

PUBLICATIONS (IN REVERSE CHRONOLOGICAL ORDER)

Special paper collection

Ziermann JM, Fratani J. Special issue editor for Zoologischer Anzeiger (2021) – A journal of comparative zoology: Special issue 'Fascinating Adaptations in Amphibians'

<https://www.sciencedirect.com/journal/zoologischer-anzeiger/special-issue/105KNN9J21T>

Publications in Refereed Journals / **Reviews or Editorial**

Since July 2021 - Tenured Associate Professor

38. Holmes B, **Ziermann JM**, Strzelecki A, Springer S, Zieger M (submitted July 18, 2022). Who Notices Apoda? Google Trends Data Reveal Interesting Trends for Recent Amphibian Species. Biodiversity and Conservation
37. Lukas P*, **Ziermann JM*** (May 2022) Sequence of chondrocranial development in basal anurans - Let's make a cranium. *Frontiers in Zoology* **19**, 17 (2022). <https://doi.org/10.1186/s12983-022-00462-z> *Corresponding authors
36. **Ziermann JM**, Fratani J. (May 2022) Fascinating Adaptations in Amphibians. Editorial. *Zoologischer Anzeiger*. Volume 298, May 2022, Pages 131-135. <https://www.sciencedirect.com/science/article/pii/S004452312200033X>

Before July 2021 (Jan 2018 Lab / Building destroyed, Fall 2018 return to building, insurance etc. till mid 2019, restart research 2nd half 2019, Spring 2020 COVID, Return to Uni Spring 2021: ordering problems etc. Research restart Fall 2021 >> Jan 2018-Oct 2021 hardly any research possibility at Howard).

35. **Ziermann JM**, Boughner JC, Esteve-Altava B, Diogo R (2021) Anatomical comparison across heads, fore-and hindlimbs in mammals using network models. *Journal of Anatomy*. (24 Feb 2021) <https://doi.org/10.1111/joa.13409>
34. **Ziermann JM** (2020). Developmental Correlations of Head and Heart Musculature: Importance for Understanding Human Syndromes. *Current Molecular Biology Reports - Evolutionary Developmental Biology* <https://doi.org/10.1007/s40610-020-00132-1>
33. Diogo R*, **Ziermann JM***, Smith C*, Alghamdi M*, Fuentes JSM, Duerinckx A (2019) First use of anatomical networks to study modularity and integration of heads, forelimbs and hindlimbs in abnormal anencephalic and cyclopic vs normal human development. *Scientific Reports* (2019) 9:7821. (*Co-first authors) <https://www.nature.com/articles/s41598-019-44314-z>; <https://doi.org/10.1038/s41598-019-44314-z>
32. **Ziermann JM**, Diogo R, Noden DM (2018) Neural crest and the patterning of vertebrate craniofacial muscles. *Genesis, The Journal of Genetics and Development*. Special issue 56 (3) e23097 <https://doi.org/10.1002/dvg.23097>
31. Alghamdi MA, Diogo R, Izquierdo R, Pastor FF, De La Paz F, **Ziermann JM***. (2018) Detailed Musculoskeletal Study of a Fetus with Trisomy 18 (Edwards Syndrome) with Langer's axillary arch, and comparison with other cases of human congenital malformations. *Journal of Anatomical Science and Research* 1:p1-8. (*corresponding author).

<http://www.imedpub.com/articles/detailed-musculoskeletal-study-of-a-fetus-with-trisomy18-edwards-syndrome-with-langers-axillary-arch-and-comparison-with-other-cas.pdf>

30. Wade M, McDowell A, **Ziermann JM***. (2018) Innervation of the Long Head of the Triceps Brachii in Humans – a Fresh Look. *The Anatomical Record* 301:473–483. Special issue “Behavioral Adaptations in Muscle Functional Morphology”. (Guest editor: A Hartstone-Rose) (*corresponding author) <https://anatomypubs.onlinelibrary.wiley.com/doi/10.1002/ar.23741>
29. **Ziermann JM**, Clement A, Ericsson R, Olsson L. (2018) Cephalic Muscle Development in the Australian Lungfish, *Neoceratodus forsteri*. *Journal of Morphology* 279, 494–516. <https://doi.org/10.1002/jmor.20784>
28. Dunlap SS, Aziz MA, **Ziermann JM***. (2017) Anatomical Variations of the Deep Head of Cruveilhier of the Flexor Pollicis Brevis and its Significance for the Evolution of the Precision Grip. *PLoS ONE* 12(11): e0187402. <https://doi.org/10.1371/journal.pone.0187402> (*corresponding author).
27. **Ziermann JM**, Fahimuddin F, Forrester A, Singh S. (2017) The Cardiopharyngeal Field in the Light of Evolutionary Medicine - Implications for Human Syndromes. *Journal of Human Anatomy* 1(2): 000110. 10pp. <https://medwinpublishers.com/JHUA/JHUA16000110.pdf>
26. **Ziermann JM**, Freitas R, Diogo R. (2017) Muscle Development in the shark *Scyliorhinus canicula*: Implications for the Evolution of the Gnathostome Head and Paired Appendage Musculature. *Frontiers in Zoology* 14, 31. 17pp (DOI: 10.1186/s12983-017-0216-y.).
25. Aziz MA, Dunlap SS, **Ziermann JM***. (2017) A Historical Review on the Muscle of Cruveilhier. *Medical Research Archives* 5(3): 26pp (*corresponding author).
24. Alghamdi MA, **Ziermann JM**, Gregg L, Diogo R. (2017) A detailed musculoskeletal study of a fetus with anencephaly and spina bifida (craniorachischisis), and comparison with other cases of human congenital malformations. *Journal of Anatomy* 230, 842–858. <https://onlinelibrary.wiley.com/doi/10.1111/joa.12601>
23. Malik AH, **Ziermann JM**, Diogo R. (2017) An Untold Story in Biology: The Historical Continuity of Evolutionary Ideas of Muslim Scholars from the 8th Century to Darwin’s Time. *Journal of Biological Education* 52(1), 3–17 (<http://dx.doi.org/10.1080/00219266.2016.1268190>).
22. Alghamdi MA, **Ziermann JM**, Diogo R. (2017) An Untold Story: The Important Contributions of Muslim Scholars for the Understanding of Human Anatomy. *The Anatomical Record* 300, 986–1008 (DOI: 10.1002/ar.23523).
2017 (Mai): cover and editorial in the journal *The Anatomical Record*; Cover here: <http://onlinelibrary.wiley.com/doi/10.1002/ar.v300.6/issuetoc?campaign=woletoc>; Editorial note here: <http://onlinelibrary.wiley.com/doi/10.1002/ar.23604/full>
21. Diogo R, Smith CM, **Ziermann JM**. (2015) Evolutionary developmental pathology and anthropology: A new area linking development, comparative anatomy, human evolution, morphological variations and defects, and medicine. *Developmental Dynamics* 244 (11), 1357–1374. <https://anatomypubs.onlinelibrary.wiley.com/doi/10.1002/dvdy.24336>
20. Reid SN, **Ziermann JM**, Gondre-Lewis MC. (2015) Genetically induced abnormal cranial development in Human Trisomy 18 with holoprosencephaly: Comparisons with the normal tempo of osteoneural development. *Journal of Anatomy* 227(1), 21–33. <https://onlinelibrary.wiley.com/doi/10.1111/joa.12326>
19. Diogo R, Kelly RG, Christiaen L, Levine M, **Ziermann JM**, Molnar JL, Noden DM, Tzahor E. (2015) A new heart for a new head in vertebrate cardiopharyngeal evolution. *Nature* 520, 466–473 (DOI:10.1038/nature14435). <https://www.nature.com/articles/nature14435>
18. Diogo R, Walsh S, Smith C, **Ziermann JM**, Abdala V. (2015) Towards the resolution of a long-standing evolutionary question: muscle identity and attachments are mainly related to topological position

- and not to primordium or homeotic identity of digits. *Journal of Anatomy* 226 (6), 523–529 (DOI: 10.1111/joa.12301).
17. Diogo R, **Ziermann JM**. (2015) Development, metamorphosis, morphology and diversity: the evolution of chordate muscles and the origin of vertebrates. *Developmental Dynamics – Special issue: 'Evolution and Morphological Diversity'* 244(9), 1046–1057 (DOI: 10.1002/dvdy.24245).
 16. Diogo R, **Ziermann JM**. (2015) Muscles of chondrichthyan paired appendages: comparison with osteichthyans, deconstruction of the fore-hindlimb serial homology dogma, and new insights on the evolution of the vertebrate neck. *The Anatomical Record* 298, 513–530 (2014: DOI: 10.1002/ar.23047).
 15. Diogo R, **Ziermann JM**, Linde-Medina M. (2015) Specialize or risk disappearance—empirical evidence of anisomerism based on comparative and developmental studies of gnathostome head and limb musculature. *Biological Reviews* 90(3), 964–978.
 14. Diogo R, **Ziermann JM**, Linde-Medina M. (2015) Is evolutionary biology becoming too politically correct? A reflection on the *scalae naturae*, phylogenetically basal clades, anatomically plesiomorphic taxa, and "lower" animals. *Biological Reviews* 90, 502–521 (2014a: DOI: 10.1111/brv.12121).
 13. **Ziermann JM**, Miyashita T, Diogo R. (2014) Cephalic muscles of Cyclostomes (hagfishes and lampreys) and Chondrichthyes (sharks, rays and holocephalans): comparative anatomy and early evolution of the vertebrate head. *Zoological Journal of the Linnean Society* 172(4), 771–802. <https://doi.org/10.1111/zoj.12186>
 12. **Ziermann JM**, Mitgutsch C, Olsson L. (2014) Analyzing developmental sequences with Parsimov – a case study of cranial muscle development in anuran larvae. *Journal of Experimental Zoology (Mol. Dev. Evol.)* 322B, 584–604 (Special issue: DOI: 10.1002/jez.b.22566). Special Issue (322B – 8): Quantifying evolutionary development using non-model organisms: integrating morphology, metrical frameworks, and gene expression (Guest editors: L Wilson & I Werneburg). <https://onlinelibrary.wiley.com/doi/10.1002/jez.b.22566>
 11. Wielstra B, Duijm E, Lagler P, Lammers Y, Meilink WRW, **Ziermann JM**, Arntzen JW. (2014) Parallel tagged amplicon sequencing of transcriptome-based genetic markers for *Triturus* newts with the Ion Torrent next-generation sequencing platform. *Molecular Ecology Resources* 14(5), 1080–1089 (DOI: 10.1111/1755-0998.12242).
 10. Aversi-Ferreira RAGMF, Maior RS, Aziz A, **Ziermann JM**, Nishijo H, Tomaz C, Tavares MCH, Aversi-Ferreira TA. (2014) Anatomical analysis of thumb opponency movement in the Capuchin monkey (*Sapajus sp.*). *PLoS ONE* 9(2): e87288, 8pp (doi:10.1371/journal.pone.0087288)
 09. **Ziermann JM**, Diogo R. (2014) Cranial muscle development in frogs with different developmental modes: direct development vs. biphasic development. *Journal of Morphology* 275, 398–413 (2013: DOI: 10.1002/jmor.20223).
 08. Diogo R, **Ziermann JM**. (2014) Development of fore- and hindlimb muscles in frogs: Morphogenesis, homeotic transformations, digit reduction, and the forelimb-hindlimb enigma. *Journal of Experimental Zoology (Mol. Dev. Evol.)* 322B, 86–105 (2013: DOI: 10.1002/jez.b.22549).
 07. Aversi-Ferreira RAGMF, Abreu T, Pfrimer GA, Silva SF, **Ziermann JM**, Carneiro-e-Silva FO, Tomaz C, Tavares MCH, Maior RS, Aversi-Ferreira TA. (2013) Comparative anatomy of the hind limb vessels of the Bearded Capuchins (*Sapajus libidinosus*) with apes, baboons and *Cebus capucinus*: With comments of the vessels' role on bipedalism. *BioMed Research International*; Volume 2013, Article ID 737358, 15pp (DOI: <http://dx.doi.org/10.1155/2013/737358>. 1–15.).

06. Arntzen JW, McAtear J, Recuero E, **Ziermann JM**, Ohler A, van Alphen J, Martinez-Solana I. (2013) Morphological and genetic differentiation of *Bufo* species in western Europe. *Contributions to Zoology* 82 (4), 147–169.
05. **Ziermann JM**, Diogo R. (2013) Cranial muscle development in the model organism *Ambystoma mexicanum*: implications for tetrapod and vertebrate comparative and evolutionary morphology and notes on ontogeny and phylogeny. *The Anatomical Record* 296, 1031–1048 (DOI 10.1002/ar.22713).
04. **Ziermann JM**, Infante C, Hanken J, Olsson L. (2013) Morphology of the cranial skeleton and musculature in the obligate carnivorous tadpole of *Lepidobatrachus laevis* (Anura, Ceratophryidae). *Acta Zoologica (Stockholm)* (1) 2013: 101–112 (2011: doi: 10.1111/j.1463-6395.2011.00525.x).
Cover picture *Acta Zoologica (Stockholm)* 1/2013
03. Ericsson R, **Ziermann JM**, Piekarski N, Schubert G, Joss J, Olsson L. (2009) Cell fate and timing in the evolution of neural crest and mesoderm development in the head region of amphibians and lungfishes. *Acta Zoologica (Stockholm)* 90 (1 Suppl.), 264–272.
02. Sánchez-Villagra MR, **Ziermann JM**, Olsson L. (2008) Limb chondrogenesis in *Graptemys nigrinoda* (Emydidae), with comments on the primary axis and the digital arch in turtles. *Amphibia-Reptilia* 29, 85–92.
01. **Ziermann JM**, Olsson L. (2007a) Patterns of spatial and temporal cranial muscle development in the African Clawed Frog, *Xenopus laevis* (Anura: Pipidae). *Journal of Morphology* 268 (1 Suppl.), 791–804.
Ziermann JM, Olsson L. (2007b) A new staging table for stages relevant to cranial muscle development in the African Clawed Frog, *Xenopus laevis* (Anura: Pipidae). *Journal of Morphology* 268, (electronic supplement to Ziermann and Olsson, 2007a).

Books

Ziermann JM, Diaz R, Diogo R (2019) *Heads, Jaws, and Muscles - Anatomical, Functional, and Developmental Diversity in Chordate Evolution*. Springer Series: Fascinating Life Sciences. Springer (Heidelberg, Germany). XIV, 303 pages; 36 b/w illustrations, 59 illustrations in color; ISBN 978-3-319-93559-1; DOI 10.1007/978-3-319-93560-7.
<https://www.springer.com/us/book/9783319935591>

Diogo R, **Ziermann JM**, Molnar J, Siomava N, Abdala V. (2018) *Muscles of Chordates: Development, Homologies, and Evolution*. Taylor & Francis Group, LLC (Oxford, UK). ISBN 9781138571167, Cat# K43646. 650pp - 88 Color & 118 B/W Illustrations.
<https://www.crcpress.com/Muscles-of-Chordates-Development-Homologies-and-Evolution/Diogo-Ziermann-Molnar-Siomava-Abdala/p/book/9781138571167>

Smith CM, Molnar JL, **Ziermann JM**, Gondre-Lewis M, Sandone C, Aziz AM, Bersu ET, Diogo R. (2015) *Muscular and Skeletal Anomalies in Human Trisomy in an Evo-Devo Context: Description of a T18 cyclopic fetus and comparison between Edwards (T18), Patau (T13) and Down (T21) syndromes using 3-D imaging and anatomical illustrations*. Taylor & Francis Group, LLC (Oxford, UK). ISBN 9781498711371, CAT# K25062. 222pp - 25 Color & 130 B/W Illustrations.
<https://www.crcpress.com/Muscular-and-Skeletal-Anomalies-in-Human-Trisomy-in-an-Evo-Devo-Context/Diogo-Smith-Ziermann-Molnar-Gondre-Lewis-Sandone-Bersu-Aziz/p/book/9781498711371>

Book Chapters

Ziermann JM, Diogo R. (2019) Chapter 1: Evolution of Chordate Cardiopharyngeal Muscles and the Origin of Vertebrate Head Muscles. In *Heads, Jaws, and Muscles - Anatomical, Functional, and Developmental Diversity in Chordate Evolution*. (Eds. Ziermann JM, Diaz R, Diogo R). Springer (Heidelberg, Germany). 1-22pp. ISBN 978-3-319-93559-1

- <https://www.springer.com/us/book/9783319935591>

Ziermann JM (2019) Chapter 3: Cranium, Cephalic Muscles, and Homologies in Cyclostomes. In *Heads, Jaws, and Muscles - Anatomical, Functional, and Developmental Diversity in Chordate Evolution*. (Eds. Ziermann JM, Diaz R, Diogo R). Springer (Heidelberg, Germany). 45-64pp. ISBN 978-3-319-93559-1

- <https://www.springer.com/us/book/9783319935591>

Ziermann JM (2019) Chapter 7: Diversity of Heads, Jaws, and Cephalic Muscles in Amphibians. In *Heads, Jaws, and Muscles - Anatomical, Functional, and Developmental Diversity in Chordate Evolution*. (Eds. Ziermann JM, Diaz R, Diogo R). Springer (Heidelberg, Germany). 143-170pp. ISBN 978-3-319-93559-1

- <https://www.springer.com/us/book/9783319935591>

Ziermann JM, Diogo R. (2018) Chapter 10: Development of head muscles in fishes and notes on phylogeny-ontogeny links: a basis for evo-devo and developmental research on fish muscles. In *Evolution and Development of Fishes*. (Eds. Johanson Z, Underwood C, Richter M). Cambridge University Press. 172-187pp. <https://doi.org/10.1017/9781316832172.011>

Commentaries

Ziermann JM (2019, April): 'Do's and Don'ts in writing'. Anatomy Now – The official newsletter of the American Association of Anatomists (Note: since August 2019: American Association for Anatomy) (DOI: 10.13140/RG.2.2.35952.92164).

- https://www.anatomy.org/dos-and-donts-in-writing.html?_zs=CLntE1&_zl=9o635

Ziermann JM (2018, June): 'Common Teaching Pitfalls for New Faculty'. Anatomy Now – The official newsletter of the American Association of Anatomists (Note: since August 2019: American Association for Anatomy) (DOI: 10.13140/RG.2.2.20853.42723).

- https://www.anatomy.org/ceca-ziermann.html?_zs=CLntE1&_zl=tdvU4#

Ziermann JM (2017, February): 'Teaching Anatomy using Evolutionary Reasoning in a Religious Environment'. Anatomy Now – The official newsletter of the American Association of Anatomists (Note: since August 2019: American Association for Anatomy) (DOI: 10.13140/RG.2.2.26490.70080).

- <http://amasan.informz.net/admin31/content/template.asp?sid=46149&ptid=1411&brandid=3960&uid=884750249&mi=5901772&ps=46149>

Ziermann JM (2016, June): 'Engaged learning strategies'. Anatomy Now – The official newsletter of the American Association of Anatomists (Note: since August 2019: American Association for Anatomy) (DOI: 10.13140/RG.2.1.3635.4169).

- <http://amasan.informz.net/admin31/content/template.asp?sid=43716&ptid=1346&brandid=3960&uid=884750249&mi=5333885&ps=43716>

Published Abstracts

Since July 2021 - Tenured Associate Professor

Ziermann JM (2022) Tissue Interaction in Pharyngeal Arches. Presented as Poster for the annual meeting of the American Association of Anatomy at the Experimental Biology conference EB2021; April 27-30, 2022. The FASEB Journal 2022 in press.

Before July 2021

McPike KN, Boughner JC, **Ziermann JM** (2021) Role of p63 in Craniofacial Muscles Development. Presented as Poster for the annual meeting of the American Association of Anatomy at the Experimental Biology conference EB2021; April 27-30, 2021; virtual/online conference. The FASEB Journal 2021 in press.

McPike KN, Boughner JC, **Ziermann J** (2020) P63 Mutation Impacts the Structure of Cardiopharyngeal Field Derived Muscles in Mice. Presented as Poster for the annual meeting of the American Association of Anatomy at the Experimental Biology conference EB2020. 4-7 April 2020, San Diego, CA, USA (Conference cancelled due to COVID-19 Pandemic). Abstract <https://faseb.onlinelibrary.wiley.com/doi/abs/10.1096/fasebj.2020.34.s1.06773> The FASEB Journal 2020 34(S1):1-1.

Ziermann JM, Waters ST (2020) Gbx2 hypomorph mice with cranial nerve V, VII, and VIII as well as craniofacial and cardiac abnormalities. Presented as Talk for the annual meeting of the American Association of Anatomy at the Experimental Biology conference EB2020. 4-7 April 2020, San Diego, CA, USA (Conference cancelled due to COVID-19 Pandemic). Abstract <https://doi.org/10.1096/fasebj.2020.34.s1.06699> The FASEB Journal 2020 34(S1):1-1.

Ziermann JM (2019) Cell and Tissue Interactions in Head and Heart Development and Evolution. Talk presented at 12th International Congress of Vertebrate Morphology (ICVM12), held July 21 – 25, 2019 in Prague, Czech Republic. Journal of Morphology 2019, 280: S243.

Ziermann JM (2019) Integrating a Virtual Dissection Table in Anatomical Education. Poster presented at 12th International Congress of Vertebrate Morphology (ICVM12), held July 21 – 25, 2019 in Prague, Czech Republic. Invited presentation at symposium “Educating the Vertebrate Morphologists of the 21st Century: Technology, Pedagogy, and Core Concepts” Organizers: Nicole Danos, Katie L. Staab, Lisa B. Whitenack, John Hutchinson. Journal of Morphology 2019, 280: S37-38.

Ziermann JM (2019) Day 0–28 of Human Embryonic Development: Importance of Studying Cell and Tissue Interactions in Head and Heart Development. Poster presented at the annual meeting of the American Association of Anatomy at the Experimental Biology conference EB2019. 5-9 April 2019, Orlando, FL, USA. Poster: DOI: 10.13140/RG.2.2.17005.23521; Abstract DOI: 10.1096/fasebj.2018.32.1_supplement.512.1; The FASEB Journal 2019 (33), 77.4.1.

Ziermann JM (2018) Gene Regulatory Network and Tissue Interactions Important for Head and Heart Development and Evolution. Talk presented at the annual meeting of the American Association of Anatomy at the Experimental Biology conference EB2018. 21-25 April 2018, San Diego, CA, USA. Talk: DOI: 10.1096/fasebj.2018.32.1_supplement.364.1; Abstract: The FASEB Journal 2018 (32), 364.1.

Siomava N, Edwards D, **Ziermann JM**. (2018) Expression of Nkx2.5 and Isl1 in the cardiopharyngeal mesoderm of developing *Xenopus* embryos. Poster presented at the annual meeting of the American Association of Anatomy at the Experimental Biology conference EB2018. 21-25 April 2018, San Diego, CA, USA. Poster: DOI: 10.1096/fasebj.2018.32.1_supplement.512.1; Abstract: The FASEB Journal 2018 (32), 512.1.

- Alghamdi MA, **Ziermann JM**, Diogo R. (2018) Abnormal Development of Human Musculature: Linking Development, Anatomical Variations and Defects, Atavisms, Order and Chaos and Medicine. Poster presented at the annual meeting of the American Association of Anatomy at the Experimental Biology conference EB2018. 21-25 April 2018, San Diego, CA, USA. Poster: DOI: 10.1096/fasebj.2018.32.1_supplement.775.3; Abstract: The FASEB Journal 2018 (32), 775.3.
- Alghamdi MA, **Ziermann JM**, Diogo R. (2018) Understanding the Development, Variations, and Defects of the Muscular System in Normal Human Embryos, Fetuses, and Newborns. Poster presented at the annual meeting of the American Association of Anatomy at the Experimental Biology conference EB2018. 21-25 April 2018, San Diego, CA, USA. Poster: DOI: 10.1096/fasebj.2018.32.1_supplement.643.2; Abstract: The FASEB Journal 2018 (32), 643.2.
- McDowell AR, Wade MD, **Ziermann JM**. (2017) Significance of Recognizing Anatomical Variations for Medical Education – an Example of the Triceps Brachii Heads. Poster presented at the annual meeting of the American Association of Anatomy at the Experimental Biology conference EB2017. 22-26 April 2017, Chicago, IL, USA. Poster: DOI: 10.13140/RG.2.2.18674.30403; Abstract: The FASEB Journal 2017 (31), 901.6.
- Ziermann JM**, Franco Curcio D. (2017) Medical Education Across Borders – Are You GAAAME?. Poster presented at the annual meeting of the American Association of Anatomy at the Experimental Biology conference EB2017. 22-26 April 2017, Chicago, IL, USA. Poster: DOI: 10.13140/RG.2.2.20966.42566; Abstract: The FASEB Journal April 2017 (31), 734.7.
- Ziermann JM**, Diogo R. (2016) Major challenges in vertebrate morphology, muscle evolution and evolutionary change via heterochrony. Talk presented at the 11th International Congress of Vertebrate Morphology (ICVM11) held in Washington DC, July 2016. Talk: DOI: 10.13140/RG.2.1.3163.0329; Abstract: Anatomical Record, 299, Special Feature – 82.
- Alghamdi M, Smith C, **Ziermann J**, Diogo R. (2016) Musculoskeletal and Neural Comparison of Normal and Abnormal Development in Humans and Broader Medical Implications. Poster presented at the annual meeting of the American Association of Anatomy at the Experimental Biology conference EB2016. 2-6 April 2016, San Diego, CA, USA. The FASEB Journal April 2016 (30), 1033.1.
- Forrester A, Fahimuddin F, Singh S, **Ziermann JM** (2016) The Cardiopharyngeal Field and Associated Syndromes in Humans. Poster presented at the annual meeting of the American Association of Anatomy at the Experimental Biology conference EB2016. 2-6 April 2016, San Diego, CA, USA. The FASEB Journal April 2016 (30), 1035.3.
- Ziermann JM**, Diogo R. (2016) Polyisomerism, Anisomerism, and the Evolution and Development of the Vertebrate Head Muscles. Poster presented at the annual meeting of the American Association of Anatomy at the Experimental Biology conference EB2016. 2-6 April 2016, San Diego, CA, USA. The FASEB Journal April 2016 (30), 779.2.
- Diogo R, **Ziermann JM** (2015). The end of an old dogma with crucial implications for medical and biological students and for medicine: regenerative, developmental, paleontological and evolutionary studies contradict the fore-hindlimb serial homology. Talk presented at the annual meeting of the American Association of Anatomy at the Experimental Biology conference EB2015. 28 Mar - 1 Apr 2015, Boston, MA, USA. The FASEB Journal April 2015 (29), 343.5.
- Ziermann J**, Diogo R. (2015) Cephalic Muscle Evolution in Chordates. Talk presented at the annual meeting of the American Association of Anatomy at the Experimental Biology conference EB2015. 28 Mar - 1 Apr 2015, Boston, MA, USA. The FASEB Journal April 2015 (29), 345.4.
- Ziermann J**, Fahimuddin F, Forrester A, Singh S, Diogo R. (2015) Cardiopharyngeal field, Head & Heart Muscle Development, and Associated Syndromes in Humans. Poster presented at the annual

- meeting of the American Association of Anatomy at the Experimental Biology conference EB2015. 28 Mar - 1 Apr 2015, Boston, MA, USA. The FASEB Journal April 2015 (29), 872.3.
- Smith CM, **Ziermann J**, Diogo R. (2015) Muscular and skeletal anomalies in human trisomy in an evo-devo context using 3-D imaging and anatomical dissections, with notes on Down Syndrome, cyclopia and medical implications. Poster presented at the annual meeting of the American Association of Anatomy at the Experimental Biology conference EB2015. 28 Mar - 1 Apr 2015, Boston, MA, USA. The FASEB Journal April 2015 (29), 870.1.
- Alghamdi M, Malik A, **Ziermann J**, Diogo R. (2015) An untold story: the important contributions of Muslim scholars for the discovery of human anatomy and the history of evolutionary thinking. Poster presented at the annual meeting of the American Association of Anatomy at the Experimental Biology conference EB2015. 28 Mar - 1 Apr 2015, Boston, MA, USA. The FASEB Journal April 2015 (29), 549.9.
- Sedlmayr JC, Cork RJ, Schachner ER, Rehorek SJ, Smith TD, McNulty MA, **Ziermann J**, Thorn CA, Diogo R. (2015) Introducing the Comparative Atlas of Vertebrate Embryology Online Database. Poster presented at the annual meeting of the American Association of Anatomy at the Experimental Biology conference EB2015. 28 Mar - 1 Apr 2015, Boston, MA, USA. The FASEB Journal April 2015 (29), 867.19.
- Diogo R, Smith CM, **Ziermann J**. (2015) Why study muscles: bringing together anatomy, evolution, development, genetics, birth defects and medicine. Talk presented at the annual meeting of the American Association of Anatomy at the Experimental Biology conference EB2015. 28 Mar - 1 Apr 2015, Boston, MA, USA. The FASEB Journal April 2015 (29), 211.1.
- Ziermann J**, Diogo R. (2014) Specialize or disappear: anisomerism, empirical evidence of the differentiation or loss of polyisomere structures during gnathostome evolution based on a comparative study of head and appendicular muscles. Poster presented at the annual meeting of the American Association of Anatomy at the Experimental Biology conference EB2014. 25-30 April 2014, San Diego, CA, USA. The FASEB Journal April 2014 (28), 918.27.
- Diogo R, **Ziermann J**, Johnston P. (2014) Deconstructing the dogma of fore and hindlimb serial homology: evidence from regenerative, developmental, comparative, paleontological and evolutionary studies. Poster presented at the annual meeting of the American Association of Anatomy at the Experimental Biology conference EB2014. 25-30 April 2014 Conference San Diego, CA, USA. The FASEB Journal April 2014 (28), 919.3.
- Ziermann J**, Diogo R. (2014) Parallelism between ontogeny and phylogeny - A case study in amphibians. Poster presented at the annual meeting of the American Association of Anatomy at the Experimental Biology conference EB2014. 25-30 April 2014 Conference San Diego, CA, USA. The FASEB Journal April 2014 (28), 921.10.
- Diogo R, **Ziermann J**, Linde-Medina M. (2014) Is evolutionary biology becoming too politically correct? A reflection on the *scala naturae*, phylogenetically basal clades, anatomically plesiomorphic taxa, and "lower" animals. Poster presented at the annual meeting of the American Association of Anatomy at the Experimental Biology conference EB2014. 25-30 April 2014 Conference San Diego, CA, USA. The FASEB Journal April 2014 (28), 919.4.
- Diogo R, Walsh SM, Smith C, **Ziermann J**. (2014) First detailed comparative, developmental and pathological analysis of the relationship between limb soft and hard tissues: muscle configuration is mainly related to the topological position, and not the anlage and/or homeotic identity, of digits. Poster presented at the annual meeting of the American Association of Anatomy at the Experimental Biology conference EB2014. 25-30 April 2014 Conference San Diego, CA, USA. The FASEB Journal April 2014 (28), 919.5.

- Ziermann JM**, Diogo R. (2013) Comparative evolutionary myological studies deconstruct the fore-hindlimb serial homology myth. Talk presented at the 10th International Congress of Vertebrate Morphology (ICVM 2013), Barcelona, Spain. *The Anatomical Record* 296, Special Feature, p211.
- Ziermann JM**, Diogo R. (2013) Comparative anatomy, phylogeny, evolutionary trends, the notion of 'progress' in evolution, and the myth of human morphological complexity. Talk presented at the 10th International Congress of Vertebrate Morphology (ICVM 2013), Barcelona, Spain. *The Anatomical Record* 296, Special Feature, p211.
- Ziermann JM**, Diogo R. (2013) Parallelism between ontogeny and phylogeny? A case study in amphibians. Poster presented at the 10th International Congress of Vertebrate Morphology (ICVM 2013), Barcelona, Spain. *The Anatomical Record* 296, Special Feature, p281.
- Ziermann JM**, Diogo R. (2013) Amphibian muscle development and homologies: broader developmental and evolutionary implications, with notes on metamorphosis and terminal additions. Poster presented at the annual meeting of the American Association of Anatomy at the Experimental Biology conference EB2013. 20-24 April 2013, Boston, MA, USA. *The FASEB Journal* April 2013 (27), 963.3.
- Sánchez-Villagra MR, **Ziermann JM**, Nagashima H, Mitgutsch C, Lennart O, Kuratani S. (2007) Autopodial development and evolution in turtles. Talk presented at the 8th International Congress of Vertebrate Morphology (ICVM 2007) Paris. *Journal of Morphology* 268 (12), 1128.
- Ziermann JM**, Olsson L. (2007) Sequence heterochronies in Lissamphibia. Talk presented at the 8th International Congress of Vertebrate Morphology (ICVM 2007) Paris. *Journal of Morphology* 268 (12), 1153.

CONFERENCE CONTRIBUTIONS

Talks at international conferences (see published abstracts)

Since July 2021 - Tenured Associate Professor

Before July 2021

- Diogo R, Esteve-Altava B, Molnar J, **Ziermann JM**. (2016) Surprising developmental, evolutionary, pathological and comparative perspectives on serial homology of the head and limbs/fins: from dissimilarity to derived serial similarity. 6th Euro-Evo-Devo Meeting. Uppsala, July 26-29, 2016. Oral presentation.
- Diogo R, **Ziermann JM**. (2016). A new heart for a new head in vertebrate cardiopharyngeal evolution: new anatomical and developmental insights on *Amphioxus* and other Chordates. *Amphioxus* satellite meeting in 6th Euro-Evo-Devo Meeting. Uppsala, July 25-26, 2016. Oral presentation.
- Diogo R, **Ziermann JM**. (2014) Why study muscles: bringing together anatomy, evolution, development, genetics, birth defects and medicine. First international meeting of evolutionary and developmental biology of heart and head muscles. Washington DC, May 11th, 2014.
- Ziermann JM**, Diogo R. (2014) Cyclostomes (lampreys and hagfishes) - what vertebrate animals without jaws teach us about the origin and evolution of vertebrate muscles. First international meeting of evolutionary and developmental biology of heart and head muscles. Washington DC, May 11th, 2014.
- Ziermann JM**, Olsson L. (2008) Sequence heterochrony in Lissamphibia. Ghent. European Society for Evolutionary Developmental Biology (EED). p 200.

Ericsson R, **Ziermann JM**, Piekarski N, Joss J, Olsson L. (2007) Cell fate and timing in the evolution of neural crest and mesoderm development in the head region of Amphibians and Lungfishes. 11th Congress on Early Vertebrates, Uppsala, Sweden.

Sánchez-Villagra MR, Nagashima H, Mitgutsch C, Winkler J, **Ziermann JM**, Olsson L, Kuratani S. (2006) Autopodial development and evolution in turtles; Prague. European Society for Evolutionary Developmental Biology (EED). p 194.

Posters at international conferences (see published abstracts)

Since July 2021 - Tenured Associate Professor

Boughner J, Wiltz K, McPike K, **Ziermann J** (2022) The Role of p63 in Muscle Development of the Head and Heart. Presented by JB at the joined conference 'Society for Developmental Biology & PASEDB' (July 17-20, 2022) in Vancouver, British Columbia, Canada.

Before July 2021

Boughner JC, **Ziermann JM**, Diogo R, Esteve-Altava B (2017) Can anatomical network analysis help explain anatomical evolution in marsupials and placentals? Presented at the Pan American Society for Evolutionary Developmental Biology 2017, August 19-23, Calgary, CAN.

Raj MT, Uppal J, **Ziermann JM**, Esteve-Altava B, Smith CM, Rasskin-Gutman D, Diogo R, Boughner JC. (2015) Red in Tooth and Jaw: Mechanisms coordinating the evo-devo of the mammalian face. Presented at the Pan American Society for Evolutionary Developmental Biology 2015, August 5-9, Berkeley, USA.

Diogo R, Smith C, **Ziermann JM**. (2015) Development and evolution of muscles of humans and other vertebrates: broader evolutionary and medical implications. Presented at the EMBO Workshop on Integrative perspectives on musculoskeletal development 2015, January 4, Ein Gedi, Israel.

Ziermann JM, Arntzen JW, Richardson MK. (2010) The transcriptome of an embryo of *Triturus carnifex* (Salamandridae, Caudata). Presented at the European Society for Evolutionary Developmental Biology (EED), Paris, France. Abstract book p274.

Ziermann JM, Bininda-Emonds ORP, Olsson L. (2007) Identifying sequence heterochronies in Lissamphibia. Presented at the 9. Jahrestagung der Gesellschaft für Biologische Systematik in Vienna, Austria (9th annual meeting of the society for biological systematic): Abstract book p169. (Prize for best graduate student poster).

Ziermann JM, Olsson L. (2006) Pattern and timing of cranial muscle development in anuran amphibians. Presented at the European Society for Evolutionary Developmental Biology (EED). Prague, Czech Republic.

Posters at national conferences

Since July 2021 - Tenured Associate Professor

Before July 2021

McPike KN, Boughner JC, **Ziermann JM** (2019) Correlation of head and heart muscle malformation in p63 mutant mice. Howard University Research Week 2019, April 11, Washington, DC, USA.

- Alghamdi MA, **Ziermann JM**, Diogo R. (2018) Understanding the Development, Variations and Defects of the Muscular System in Normal Human Embryos, Fetuses and Newborns. Howard University Research Week 2018, April 22, Washington, DC, USA.
- Cline D, Mayo H, Brown E, **Ziermann JM** (2018) The Development & Evolution of the Multi-Chambered Heart in Vertebrates. Howard University Research Week 2018, April 22, Washington, DC, USA.
- Edwards D, Siomava N, **Ziermann JM** (2018) Exploring the Role of *Nkx2.5* & *Islet1* during development of the cardiopharyngeal mesoderm. Howard University Research Week 2018, April 22, Washington, DC, USA.
- Diaz G, Alghamdi MA, **Ziermann JM**, Diogo R (2017) Anatomical analysis of musculoskeletal anomalies in a trisomy 13 fetus due to delayed development. Regional Conference of the American Association of Anatomists, 2017, November 4, Pittsburgh, PA, USA.
- Edwards D, Siomava N, **Ziermann JM** (2017) Exploring the Role of *Nkx2.5* & *Islet1* during development of the cardiopharyngeal mesoderm. Regional Conference of the American Association of Anatomists, 2017, November 4, Pittsburgh, PA, USA.
- Altema DW, **Ziermann JM** (2017) Implications of Nerve and Vessel Anastomosis in Wrist and Palmar Injury. Regional Conference of the American Association of Anatomists, 2017, November 4, Pittsburgh, PA, USA.
- Douglas N, Siomava N, **Ziermann J**, Diogo R. (2017) Seeing eye to eye: Cyclopia in Sheep and Humans. Howard University Research Week 2017, April 17, Washington, DC, USA.
- Wade M, McDowell A, **Ziermann J**. (2016) Innervation of the Long Head of the Triceps Brachii. Regional Conference of the American Association of Anatomists, 2016, November 5, New York City, NY, USA.
- Alghamdi M, Smith C, **Ziermann JM**, Diogo R. (2016) Musculoskeletal and Neural Comparison of Normal and Abnormal Development in Humans and Broader Medical Implications. Howard University Research Week 2016, April 14, Washington, DC, USA.
- Singh SS, Forrester A, Fahimuddin F, **Ziermann JM**. (2015) Applications of the urochordate cardiopharyngeal field to head and heart syndromes in humans. Howard University Research Week 2015, April 16, Washington, DC, USA.
- Smith CM, **Ziermann JM**, Diogo R. (2015) Muscular and skeletal anomalies in human trisomy in an evo-devo context using 3-D imaging and anatomical dissections, with notes on Down Syndrome, cyclopia and medical implications. Howard University Research Week 2015, April 16, Washington, DC, USA.
- Malik AH, Alghamdi M, **Ziermann JM**, Diogo R. (2015) An untold story: the important contributions of Muslim scholars for the discovery of human anatomy and the history of evolutionary thinking. Howard University Research Week 2015, April 16, Washington, DC, USA.
- Walsh S, Smith C, **Ziermann JM**, Diogo R. (2014) Muscle birth defects in a human trisomy-18 fetus, comparisons with other trisomies and karyotypically normal humans, and discussion of implications for the understanding and surgical treatment of non-pentadactyl limbs. Howard University Research Week 2014, April, Washington, DC, USA.
- Augustin J, Beheshtin B, Adegbyoyega M, Fair V, Walsh S, **Ziermann J**, Aziz A, Diogo R. (2013) Bias in Science: Determining the Validity of Racial Biological Theories. VSU (Virginia State University) Annual Undergraduate Research Conference 2013, April 5, Virginia, USA.
- Ziermann JM**, Olsson L. (2006) Patterns of cranial muscle development in the African Clawed Frog, *Xenopus laevis* (Anura, Pipidae). 3rd workshop in the department of Anatomy in Dresden, Germany.

Ziermann JM, Olsson L. (2004) Cranial muscle development in *Xenopus laevis* (Anura, Pipidae); 97.
Jahresversammlung der Deutschen Zoologischen Gesellschaft. Rostock, Germany.