: Two Sides of the Same Coin: Mechanistic and Population-Level Perspectives on Evolution, Konrad Lorenz Institute, Klosterneuburg, Austria
- 2016 Second Saimaa ringed seal symposium, University of Eastern Finland, Joensuu, Finland
- 2016 EMBO fellows meeting, EMBL, Heidelberg, Germany
- 2016 FEED: Mammalian Ontogeny and Developmental Biology Workshop, Northeastern Ohio Medical University (NEOMED), OH, USA
- 2016 Workshop on Integrating Generic and Genetic Explanations of Biological Phenomena: Evolutionary Novelty, Minnesota Center for the Philosophy of Science, Univ. Minnesota, MN, USA
- 2016 Gordon Research Conference, Bones and Teeth, Galveston, TX, USA
- 2015 Evolution and Development of the Vertebrate dentition: A Festschrift in honour of Moya Meredith Smith, The Gordon Museum of Pathology and Life Sciences Museum at Kings College London, UK
- 2015 Evolution and Development seminar, Dept. Zoology, Univ. Cambridge, UK
- 2014 School of Biological Sciences, Monash University, Australia
- 2014 Dept. Biosystems Science and Engineering, ETH - Zurich, Basel, Switzerland
- 2014 Viikki Biocenter Monday lecture, University of Helsinki, Finland
- 2014 Evolutional Morphology Seminar, Dept. Organismal Biology and Anatomy, Univ.

- Chicago, IL, USA
- 2014 Symposium on Size and Shape, Georg-August-University Göttingen, Germany
  - 2013 Symposium 'Fossilised ontogenies and evolution', 57th Annual Meeting of the Palaeontological Association, University of Zurich, Switzerland
  - 2013 Workshop on Evolutionary, Developmental and Population Genetics, Biocenter Oulu, Oulu, Finland
  - 2013 CNRS Department Regulations, Development and Molecular Diversity, National Museum of Natural History, Paris, France
  - 2013 Symposium: Molecular Palaeobiology, Annual Meeting of the Society of Molecular Biology and Evolution, Chicago, IL, USA
  - 2013 Finnish Dental Society Apollonia Symposium, Lahti, Finland
  - 2013 European course of paleontology, École Normale Supérieure de Lyon (ENS), Lyon, France
  - 2012 Symposium: Horizon in Molecular Life Science, Norwegian Academy of Science and Letters, Oslo, Norway
  - 2012 Symposium: Imaging for Evo-Devo, The 4rd conference of the European Society for Evolutionary Developmental Biology, Lisbon, Portugal
  - 2012 Workshop on Interdisciplinary Perspectives on the Evolution and Development of the Vertebrate Head, Radcliffe Institute for Advanced Study, Harvard University, Cambridge, MA, USA
  - 2012 Workshop on dentition as a complex adaptive system, Royal College of Physicians, London, UK
  - 2011 Mittwochskolloquium - MiKo, Max Planck Institute for Developmental Biology, Tuebingen, Germany
  - 2011 Ecology and Evolutionary Biology Wednesday Seminar, Dept. Biosciences, University of Helsinki, Finland
  - 2011 European course of paleontology, École Normale Supérieure de Lyon (ENS), Lyon, France
  - 2010 Centre for Ecology and Evolution Symposium: Evolutionary Constraints, Zoological Society, London, UK
  - 2010 Workshop on the evolution of form, Konrad Lorenz Institute, Altenberg, Austria
  - 2010 Symposium: The population genetics of development, The 3rd conference of the European Society for Evolutionary Developmental Biology, Paris, France
  - 2010 Symposium: Frontiers in Organogenesis, RIKEN Center for Developmental Biology, Kobe, Japan
  - 2009 Dept. Theoretical Biology, Center for Organismal Systems Biology, University of Vienna, Wien, Austria
  - 2009 Viikki Biocenter Monday lecture, University of Helsinki, Finland
  - 2009 Craniofacial and Mesenchymal Biology Seminar Series, UC San Francisco, CA, USA
  - 2009 Primate Genomics Initiative, Dept. Biology, Duke University, Durham, NC, USA
  - 2009 Summer School on Evolutionary Developmental Biology, Istituto Veneto di Scienze Lettere ed Arti, Venice, Italy
  - 2009 Symposium: Darwin and development, in 16th International Society of Developmental Biologists Congress, UK
  - 2009 Workshop on human evodevo, Konrad Lorenz Institute, Altenberg, Austria
  - 2009 *Keynote lecture*, 85th Congress of the European Orthodontic Society, Helsinki, Finland
  - 2009 Master BioSciences: UE Europe de Paleontologie, Institute of functional genomics, École Normale Supérieure de Lyon (ENS), Lyon, France
  - 2009 Darwin 2009 lecture, University of Zürich, Zürich, Switzerland

- 2009 Biogeosciences Joint Research Unit, Univ. Bourgogne, France
- 2009 Symposium: Standing at the Crossroads: The Genetics of Morphology, in 78th Annual Meeting of the American Association of Physical Anthropologists, Chicago, IL, USA
- 2008 14th International Symposium on Dental Morphology, Greifswald, Germany
- 2008 Biomedicum Helsinki Lecture, University of Helsinki, Finland
- 2008 Annual Meeting of the Society of Molecular Biology and Evolution, Barcelona, Spain
- 2008 Symposium: Pattern and Processes of Morphological Integration in Primate and Human Evolution, in 77th Annual Meeting of the American Association of Physical Anthropologists, Columbus, OH, USA
- 2008 *Keynote lecture*, Gordon Research Conference, Craniofacial morphogenesis and tissue regeneration, Il Ciocco, Barga, Italy
- 2007 Dept. Zoology, Univ. Cambridge, UK
- 2007 Institute of Forensic Medicine, University of Helsinki, Finland
- 2007 The 9th International Conference on Tooth Morphogenesis and Differentiation, Zurich, Switzerland
- 2007 Symposium: Complexity, in 8th International Congress of Vertebrate Morphology, Paris, France
- 2007 Sigrid Juselius Symposium: Cell communication in morphogenesis, Hanasaari, Finland
- 2007 Helsinki Life Science Today, University of Helsinki, Finland
- 2006 Symposium: Vertebrate paleontology, development and evolution, in 66th Annual Meeting of Society of Vertebrate Paleontology, Ottawa, Canada
- 2006 Dept. Ecology and Evolution, SUNY at Stony Brook, Stony Brook, NY
- 2006 *Keynote lecture*, European Society for Evolutionary Developmental Biology, the first and founding meeting, Prague, Czech Republic
- 2006 Novartis Foundation Symposium: Open meeting on Tinkering: the microevolution of development, London, UK
- 2006 Novartis Foundation Symposium: Tinkering: the microevolution of development, London, UK
- 2006 Workshop: Probabilistic Modeling and Machine Learning in Structural and Systems Biology, Tuusula, Finland
- 2006 Symposium: Integrating Evolution, Development and Genomics, University of California at Berkeley, CA, USA
- 2006 Dept. of Biological Sciences, Stanford University, CA, USA
- 2006 COST meeting: Growth factors in craniofacial development and repair, Helsinki, Finland
- 2006 Dept. Organismal and Evolutionary Biology, Harvard University, Cambridge, MA, USA
- 2006 Dept. Biology, University of Oulu, Finland
- 2006 Gordon Research Conference, Craniofacial morphogenesis and tissue regeneration, Ventura, CA, USA
- 2005 6th Evolution and Development One-Day meeting, Univ. Manchester, UK
- 2005 Evolution and Genomes in Biology and Medicine, The 15th Annual BioCity Symposium, Turku, Finland
- 2005 Symposium: Diversity-abundance relationships in the fossil record, North American Paleontology Convention, Halifax, Canada
- 2005 Conference: Dental perspectives on human evolution, Dept. Human Evolution, Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany
- 2005 Univ. Museum of Zoology, Univ. Cambridge, UK
- 2005 Dept. Anthropology, George Washington University, Washington, DC, USA
- 2005 Evolution and development of the vertebrate dentition symposium, Society for Integrative and Comparative Biology, San Diego, CA, USA

- 2004 Center for Ecological and Evolutionary Synthesis (CEES), University of Oslo, Norway
- 2004 Workshop: Physics and Biology: Reduction and Complexity, University of Oslo, Norway
- 2004 Minisymposium: Evolutionary principles in cells and embryos: ELSO meeting, Nice, France
- 2004 Dept. Ecology and Evolution, SUNY at Stony Brook, Stony Brook, NY, USA
- 2004 Depts of Biological Anthropology and Biology, Duke University, Durham, NC, USA
- 2004 Dept. of Biology, University of Rochester, NY, USA
- 2004 Morphological innovations symposium, Society for Integrative and Comparative Biology, New Orleans, LO, USA
- 2003 Functional genomics workshop, Center for Ecology and Evolution, London, UK
- 2003 Gordon Research Conference, Bones and Teeth, Kimball Union, NH, USA
- 2003 Symposium on Mammalian Evolution, Celebration for Prof. William Clemens, University of California at Berkeley, CA, USA
- 2003 Sewall Wright Lecture, a guest of the doctoral students in the Committee on Evolutionary Biology, University of Chicago, IL, USA
- 2003 Biological Anthropology Wing Colloquium Series, Harvard University, Cambridge, MA, USA
- 2002 Evolution and Development One-Day meeting, Univ. Reading, UK
- 2002 Dept. Craniofacial development, King's College, London, UK
- 2002 Third Symposium of the Nordic Countries on Craniofacial Growth: From Genes to Clinics, Turku, Finland
- 2002 Altenberg Seminar in Theoretical Biology, Konrad Lorenz Institute, Austria
- 2002 Experimental Biology meetings minisymposium: Gene Expression Monitoring and 3-D Visualization, New Orleans, LO, USA
- 2002 Cornelis Wiersma Visiting Professor lecture, Dept. Biology, California Institute of Technology, Pasadena, CA, USA
- 2000 Environment and Ecosystem Dynamics of the Eurasian Neogene, Lyon, France
- 2000 Spatial Ecology Workshop on Extinction, Tvärminne, Finland
- 2000 Dept. Biology, San Jose State University, San Jose, CA, USA
- 2000 Dept. Anthropology, University of California, Davis, CA, USA
- 1999 Dept. Biology, University of Missouri, St. Louis, MO, USA
- 1999 Inst. of Human Origins and Wenner Gren Foundation workshop on Homoplasy, Columbus, Ohio, USA
- 1999 Dept. Ecology and Evolution, SUNY at Stony Brook, Stony Brook, NY, USA
- 1999 New York College of Osteopathic Medicine, New York Institute of Technology, Old Westbury, NY, USA
- 1997 The 6th International Conference on Tooth Morphogenesis and Differentiation, Göteborg, Sweden
- 1997 Dept. Biological Anthropology, Duke University, Durham, NC, USA
- 1995 10th International Symposium on Dental Morphology, Berlin, Germany
- 1994 Symposium: Teeth, from homeobox to function, Vertebrate Morphology meetings, Chicago, IL, USA

**Referee:** 64 journals (over 220 papers), 11 funding agencies, and 10 recruitment, tenure or promotion reviews

*Journals (\* = over five papers):*

Nature\*, Proceedings of the National Academy of Sciences (USA)\*, Science\*, Development\*, American Journal of Physical Anthropology\*, Archives of Oral Biology, Evolution\*, Evolution and Development\*, International Journal of Developmental Biology\*, American Naturalist,

Anatomical Record, Anatomy and Embryology, Annales Zoologici Fennici, Biological Journal of the Linnean Society, BioEssays, BMC Evolutionary Biology, Canadian Journal of Zoology, Cell & Tissue Research, Connective Tissue Research, Current Biology, Developmental Dynamics, Differentiation, European Journal of Oral Sciences, European Journal of Orthodontics, Evolutionary Anthropology, eLife, Evolutionary Ecology, Evolutionary Ecology Research, Folia Primatologica, Heredity, Historical Biology, Journal of Animal Ecology, Journal of Anatomy, Journal of Dental Research, Journal of Experimental Zoology, Journal of Human Evolution, Journal of Mammalian Evolution, Journal of Mammalogy, Journal of Morphology, Journal of Paleontology, Journal of Physiology, Journal of R. Soc. Interface, Journal of Physiology, Journal of Theoretical Biology, Journal of Vertebrate Paleontology, Journal of Zoology (London), Mechanisms of Development, Methods in Ecology and Evolution, Nature Communications, Palaeontologia Electronica, Palaeogeography Palaeoclimatology Palaeoecology, Paleobiology, Pediatric Research, PLoS Biology, PLoS Genetics, PLoS ONE, Proc. R. Soc. Lond. (Biological Sciences), Proc. R. Soc. Lond. B (Biology Letters), Science Advances, Science Signaling, Scientific Reports, Systematic Biology, Tissue & Cell, Zoologischer Anzeiger, Trends in Ecology and Evolution

*Funding agencies:*

Biotechnology and Biological Sciences Research Council UK (BBSRC), ERC, Human Frontier Science Program Organization, The Leakey Foundation, The Leverhulme Trust, NERC (UK), NSF, National Geographic Society, Swedish Research Council, Swiss National Science Foundation, The Wellcome Trust

**Students and Student Committees (Masters = 8, PhDs = 9, Postdocs = 15):**

*Ph.D. Committees (advisor):*

Aki Kallonen (2016, Univ. Helsinki, Dept. Physics, co-advisor with Keijo Hämäläinen)  
Julia Winchester (2016, Stony Brook Univ., Dept. Anthropology, co-advisor with Frederic Grine)  
Tuomas Aivelo (2015, Univ. Helsinki, Dept. Environmental sciences, co-advisor with Juha Laakkonen)  
Enni Harjunmaa *née* Penttilä (2012, Univ. Helsinki, Dept. Genetics, advisor)  
Sarah Zohdy (2012, Univ. Helsinki, Dept. Physiology, advisor)  
Pauliina Munne (2010, Univ. Helsinki, Dept. Physiology, co-advisor with Irma Thesleff)  
Elina Järvinen (2008, Univ. Helsinki, Dept. Genetics, co-advisor with Irma Thesleff)  
Jussi Eronen (2006, Univ. Helsinki, Dept. Geology, co-advisor with Mikael Fortelius)  
Soile Keränen (2000, Univ. Helsinki, Dept. Genetics, co-advisor with Irma Thesleff)

*Ph.D. Committees (external member):*

Outi Hallikas (2009, Univ. Helsinki, Dept. Genetics, reviewer)  
Elodie Renvoisé (2009, Univ. Bourgogne, France, Rapporteur-external examiner)  
Cyril Charles (2008, Univ. Poitiers, France, Rapporteur-external examiner)  
Alex van Nievelt (2002, Duke Univ., Dept Biology NC, USA, committee member)

*M.S. Committees (advisor):*

Vilma Väänänen (2018, Univ. Helsinki, Dept. Biosciences)  
Ona Saarnisalo (2018, Univ. Helsinki, Dept. Biosciences)  
Mona Christensen (2014, Univ. Helsinki, Dept. Biosciences)  
Tuomas Kankaanpää (2013, Univ. Helsinki, Dept. Biosciences)  
Ilya Plyusnin (2007, Univ. Helsinki, Dept. Physiology)  
Pauliina Munne (2006, Univ. Helsinki, Dept. Physiology)  
Enni Penttilä (2006, Univ. Helsinki, Dept. Genetics)  
Aapo Kangas (2003, Univ. Helsinki, Dept. Physiology)

**Postdoctoral Fellows:**

- 2014- Rishi Das Roy, *PhD*: CSIR-Inst. Genomics and Integrative Biology, Delhi, India
- 2014- Mia Valtonen, *PhD*: East. Fin. Univ. Joensuu, Dept. Biology
- 2012- Outi Hallikas, *PhD*: Univ. Helsinki, Finland
- 2014-18 Yoland Savriama, *PhD*: Univ. Manchester, UK
- 2010-17 Jacqueline Moustakas; *PhD*: UC Berkeley, CA, USA
- 2009-14 Elodie Renvoisé; *PhD*: Univ. Bourgogne, France
- 2008-14 Ian J. Corfe; Institute of Biotechnology, University of Helsinki
- 2009-10 Doug M. Boyer, Dept. Biol. Anthropology, Duke University, Durham, NC, USA  
(tenured)
- 2008-10 Stacey R. Tecot, Dept. Anthropology, Univ. Arizona, Tuscon, AZ, USA (tenured)
- 2008-10 Jennifer L. Verdolin, NESCent, Duke University, Durham, NC, USA
- 2005 Gregory P. Wilson, Dept. Biology, Univ. Washington, Seattle, WA, USA (tenured)
- 2003-08 Alistair R. Evans, School of Biol. Sciences, Monash Univ., Clayton, Victoria, Australia  
(tenured)
- 2003-08 Kathryn D. Kavanagh, Dept. Biology, Univ. Mass, Dartmouth, MA, USA (tenured)
- 2003 Stephen J. King, Dept. Biology, Univ. Mass, Amherst, MA, USA
- 2002-07 Isaac Salazar-Ciudad, Institute of Biotechnology, University of Helsinki



**Publications: (excluding abstracts)**

- ms. Laakkonen, J. & Jernvall, J. — The muscles of mastication and their related skull characters in the Saimaa ringed seal (*Phoca hispida saimensis*). *manuscript*.
- ms. Souza, J. F., Jeremias, F., Alaluusua, S., Sahlberg, C., Santos-Pinto, L., Jernvall, J., Sova, S. S., Cerri, P. S. & Cordeiro, R. C. L. — The effect of amoxicillin on dental enamel development in rats in vivo. *manuscript*.
- ms. Häkkinen, T. J., Sova, S. S., Corfe, I. J., Tjäderhane, L., Hannukainen, A. & Jernvall, J. — A model of enamel matrix secretion maps dentin topography to enamel surface topography. *manuscript*.

2018

92. Savriama, Y., Valtonen, M., Kammonen, J. I., Rastas, P., Smolander, O.-P., Lyyski, A., Häkkinen, T. J., Corfe, I. J., Gerber, S., Salazar-Ciudad, I., Paulin, L., Holm, L., Löytynoja, A., Auvinen, P. & Jernvall, J. — Bracketing phenotypic limits of mammalian hybridization. *Royal Society Open Science* **5**: 180903 (2018).  
<http://dx.doi.org/10.1098/rsos.180903>
91. Marin-Riera, M., Moustakas-Verho, J., Savriama, Y., Jernvall, J. & Isaac Salazar-Ciudad, I. — Differential tissue growth and cell adhesion alone drive early tooth morphogenesis: An ex vivo and in silico study. *PLoS Computational Biology* **14**: e1005981 (2018).  
<https://doi.org/10.1371/journal.pcbi.1005981>
90. Sova, S. S., Tjäderhane, L., Heikkilä, P. A. & Jernvall, J. — A microCT study of three-dimensional patterns of biomineralization in pig molars. *Frontiers in Physiology*, **9**: 71 (2018). doi: 10.3389/fphys.2018.00071
89. Aivelo, T., Medlar, A., Löytynoja, A., Laakkonen, J. & Jernvall, J. — Metabarcoding gastrointestinal nematodes in sympatric endemic and non-endemic species in Ranomafana National Park, Madagascar. *International Journal of Primatology* **39**: 49-64 (2018).

2017

88. Eronen, J. T., Zohdy, S., Evans, A. R., Tecot, S. R., Wright, P. C. & Jernvall, J. — Feeding ecology and morphology make a bamboo specialist vulnerable to climate change. *Current Biology* **27**: 3384-3389 (2017).
87. Zohdy, S., Bisanzio, D., Tecot, S. R., Wright, P. C. & Jernvall, J. — Aggression and hormones are associated with heterogeneity in parasitism and parasite dynamics in the brown mouse lemur. *Animal Behaviour* **132**: 109-119 (2017).
86. Renvoisé, E., Kavanagh, K. D., Lazzari, V., Häkkinen, T. J., Rice, R., Pantalacci, S., Salazar-Ciudad, I. & Jernvall, J. — Mechanical constraint from growing jaw facilitates mammalian dental diversity. *Proceedings of the National Academy of Sciences, USA* **114**: 9403-9408 (2017).
85. Prochazkova, M., Häkkinen, T. J., Prochazka, J., Spoutil, F., Jheon, A. H., Ahn, Y., Krumlauf, R., Jernvall, J. & Klein, O. D. — FGF signaling refines Wnt gradients to regulate the patterning of taste papillae. *Development* **144**: 2212-2221 (2017).

2016

84. Aivelo, T., Laakkonen, J. & Jernvall, J. — Population- and individual-level dynamics of the intestinal microbiota of a small primate. *Applied and Environmental Microbiology* **82**: 3537-3545 (2016).
83. Laakkonen, J. & Jernvall, J. — Macroscopic anatomy of the Saimaa ringed seal (*Phoca hispida saimensis*) lower respiratory tract. *The Anatomical Record* **299**: 538-543 (2016).

82. Evans, A. R., Daly, E. S., Catlett, K. K., Paul, K. S., King, S. J., Skinner, M. M., Nesse, H. P., Hublin, J.-J., Townsend, G. C., Schwartz, G. T. & Jernvall, J. — A simple rule governs the evolution and development of hominin tooth size. *Nature* **530**: 477-480 (2016). (published with a commentary)

2015

81. Aivelo, T., Medlar, A., Löytynoja, A., Laakkonen, J. & Jernvall, J. — Tracking year-to-year changes in intestinal nematode communities of rufous mouse lemurs (*Microcebus rufus*). *Parasitology* **142**: 1095-1107 (2015).
80. Tapaltskyan, V., Eronen, J. T., Lawing, A. M., Sharir, A., Janis, C., Jernvall, J. & Klein, O. D. — Continuously growing rodent molars result from a predictable quantitative evolutionary change over 50 million years. *Cell Reports* **11**: 673-680 (2015).
79. Vesterinen, H. M., Corfe, I. J., Sinkkonen, V., Iivanainen, A., Jernvall, J. & Laakkonen, J. — Teat morphology characterization with 3D imaging. *The Anatomical Record* **298**: 1359-1366 (2015). Published Online Nov 2014.

2014

78. Zohdy, S., Gerber, B. D., Tecot, S., Blanco, M. B., Winchester, J. M., Wright, P. C. & Jernvall, J. — Teeth, sex, and testosterone: Aging in the world's smallest primate. *PLoS ONE* **9**(10): e109528. doi:10.1371/journal.pone.0109528 (2014).
77. Harjunmaa, E., Seidel, K., Häkkinen, T., Renvoisé, E., Corfe, I. J., Kallonen, A., Zhang, Z.-Q., Evans, A. R., Mikkola, M. L., Salazar-Ciudad, I., Klein, O. D. & Jernvall, J. — Replaying evolutionary transitions from the dental fossil record. *Nature* **512**: 44-48 (2014). (published with a commentary)
76. Horvath, J. E., Ramachandran, G. L., Fedrigo, O., Nielsen, W. J., Babbitt, C. C., St. Clair, E. M., Pfefferle, L. W., Jernvall, J., Wray, G. A. & Wall, C. E. — Genetic comparisons yield insight into the evolution of enamel thickness during human evolution. *Journal of Human Evolution* **73**: 75-87 (2014).
75. Moustakas-Verho, J. E., Zimm, R., Cebra-Thomas, J., Seppälä, N. K., Kallonen, A., Mitchell, K. L., Hämäläinen, K., Salazar-Ciudad, I., Jernvall, J. & Gilbert, S. F. — The origin and loss of periodic patterning in the turtle shell. *Development* **141**: 3033-3039 (2014).
74. Brook, A. H., Jernvall, J., Smith, R. N., Hughes, T. E. & Townsend, G. C. — The dentition: the outcomes of morphogenesis leading to variations of tooth number, size and shape. *Australian Dental Journal* **59** (1 Suppl): 131-142 (2014).
73. Laakkonen, J., Kankaanpää, T., Corfe, I. J., Jernvall, J., Soveri, T., Keovichit, K. & Hugot, J.-P. — Gastrointestinal and dental morphology of herbivorous mammals: where does the Laotian Rock rat fit? *Annales Zoologici Fennici* **51**: 153-161 (2014).

2013

72. Gomes Rodrigues, H., Renaud, S., Charles, C., Le Poul, Y., Solé, F., Aguilar, J.-P., Michaux, J., Tafforeau, P., Headon, D., Jernvall, J. & Viriot, L. — Roles of dental development and adaptation in rodent evolution. *Nature Communications* **4**: 2504 doi: 10.1038/ncomms3504 (2013).
71. Salazar-Ciudad, I. & Jernvall, J. — The causality horizon and the developmental bases of morphological evolution. *Biological Theory* **8**: 286-292 (2013).

2012

70. Jernvall, J. & Thesleff, I. — Tooth shape formation and tooth renewal: Evolving with the same signals. *Development* **139**: 3487-3497 (2012).

69. Hääpä, O., Harjunmaa, E., Lindfors, P. H., Huh, S.-H., Fliniaux, I., Åberg, T., Jernvall, J., Ornitz, D. M., Mikkola, M. L. & Thesleff, I. — Ectodysplasin regulates activator-inhibitor balance in murine tooth development through Fgf20 signaling. *Development* **139**: 3189-3199 (2012).
68. Muldoon, K. M., Crowley, B. E., Godfrey, L. R., Rasoamiamanana, A., Aronson, A., Jernvall, J., Wright, P. C. & Simons, E. L. — Early Holocene fauna from a new subfossil site: A first assessment from Christmas River, south central Madagascar. *Madagascar Conservation & Development* **7**: 23-29 (2012).
67. King, S., J., Boyer, D. M., Tecot, S., Strait, S. G., Zohdy, S., Blanco, M. B., Wright, P. C. & Jernvall, J. — Lemur habitat and dental senescence in Ranomafana National Park, Madagascar. *American Journal of Physical Anthropology* **148**: 228-237 (2012).
66. Godfrey, L. R., Winchester, J. M., King, S. J., Boyer, D. M. & Jernvall, J. — Dental topography indicates ecological contraction of lemur communities. *American Journal of Physical Anthropology* **148**: 215-227 (2012).
65. Zohdy, S., Kemp, A. D., Durden, L. A., Wright, P. C. & Jernvall, J. — Mapping the social network: Tracking lice in a wild primate (*Microcebus rufus*) population to infer social contacts and vector potential. *BMC Ecology* **12**: 4 <http://www.biomedcentral.com/1472-6785/12/4> (2012).
64. Wilson, G. P., Evans, A. R., Corfe, I. J., Smits, P., Fortelius, M. & Jernvall, J. — Adaptive radiation of multituberculate mammals before the extinction of dinosaurs. *Nature* **483**: 457-460 (2012).
63. Harjunmaa, E., Kallonen, A., Voutilainen, M., Hämäläinen, K., Mikkola, M. L. & Jernvall, J. — On the difficulty of increasing dental complexity. *Nature* **483**: 324-327 (2012).
- 2011
62. Boyer, D. M., Lipman, Y., St. Clair, E., Puente, J., Patel, B. A., Funkhouser, T., Jernvall, J. & Daubechies, I. — Algorithms to automatically quantify the geometric similarity of anatomical surfaces. *Proceedings of the National Academy of Sciences, USA* **108**: 18221-18226 (2011). (published with a commentary)
61. Blatch, S., Boyer, D. M., King, S. J., Bunn, J. M., Jernvall, J. & Wright, P. C. — Changes in orientation of attritional wear facets with implications for jaw motion in a mixed longitudinal sample of *Propithecus edwardsi* from Ranomafana National Park, Madagascar. *American Journal of Physical Anthropology* **146**: 130-147 (2011).
60. Bunn, J. M., Boyer, D. M., Lipman, Y., St. Clair, E., Jernvall, J. & Daubechies, I. — Comparing Dirichlet normal surface energy of tooth crowns, a new technique of molar shape quantification for dietary inference, with previous methods in isolation and in combination. *American Journal of Physical Anthropology* **145**: 247-262 (2011).
59. Eronen, J. T., Evans, A. R., Fortelius, M. & Jernvall, J. — Genera are often better than species for detecting evolutionary change in the fossil record: A reply to Salesa et al. *Evolution* **65**: 1514-1516 (2011).
58. King, S. J., Morelli, T. L., Arrigo-Nelson, S., Ratelolahy, F. J., Godfrey, L. R., Wyatt, J., Tecot, S., Jernvall, J. & Wright, P. C. — Morphometrics and pattern of growth in wild sifakas (*Propithecus edwardsi*) at Ranomafana Park, Madagascar. *American Journal of Primatology* **73**: 155-172 (2011). Published Online Sep. 2010.
- 2010
57. Kavanagh, K. D., Haugen, T. O., Gregersen, F., Jernvall, J. & Vøllestad, L. A. — Contemporary temperature-driven divergence in a Nordic freshwater fish under conditions commonly thought to hinder adaptation. *BMC Evolutionary Biology* **10**: 350

<http://www.biomedcentral.com/1471-2148/10/350> (2010). (*published with a commentary*)

56. Munne, P. M., Felszeghy, S., Jussila, M., Suomalainen, M., Thesleff, I. & Jernvall, J. — Splitting placodes: effects of bone morphogenetic protein and Activin on the patterning and identity of mouse incisors. *Evolution and Development* **12**: 383-392 (2010).
55. Boyer, D. M., Evans, A. R. & Jernvall, J. — Evidence of dietary differentiation among late Paleocene-early Eocene plesiadapids (Mammalia, Primates). *American Journal of Physical Anthropology* **142**: 194-210 (2010). Published Online Dec 2009.
54. Skinner, M. M., Evans, A., Smith, T., Jernvall, J., Tafforeau, P., Kupczik, K., Olejniczak, A. J., Rosas, A., Radovic, J., Thakeray, J. F., Toussaint, M., & Hublin, J.-J. — Brief Communication: Contributions of enamel-dentine junction shape and enamel deposition to primate molar crown complexity. *American Journal of Physical Anthropology* **142**: 157-163 (2010).
53. Salazar-Ciudad, I. & Jernvall, J. — A computational model of teeth and the developmental origins of morphological variation. *Nature* **464**: 583-586 (2010).
52. Eronen, J. T., Evans, A. R., Fortelius, M. & Jernvall, J. — The impact of regional climate on the evolution of mammals: A case study using fossil horses. *Evolution* **64**: 398-408 (2010). Published Online Sep 2009.

2009

51. Jernvall, J. & Eronen, J. T. — Hampaiden evoluutio (Evolution of teeth, in Finnish). *Duodecim* **125**: 2017-2022 (2009).
50. Munne, P. M., Tummers, M., Järvinen, E., Thesleff, I. & Jernvall, J. — Tinkering with the inductive mesenchyme: *Sostdc1* uncovers the role of dental mesenchyme in limiting tooth induction. *Development* **136**: 393-402 (2009).

2008

49. Järvinen, E., Välimäki, K., Pummila, M., Thesleff, I. & Jernvall, J. — The taming of the shrew milk teeth. *Evolution and Development* **10**: 477-486 (2008).
48. Wright, P. C., King, S. J., Baden, A. & Jernvall, J. — Aging in wild female lemurs: Sustained fertility with increased infant mortality. In: *Primate Reproductive Aging*, S. Atsalis, S. W. Margulis & P. R. Hof (eds), Interdisciplinary Topics in Gerontology Vol. 36, Karger Press, Basel, pp. 17-28 (2008).
47. Plyusnin, I., Evans, A. R., Karme, A., Gionis, A. & Jernvall, J. — Automated 3D phenotype analysis using data mining. *PLoS ONE* **3**(3): e1742. doi:10.1371/journal.pone.0001742 (2008).
46. Jernvall, J., Gilbert, C. C. & Wright, P. C. — Peculiar tooth homologies of the greater bamboo lemur (*Prolemur = Hapalemur simus*): When is a paracone not a paracone? In: *Elwyn Simons: A Search for Origins*, J. G. Fleagle & C. C. Gilbert (eds), Springer, New York, pp. 335-342 (2008).

2007

45. Kavanagh, K. D., Evans, A. R. & Jernvall, J. — Predicting evolutionary patterns of mammalian teeth from development. *Nature* **449**: 427-432 (2007). (*published with a commentary*)
44. Jernvall, J. & Salazar-Ciudad, I. — The economy of tinkering mammalian teeth. In: *Tinkering: The Microevolution of Development*, G. Bock. & J. Goode (eds), Novartis Foundation Symposium 284, London, pp. 207-224 (2007).
43. Jernvall, J. & Salazar-Ciudad, I. — Where the genes meet the road. Review of *Biological Physics of the Developing Embryo* (G. Forgacs & S. A. Newman). *BioEssays* **29**: 607-608

(2007).

42. Evans, A. R., Wilson, G. P., Fortelius, M. & Jernvall, J. — High-level similarity of dentitions in carnivorans and rodents. *Nature* **445**: 78-81 (2007).

2006

41. Järvinen, E., Salazar-Ciudad, I., Birchmeier, W., Taketo, M. M., Jernvall, J. & Thesleff, I. — Continuous tooth generation in mouse is induced by activated epithelial Wnt/ $\beta$ -catenin signaling. *Proceedings of the National Academy of Sciences, USA* **103**: 18627-18632 (2006).
40. Klein, O. D., Minowada, G., Peterkova, R., Kangas, A., Yu, B. D., Lesot, H., Peterka, M., Jernvall, J. & Martin, G. R. — Sprouty genes control diastema tooth development via bidirectional antagonism of epithelial-mesenchymal FGF signaling. *Developmental Cell* **11**: 181-190 (2006).
39. Fortelius, M., Gionis, A., Jernvall, J. & Mannila, H. — Spectral ordering and biochronology of European fossil mammals. *Paleobiology* **32**: 206-214 (2006).
38. Evans, A. R., Fortelius, M., Jernvall, J. & Eronen, J. T. — Dental ecomorphology of extant European carnivorans. In: *Proceedings of the 13th International Symposium on Dental Morphology*, pp. 223-232 (2006).

2005

37. King, S. J., Arrigo-Nelson, S. J., Pochron, S. T., Semperebon, G. M., Godfrey, L. R., Wright, P. C. & Jernvall, J. — Dental senescence in a long-lived primate links infant survival to rainfall. *Proceedings of the National Academy of Sciences, USA* **102**: 16579-16583 (2005). (*published with a commentary*)
36. Salazar-Ciudad, I. & Jernvall, J. — Graduality and innovation in the evolution of complex phenotypes: insights from development. *Journal of Experimental Zoology Part B: Molecular and Developmental Evolution* **304B**: 619-631 (2005).
35. Kassai, Y., Munne, P., Hotta, Y., Penttilä, E., Kavanagh, K., Ohbayashi, N., Takada, S., Thesleff, I., Jernvall, J. & Itoh, N. — Regulation of mammalian tooth cusp patterning by ectodin. *Science* **309**: 2067-2070 (2005).
34. Wright, P. C., Razafindratsita, V. R., Pochron, S. T. & Jernvall, J. — The key to Madagascarfrugivores. In: *Tropical Fruits and Frugivores: The Search for Strong Interactors*, J. L. Dew & J. P. Boubli (eds), Springer, Dordrecht, pp. 121-138 (2005).

2004

33. Kangas, A. T., Evans, A. R., Thesleff, I. & Jernvall, J. — Nonindependence of mammalian dental characters. *Nature* **432**: 211-214 (2004).
32. Jernvall, J. & Fortelius, M. — Maintenance of trophic structure in fossil mammal communities: site occupancy and taxon resilience. *American Naturalist* **164**: 614-624 (2004).
31. Pispä, J., Mustonen, T., Mikkola, M. L., Kangas, A. T., Koppinen, P., Lukinmaa, P.-L., Jernvall, J. & Thesleff, I. — Tooth patterning and enamel formation can be manipulated by misexpression of TNF receptor Edar. *Developmental Dynamics* **231**: 432-440 (2004).
30. Salazar-Ciudad, I. & Jernvall, J. — How different types of pattern formation mechanisms affect the evolution of form and development. *Evolution and Development* **6**: 6-16 (2004).

2003

29. Jernvall, J., Wright, P. C., Ravoavy, F. L. & Simons, E. L. — Report on findings of subfossils at Ampoza and Ampanihy in southwestern Madagascar. *Lemur News* **8**: 21-23

(2003).

28. Sariola, H.(editor-in-chief), Frilander, M., Heino, T., Jernvall, J., Partanen, J., Sainio, K., Salminen, M. & Thesleff, I. — *Kehitysbioogia: solusta yksilöksi* (Developmental biology textbook in Finnish). Duodecim, Helsinki (2003).
27. Jernvall, J. — Speciation. In: *Key Concepts and Approaches in Evolutionary Developmental Biology*, B. K. Hall & W. M. Olson (eds), Harvard University Press, Cambridge MA, pp. 349-357 (2003).
26. Salazar-Ciudad, I., Jernvall, J. & Newman, S. A. — Mechanisms of pattern formation in development and evolution. *Development* **130**: 2027-2037 (2003).

2002

25. Fortelius, M., Eronen, J., Jernvall, J., Liu, L., Pushkina, D., Rinne, J., Tesakov, A., Vislobokova, I., Zhang, Z. & Zhou, L. — Fossil mammals resolve regional patterns of Eurasian climate change over 20 million years. *Evolutionary Ecology Research* **4**: 1005-1016 (2002).
24. Salazar-Ciudad, I. & Jernvall, J. — A gene network model accounting for development and evolution of mammalian teeth. *Proceedings of the National Academy of Sciences, USA* **99**: 8116-8120 (2002).
23. Jernvall, J. & Fortelius, M. — Common mammals drive the evolutionary increase of hypsodonty in the Neogene. *Nature* **417**: 538-540 (2002). (*published with a commentary*)

2001

22. Thesleff, I., Keränen, S. V. E. & Jernvall, J.— Enamel knots as signaling centers linking tooth morphogenesis and odontoblast differentiation. *Advances in Dental Research* **15**: 14-18 (2001).

2000

21. Jernvall, J., Keränen, S. V. E. & Thesleff, I. — Evolutionary modification of development in mammalian teeth: Quantifying gene expression patterns and topography. *Proceedings of the National Academy of Sciences, USA* **97**: 14444-14448 (2000). (*published with a commentary*)
20. Jernvall, J. & Jung, H.-S. — Genotype, phenotype, and developmental biology of molar tooth characters. *Yearbook of Physical Anthropology* **43**: 171-190 (2000).
19. Jernvall, J., Hunter, J. P. & Fortelius, M. — Trends in the evolution of molar crown types in ungulate mammals: evidence from the Northern Hemisphere. In: *Development, Function and Evolution of Teeth*, M. Teaford, M. M. Smith & M. Ferguson (eds), Cambridge University Press, pp. 269-281 (2000).
18. Jernvall, J. & Thesleff, I. — Return of lost structure in the developmental control of tooth shape. In: *Development, Function and Evolution of Teeth*, M. Teaford, M. M. Smith & M. Ferguson (eds), Cambridge University Press, pp. 13-21 (2000).
17. Jernvall, J. — Linking development with generation of novelty in mammalian teeth. *Proceedings of the National Academy of Sciences, USA* **97**: 2641-2645 (2000).
16. Jernvall, J. & Thesleff, I. — Reiterative signaling and patterning during mammalian tooth morphogenesis. *Mechanisms of Development* **92**: 19-29 (2000).

1999

15. Pispä, J., Jung, H.-S., Jernvall, J., Kettunen, P., Mustonen, T., Tabata, M. J., Kere, J. & Thesleff, I. — Cusp patterning defect in *Tabby* mouse teeth and its partial rescue by FGF. *Developmental Biology* **216**: 521-534 (1999).

14. Wright, P. C. & Jernvall, J. — The future of primate communities: a reflection of the present? In: *Primate communities*, J. G. Fleagle, C. Janson & K. Reed (eds), Cambridge University Press, pp. 295-309 (1999).
13. Keränen, S. V. E., Kettunen, P., Åberg, T., Thesleff, I. & Jernvall, J. — Gene expression patterns associated with suppression of odontogenesis in mouse and vole diastema region. *Development, Genes and Evolution* **209**: 495-506 (1999).
12. Jernvall, J. & Selänne, L. — Laser confocal microscopy and geographic information systems in the study of dental morphology. *Palaeontologia Electronica* **2**(1): 3A: 18p; [http://palaeo-electronica.org/1999\\_1/confocal/issue1\\_99.htm](http://palaeo-electronica.org/1999_1/confocal/issue1_99.htm) (1999).

1998

11. Keränen, S. V. E., Åberg, T., Kettunen, P., Thesleff, I. & Jernvall, J. — Association of developmental regulatory genes with the development of different molar tooth shapes in two species of rodents. *Development, Genes and Evolution* **208**: 477-486 (1998).
10. Jernvall, J. & Wright, P. C. — Diversity components of impending primate extinctions. *Proceedings of the National Academy of Sciences, USA* **95**: 11279-11283 (1998).
9. Jernvall, J., Åberg, T., Kettunen, P., Keränen, S. & Thesleff, I. — The life history of an embryonic signaling center: BMP-4 induces *p21* and is associated with apoptosis in the mouse tooth enamel knot. *Development* **125**: 161-169 (1998).

1997

8. Thesleff, I. & Jernvall, J. — The enamel knot: a putative signaling center regulating tooth development. *Cold Spring Harbor Symposia on Quantitative Biology* **62**: 257-267 (1997).

1996

7. Jernvall, J., Hunter, J. P. & Fortelius, M. — Molar tooth diversity, disparity, and ecology in Cenozoic ungulate radiations. *Science* **274**: 1489-1492 (1996). (*published with a commentary*)
6. Vaahtokari, A., Åberg, T., Jernvall, J., Keränen, S. & Thesleff, I. — The enamel knot as a signaling center in the developing mouse tooth. *Mechanisms of Development* **54**: 39-43 (1996).

1995

5. Hunter, J. P. & Jernvall, J. — The hypocone as a key innovation in mammalian evolution. *Proceedings of the National Academy of Sciences, USA* **92**: 10718-10722 (1995).
4. Jernvall, J. — Mammalian molar cusp patterns: Developmental mechanisms of diversity. *Acta Zoologica Fennica* **198**: 1-61 (1995).
3. Jernvall, J. — The enamel knot and the initiation of mammalian tooth cusp formation: Secondary cusps and knots. In: *Proceedings of the 10th International Symposium on Dental Morphology*, R. J., Radlanski & H., Renz (eds) Christine und Michael Brünne Gbr, Berlin, pp. 43-48 (1995).

1994

2. Jernvall, J., Kettunen, P., Karavanova, I., Martin, L. B. & Thesleff, I. — Evidence for the role of the enamel knot as a control center in mammalian tooth cusp formation: non-dividing cells express growth stimulating *Fgf-4* gene. *International Journal of Developmental Biology* **38**: 463-469 (1994).

1993

1. Nieminen, P., Vainio, S., Jernvall, J., Lukinmaa, P.-L., Lehtonen, E. & Thesleff, I. — A Chondroitin sulfate epitope in mammalian dental pulp and its developmental expression in

mouse dental papilla. *Journal of Dental Research* **72**: 1460-1472 (1993).