

CURRICULUM VITAE

Marcelo R. Sánchez-Villagra

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Born April 25, 1970, in Buenos Aires,
Argentina (Resident of Switzerland)

Office Address: Paläontologisches Institut und Museum, Universität Zürich, Karl Schmid-Strasse 4, CH-8006 Zürich, Switzerland

Education

Habilitation, University of Tübingen. July 2003. Topic: Ontogeny and phylogeny in mammals (Prof. W. Maier)

Ph.D., Duke University, Department of Biological Anthropology and Anatomy, October 1998. Dissertation Title: 'Patterns of morphological change in the ontogeny and phylogeny of the marsupial skull' (Profs. R. Kay and K. Smith)

Licenciado en Biología (B. S.) *cum Laude*, Univ.Simón Bolívar, Caracas, 5.1992.

Academic Positions

Professor of Palaeobiology, University of Zürich (6. 2019 to date)

Associate Professor of Palaeobiology, University of Zürich (2. 2013-5.2019)

Director, Palaeontological Inst. & Museum UZH (8.2017 to date)

Interim Director, Palaeontological Inst. & Museum UZH (1.8.2013-31.1.2014)

Assistant Professor of Palaeontology, University of Zürich (2007-2012)

Adjunct Professor of Palaeontology, Erdwissenschaften, ETH Zürich (2009 to date)

Researcher (Curator equivalent in the USA), Evolutionary Developmental Palaeobiology, Department of Palaeontology, The Natural History Museum, London (5.2004-11 2006)

Adjunct Lecturer (Privatdozent), Lehrstuhl Zoologie, Universität Tübingen, Germany (7.2003 – 11.2006)

Junior Lecturer (Wissenschaftlicher Assistent), Lehrstuhl Zoologie, Universität Tübingen, Germany (11.1998 - 7.2003)

Teaching Assistant, Department of Biological Anthropology and Anatomy, Duke University, USA (9.1993-10.1998)

Research Assistant, Paleobiology Collection, Museo de Ciencias Naturales de la Universidad Simón Bolívar, Caracas (1-7.1991)

Honorary Academic Positions and Awards

2003-to date 'Research Associate', Section of Mammals, Carnegie Museum of Natural History, Pittsburgh

2005-2013 'Visiting researcher', RIKEN Center of Developmental Biology, Kobe

- 2003- 2006 'Museum Associate in Mammalogy', Natural History Museum of Los Angeles County
- 2003 'Fritz-Frank-Förderpreis' - Prize of German Society of Mammalogy
- 1997 Honorable Mention, Predoctoral Fellowship. Soc. Vertebrate Paleontology
- 1996 Best Student Paper Prize, Division of History and Philosophy of Biology, Society of Integrative and Comparative Biology
- 1992 'Antonio José de Sucre' Award 1992, Venezuelan Government for academic excellence (Scholarship to cover all costs of Ph.D. study at Duke University)
- 1991 'Bryan Patterson Award' 1990-1991 of the Society of Vertebrate Paleontology

Teaching Experience

- As Course Coordinator and Main Instructor (Zürich, in German):
 Biologie, Grundkurs Biodiversität BIO 121 – 12 Vorlesungen über alle Chordata (2009-2013, 2015-2023)
- As Main Instructor (Zürich, in German and English):
 Blockkurs – Evolutionsmorphologie von Wirbeltieren (2007-2023)
 Palaeontological Excursion in Switzerland (3 weeks, Nov. 2020, March 2021)
 Palaeontological Excursion to Chile (2 weeks, Jan. 2018)
 Palaeontological Excursion to Argentina (2 weeks, Sept. 2014)
 Palaeontological Excursion to Venezuela (2 weeks, Feb. 2011; Nov. 2013)
 BIO 280: Animal Variation under Domestication (2019, 2021)
 Seminar 'Evolutionary Biology and the Social Sciences' (2014)
 Summer Internships in Palaeobiology (2013-2017)
 1-Tag Exkursion Tessin, Breggia Park: Wirbeltierpalaeontologie (2017)
 Research practical, BIO 780 (2015-2017)
- As Co-Instructor (Zürich, in German and English):
 Blockkurs – Palaeobiology of Vertebrates (2009-2022)
 BUSS Summer school of life sciences, Zürich (2013, 2014, 2016)
 BIO 591 Seminar: Paläobiologie der Säugetiere (2008, 2012, 2016, 2018)
 BIO 395: Concepts in Evolutionary Biology (2016, 2018)
 BIO 554: Topics in Evolutionary Biology, Graduate Programme (2010-2016)
 Biologie, Grundkurs Biodiversität und Evolution – 2 Vorlesungen (2007, 2008)
 2-Tägige Exkursion: Wirbeltierpalaeontologie Süddeutschlands (2009, 2010, 2012, 2016)
- As Co-Instructor (University College London):
 Lectures and Practical: Mammalian Evolution (2005)
- As Co-Instructor (London, Imperial College):
 Lectures and Practicals: Vertebrate Palaeontology and Evolution (2005)
- As Main Instructor (Tübingen, in German):
 'Großpraktikum' (Main Zoology Course, including lab):
 Hemichordata (Spring 1999, 2000, 2001, 2002)
 Tunicata (Spring 2000)
 Amphibians (Summer 2002)

Turtles (Summer 2005)

Mammals (Fall 1999, 2000, 2001, 2002, 2003, 2004, Spring 2001, 2002, 2003)

‘Praktikum’

Introduction to the methods of phylogenetic reconstruction - morphological and molecular data (Fall 2002, 2003, 2004, 2005)

Seminars:

Evolution of Tetrapods (Fall 2003)

Phylogeny of mammals (Fall 1999, Spring 2001, 2002, 2003)

Research on mammalian evolution (Spring 2000)

‘Exkursionen’

Zoological Excursion (full day) to the Wilhelma Zoo, Stuttgart (Spring 1999-Fall 2003)

Palaeontological Excursion (full day) to the Löwentor Museum, Stuttgart (Fall 2003)

As Teaching Assistant (USA, in English): Human Anatomy (Fall 1994, 1996), Human Evolution (Spring 1995), Intro. to Biol. Anthropol. and Anatomy (Fall 1995), Primate Anatomy (Spring 1996), and Human Gross Anatomy for medical students (Fall 1996, 1997).

Co-director of special course (Cuba, in Spanish): Workshop in Systematics (1998). Organized by the Center for Biodiversity of the American Museum of Natural History (with Drs. Ross MacPhee and Inés Horovitz). One-week intense course with labs.

Grants Obtained

More than US\$5.000 (grants of junior lab members not listed)

2022 Swiss National Fond: ‘An experimental study of morphological changes in the initial phase of the domestication process’ (CHF 381’630)

2022 Swiss National Fond, Spirit: ‘South American Pleistocene Megafaunal Diversification and Extinction – An Evaluation of the Historical Roth collection in Zurich’ (CHF 243’936)

2021 Swiss National Fond, AGORA (Science communication): ‘Chicken: queen of the dinosaurs’ CRARP3_205799 (CHF 38’000)

2019 Lehrkredit, Universität Zürich ‘A synergy of web-based, digital and traditional approaches to communicate concepts on evolution’ (CHF 27’136)

2017 Stiftung für wissenschaftliche Forschung an der Universität Zürich, ‘The origin of morphological diversity in chicken domestication as model for evolution – a developmental and comparative perspective on Swiss and Japanese breeds (CHF 14’039)

2017 Swiss National Fond, ‘The developmental bases of variation in mammalian domestication: comparative ontogenetic and experimental approaches’ (CHF 600’000).

- 2015 National Geographic Society Committee for Research and Exploration, PI: Dr. Edwin Cadena; Co-PI Sánchez-Villagra, Scheyer. Giant Turtles from the Miocene of Venezuela (USD 15'000)
- 2015 EPFL Leading House - Swiss Bilateral Programmes, Seed Money Grant 2015 Latinamerica 'Morphological diversity and growth in cattle and horse domestication: The Vaca Nata and the Falabella from Argentina' (CHF 15,550)
- 2015 Swiss National Fond, International Short Visit 'Testing for competition or ecological replacement in extinct carnivore faunas' (Invitee: Dr. Analía Forasiepi, CONICIT; CHF 10,530)
- 2014 Swiss National Fond, R'Equipe: 'A new high-resolution Computed Tomography facility for Paleobiological and Anthropological Research at the University of Zürich' (co-PI: Prof. C. Zollikofer; CHF 165,000)
- 2014 Swiss National Fond, AGORA (Science communication): 'A new Museum exhibit on Evolution: The Diversity of Crocodiles and their ancestors in geological time' (CHF 163,755)
- 2013 Swiss National Fondm, 'Postnatal development and the generation of morphological and life history diversity in mammalian evolution: a study of heterochrony, modularity and bone histology in extant and extinct forms': 3 years, 3 x PhD positions and technical position (CHF 598,148)
- 2012 Cogito Stiftung, Symposium 'Evolutionary Biology and the Human/Social Sciences' (CHF 30,000)
- 2011 Swiss National Fond, SINERGIA (co-PIs: Walter Salzburger, Heinz Furrer): 'Pattern and process in evolutionary radiations of fossil and living actinopterygian fishes' (CHF 945'097, 2/3 of which were for Zürich)
- 2010 Swiss National Fond: 'Heterochrony and modularity in mammalian evolution: An examination of the developmental bases of adaptive radiations in three clade-pairs' (CHF 411,151)
- 2009 Leverhulme grant for 2 years postdoctoral position (Co-PI, PI: R. J. Asher, Univ. Cambridge, UK): 'Evolution in developmental sequences in basal placental mammals'. (CHF 280,000)
- 2009 Swiss National Fond (enlargement of on-going project): 'Heterochrony and modularity in the rodent skeleton: Testing the developmental bases of adaptive radiations in mammalian evolution' (1 year) (CHF 108'564)
- 2007 Swiss National Fond: 'Skeletal heterochronies in mammals and the marsupial-placental dichotomy' (3 years) (CHF 260,000)
- 2007 FAN-Zürcher Universitätsverein: 'Skeletal heterochronies in living reptiles and in fossils from the UNESCO site of Monte San Giorgio, Ticino', 2 years (CHF 100,000)
- 2007 Grant from National Geographic Society, USA: 'The Oligocene to Miocene Marine and Terrestrial Biota of Northern Venezuela' (co-Investigator; Project leader: Dr. Kenneth Johnson, Natural History Museum, London) (CHF 14,500)

Pre-Zürich:

- 2006 Grant from the Palaeontology Research Fund, Natural History Museum, London: 'The Oligocene to Miocene Marine and Terrestrial Biota of Northern Venezuela' (co-PI: Dr. Kenneth Johnson)
- 2004 Grant from National Geographic Society, USA (Main investigator): 'Fossil vertebrates from the Oligocene and Miocene of Venezuela.'
- 2003 Grant from Government of Baden-Württemberg, Germany: 'Funktionelle Anatomie und Phylogenie des Vestibularorgans bei Marsupialia, mit Hilfe hochauflösender Computer-Tomographie'
- 2001 Grant from Government of Baden-Württemberg, Germany: 'Mittelkänozoische Fossilien aus einer wenig bekannten Wüstenregion in Nordwest-Venezuela'
- 2001 Deutsche Forschungsgemeinschaft, Research Grant (2 years): 'A comprehensive morphological analysis of higher level relationships of marsupial mammals'
- 2001 National Geographic Society, Committee of Research and Exploration Grant (Main investigator): 'Middle Cenozoic fossils from unexplored areas in Northwestern Venezuela'
- 1999 Grant from Government of Baden-Württemberg, Germany: 'Computergestützte dreidimensionale Rekonstruktion embryonaler Strukturen von Wirbeltieren' (with Dr. Sven Gemballa).
- 1997 Grant to support workshop in systematics in Cuba, 1998. Center for Biodiversity of the American Museum of Natural History (with Drs. Ross MacPhee and Inés Horovitz)
- 1997 German Academic Exchange Program (DAAD), Grant to support research stay in Germany (4 months)

Less than US\$ 5.000

- 2023 Alumni UZH. Support for hosting the 96th German Mammalogical Society Congress in Zurich, August 2023.
- 2021 Congressi Stefano Franscini, Workshop 'The South American Ethnosphere: Human Diversity in Time and Space', with C. Barbieri and T. Bartoletti. Monte Verità, August 2021.
- 2019 Latinoamerica Zentru Zürich, Support for special event on South American Biodiversity, 18. Oct. 2019
- 2008 Palaeontological Association, Support for organisation of Symposium 'Fossilised Ontogenies' at the II Meeting of the European Society for Evolutionary Developmental Biology, Ghent, August 2008
- 2006 Percy Sladen Memorial Fund, Linnean Society, to support palaeontological fieldwork in Venezuela, May-June 2006
- 2006 SYNTHESIS grant from the European Union, to support research at the Naturkunde Museum in Berlin, July 2006

2006 RIKEN, Center for Developmental Biology, Kobe (Japan), Research Visit Grant, April 2006
2005 RIKEN, Center for Developmental Biology, Kobe (Japan), Research Visit Grant, August 2005
2004 Kyoto University Foundation (Japan), Research Visit Grant, August 2004.
2003 High Lat-Research Visit Grant, Swedish Museum of Natural History, Stockholm.
2002 Research Study Grant, Natural History Museum of Los Angeles County, USA
2001 Deutsche Forschungsgemeinschaft, Grant to support trip to a Congress in USA
2000 Jurassic Foundation (with Dr. Fernando Novas), Grant to support study of early ornithischian from Venezuela
1999 Deutsche Forschungsgemeinschaft, Grant to support research trip to USA
1996 LASPAU (Academic Programs for the Americas) Trustees' Fund Award
1995 Collection Study Grant, American Museum of Natural History
1994 Tinker Field Research Fellowship, Duke University USA

Fieldwork Experience

Expedition leader in palaeontological expeditions to Venezuela (at least once a year 2023, 2020, 2019, 2010-2017, 2001-2008, 1999, 1995, 1993, 1991)
Expedition co-leader in palaeontological expedition to the Swiss Alps, Schesaplana, Graubünden (2008)
Crew member in palaeontological expeditions to Argentina (2014), Bolivia (1992, 1994), Colombia (1992, 2014), Egypt (1995), Cuba (1998), Venezuela (1989-90)
Crew member in BIOMA / Universidad Simón Bolívar biodiversity expedition, collection of bats and small mammals from Southern Venezuela (2/1990)
Investigator in behavioural ecology of howler monkeys, PI Dr. T. Pope (Univ. of Florida), Hato El Frío, Venezuelan Llanos (7-9/'91; 7-8/'93)

Language Skills

English, German, Spanish: read, write, and speak fluently
French: read and speak with difficulties

Invited Talks (Seminar series, featured speaker, plenary and outreach talks)

Invited Talk, Naturhistorische Gesellschaft Nürnberg, 'Neue Erkenntnisse über die Domestikation der Tiere: Über Hunde, Hühner, Kühe und Goldfische', 3. July 2023.
Invited Talk, 'Cultural macroevolution in South America and beyond: of domestic dogs, blowguns and cranial modifications'. Workshop 'New Results and Methods in Reconstructing Population History', 31 Januar 2023.
Outreach Museum Talk, 'Sprechende Schildkröten? Die Evolution der vokalen Kommunikation unter Wirbeltieren', Zoologisches Museum der Universität Zürich, 29 January 2023.
Invited Talk, 'About Goldfish and other topics'. Festschrift W. Maier, Tübingen, 'Vergleichende Entwicklungsgeschichte'. 17 December 2022.

Invited Talk, 'On chicken, goldfish and cattle – morphological diversification in the domestication process'. Emerging biology lectures, hosted by Naturalis Museum and University of Leiden. 31 October 2022.

Invited Talk, 'Dogs in South America: A biological, cultural evolutionary and ethnological survey' (held with Dr. Cristiana Bertazoni), Department of Anthropology, University of Zurich, 24.10.2022.

Invited Talk, 'Animal Domestication in the South American Ethnosphere', Collegium Helveticum, Zurich, Symposium: 'Poetics, Ethics and Politics of the Forest in Latina American Cultures' 23. June 23 2022.

Invited Talk, 'Domestikation als Startvorteil? Wie domestizierte Arten zu Invasoren werden', Ringvorlesung Biologie und Erkrankungen der Wildtiere, VetSuisse 16 Nov. 2021

Invited Talk, 'Another way of being: a cultural evolution perspective on the South American Ethnosphere', Metamorfosis y Perspectivismo en la Narrativa Latinoamericana, Romanisches Seminar UZH Special Symposium, 12 Nov. 2021

Invited Talk, 'Neue Erkenntnisse über die Domestikation der Tiere: Über Hunde, Hühner, Kühe und Goldfische', Freunde des BIOTOPIA – Naturkundemuseum Bayern, Munich, 3. Nov. 2021

Invited Talk, 'Claude Lévi-Strauss: The Humanist Forerunner of Cultural Evolution Studies', Tristes Tropiques: Readings of Lévi-Strauss, 14 Oct. 2021

Invited Talk, 'Cultural macroevolution in South America: Three case studies', Workshop 'The South American Ethnosphere: Human Diversity in Time and Space', Congressi Stefano Franscini, Monte Verità, August 2021

Invited Talk, Main Plenary, 'XVI Encontro Nacional de Biologia Evolutiva' (online) Portugal. 16-17. Dec. 2020.

Invited Talk, 'The logic of domesticated animals: a developmental look at them and ourselves' University of Geneva, 28. Feb. 2020.

Invited Talk, 'El continente Americano como experimento: flautas, animales domesticados y fósiles como testimonios de evolución biológica y cultural' Instituto del Patrimonio Cultural, Caracas Nov. 2019.

Invited Talk, 'Domestikation und der Ursprung von *Homo sapiens*' Mammut Museum Niederweningen, 19. May 2019.

Invited Talk 'Hilgendorf Talk', 'Modern human origins and 'self-domestication'- an organismal and developmental perspective', Universität Tübingen, January 2019.

Invited Talk, 'On dog, cat, horse, cow and chicken heads– examining morphological diversity and its developmental bases in domesticated animals', Dresden Senckenberg Institution Oktober 2018.

Invited Talk, 'Panpipe evolution and transpacific human migrations', Minisymposium, Latin American Center Zurich (LZZ) and Paleontological Institute and Museum University of Zurich, Aug. 2018.

Invited Talk, École d'été 2018 « Méthodes de l'interdisciplinarité. 'La biología de la diversidad animal y sus orígenes – su potencial para estudios e inspiración en las ciencias sociales y las artes'. University of Zurich, Romanistik. 21 June 2018.

Invited Symposium Talk, 'On dogs, cats, chicken, and - humans? Morphological diversity and its developmental bases in domesticated animals', Evolutionary Medicine Seminar Series UZH, 9.5.2018.

Invited Talk, 'New Paleontological Discoveries in the American Tropics – Tempo and mode of evolution in the biodiversity of terrestrial and marine environments of northern South America', University of Southern California, Geology, 4.2018.

Invited Talk, 'On dog, cat, horse, cow and chicken heads– examining morphological diversity and its developmental bases in domesticated animals', University of Southern California, Zoology, 4.2018.

Invited Talk, 'New Paleontological Discoveries in the American Tropics – Tempo and mode of evolution in the biodiversity of terrestrial and marine environments of northern South America', University of Helsinki, Geology, 3.2018.

Invited Talk, 'On dog, cat, horse, cow and chicken heads– examining morphological diversity and its developmental bases in domesticated animals', University of Helsinki, Institute of Biotechnology, 3.2018.

Invited Talk, Okümenische Kirche Langnau am Albis 'Naturwissenschaft – Methoden und Fragestellungen'. 15.3.2018

Invited (Skype) Talk, Universidad de Tucumán, Argentina, workshop on current evolutionary theory. 'Procesos de Domesticación Una perspectiva desde la Biología del Desarrollo'.

Invited Symposium Talk, 'On dog, cat, horse, cow and chicken heads– examining morphological diversity and its developmental bases in domesticated animals.', Gordon Research Conference, Craniofacial Morphogenesis & Tissue Regeneration, 2.2018.

Invited Talk, 'On horses, dogs and chicken – the evolutionary morphology of domestication', Universität Basel, Zooarcheology, 12.2017.

Invited Talk, 'Domestikation als Modell für die Evolution', Ringvorlesung Domestikation, University of Zürich, 12 Oktober 2017.

Invited Talk, 'Animalicum – Der Tier & Wir Kongress', 'Wie die Katze zum Menschen kam', Bregenz, Austria, March 2017.

Invited Talk, Zoological Institute Russian Academy of Science, St. Petersburg, 'On Domestication and Evolution in Islands', October 2016.

Keynote 30 Jornadas Argentinas de Paleontología de Vertebrados, Buenos Aires, 'La evolución del desarrollo y la paleontología de vertebrados', May 2016.

Schweizer Geologen Tag, EPFL Lausanne, März 2016, Plenary Speaker, 'Deep Time and Origins'

'Schweizerischer Blinden- und Sehbehindertenverband, Sektion Zürich-Schaffhausen', Krokodil im Baum Exhibit Talk, 26. September 2015

'Flying Science', Basel, Keynote on the evolution of bicycles, August 2015

Evolution and Ecology Seminar, IEES UZH, May 2015

Anthropologisches Institut Seminar, UZH, April 2015

'Think different' Seminar, Invited speaker, Zoologisches Institut Uni Basel, April 2015

'Flying Science', Basel, Keynote on Dinosaurs and Birds, March 2015
Institute of Biology, 'Top Lecture', Leiden University, Netherlands, March 2015
Museum für Naturkunde Berlin, Darwin's Birthday Keynote, February 2015
Royal Veterinary College London, January 2015
University of Tokyo Museum, May 2014
Paläontologisches Museum Universität Zürich, December 2013.
XV Congreso y 12 jornadas de Educación de la Sociedad de Ciencias Morfológicas de
La Plata, Argentina (plenary speaker, via Skype), August 2013
Studienkreis Zürcher Mineraliensammler, June 2013
École normale supérieure de Lyon, February 2013
University of Plymouth, February 2013
University of Bristol, February 2013
Focus Terra Zürich, February 2013
Natur Museum Winterthur, November 2012
Paläontologische Gessellschaft 100th Meeting, Berlin, Keynote Speaker, Sept. 2012
Smithsonian Institution, Barro Colorado Island, May 2012
Smithsonian Institution, Panama, Palaeobiology group May 2012
Smithsonian Institution, Panama, (Tupper Symposium), May 2012
Swiss Systematics Association, opening talk, November 2011
Universität Basel, Zoologisches Institut, October 2011
European Meeting of PhD Students in Evolutionary Biology, EMPSEB, Portugal,
August 2011 (invited, featured speaker)
Society of Molecular Biology, Kyoto, July 2011 (invited symposium speaker)
Kyoto University Museum, July 2011
RIKEN Ctr. Dev. Biology, Kobe, July 2011
Symposium on evolutionary constraints, Zoological Society London, Nov. 2010
(featured speaker)
'The Evolution of Form', Konrad Lorenz Institute, Vienna, Sept. 2010
(invited Altenberg symposium speaker)
Ringvorlesung 'Evolution' (Darwin-Jahr UZH/ETH), Zürich Oct. 2009
Paläontol. Museum München, Opening Special Exhibit (featured speaker), Juli 2009
University of Jena, Institut für Spezielle Zoologie, Juli 2009
University of Konstanz, Department of Biology, April 2009
University of Zürich, Institut of Oral Biology, February 2009
University of Bonn, December 2008
Phylogenetisches Symposium Hamburg (plenary talk), November 2008
Museum für Tierkunde, Dresden, April 2008
University of Melbourne, Australia, February 2008
University of New South Wales, Australia, February 2008
University of Leiden, January 2008
University of Cambridge, October 2007
University of Zürich, Botanical Institute, September 2007
University of Leicester, New Walk Museum, July 2006

Universität Bonn, Institut für Palaeontologie, December 2005
Queen Mary College, University of London, October 2005
University College London, May 2005
Oxford University Museum, April 2005
Natural History Museum Bern, Switzerland, November 2004
Kyoto University Museum, August 2004
University of Lund, Department of Genetics, February 2004
Swedish Museum of Natural History, Stockholm, August 2003
Natural History Museum of Los Angeles, April 2003
University of California at Berkeley, April 2003
Florida Museum of Natural History, March 2003
University of Oxford, Department of Zoology, February 2003
Museum für Naturkunde, Berlin, September 2002
Natural History Museum of Los Angeles, June 2002
Universität Essen, Department of Zoology, May 2001
University of Massachusetts, Amherst, November 2000
University of Wisconsin, Madison, Department of Zoology, March 2000
Carnegie Museum of Natural History, Pittsburgh, March 2000
Duke University, North Carolina, March 2000
University of California at Riverside, February 2000
University of Helsinki, Department of Zoology, October 1999
Universität Tübingen, Zoologisches Institut, July 1997
University of Wisconsin, Madison, Department of Zoology, March 1997
Universidad del Zulia, Museo de Biología, June 1996
George Washington University, Department of Biology, January 1996

Editorial and Professional Service

Associate Editor, *Journal of Vertebrate Paleontology* (2013-2021)
Member of Editorial Board, *Royal Society Open Science* (2019- to date)
Member of Editorial Board, *Vertebrate Zoology*, Senckenberg (2018- to date)
Member of Editorial Board, *Revista del Museo de La Plata* (January 2017 to date)
Member of Editorial Board, *Journal of Anatomy* (June 2015 to date)
Member of Editorial Board, *MorphoMuseum* (March 2015 to date)
Member of Editorial Board of *Journal of Experimental Zoology, Molecular and Developmental Evolution* (2013 - 2021)
Member of Editorial Board of *Organisms and Diversity* (January 2010 to date)
Member of Editorial Board of *Swiss Journal of Palaeontology* (January 2010 to date)
Member of Editorial Board of *Acta Zoologica* (2008-2017)
Member of Editorial Board of *Journal of Mammalian Evolution* (January 2007-2020)
Editor for 'Morphology and Systematics' in *Mammalian Biology* (2007-2012)
Guest Editor for special issues of: *Seminars in Cell and Developmental Biology* (2010), *Palaeontologische Zeitschrift* (2008), *Journal of Systematic Palaeontology* (2006), *Special Papers in Palaeontology* (2004).

Member of European Research Council ERC (European Union) Review panel (LS8, Evolutionary Biology), 2015, 2017, 2019

External reviewer: Leibniz Institutes, Senckenberg Museum (2013), IGFL Inst. Functional Genomics, École Normale Lyon (2013).

Member of the Executive Committee (2007-2010), Webmaster (2007-2016), Nominating Committee (2019), International Society of Vertebrate Morphology

Member of the Gregory Award Committee, Society of Vertebrate Paleontology (since 2017).

Manuscripts reviewed (average 22 / year in the last 17 years) for *Acta Zoologica*, *Ameghiniana*, *American Journal of Physical Anthropology*, *American Museum Novitates*, *Amphibia-Reptilia*, *Anatomical Record*, *Andean Geology*, *Biological Reviews*, *Cambridge University Press*, *Caribbean Journal of Science*, *Evolution*, *Evolution and Development*, *Frontiers in Psychology*, *Handbuch der Zoologie*, *Journal of Anatomy*, *Journal of Comparative Physiology*, *Journal of Evolutionary Biology*, *Journal of Experimental Zoology Molecular and Developmental Evolution*, *Journal of the Geological Society*, *Journal of Mammalian Evolution*, *Journal of Morphology*, *Journal of Ornithology*, *Journal of Paleontology*, *Journal of South American Earth Sciences*, *Journal of Systematic Palaeontology*, *Journal of Theoretical Biology*, *Journal of Vertebrate Paleontology*, *Journal of Zoology*, *Mammalian Biology*, *Mitteilungen aus dem Museum für Naturkunde Berlin*, *Nature*, *Nature Ecology and Evolution*, *Naturwissenschaften*, *Neues Jahrbuch für Geologie und Paläontologie*, *Organisms Diversity & Evolution*, *Oxford University Press*, *Palaeontologia Electronica*, *Palaeontology*, *Papéis Avulsos de Zoologia*, *Plos Biology*, *Plos One*, *Proceedings of the Natural Academy of Sciences USA*, *Proceedings of the Royal Society*, *Revista Museo de La Plata*, *Science*, *Systematic Biology*, *Trends in Ecology and Evolution*, *Vertebrate Zoology*, *Zoological Journal of the Linnean Society*, *Zoological Science*, *Zoological Scripta*, *Zoology*.

Grant proposals and research prizes reviewed for *Human Science Frontier Program*, *SNF*; *Uni Genf Research Council (Switzerland)*, *DFG (Germany)*, *NERC (UK)*, *National Geographic Society (USA)*, *CONICET Research Council (Argentina)*, *Comisión Biodiversidad, Ecología, Genética y Evolución BEGE FONCYT Argentina*, *Finnish Academy of Sciences (Finland)*, *L'Agence Nationale de la Recherche (France)*, *Smithsonian Institution Research Prize*

Evaluator of proposal for Promotion at the professorial level: *University of Vienna*, *Humboldt Universität Berlin (x2)*, *State University of New York at Stony Brook*, *University of Louisville (x2)*, *LMU Munich*.

Deputy Director, Graduate Programme in Evolutionary Biology, *University of Zurich* (since 2016).

Member of *Forschungskommission University of Zurich*, 2010-2020.

Founding member of *Nachhaltigkeit-Kommission University of Zurich*, 2013-to-date

Member of *Steering Committee, Latinoamerican Zentrum University of Zurich* (since March 2017)

Member, *Patronatskomitee, Mammutmuseum Niederweningen*

Member of several committees at the University of Zurich, past events and tasks:
Darwin's Year 2009; New Exhibit on Mass Extinctions, faculty searches at the
Dpt. Anthropology (2017), Dept. Evol & Env. Sci. (2017, 2016, 2013, 2010),
Zoological Institute (2009).

University of Tübingen, Institut of Zoology: Member of committees concerning fund
allocation for graduate students and grant proposal to acquire computer
technology for teaching purposes (2001-2003).

Student/Postdoc representative of the 'Division of Integrative and Comparative
Issues,' Society for Integrative and Comparative Biology (1997-1999)

Organiser of Symposia:

- 'The South American Ethnosphere: Human Diversity in Time and Space' ETH
CSF meetings 2021 (www.csf.ethz.ch/csf-meetings.html) (co-organiser Chiara
Barbieri, Tomás Bartoletti)
- 'Variation under domestication: an organismal and morphological perspective'
International Congress of Vertebrate Morphology, Prague, July 2019 (co-organiser
M. Geiger)
- URPP Mini Symposium: 'Domestication - A Genomics and Evo-Devo
Perspective'. Organisers: Marcelo R Sánchez-Villagra and Ueli Grossniklaus. 25
May 2018.
- 'Ringvorlesung Domestikation: Aus der freien Wildbahn... in die Zivilisation:
Die Domestikation des Lebens' Autumn Semester 2017, 13 speakers, UZH.
- 'Evo-Devo of Domestication' – VI Meeting of the European Society for
Evolutionary Developmental Biology, Uppsala, 2016
- 'Evolution, Development and Integration of the Vertebrate Brain and skull' –
International Congress of Vertebrate Morphology, Washington DC, July 2016 (co-
organiser G. Bever, B-A Bhullar)
- 'Evolution and the Human & Social Sciences: New perspectives' (Autumn 2013 &
Autumn 2014) (co-organiser 2013 N. Beck)
- 'Fossilised Ontogenies' – II Meeting of the European Society for Evolutionary
Developmental Biology, Ghent, August 2008
- 'Comparative Ontogeny and Homology' – International Congress of Vertebrate
Morphology, Paris, July 2007 (co-organiser O. Rieppel)
- Meeting of the Central European Turtle Evolutionary Biologists - December
2nd 2014, Zürich (co-organiser I. Werneburg)

Participation in Courses & Events related to Science & Art / Societal / Environmental Issues (selection)

Invited speaker in Workshop 'New voices and approaches on Decolonization in
Latin American Contexts'. In Conference 'Decolonizing Natural Histories.
Museum d'Histoire Naturelle Neuchâtel'. 15-17 March 2023.

Co-organiser of symposium 'Interspecies communication: challenging divided perspectives'. The 2023 conference of the Swiss Association for the Studies of Science, Technology & Society (STS-CH), Basel 31 Aug- 1 Sept 2023.

Main Speaker at "Phaethon" association evening event, for the preservation of the biological and cultural heritage of Rhodes miniature horses (Archangelos, 13 Oct. 2022)

Scientific Mentor in ZhDK Zürcher Hochschule der Künste in course Science2Science, BA Scientific Visualization (Sept-Oct. 2021, 2022)

Panel Member and co-host of event 'Evolution of Wind Instruments in South America', sponsored by the Latinoamerica Cente UZH, Zool. Mus. UZH (9.8.2019)

Speaker at 'Ignite' talk slam series, 5 'On bulldog cows and dwarf horses' (6.2017)

Invited commentator on 'Transgenic Art', Eduardo Kac & Jens Andermann, Café Voltaire Zürich (9.Feb.2015)

Organiser and Host: 'Essbare Insekten', evening talks/discussions/degustation event at the Zoological Museum University of Zürich for 150 attendants, on insect eating in Switzerland (3 Nov. 2014)

Invited commentator Film 'Call of Life' (extinction and human affairs) organised by Nebenrolle Natur, at 'The Hub', Zürich (9.Feb.2014)

Museum exhibits

Project leader of 'Chicken' exhibit at the Zoological Museum, University of Zürich (opened 12. January 2021, 9 months)

Project leader of 'Crocodiles' exhibit at the Zoological Museum, University of Zürich (opened Fall 2015, 6 months)

Co-organiser in team of five: 'Massenaussterben' (Mass Extinction) exhibit at the Zoological Museum, University of Zürich (2009)

Students/Postdocs/Lab members/ PhD evaluations (details: www.msanchezlab.net/)

Previous lecturer in group: T. Scheyer (2.2007-3.2019),

Current lecturers in group: Jorge Carrillo (50% start 9.2017 as postdoc), G. Aguirre (50% start 12.2014 as postdoc)

Current post-docs: Kévin Le Verger (start 1.11.2021), Caroline Sommer-Trembo (start. 1.4.2023).

Current PhD Students in Zurich: (projected completion date): Aldo Benítez (2.2025).

Current Masters Students in Zürich (projected completion date): Laurelle Küng (9.2023).

Past post-docs: Madeleine Geiger (Curator, St. Gallen), Anne-Claire Fabre (Curator, Bern), M. Matschiner (Norwegian Science Foundation), Madlen Stange (SNF-Postdoc), T. Schmelzle (UZH), C. Pimiento (Humboldt Stipendiat, Berlin), R. Salas-Gismondi (Lecturer, Peru), L. Kerber (Curator Museum Southern Brasil), E. Amson (Humboldt Stipendiat Berlin), E. Maxwell (Curator Stuttgart Natural History Museum), D. Koyabu (Assist. Prof. Univ. Tokyo); C Bickelmann (postdoc Museum Berlin); T. Scheyer (PD lecturer, UZH); C Mitgutsch

(Laboratory Technician, Humboldt Universität Berlin); I Werneburg (Curator, Univ. Tübingen); L. Wilson (DECRA fellowship Sydney); M. Delfino (curator Torino); S. Ladeveze (researcher CNRS); H. Müller (postdoc Uni Jena); A. Goswami (Professor, NHM London).

Past-Habilitation thesis: Torsten Scheyer, October 2014.

Past doctoral students, current positions:

- Gabriel Cohen (7.2023; postdoctoral researcher
- Evelyn Hüppi (7.2022), environmental consultancy/museum curator assistant
- Ana Balcarcel (5.2022), postdoctoral researcher
- Daniel Núñez (2.2021; Swiss Embassy Grant), postdoctoral researcher
- Germán Montoya (7.2020; external, South Africa), postdoctoral researcher
- T. Argyriou (6.2018), postdoctoral researcher
- L. Heck (2.2018), private sector
- J. Carillo-Sánchez (5.2017), postdoctoral research
- M. Stange (5.2017), Junior Professor
- K. Veitschegger (5.2017), private sector
- J. Carillo-Briceño (9. 2016), Lecturer UZH
- C. Kolb (4.2016), head of geology private sector company
- M. Geiger (8.2015), Head Curator St Gallen Naturhistorisches Museum
- F. Galliari (4.2013, Universidad de La Plata; co-advised by Dr. A. Carlini) postdoc, La Plata
- J. Hugi (9.2011), curator, Winterthur Museum
- T. Schmelzle (12.2010, Tübingen, co-advised by Prof. W. Maier), private sector
- I. Werneburg (7.2010), curator, Univ. Tübingen, Geology
- L. Wilson (7.2010), Assistant Professor, Canberra
- A. Carlini (3.2010), Professor and permanent researcher at Museo and Universidad de La Plata (CONICET), Argentina
- V. Weisbecker (5.2008, Sydney, co-advised by Prof. M. Archer), Professor, Flinders University, Australia

Past Masters: Zürich: Keesha Ming Martin (2.2023), Zoe Marie Christen (10.2022), Aldo Benítez (12.2021), Carlos Manuel Herrera (12.2020); Sinéad Lynch (2.2020), D. Zurita (9.2018), E. Hüppi (2.2018), A. Schweizer (2.2016), M. Aeschbacher (12.2015), M. Fuchs (2.2015), F. Straehl (2013), P. Meier (2012), L. Rager (2012), K. Polachowski (2011), T. Alloing (2011; co-advisor, Montpellier), M. Milhajevic (2010), C. Wimmer (2010); Tübingen and London: E. Barrow (2005), P. Menke (2004), L. Wurst (2004), S. Schmid (2004), N. Boos (2003), J. Prochel (2002), M. Döttling (2002), M. Großmann (2001)

External Examiner of doctoral dissertations (39): Universities of Basel (1), Cambridge (2), Dijon (2), Geneva (2), Helsinki (3), Jena (2), La Plata (2), Montpellier (2),

Oxford (1), Paris (4), Poitiers (1), Tübingen (3), Western Australia (1), Sydney (1), Zürich (14);

External Examiner of Masters (9) at the University of Tübingen, Melbourne and Sydney.

External examiner of 3 Habilitations (Fiburg, 2xMontpellier) and of 2 Privatdozentur (Berlin, Frankfurt)

Host for researchers on sabbaticals and long research stays: Dr. Leonardo Kerber (2019, Center of Palaeontology, Brasil); Dr. A. Forasiepi (2011, 2013, 2015, 2017, CONICET, Argentina; Dr. Christopher Sheil (2008, John Carroll Univ., USA).

Scholarly Societies

Society of Vertebrate Paleontology (since 1991), International Society of Vertebrate Morphologists (since 1993), Society of Integrative and Comparative Biology (1994-2000), Deutsche Zoologische Gesellschaft (2000-2006), Deutsche Gesellschaft für Säugetierkunde (since 2000), Palaeontological Association (2004-2015).

Exhibiton Catalogue / Virtual Exhibit

2. Aguirre G, Hüppi E, **Sánchez-Villagra MR**. 2022. Virtual exhibit Chicken - Erbe der Dinosaurier, Paläontologisches Institut und Museum www.pim.uzh.ch/museum/soa/22/dinohuhn/index.php
1. Scheyer TM, Straehl F, **Sánchez-Villagra MR**. 2015. Das Krokodil im Baum – Ein Katalog zur Ausstellung. Scidinge Hall.
 - 1b. Scheyer TM, Straehl F, **Sánchez-Villagra MR**. 2015. Crocodile in a tree – a catalogue to the Museum’s exhibit. Scidinge Hall.

Books

5. **Sánchez-Villagra MR**. 2022. *The Domestication Process*. Princeton University Press.
4. **Sánchez-Villagra MR, MacLeod N** (eds). 2014. *Issues in Palaeobiology: A Global View*. Scidinge Hall. 289 pp.
3. **Sánchez-Villagra MR** (eds). 2012. *Venezuela Paleontológica*. Printworkart Press. 382 pp.
- 2c. (Italian Translation of 2: **Sánchez-Villagra MR**. 2014. *Embrioni nel tempo profondo. Il registro paleontologico dell'evoluzione biologica*. Firenze University Press)
- 2b. (German Translation of 2: **Sánchez-Villagra MR**. 2013. *Embryonen aus der Tiefenzeit*. Vdf Verlag)
2. **Sánchez-Villagra MR**. 2012. *Embryos in Deep Time*. University of California Press.
1. **Sánchez-Villagra MR, Aguilera OA, Carlini AA** (eds). 2010. *Urumaco and Venezuelan Palaeontology – The fossil record of the Northern Neotropics*. Indiana University Press. 286 pp.

Edited volumes

5. **Sánchez-Villagra MR** (ed). 2022. *The evolutionary and developmental morphology of domestication in birds and mammals*. Jour Exp Zool Mol Dev Evol.
4. **Sánchez-Villagra MR** (ed). 2010. *Developmental Vertebrate Palaeontology*. Seminars in Cell and Developmental Biology. doi:10.1016/j.semcdb.2009.12.001.
3. **Sánchez-Villagra MR**, Aguilera O (eds). 2008. *Vertebrate Palaeontology in Venezuela*. Palaeontologische Zeitschrift. 82:103-245.
2. **Sánchez-Villagra MR** (ed). 2006. *New Vertebrate Finds from the Neogene of Venezuela*. Journal of Systematic Palaeontology. 4(3), 211-306.
1. **Sánchez-Villagra MR**, Clack JA (eds). 2004. *Fossils of the Castillo Formation, Venezuela: Contributions on Neotropical Palaeontology*. Special Papers in Palaeontology, 71. 112 pp.

Papers in press in peer-reviewed journals

- Sánchez-Villagra MR**, Bond M, Reguero M, Bartoletti TJ. 2023. From fossil trader to palaeontologist: On Swiss-born naturalist Santiago Roth and his scientific contributions. Swiss Jour Palaeontol.
- Loza, CM; **Sánchez Villagra MR**, Scarano, AC, Romero M, Barbeito CG, Carlini AA. The brain of fur seals, seals, and walrus (Pinnipedia): a comparative anatomical and phylogenetic study of cranial endocasts in an evolutionary radiation of semiaquatic mammals. Journal of Mammalian Evolution.
- Ronez C, Carillo-Briceño JD, Hadler P, **Sanchez-Villagra MR**, Pardiñas U. Submitted. First Pliocene sigmodontine rodents (Mammalia: Cricetidae) in Northernmost South America: tests of biogeographic hypotheses and revised evolutionary scenarios. Roy Soc Open Sci.

Papers about 3D databases in peer-reviewed journals / scientific video

- Ferreira JD, Negri FR, **Sánchez-Villagra MR**, Kerber L. 2020 3D model related to the publication: Small within the largest: Brain size and anatomy of the extinct *Neopiblema acrensis*, a giant rodent from the Neotropics. MorphoMuseumM. (doi:10.18563/journal.m3.107)
- Carrillo JD, Amson E, Jaramillo C, Sánchez R, Quiroz L, Cuartas C, Rincón AF, **Sánchez-Villagra MR**. 2018. 3D models related to the publication: The Neogene record of northern South American native ungulates. MorphoMuseumM 4, e61
- Schweizer AV, Lebrun R, Wilson LAB, Costeur L, Schmelzle T, **Sánchez-Villagra MR**. 2017. 3D models related to the publication: Size Variation under Domestication: Conservatism in the inner ear shape of wolves, dogs and dingoes. MorphomuseumM.
- Latimer AE, Loza CM, **Sánchez-Villagra MR**, Carlini AA. 2017. 3D models related to the publication: Sensory anatomy of the most aquatic of carnivorans: the Antarctic Ross seal, and convergences with other mammals. MorphoMuseumM 3(4)-e7 [doi: 10.18563/m3.3.4.e7].

Sánchez-Villagra MR, Maxwell E, Furrer H. 2013. Body elongation in early fish evolution: www.youtube.com/watch?v=LgP1PIw8Mys (animation: Dirk Baum)

Papers in peer-reviewed journals (15 Journal Covers) –

The lab list of publication is available at:

<http://www.msanchezlab.net/publications/index.php>

229. Carrillo-Briceño JD, Vezzosi RI; Ming KM, Christen ZM, Mothé D; Ruiz-Ramoni D, **Sánchez-Villagra MR**. 2023. Nearctic Pleistocene ungulates from the Pampean region (Argentina) in the historical collections of Santiago Roth in Switzerland: an overview. *Swiss Jour Palaeontol.* 142 (1):12.
228. Christen ZM, **Sánchez-Villagra MR**, Le Verger K. 2022. Cranial and Endocranial Comparative Anatomy of the Pleistocene Glyptodonts from the Santiago Roth Collection. *Swiss Jour Palaeontol.*
227. Hayashi S, Kubo MO, **Sánchez-Villagra MR**, Taruno H, Izawa M, Shiroma T, Nakano T, Fujita M. 2023. Variation and process of life history evolution in insular dwarfism as revealed by a natural experiment. *Frontiers in Earth Science*, section Paleontology. DOI 10.3389/feart.2023.1095903
226. McKay CJ, Luckett WP, **Sánchez-Villagra MR**. 2023. Vestigial Structures and Variation in the Evolution of the Marsupial Mammal Dental Development - A Study of the Woolly Opossum *Caluromys philander*. *Journal of Mammalian Evolution* 30:21–31.
225. Jorgewich-Cohen G, Townsend SW, Rodrigues Padovese L, Klein N, Praschag P, Ferrara CR, Ferrara CR, Ettmar S, Menezes S, Pinatti Varani A, Serano J, **Sánchez-Villagra MR**. 2022. Common Evolutionary Origin of Acoustic Communication in choanate vertebrates. *Nature Communications.* 13, 6089.
224. Núñez-León D, Nagashima H, **Sánchez-Villagra MR**. 2022. Morphological variation in the chondrocranium in chicken domestication. *Jour Exp Zool Mol Dev Evol.* <https://doi.org/10.1002/jez.b.23177>.
223. McKay CJ, Sommer-Trembo C, **Sánchez-Villagra MR**. 2022. The portrayal of animal interactions in nature documentaries by David Attenborough and Bernhard Grzimek. *Evolution: Education and Outreach* 15:15.
222. **Sánchez-Villagra MR**. 2022. Claude Lévi-Straus as a humanist forerunner of cultural macroevolution studies. *Evolutionary Human Sciences.* 4:e31.
221. Geiger M, **Sánchez-Villagra MR**, Sherratt E. 2022. Cranial shape variation in domestication: the case of rabbits. *Jour Exp Zool Mol Dev Evol.* <https://doi.org/10.1002/jez.b.23171>.
220. Carlini AA, Carrillo-Briceño JD, Jaimes A, Aguilera O, Zurita AE; Iriarte J, **Sánchez-Villagra MR**. 2022. Damaged glyptodontid skulls from Late Pleistocene sites of northwestern Venezuela: evidence of hunting by humans? *Swiss Journal of Palaeontology.* 141:11.

219. Nummela S, Aguirre-Fernández G, Smith KK, **Sánchez-Villagra MR**. 2022. Growth pattern of the middle ear in the gray short-tailed opossum, *Monodelphis domestica*. *Vertebrate Zoology* 72: 487-494. <https://doi.org/10.3897/vz.72.e83544> .
218. Segura V, Flores D, Geiger M, Amson T, **Sánchez-Villagra MR**. 2022. Biological and cultural history of domesticated dogs in the Americas. *Anthropozoologica* 57(1):1-18.
217. Herrera CM, Geiger M, Núñez-León D, Nagashima H, Gebhardt-Henrich SG, Toscano MJ, **Sánchez-Villagra MR**. 2022. Skeletal variation in bird domestication: limb proportions and sternum in chicken, with comparisons to mallard ducks and Muscovy ducks. *PeerJ* 10:e13229.
216. Balcarcel AM, Geiger M, Clauss M, **Sánchez-Villagra MR**. 2022. The mammalian brain under domestication: Discovering patterns after a century of old and new analyses. *Journal of Experimental Zoology B: Molecular and Developmental Evolution*:1-24 [doi: 10.1002/jez.b.23105].
215. Ascarrunz E, **Sánchez-Villagra MR**. 2022. The macroevolutionary and developmental evolution of the turtle carapacial scutes. *Vertebrate Zoology* 72: 29–46.
214. Jorgewich-Cohen G, dos Santos Henrique R, Dias PH, **Sánchez-Villagra MR**. 2022. The evolution of reproductive strategies in turtles. *PeerJ* 10:e13014
213. Aguirre-Fernández G, Barbieri C, Graff A, Perez de Arce J, Moreno H, **Sánchez-Villagra MR**. 2021. Cultural macroevolution of musical instruments in South America. *Humanities and Social Sciences Communications* 8:208.
212. Geiger M, Schoenebeck J, Schneider RA, Fischer M, Schmidt M, **Sánchez-Villagra MR**. 2021. Exceptional changes in skeletal anatomy under domestication: the case of brachycephaly. *Integrative Organismal Biol* 3:obab023.
211. Núñez-León D, Cordero GA, Schlindwein X, Jensen P, Stoeckli E, **Sánchez-Villagra MR**, Werneburg I. 2021. Shifts in growth, but not differentiation, foreshadow the formation of exaggerated forms under chicken domestication. *Proc Roy Soc B*. <https://doi.org/10.1098/rspb.2021.0392>
210. Balcarcel AM, Veitschegger K, Clauss M, **Sánchez-Villagra MR**. 2001. Intensive human contact correlates with smaller brains: differential brain size reduction in cattle types. *Proc Roy Soc B*. <https://doi.org/10.1098/rspb.2021.0813>
209. Wilson LAB, Balcarcel A, Geiger M, Heck L, **Sánchez-Villagra MR**. 2021. Modularity patterns in mammalian domestication and developmental hypotheses for diversification. *Evolution Letters* 5:385-396.
208. Segura V, **Sánchez-Villagra MR**. 2021. Human-Canid Relationship in the Americas: An Examination of canid biological attributes and domestication. *Mammalian Biology*. <https://doi.org/10.1007/s42991-021-00129-y>
207. Hüppi E, Werneburg I, **Sánchez-Villagra MR**. 2021. Evolution and development of the bird chondrocranium. *Frontiers of Zoology* 18:21.
206. Herrera-Castillo CM, Carrillo-Briceño JD; **Sánchez-Villagra MR**. 2021. Non-invasive imaging reveals new cranial material of the basal ornithischian dinosaur *Laquintasaura venezuelae*, early Jurassic of Venezuela. *Anartia* 32:53-60.

205. Carrillo-Briceño JD, Sánchez R, Scheyer TM, Carrillo JD, Delfino M, Georgalis GL; Kerber L, Ruiz-Ramoni D, Birindelli JLO, Cadena EA, Rincón AF, Chavez-Hoffmeister M, Carlini AA; Carvalho MR, Trejos-Tamayo R; Vallejo F, Jaramillo C, Jones DS, **Sanchez-Villagra MR**. 2021. A Pliocene–Pleistocene continental biota from Venezuela. *Swiss Journal of Palaeontology* 140:9.
204. Benites-Palomino A, Reyes-Cespedes AE, Aguirre-Fernández G, Sanchez R, Carrillo-Briceño JD, **Sanchez-Villagra MR**. 2021. A Stem Delphinidan' from the Caribbean region of Venezuela. *Swiss Journal of Palaeontology* 140:6
203. Balcarcel AM, **Sánchez-Villagra MR**, Segura V, Evin A. 2021. Singular patterns of skull shape and brain size change in the domestication of South American camelids. *Journal of Mammalogy* 102:220-235.
202. Recht J, Schuenemann VJ, **Sánchez-Villagra MR**. 2020. Host Diversity and Origin of Zoonoses: The Ancient and the New. *Animals* 10, 1672.
201. Lynch S, **Sánchez-Villagra MR**, Balcarcel AM. 2020. Description of a fossil camelid from the Pleistocene of Argentina, and a cladistic analysis of the Camelinae. *Swiss Journal of Palaeontology*. 139, 5.
200. Aguirre-Fernández G, Blasi D, **Sánchez-Villagra MR**. 2020. Panpipes as units of cultural analysis and dispersal. *Evolutionary Human Science*. 2:E17.
199. Cordero GA, **Sánchez-Villagra MR**, Werneburg I. 2020. An irregular hourglass pattern describes the tempo of phenotypic development in placental mammal evolution. *Biology Letters* 16 (5):20200087.
198. Cadena EA, Scheyer TM, Carrillo-Briceño JD, Sánchez R, Aguilera-Socorro OA, Vanegas A, Pardo M, **Sánchez-Villagra MR**. 2020. The anatomy, paleobiology and evolutionary relationships of the largest extinct side-necked turtle. *Science Advances* 6: eaay4593.
197. Ferreira JD, Negri FR, **Sánchez-Villagra MR**, Kerber L. 2020. Small within the largest: Brain size and anatomy of the extinct *Neopiblema acrensis*, a giant rodent from the Neotropics. *Biology Letters* 16: 20190914.
196. Teng CS, Cavin L, Maxson Jr. RE, **Sánchez-Villagra MR**, Crump JG. 2019. Resolving Homology in the Face of Shifting Germ Layer Origins: Lessons from a Major Skull Vault Boundary. *eLife* 8:e52814.
195. Scheyer TM, Strauss O, Delfino M, Carrillo-Briceño JD, Sánchez R, **Sánchez-Villagra MR**. 2019. Giant extinct caiman breaks constraint on the axial skeleton of extant crocodylians. *eLife* 8:e49972.
194. Klinkhamer AJ, Woodley N, Neenan JM, Parr WCH, Clausen P, **Sánchez-Villagra MR**, Sansalone G, Lister AM, Wroe S. 2019. Head to Head: the case for fighting behaviour in *Megaloceros giganteus* using finite element analysis. *Proc Roy Soc B*. <https://doi.org/10.1098/rspb.2019.1873>
193. **Sánchez-Villagra MR**, van Schaik CP. 2019. Evaluating the self-domestication hypothesis of human evolution. *Evolutionary Anthropology* 28:133-143.
192. Núñez-León D, Aguirre-Fernández G; Steiner A, Nagashima H, Jensen P, Stoeckli E, Schneider RA, **Sánchez-Villagra MR**. 2019. Morphological diversity

- of integumentary traits in chicken domestication: insights from disparity analysis and embryonic development. *Developmental Dynamics* doi: 10.1002/dvdy.105.
191. Heck L, **Sánchez-Villagra MR**, Stange M. 2019. Why the long face? Comparative shape analysis of miniature, pony, and other horse skulls reveals changes in ontogenetic growth. *PeerJ* 7:e7678.
190. Ascarrunz E, **Sánchez-Villagra MR**, Betancur-R, Laurin M. 2019. On trends and patterns in macroevolution: Williston's law and the branchiostegal series of extant and extinct osteichthyan vertebrates. *BMC Evol Biol.* 19, 117.
189. Hüppi E, Núñez-León D, Nagashima H, **Sánchez-Villagra MR**. 2019. Development of the chondrocranium in the domesticated fowl (*Gallus gallus f. domestica*), with a study on the variation of the hypoglossal foramina. *Vertebrate Zoology* 69: 299 – 310.
188. Zurita-Altamirano D, Buffetaut E, Forasiepi AM, Kramarz A, Carrillo JD, Aguirre-Fernández G, Carlini AA, Scheyer TM, **Sánchez-Villagra MR**. 2019. The Allemann Collection from the Santa Cruz Formation (Late Early Miocene), Argentina, In Zurich, Switzerland. *Swiss Journal of Palaeontology* 138:259-275.
187. Veitschegger K, Kolb C, Amson E, **Sánchez-Villagra MR**. 2019. Longevity and life history of cave bears – a review including data from tooth cementum and relative emergence of permanent dentition. *Historical Biology* 31:510-516.
186. Salas-Gismondi R, Moreno-Bernal J, Scheyer TM, **Sánchez-Villagra MR**, Jaramillo C. 2019. New Miocene Caribbean gharials and patterns of longirostry in crocodylians. *Journal of Systematic Palaeontology* 17:1049-1075.
185. Hüppi E, **Sánchez-Villagra MR**, Tzika A, Werneburg I. 2018. Ontogeny and phylogeny of the mammalian chondrocranium: the cupula nasi anterior and associated structures of the anterior head region. *Zoological Letters* 4:29.
184. Veitschegger K, Kolb C, Amson E, Scheyer TM, **Sánchez-Villagra MR**. 2018. Palaeohistology and life history evolution in cave bears, *Ursus spelaeus* s.l. *PlosOne* 13(11): e0206791.
183. Argyriou T, Giles S, Friedman M, Romano C, Kogan I, **Sánchez-Villagra MR**. 2018. Internal cranial anatomy of Early Triassic species of †*Saurichthys* (Actinopterygii: †Saurichthyiformes): implications for the phylogenetic placement of †saurichthyiforms. *BMC Evolutionary Biology* 18:161.
182. Carrillo JD, Amson E, Jaramillo C, Sánchez R, Quiroz L, Cuartas C, Rincón AF, **Sánchez-Villagra MR**. 2018. The Neogene Record of Northern South American Native Ungulates. *Smithsonian Contributions to Palaeobiology* 101: 67pp.
181. Stange S, Núñez-León D, **Sánchez-Villagra MR**, Jensen P, Wilson LAB. 2018. Morphological disparity under domestication: how variable are chicken? *Roy Soc Open Sci.* 5: 180993.
180. Carrillo-Briceño JD, Carrillo JD, Aguilera OA, **Sánchez-Villagra MR**. 2018. Shark and ray diversity in the Tropical America (Neotropics) – an examination of environmental and historical factors affecting diversity, *PeerJ* 6:e5313.
179. Veitschegger K, Wilson LAB, Nussberger B, Camenisch G, Wroe S, Keller LF, **Sánchez-Villagra MR**. 2018. Resurrecting Darwin's Niata - anatomical,

- biomechanical, genetic, and morphometric studies of morphological novelty in cattle. *Scientific Reports* 8:9129.
178. Pimiento C, Tang KL, Zamora S, Klug C, **Sánchez-Villagra MR**. 2018. Assessing canalisation of intraspecific variation on a macroevolutionary scale: The case of crinoid arms through the Phanerozoic. *PeerJ*:e4899.
177. Delfino M, **Sánchez-Villagra MR**. 2018. A late Miocene pipine frog from the Urumaco Basin, Venezuela. *Ameghiniana* 55:210-214.
176. Geiger M, **Sánchez-Villagra MR**. 2018. Similar rates of morphological evolution in domesticated and wild pigs and dogs. *Frontiers in Zoology* 15(1):23.
175. Heck L, Wilson LAB, Evin A, Stange M, **Sánchez-Villagra MR**. 2018. Shape variation and modularity of skull and teeth in domesticated horses and wild equids. *Frontiers of Zoology* 15(1):14.
174. Carlini AA, Brandoni D, Sánchez R, **Sánchez-Villagra MR**. 2018. A new Megatheriinae skull (*Xenarthra*, Tardigrada) from the Pliocene of Northern Venezuela - implications for a giant sloth dispersal to Central and North America. *Palaeontologia Electronica* 21.2.16A:1-12.
173. Stange M, Aguirre- Fernández G, Salzburger W, **Sánchez-Villagra MR**. 2018. Study of morphological variation of northern Neotropical Ariidae reveals conservatism despite macrohabitat transitions. *BMC Evol Biol.* 18:38.
172. Geiger M, **Sánchez-Villagra MR**, Lindholm AK. 2018. A longitudinal study of phenotypic changes in early domestication of mice. *Roy Soc Open Sci.* 5: 172099.
171. Stange M, **Sánchez-Villagra MR**, Salzburger W, Matschiner M. 2018. Bayesian Divergence-Time Estimation with Genome-Wide SNP Data of Sea Catfishes (Ariidae) Supports Miocene Closure of the Panamanian Isthmus. *Systematic Biology* 67:681-699.
170. Kerber L, **Sánchez-Villagra MR**. 2018. Morphology of the middle ear ossicles in the rodent *Perimys* (Neoepiblemidae) and a comprehensive anatomical and morphometric study of the phylogenetic transformations of these structures in caviomorphs. *Journal of Mammalian Evolution*. <https://doi.org/10.1007/s10914-017-9422-9>.
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168. Loza CM, Reutimann O, **Sánchez-Villagra MR**, Carlini AA, Aguirre-Fernández G. in review. Evolutionary transformations of the malleus in pinnipeds, with emphasis on Southern Hemisphere taxa. *Contributions to Zoology* 87 (2) 75-85.
167. **Sánchez-Villagra MR**, Segura V, Geiger M, Heck L, Veitschegger K, Flores D. 2017. On the lack of a universal pattern associated with mammalian domestication - differences in skull growth trajectories across phylogeny. *Roy Soc Open Sci.* 4(10): 170876.
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