

## CURRICULUM VITAE

### JANINE M. ZIERMANN, PH.D.

Howard University College of Medicine  
 Department of Anatomy  
 520 W St. NW; Numa Adams Bldg, Rm 1319  
 Washington, DC 20059  
[Janine.ziermann@howard.edu](mailto:Janine.ziermann@howard.edu) OR [jziermann@yahoo.de](mailto:jziermann@yahoo.de)

Web page: [www.headheartevodevo.com](http://www.headheartevodevo.com)  
 ResearchGate: [https://www.researchgate.net/profile/Janine\\_Ziermann](https://www.researchgate.net/profile/Janine_Ziermann)  
 Web of Science ResearcherID: C-7155-2014  
 ORCID 0000-0002-1264-9240  
 Scopus Author ID: 14038294700

Permanent Resident of USA: Green Card: since 11/2017

#### CURRENT POSITION

<b>Howard University College of Medicine, Department of Anatomy</b> Associate professor (tenured)	Washington, DC July 2021 – Present
--	---------------------------------------

#### PAST POSITIONS

<b>Howard University College of Medicine, Department of Anatomy</b> Assistant professor (on tenure track since July 2017) Instructor (Human anatomy) & Research faculty Postdoctoral researcher	Washington, DC July 2016 – June 2021 July 2014 – June 2016 Sept 2012 – June 2014
--	---

<b>Netherlands Centre for Biodiversity Naturalis</b> (now Naturalis Biodiversity Center) Analyst molecular laboratories (technician)	Leiden, Netherlands Feb 2012 – July 2012
--	---

<b>University Leiden, Institute of Biology, Department of Integrative Zoology</b> Guest researcher Postdoctoral researcher	Leiden, Netherlands Dec 2011 – Aug 2012 Sept 2008 – Feb 2012
--	--

## EDUCATION

### Friedrich Schiller University Jena, Institute of Systematic Zoology and Evolutionary Biology with Phyletic Museum

Jena, Germany; May 2005 – Aug 2008

- Ph. D., Thesis Title: Evolutionäre Entwicklung larvaler Cranialmuskulatur der Anura und der Einfluss von Sequenzheterochronien (“Evolutionary development of cranial muscles in anuran larvae and influence of sequence heterochrony”); 145 pages; 347 pages including appendices (cum laude):
- **Certificate:** 9 Feb. 2009
- Advisor: Prof. Dr. Lennart Olsson

### Friedrich Schiller University Jena, Institute of Systematic Zoology and Evolutionary Biology with Phyletic Museum

Jena, Germany; May 2004 – May 2005

- Diploma in Biology, Title: Entwicklung der larvalen Kopfmuskulatur des Südafrikanischen Krallenfrosches, *Xenopus laevis* (Anura: Pipidae), inklusive Erstellung einer Stadien-tabelle (“Development of the larval cranial musculature in the South African Clawed Toad, *Xenopus laevis* (Anura: Pipidae), with a new staging table”); 130 pages. DOI: [10.13140/2.1.2856.8648](https://doi.org/10.13140/2.1.2856.8648)
- **Certificate:** 9 June 2005
- Advisor: Prof. Dr. Lennart Olsson

### Friedrich Schiller University Jena

Jena, Germany

- Study of biology (final degree Diploma) 1999 – 2004
- Advanced study period: evolutionary zoology, anthropology, ecology 2002 – 2004

## GRANTS AND AWARDS

### Ongoing research support – in chronological order

Funding organization (Source)	Project title	Role (PI, Co-Investigators, etc.)	Amount	Duration
FAPESP/Smithsonian Institution (#2016/19075-9)	Diversidade e Evolução de Gymnotiformes / Diversity and Evolution of Gymnotiformes	Role: Co-Investigator PI – Naércio Aquino Menezes-Filho, Museu de Zoologia da Universidade de São Paulo (MZUSP), Brazil; PI – Carlos David de Santana, Smithsonian Institution National Museum of Natural History (NMNH), Washington, DC, USA; Co-PI – Aléssio Datovo da Silva, Museu de Zoologia da Universidade de São Paulo (MZUSP), Brazil; <b>Co-Investigators:</b> 23 Co-investigators, including <b>JM Ziermann</b>	\$ 1,256,000	08/01/2017 - 07/31/2022
NSF EIR-HBCU 18-522 ID: 2000005 (HUCM)	“Collaborative Research: Excellence in	<b>Role: PI</b> ( <a href="https://www.nsf.gov/awardsearch">https://www.nsf.gov/awardsearch</a> )	\$ 229,338 (original) + \$115,414	07/01/2020 - 06/30/2022

NSF EIR -HBCU 18-522 (August 2021) – supplementary fund for #2000005	Research": Impact of <i>Gbx2</i> on neural crest cells during neuronal, craniofacial and cardiovascular development	<a href="/showAward?AWD_ID=2000005&amp;HistoricalAwards=false">/showAward?AWD_ID=2000005&amp;HistoricalAwards=false</a>	(supplementary) = \$ 344,752	3; extended to 6/30/2024
NSF EIR-HBCU 18-522 ID: 1956450 (UDC)	"Collaborative Research: Excellence in Research": Impact of <i>Gbx2</i> on neural crest cells during neuronal, craniofacial and cardiovascular development	<b>Role:</b> Collaborator for #1956450: PI: Samuel Waters, University of District of Columbia	\$ 226,822	07/01/2020-06/30/2023;

## Grant applications submitted

Funding organization (Source)	Project title	Role (PI, Co-Investigators, etc.)	Amount	Duration
DFG (submitted Jan 9, 2023)	"Skelett- und Zahnentwicklung larvaler Batrachia" (Skeletal and tooth development in larval Batrachia)	<b>Role:</b> collaborator PI: Paul Lukas (FSU, Jena, GER)	€453.335	36 months
NIH RO1 (Submitted Feb 6, 2023)	"The head and the heart: studying tissue interactions to explain p63-related defects in mouse mesoderm- and neural crest-derived cranial and cardiac muscle tissues"	<b>Role: PI;</b> collaborator: Julia Boughner (USask, CAN)	\$1,525,840.00	11/01/2023 – 10/31/2027

## Past research support

Funding organization (Source)	Project title	Role (PI, Co-Investigators, etc.)	Amount	Duration
Research Meetings Outreach Grant. American Association of Anatomists. Submitted 25 <sup>th</sup> Feb 2020; awarded June 26 <sup>th</sup> , 2020	50 Years of Head Developmental Research – A Symposium to Honor Dr. Drew Noden's Contribution to Science	<b>Role: Symposium organizer;</b> with Rui Diogo (HUCM); Richard A. Schneider (UC San Francisco School of Medicine); Jean-Pierre Saint-Jeannet (NYU College of Dentistry; Local Organizer)	\$ 3,000	5/18/2020 *postponed to Spring 2021 due to Covid 19
GW School of Medicine and Health Sciences (SMHS)	Using Three Dimensional Printed Models in Embryology Education	PI – Victor Taylor II, <b>Co-Investigators:</b> Rosalyn Jurjus, <b>Janine M. Ziermann</b>	\$ 6,500	1/2019 - 12/2019
Office of Faculty Development at Howard University	Travel Award to attend Anatomage Table User Group Meeting 2018; San Jose, CA	<b>Role: Attendee</b>	\$ 2,500	7/20 – 7/21, 2018
College of Medicine Research Award (CoMRAD), University of Saskatchewan, CAN	A newly discovered role for physical contacts among head muscles and bones during healthy musculoskeletal development and growth	PI - Julia Boughner, <b>Co-Investigators:</b> Rui Diogo, <b>Janine M. Ziermann</b> , Diego Rasskin-Gutman	\$ 8,435	05/01/16-11/1/17
2017 RCMI Research Readiness Contest (awarded May 11, 2017)	Travel Opportunity for a Professional Development Conference/Training	<b>Role:</b> Participant at NIH BioTech 55: Engineering with CRISPR, TALENs, & ZFNs - . NIH, Bethesda, MD, USA	\$ 1,500	7/31 – 8/4, 2017
BFPSAP (Application for the Bridge Funds and Pilot Study	How tissue interactions can (or	<b>Role: PI</b>	\$ 25,000	11/28/16-11/27/17

Awards Program) Howard University (U100217)	cannot) get you your heart's desire: Role of neural crest cells for development of head and heart muscles			
Faculty Start-Up Package, Howard University College of Medicine (U400035)	Comparative Chordate Embryology and Implications for Human Health	PI - Rui Diogo; <b>Role:</b> <b>Postdoctoral researcher</b>	IDK	07/01/12-07/01/14
NCB Naturalis call 'ultra-high-throughput sequencing 2010 (PS2010.07)		<b>Role: PI</b> , Co-investigators: J. W. Arntzen (Naturalis, Leiden, Netherlands), M. K. Richardson (IBL, IZ, Leiden, Netherlands), B. Wielstra (Naturalis, Leiden, Netherlands)	€ 12,400	10/01/10-01/01/11
NWO-ALW (ALW817.02.027)	Developmental mechanisms of body plan evolution in a morphocline of salamanders	PI - M. K. Richardson; <b>Role:</b> <b>Postdoctoral researcher</b>	IDK	09/01/08-08/31/11
Deutsche Forschungsgemeinschaft (OL 134/2-4)	Cranial muscle development and evolution in anuran larvae	PI – Lennart Olsson; <b>Role:</b> <b>PhD student</b>	IDK	05/01/05-04/30/08

## Awards & Honors

**2022** Nominated for the (American Association for Anatomy) **AAA** (American Association for Anatomy) **Henry Gray Distinguished Educator Award**

**2020 AAA Student/Postdoc Travel Award:** American Association of Anatomists (AAA; Note: since August 2019: American Association for Anatomy) and the Committee for Early Career Anatomists (CECA) awarded to Kristen McPike.

- For the participation at AAA's Annual Meeting at EB2020, our poster abstract has been awarded the AAA Travel Award. Abstract title: P63 Mutation Impacts the Structure of Cardiopharyngeal Field Derived Muscles in Mice; Authors: Kristen McPike, Julia C. Boughner, Janine M. Ziermann (\$250).

**2019 Certificate of Appreciation** for Outstanding Professionalism in Teaching Human Anatomy Table Workshop: A Hands-on Training Session (Jan 21, Feb 21, Mar 28, 2019)

**2017 Graduate student scientific poster presentation award – Second place:** from the American Association of Anatomists (AAA; Note: since August 2019: American Association for Anatomy) awarded to Dameel Edwards.

- 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.
- <http://amasan.informz.net/admin31/content/template.asp?sid=48547&ptid=1472&brandid=3960&uid=825287986&mi=6491461&ps=48547>

**2017 AAA Student/Postdoc Travel Award:** American Association of Anatomists (AAA; Note: since August 2019: American Association for Anatomy) and the Committee for Early Career Anatomists (CECA) (April 2017) awarded to Arthur McDowell

- For the participation at AAA's Annual Meeting at EB2017, our poster abstract has been awarded the AAA Travel Award. Abstract title: Significance of Recognizing Anatomical Variations for Medical Education – an Example of the Triceps Brachii Heads; Authors: Arthur McDowell, Michael Wade, Janine Ziermann (\$250).

**2015 Journal of Anatomy: Joint Runner-Up Best Paper Prize:**

- For the publication in 2015: 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).

**2014 YAPA Award:** American Association of Anatomists (AAA) and the Keith and Marion Moore Young Anatomist's Publication Award (YAPA):

- [http://www.eurekalert.org/pub\\_releases/2014-04/aaoa-aa041514.php](http://www.eurekalert.org/pub_releases/2014-04/aaoa-aa041514.php)
- For the publication "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." I was awarded the YAPA award (\$500 honorarium and \$500 in travel support to participate at the AAA's Annual Meeting at EB 2014)

**2013 AAA Student/Postdoc Travel Award:** American Association of Anatomists (AAA) and the Advisory Committee for Young Anatomists (ACYA) (January 2013)

- For the participation at AAA's Annual Meeting at EB2013, I have been awarded a AAA Travel Award. Abstract title: Amphibian muscle development and homologies: broader developmental and evolutionary implications, with notes on metamorphosis and terminal additions (\$250)

**2007 Award for the best graduate student poster:** 9th annual meeting of the society for biological systematic (9. Jahrestagung der GfBS) Vienna, Austria, 2007. Abstract title: Identifying sequence heterochronies in Lissamphibia. (€100)

## TEACHING EXPERIENCES

Course Code	Course Name	Role	Semester(s)	Credits	From	To	Students #
ANAT 204	Human Evolution	Course coordinator	Spring	1	2017	ongoing	1-3 graduate students

		(with Dr. Rahmat)					MS/PhD anatomy
ANAT 197	Intro to Anatomical Research I	Course coordinator (with Dr. Rahmat)	Fall	1	2017	ongoing	1-3 graduate students MS/PhD anatomy
		Lecturer	Fall	1	2016	Ongoing	
ANAT 301	Musculoskeletal Anatomy	Course coordinator	Fall	6	2020	ongoing	1-3 graduate students MS/PhD anatomy
		Lab coordinator	Fall		2015	2019	
OCCG (formerly MDAN 170)	Musculoskeletal Anatomy	Course coordinator	Fall	4	2020	ongoing	30-35 OT students (MS until 2019, OTD since 2022)
		Lab coordinator	Fall		2015	2019	
PHTH 700	Advanced Human Anatomy	Course coordinator	Fall	5	2020	ongoing	10-15 PT students (DPT)
		Lab coordinator	Fall		2015	2019	
INDI 108	Structure and Function Unit I (Back, Chest, Extremities)	Lab-co-coordinator (with Dr. Powell)	Fall		2021	ongoing	120-130 1 <sup>st</sup> year MD students
		Lecturer, lab instructor, SGL instructor	Fall		2014	ongoing	
INDI 100	Structure and Function Unit II (Head, Neck, Nervous system)	Lecturer, lab instructor, SGL instructor	Spring		2014	ongoing	120-130 1 <sup>st</sup> year MD students
INDI 109	Structure and Function Unit III (Thorax, A&P)	Lecturer, SGL instructor (reserve faculty for lab)	Spring		2015	ongoing	120-130 1 <sup>st</sup> year MD students
INDI 101	Unit I (Molecules & Cells)	Lecturer	Fall		2017	ongoing	120-130 1 <sup>st</sup> year MD students
DENT 198	Micro Anatomy (Histo)	Lecturer	Fall		2017	ongoing	75-85 1 <sup>st</sup> year DD students
		1 Histolab	Fall		2019	2019	

**Current courses at Howard University College of Medicine, Department of Anatomy** Washington, DC

- Examples for current lectures:
  - *Developmental lectures*: Early embryology; Body plan formation; Face development; Pharyngeal arch derivatives; GI development; Urogenital development; Heart development; Fetal blood supply
  - *Histology lectures*: Muscle histology; Cartilage and bone histology; Basic characteristics of skeletal muscle
  - *Anatomical lectures*: Swallowing; Muscles of Facial expression; Upper Limb Nerve Injuries; Heart anatomy
  - *Flipped class*: Brachial Plexus Injuries (since 2016)
  - *Evolution lectures*: Pre-homo hominids; Human brain evolution & tool making (2020)
- Fall 2020: Online labs for Allied health 'MDAN 170 Musculoskeletal Anatomy' for students of occupational therapy; 'PHTH 700 Advanced Human Anatomy' for students of physical therapy; 'ANAT 301 Musculoskeletal Anatomy' and SF1
- Fall 2020 & Spring 2021: online labs and Anatomage table review sessions for INDI 108 Unit I: S&F (Back, Chest, Extremities) & INDI 100 Unit II: S&F (Head, Neck, NS) (NS = nervous system)

**Past courses at Howard University College of Medicine, Department of Anatomy** Washington, DC

- 2014-2017: Faculty for laboratory course Allied health 'MDAN 168 Basic human anatomy' for undergraduate students in anatomy
- 2014-2015: Faculty for Allied Health laboratory course 'MDAN 170 Musculoskeletal Anatomy' for students of occupational therapy and 'PHTH 700 Advanced Human Anatomy' for students of physical therapy
- 2017: Reserve faculty for laboratory course 'INDI 109 Unit III: S&F (Thorax, A&P): Structure and Function 3' for first year medical students (two labs: heart, lungs)
- 2015: Reserve faculty for laboratory course 'DENT 169 Gen. Anatom. Sciences' (GAS) for first year dental students (six labs: spinal cord, upper extremity, face-scalp-neck, parotid region, orbit, temporal region)
- 2014-2014: Reserve teaching assistant for first year medical and dental student laboratory courses (Medical students 'Structure & function Unit I, II, & III: INDI 108, 100, 109 (S&F)'; Dental students 'DENT 169 Gen. Anatom. Sciences') (heart, lung, face, foot)
- 2013-2014: Reserve teaching assistant for case based Small group learning sessions for first year medical students (different topics: autoimmune disease, nerve plexus injuries, and others)

**Past courses at University Leiden, Institute of Biology, Dept. of Integrative Zoology** Netherlands

- 2009-2011: Teaching Assistant in laboratory course 'Biology of organisms/animals' for first year bachelor students in biology
- 2010-2011: One Lecture in 'Human evolution' course for third year master students in biology

**Past courses at Friedrich Schiller University Jena, Institute of Systematic Zoology and Evolutionary Biology with Phyletic Museum** Jena, Germany

- 2004-2007: Teaching Assistant for laboratory course 'Comparative Zoology' for first year biology students
- 2005-2007: Teaching Assistant for half-day zoological excursions in Jena's surroundings for 1<sup>st</sup> year biology students
- 2005-2007: Teaching assistant for laboratory course 'Histology and Embryology' for 2<sup>nd</sup> year biology students



## Advisor for students

Thesis / Dissertation Direction (reverse chronological)

### Directed as advisor:

- 2022 M (Master of Science, Howard University, Washington, DC): **Tashanti Bridgett**
  - May 2022-Spring 2023: Abnormal patterns during female urogenital development
- 2021 M (Master of Science, Howard University, Washington, DC): **Malynda Williams**: Postnatal Tendon regeneration
  - Successfully defended July 19, 2021
  - Currently teaching STEAM at McClintock STEAM Middle School (Charlotte, NC)
- 2020-paused Jan 2022 D (PhD, Howard University, Washington, DC): **Kristen N. McPike**: Craniofacial and cardiac development in mutant mice with epithelial (*p63*) and/or neural crest defects (*Gbx2*)
  - Topic: Mouse models to understand human head and heart development and pathology
  - Research conducted at Howard University College of Medicine, Department of Anatomy
- 2020 M (Master of Science, Howard University, Washington, DC): **Kristen N. McPike**: The Impact of *p63* on Cranial Neural Crest Cells and Their Derivatives (2018-2020)
  - Successfully defended July 8, 2020
  - 2020: Currently PhD student in Ziermann's lab
- 2020 M (Master of Science, Howard University, Washington, DC): **Bosung Titanji**: Thoracic and Abdominal Organ Development and Malformations Associated with Trisomy 21 (2019-2020)
  - Successfully defended May 12, 2020
  - 2020: MCAT, applied to medical schools Fall 2020
- 2015 M (Master of Science, Howard University, Washington, DC): **Aamina H. Malik**: Variability of Lower Extremity Musculature in Trisomic Humans (2014-2015)
  - Successfully defended March 26, 2015
  - 2017 – Present: 3<sup>rd</sup> year Medical Student at Howard University College of Medicine
- 2015 M (Master of Science, Howard University, Washington, DC): **Malak A. Alghamdi**: Variability of Upper Extremity Musculature in Trisomic Humans (2014-2015)
  - Successfully defended March 26, 2015
  - 2015 – present: Faculty in Saudi Arabia
- 2011 B (Bachelor of Biology, Leiden University, Leiden, NL): **Nico Kist**: Transcriptomics in *Triturus carnifex* embryos
  - 2012 – 2017: PhD Candidate at the Department of Zoology, University of Oxford, UK

### Directed as co-advisor:

- 2015-2018 D (PhD, Howard University, Washington, DC): **Malak A. Alghamdi**: Understanding the Development, Variations and Defects of the Muscular System in Normal and Abnormal Human Embryos, Fetuses and Newborns; Advisor: Dr. Rui Diogo
  - Topic: Birth defects in humans; Advisor: Rui Diogo
  - Research conducted at Howard University College of Medicine, Department of Anatomy
  - 2015 – present: Faculty in Saudi Arabia
- 2014 M (Master of Medical and Biological Illustration, Dept. Art as Applied to Medicine, John Hopkins University School of Medicine): **Christopher Smith**: 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; Advisor: Dr. Rui Diogo
  - 2017 – Present: PhD Candidate in Physical and Biological Anthropology, City University of New York, USA

- 2014 M (Master of Biology, Howard University, Washington, DC): **Sean Walsh**: Muscles of Trisomy 18 fetus; Advisor: Dr. Rui Diogo
- 2013 M (Master of Anatomy, Howard University, Washington, DC): **Bianca Wilson**: Muscles of Trisomy 21 fetus; Advisor: Dr. Rui Diogo
  - 2017 – Present: student at Ross University School of Medicine
- 2010 M (Master of Biology/Science, Leiden University, Leiden, NL): **Nicole Webster**: Chromosome 1 Syndrome in *Triturus carnifex*; Advisor: Dr. Michael Richardson
  - 2011-2017: PhD Candidate at the Department of Biological Science, University of Alberta, Edmonton, CAN
  - 2018-2021: Postdoctoral researcher in Neva Meyer's lab at Clark University, Worcester, MA
- 2007-2008 Dipl (Diploma Biology, Friedrich Schiller University, Jena, Germany): **Martin Fritsch**: Comparative analyses of anuran jaw musculature with special focus on their feeding habits; Advisor: Dr. Lennart Olsson
  - Mar 2017 – Present: Sales Representative at Leica Microsystems

**Thesis Committee Service (dissertations or theses read as a member of a student's committee):**

- 2021 (PhD, Howard University, Washington, DC): **Raechel McKinley**: The Impact of DNA Methylation Changes Following Lipopolysaccharide Treatment in Oligodendrocyte Precursor Cells; Advisor: Dr. Antonei Csoka (defended July 2021)
- 2015-2018 D (PhD, Howard University, Washington, DC): **Malak A. Alghamdi**: Understanding the Development, Variations and Defects of the Muscular System in Normal and Abnormal Human Embryos, Fetuses and Newborns; Advisor: Dr. Rui Diogo

Additional contributions to teaching

**Advisor for research projects currently conducted by students** (expected finish of research part in brackets)

- May 2021-ongoing (expected Aug 2021): **Deja Rush** (MD2024; MSSRP-Student): Embryological and evolutionary origin of the diaphragm (Review in preparation: *Developmental Dynamics*)
- April 2021-ongoing (expected Spring 2022): **Amanda Strong** (MD2024), **Lyvia K. Welborn** (MD2024), in collaboration with **Dr. Maximilian Schuff** (IVF Bregenz, Austria): Evolution of Imprinting
- April 2021-ongoing (expected Fall 2021): **Kylar Wiltz** (MD2022), **Kristen McPike** (PhD expected 2022), in collaboration with **Dr. Julia Boughner** (Saskatchewan University, CAN): Craniofacial and cardiac anomalies in p63 mutant mice (Paper in preparation: *Anatomical Record*)
- April 2021-ongoing (expected Spring 2022): **Yashvardhan Batta** (MD2024), **Andres Aquino** (MD2024), in collaboration with **Dr. Samuel Waters** (University of the District of Columbia, Washington DC): Anatomy of Gbx2 neomorph mice with focus on brain, craniofacial and cardiac musculature
- August 2018-ongoing (interrupted Mar2020-May2021 due to COVID-19; expected Spring 2022): **Ahmad Haj-Assaad** (MD2021), **Ore Oyetan** (MD2021), **Shakila Akther** (MSOT2021); **Nehemiah Wilson** (MD2024); in collaboration with **Dr. Robert Wilson** (Howard University Hospital, Washington, DC): Mystery of the scaphoid bone: ligaments, arterial supply, injuries
- April 2017-ongoing (interrupted Jan 2018-Sep 2019 due to flooded & destroyed lab; interrupted Mar2020-May2021 due to COVID-19; expected December 2021): **Hari Mayo** (MD2021), **Delaena Cline** (MD2021), **Nickalous Trevino** (MD2024), **Mailen Fernandez Gonzales** (MD2024): Heart chamber evolution
- Jan 2017-ongoing (interrupted Jan 2018-Sep 2019 due to flooded & destroyed lab; interrupted Mar2020-May2021 due to COVID-19; expected open): Cardiopharyngeal field in *Xenopus laevis*

- April 2017 – Dec 2019: **Dameel Edwards** (MD2021): *Nkx2-5* expression during heart development in *Xenopus laevis*
- Jan 2017 – Feb 2017: Part-time (5h/wk) postdoctoral student **Natalia Siomava** (Ph.D. in Bioinformatics; PostDoc; Dubai): *Islet 1* expression in *Xenopus* embryos

#### **Advisor for other/past students**

- August 2018 – August 2019: **Taylor Span** (MD2021): Cardiopharyngeal syndromes in a human fetus
- May 2017 – Feb 2018: **Derek Altema** (MD2020): Anastomosing nerves and vessels (arteries) in the hand – in particular thenar compartment
- May 2016 – Nov 2016: **Michael Wade** (MD2019), **Arthur McDowell** (MD2019): Innervation of the long head of the triceps (Paper published: The Anatomical Record)
- May 2015 – Oct 2015: **Angelique Forrester** (MD2018), **Simmi Singh** (MD2018), **Fatimah Fahimuddin** (MD2018): Cardiopharyngeal field and associated syndromes in humans (Paper published: JOHA 2017)

#### **Review session on Anatomage Table**

- 2018 – Present (students volunteer to help creating small group learning sessions)
  - Faculty license: May 2020
  - Extra student license: October 2020

## SERVICE ACTIVITIES

### Departmental, School/College, or University Committee Service

#### **Howard University committee**

- 2020-4 – ongoing: **Service in graduate appointment committee.** Role: Evaluating applications for appointment and re-appointment of faculty of the graduate school. Discussion of applications with other committee members, making suggestions regarding decision. Chair: Interim Dean Dana Williams.
- 2020-7 – 2022-6: **Committee on Budget & Planning:** Role: reviewing and discussion of budget plans
- 2022-7 – ongoing: IACUC committee Howard University

#### **Internal committees (Howard University College of Medicine, HUCM)**

- 2015-9 – 2017-6 **Member of the Evaluation Subcommittee of the Curriculum committee of HUCM.**  
**Role:** Review of student evaluations of courses given in the 1<sup>st</sup> to 4<sup>th</sup> year medical curriculum. Summarizing student comments based on positive and negative. Reporting on overall course evaluation and suggesting areas of improvement (if applicable) based on returning or repeating comments of students. Head of committee Dr. Eva Polston.
- 2017 – 2021 **Serve on the MSSRP review committee:** Medical Summer Student Research Program at Howard University College of Medicine. Annually in Feb/Mar (2017, 2018, 2019, 2020, 2021).  
**Role:** reviewing medical student applications to summer research programs, evaluating them with help of point-based rubric, discussing with other committee members quality of applications, suggesting list of awards based on student's maximum points. Head of committee Dr. John T Stubbs, III.
- 2019-10: Represent the COM Faculty at the **Middle States Preliminary Visit** on October 24th; 2019
- 6/2021 – Member of the **Interdisciplinary Biomedical Science Program Working Group:** A group of graduate program directors and faculty of the basic science departments in the College of Medicine to create a combined biomedical curriculum for graduate students.

#### **Departmental committees (Anatomy)**

- 2015-5 – 2015-8 **Member of the SOP (Standard Operating Procedures) committee.** Howard University College of Medicine, Department of Anatomy. May – Aug 2015. Head of committee: Dr. Heinbockel. Role: Review of SOPs, discussion of necessary changes and wording of them.
- 2018-3 & 2019-5 **Participation in Graduate Program Admissions Subcommittee.** Head of committee: Dr. Heinbockel 2018, Dr. Csoka 2019. Role: Review of graduate student applicants, discussion, and suggestion regarding their admission.
- 2018-4 – 2019-4 **Member of Search committee for faculty** (tenure track and adjunct). Head: Dr. Bernor. **Role:** Review and evaluate applicants for tenure and non-tenure positions in the anatomy department.
- 2019-8 – ongoing **Graduate Program Co-Director** (with Dr. Sulman Rahmat), Department of Anatomy. **Role:** Supervise and coordinate the administration and governance of graduate studies within the graduate program for which the graduate program director is responsible. Serve as a point of contact for graduate students enrolled in the program.
  - **Chair of graduate program committee** of Department of Anatomy
- 2021-1 – 2022-4 **Member of Search committee for faculty** (tenure track). Head: Dr. Csoka. **Role:** Review and evaluate applicants for tenure track positions in the anatomy department.
- 2021-7 – 2022-4 **Member of Search committee for faculty** (Instructor). Head: Dr. Csoka. **Role:** Review and evaluate applicants for tenure track positions in the anatomy department.
- 2021-11 – ongoing elected (Nov 2021, Nov 2022) **Member of the Executive Committee** of the Department of Anatomy
- 2022-2-2022-4 Organizing committee of **Anatomy Memorial Ceremony held on 4/21/2022** (with Stephen Cosgrove, Lynette Thomson, Dr. Sulman Rahmat, Dr. Thomas Heinbockel).  
<https://www.youtube.com/watch?v=Z68NSjn6o8w>

#### Other services

- HUCM
  - 2014 – ongoing **Letters of recommendation** for medical and allied health students.
  - **Anatomege Table course:**
    - Oct 2018 – Mar 2019 Leading introduction to the Anatomege table: 5x 1h (5 = 2x anatomy department + 3x HUCM wide; 5 sessions with MS1 – 1st year medical students)
    - Jan – Mar 2020 Presentation of Anatomege Table to visiting faculty from Montgomery College; questionnaire Towson University – College of Health Professions; 3 sessions with MS1
    - Fall 2020: Review for Medical students online anatomege & license for 1 medical students since Oct 2020
  - 2018-7 – ongoing **Faculty advisor for the HUCM American Medical Women's Association.** **Role:** Reviewing activities planned by AMWA, advising for advertisement, communication, outreach, and debates within the group. Current president: Ms. Megan Hahn.
  - 2022-7 – ongoing: Faculty advisor for GLAAM since July 2022
  - 2022-8 Medical youth high school students Anatomy - all male
  - 2022-9 Assistance of Dr. Maren Shaw (HUH, Dermatology) during suture training of dermatology residents (2 hours)

- Department of Anatomy
  - 2017-10 **Member of the ‘expository writing task force’** of the Howard University College of Medicine, Department of Anatomy. Lead by Dr. Heinbockel. Role: suggestions to improve writing skills in students.
  - 2019-12 Review of Raechel McKinley’s 2019 NIH-HUIRC (College of Medicine) application — successful (Feb 17, 2020)

## Contributions to the Profession

### Conference / Symposium organization

- 2014-May: **“First international meeting of evolutionary and developmental biology of heart and head muscles.”** Organizers: Rui Diogo, Janine M. Ziermann. Washington DC, May 11-13, 2014.
- 2019-3 **H-PREP Symposium**, Department of Anatomy, Howard University College of Medicine. March 23rd, 2019: 4 hours, Faculty present in Anatomy lab during high school student’s visit to the anatomy-laboratory. Preparation of several organs and discussions about donation program and ethics in the lab.
- 2019-7 **EvoDevo Symposium with Robert Cerny**, ICVM2019, Prague Czech Republic, 6 Talks

### Committee outside Howard University

- 2016-5 – 2019-4 **3-year term member of the Advisory Committee for Young Anatomists (ACYA)**, now called Committee for Early Career Anatomists (CECA) – part of the American Association of Anatomists (AAA) (Note: since August 2019: American Association for Anatomy). May 2016-April 2019
  - PhD awards judging as part of the ACYA at Experimental Biology conference EB2016, San Diego (April 2016)
  - Judge as CECA member (Committee for early carrier anatomists) at Experimental Biology conference EB2017 (Chicago, April 2017), EB2018 (San Diego, April 2018); EB2019 (Orlando, April 2019)
  - Judge as CECA member (Committee for early carrier anatomists) 125 Abstracts in the category “graduate and post-doctoral abstracts” for Experimental Biology conference EB2017 in Chicago (Dec 2016), EB2018 in San Diego (Dec 2017); and EB2019 in Orlando (Dec 2018)
  - Poster Award Judge at AAA’s Regional Meeting at Duquesne University, November 4, 2017. Graduate student award judging at the Regional Conference of the American Association of Anatomists. Duquesne University, Pittsburgh, PA, USA. (4 Nov 2017)
  - Poster Award Judge at AAA’s Regional Meeting at Columbia University Medical Center on November 5, 2016. Graduate student award judging at the Regional Conference of the American Association of Anatomists. Columbia University Medical Center, New York City, NY, USA. (5 Nov 2016)
- 2021-1 –2023-12: 3-year term member of the Scientific Affairs Committee of the American Association for Anatomy
  - Scope: <https://www.anatomy.org/AAA/About-Us/Leadership/Committees/AAA/About-AAA/Leadership/Committees.aspx>
  - 2021-2023 annually Judge “Early-Career Publication Award”

- 2021-3 Judge “Research Meetings Outreach Grant”
- 2021-9 Judge “Research Meetings Outreach Grant”
- 2022-9 Judge “Research Meetings Outreach Grant”
- 2022-7 – 2022-9 committee for new EUREKA Award (EDI Undergraduate Research Award)

**Peer-Reviewer for journals** (month and year of review) 2009 – Present: Biology (Sep 2017); Clinical Anatomy (Feb 2023) Contributions to Zoology (2009, 2013, May 2019); Developmental Dynamics (Jan, Apr 2019); Frontiers in cell and developmental biology (Feb 2021); Frontiers Physiology (Apr 2021); Healthcare Analytics (Feb 2023); Journal of Anatomy (Jan 2015); Journal of Biological Education (Jan 2018, Feb 2020); Journal of Developmental Biology (Jan 2019), Journal of Experimental Zoology (Mol Evo Dev) B (Feb, Apr 2014; Sep 2022; Jan 2023); Journal of Morphology (Feb 2016; Jul, Aug 2017; Dec 2019); Journal of Surgical Research (Jun, Oct, Dec 2019); Muscle and Nerve (Apr, Jul 2020); PeerJ (Dec 2014; Mar 2015; Aug, Nov, Dec 2017); PlosOne (Oct 2015; Feb, Oct 2016; Apr, May 2019); Scientific Reports (Aug, Dec 2015); Skeletal Muscle (Feb 2019); The Anatomical Record (May, Jul, Sep, Oct 2013; Apr 2016; May, 2xJun 2017; Feb, Dec 2018; Apr 2020; Jan, Feb 2023); Vertebrate Zoology (Jun 2020); Zoology (Jun 2014); Zoologischer Anzeiger (Jun 2012; Oct 2013; Apr, Aug, Dec 2016; Apr 2017; Jan, Aug 2019; Feb, Apr 2020; Jul 2021; Mar, Apr 2022)

### Review of Book proposals

Feb 2022: Springer – “Cyclostome anatomy” book proposal by Daichi G. Suzuki (Tsukuba University, Japan) and Hiroki Higashiyama (University of Tokyo, Japan)

Dec 2022: Springer – “Color Atlas of Animal Anatomy” book proposal by Dr. Yaoxing Chen.

### Reviewer for Funding agencies

- July 2022: Review Grant entitled “23-04839S - Sonic hedgehog signaling in the development of myocardium” for Czech Science Foundation
- July 2022: Review Grant entitled “23-05287K - Molecular interactions of nerves and nerve-associated cells in the morphogenesis of dermal placodes” for Czech Science Foundation
- February 2022: National Science Foundation – IOS NSF2205928Gross
- September 2021: National Science Foundation – Career NSF2146057Ezin
- April 2021: National Fellowship Program - Graduate Women in Science (GWIS) “Developmental mechanisms driving loss of the tail during avian evolution”
- May 2020: National Science Foundation – NSF Merit Review Process Focus Group
- July 2018: Review Grant entitled “19-18634S - Craniofacial development of non-teleost fishes as a unique model of the vertebrate head evolution” for Czech Science Foundation
- May 2017: Review Grant proposal for ANR (agence-nationale-recherche, the French National Research Agency generic 2017 call) “Evolution of gene regulatory mechanisms controlling myogenesis in deuterostomes”
- March 2017: Serve on the Spring 2017 ‘Animal Evolution of Developmental Mechanisms’ Review Panel from the NSF; the Evo-Devo Panel meets at the NSF headquarters in Arlington, VA, March 8-10, 2017.

### Editor/ Editorial Board Member

- **Editor of the journal ‘Zoologischer Anzeiger’** (Dec 2018 – present; subject editor for Vertebrata (Mammalia and “Pisces”)): <https://www.journals.elsevier.com/zoologischer-anzeiger/editorial-board/janine-m-ziermann>
  - **Handling editor** for 24 manuscripts in 2019, 22 in 2020 (25 Oct 2020)
  - Schmitt M. (2019). A brief history of the journal Zoologischer Anzeiger: <https://www.sciencedirect.com/science/article/pii/S0044523119301299> (JM Ziermann mentioned in Table 1).
- **Editorial Board Member of ‘The Journal of Experimental Zoology Part B: Molecular and Developmental Evolution’** <https://onlinelibrary.wiley.com/page/journal/15525015/homepage/editorialboard.html> (Dec 2021 – present)

- **Editorial Board Member of the 'Journal of Embryology & Developmental Biology'** (June 2016 - Present): <https://www.jscimedcentral.com/Development/editors.php>
  - **Handling editor** for 1 manuscript (Jan/Feb 2017)

### Professional memberships

- 2021/4 – Present: Black in Anatomy; Member as Ally
- 2020/8 – Present: SCGDB (Society for Craniofacial Genetics and Developmental Biology) Membership
- 2019 – Present (renewed to 1/1/2025): Pan-American Society for evolutionary developmental society
- 2017 – Present: Evolutionary Medicine (The Foundation for Evolution, Medicine and Public Health, Inc.)
- 2015 – Present: "Xenbase" Major funding for Xenbase is provided by the National Institute of Child Health and Human Development, grant P41 HD064556: Member ID (JMZiermann) XB-PERS-3324
- 2013 – Present: "Phenotype Ontology Research Coordination Network" – Phenotype Ontology RCN, NSF funded
- 2012 – Present: "American Association of Anatomists" – AAA, USA (Note: since August 2019: American Association for Anatomy)
- 2007 – Present: International Society of Vertebrate Morphology (ISVM)
- 2006 – Present: "European Society for Evolutionary Developmental Biology" – EED (founding member)
- 2006 – 2012: "Deutsche Gesellschaft für Herpetologie und Terrarienkunde" – DGHT, Germany
- 2006 – 2012: "Förderverein Phyletisches Museum" e.V. Jena, Germany
- 2006 – 2012: "Gesellschaft für Biologische Systematik" – GfBS, Germany

### Public & Community Service

**2014-May-July:** Supporting the Preparation of the Exhibition "Exhibition "Anatomical Art: Dissection to Illustration. An Exhibit 2014." at Howard University (with SS Dunlap, MA Aziz; Leading artist: Robert Liberace)

**2013 (May, October):** Preparation of human bodies for Art class from Robert Liberace: <http://www.robertliberace.com/stillLife/gallery.htm>

### OUTREACH ACTIVITIES

#### Interviews & others reporting about my research

**January 2021:** EXPERTS WEIGH IN ON CURRENT JOB MARKET TRENDS  
<https://www.zippia.com/biological-science-technician-jobs/trends/> \_

**2020** Featured article: Alghamdi et al. 2017 "An Untold Story: The Important Contributions of Muslim Scholars for the Understanding of Human Anatomy"

- 2020-June <https://muslimheritage.com/understanding-of-human-anatomy/>

**2018:** Featured article (Ziermann et al. 2018 J Morph) on DICE CT webpage:

- <https://dicect.com/2018/05/23/featured-article-cephalic-muscle-development-in-the-australian-lungfish-neoceratodus-forsteri/>

**2017:** reactions to Alghamdi et al. (2017, Journal of Anatomy)

- May: cover and editorial in the Journal Anatomical Record
  - <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>

- Feb: featured in this key article in February's 2017 newsletter of the American Association of Anatomists (Note: since August 2019: American Association for Anatomy)
  - <http://amasan.informz.net/admin31/content/template.asp?sid=46181&ptid=1411&brandid=3960&uid=884750249&mi=5901772&ps=46181>

**2015-May:** Anatomy now: special edition Diogo et al. (2015, Nature)

- <http://amasan.informz.net/admin31/content/template.asp?sid=39253&ptid=1180&brandid=3960&uid=825287986&mi=4344125&ps=39253>

**2015-Jan:** Interview Howard University Graduate School Magazine (HUGS Magazine, Issue 008 2015) (with Gwendolyn S. Bethea)

- <http://www.hugsresearch.org/issues/008/research-on-evolution-of-human-development.html>

**2013-Jan:** Interview in Mare Universitair Weekblad about Ziermann et al. (2013, Acta Zoologica)

- <http://www.mareonline.nl/archive/2013/01/30/de-freddy-krueger-kikker>

## Other outreach / Community outreach

**2022-July:** 12 underrepresented minorities Students from Public High school in Ward 7 & 8 of Washington DC visit the Anatomy lab at HUCM to be introduced to STEM (Anatomy) (2-hour demonstration)

**2021-July:** Hard of hearing school students from Gaulladet University visit the Anatomy lab (2-hour demonstration)

**2016-Nov:** 2-hour tour at Howard University College of Medicine and introduction to human anatomy for endocrinology students that are interested in applying for medical or dental school at Howard University (contact Cheryl Rust, M.S.P.H., Ph.D.)

**2016-2018 Oct:** 15-30min presentation about head and heart research for students visiting from George Washington University

## RESEARCH COLLABORATIONS (PUBLICATION)

**Bold:** ongoing collaborations; Regular: finished collaborations; (journal name): Publication in this journal

- **Waters SJ (2020-ongoing):** Gbx2 during developmental processes of brain, craniofacial and cardiovascular structures (Waters: University District of Columbia, DC, USA)
- **Boughner JC (2018-ongoing):** p63 mutations and their effects on cardiopharyngeal syndromes in mice (Boughner: University of Saskatchewan, CAN; Developmental Dynamics - submitted)
- Boughner JC, Esteve-Altava B, Diogo R (2015-2020): Network analysis in mice (Boughner: University of Saskatchewan, CAN; Esteve-Altava & Diogo: Howard University; Journal of Anatomy)
- Diogo R. (2014-2020): Evolutionary concepts (Diogo/Ziermann as CoPIs); limb muscle evolution (Diogo is PI); Cephalic muscle evolution in Vertebrates (Ziermann is PI) (Howard University College of Medicine) (multiple publications: see publication list)
- Aziz MA., Dunlap SS. (2013-2018): Muscles of the thumb: The muscle of Cruveilhaer and Innervation (Howard University College of Medicine, Washington, DC) (Medical Research Archives; PLOSone)
- Ericsson R., Clements A. (2015-2017): early cranial muscle differentiation in Australian lungfishes (Ericsson: Natural history museum, London, GB; Clements: Uppsala University, Sweden) (Journal of Morphology)
- Gondre-Lewis M. (2014-2015): Trisomic human fetuses (Howard University College of Medicine, Washington, DC) (Journal of Anatomy)



- Wielstra B, Arntzen JW. (2012-2013) Transcriptomics in *Triturus*; Phylogeography of *Bufo* in France (Naturalis Biodiversity Center, Leiden, The Netherlands). (Molecular Ecology Resources; Contributions to Zoology)
- Aversi-Ferreira TA. (2012-2014): Muscles and vessels in apes & monkeys (Federal University of Tocantins – Brazil) (Biomedical Research International; PlosOne)
- Elinson RP. (2012-2013): Cranial muscle development in direct development frog *Eleutherodactylus coqui* (Duquesne University, Pittsburgh, PA) (Journal of Morphology)
- Infante C, Hanken J. (2008-2010): Morphology in larvae of *Lepidobatrachus laevis* (Harvard University, Boston, MA) (Acta Zoologica)
- Sanchez-Villagra, M. (2007-2008): Limb development in *Graptemys nigrinoda nigrinoda* (Zürich University, Switzerland) (Amphibia-Reptilia)
  - <http://cashp.gwu.edu/blog/2014/05/14/anatomy-of-a-lab-rotation/>

## CERTIFICATIONS, ATTENDED COURSES & WORKSHOPS

Howard University College of Medicine, Washington, DC, USA

2012 – Present

- Collaborative institutional training initiative (CITI PROGRAM) – sorted by Course ID

Course - CITI PROGRAM	Course ID	Stage	Completion Record ID	Completion date	Expiration date
Human Research - Group 1. BIOMEDICAL / refresher / refresher	ID 1289	Basic Course	15536308 / 32308543 / 46268750	03-Oct-2017 / 1-Mar-2020 / 11-Dec-2021	03-Oct-2019 / 1-Mar-2022 / 11-Dec-2023
Working with the IACUC	ID 70201	Lab Animal Research	15536309 / 37570946	20-Oct-2017 / 3-Aug-2020	19-Oct-2020 / 3-Aug-2023
Essentials for IACUC Members	ID 70202	Lab Animal Research	51970545	17-Nov-22	17-Nov-25
Working with Amphibians in Research Settings	ID 70204	Lab Animal Research	15536310 / 40418337	19-Apr-2018 / 11-Dec-2021	19-Apr-2021 / 10-Dec-2024
Working with Mice in Research Settings - Working with Mice in Research	ID 70206	Lab Animal Research	15536311 / 53165254	12-Mar-2020 / 23-Mar-2023	12-Mar-2023 / 23 Mar 2026
IACUC Community Member	ID 70219	Lab Animal Research	51970546	24-Mar-2023	24-Mar-2026
Post-Approval Monitoring (PAM)	ID 95938	Lab Animal Research	35924749	09-Aug-2020	09-Aug-2023
Information Privacy Security (IPS) - Researchers	ID 95950	Basic Course	35924750	17-Mar-2020	N/A
Biomedical Responsible Conduct of Research	ID 95954	RCR / refresher	35686083 / 53053431	04-Mar-2020 / 23-Mar-2023	04-Mar-2023 / 23 Mar 2026
CITI Conflicts of Interest - Conflicts of Interest	ID 95965	Stage 1	35910199	11-Mar-2020	10-Mar-2024

Export Controls - CITI Export Controls Course	ID 102877	Stage 1	15536324 / 35976353	12-Mar-2015 / 9-Aug-2020	10-Mar-2020 / 8-Aug-2025
Biosafety - Group 2: Bench Researchers and Research Staff; Students in Biological Sciences	ID 102894	Stage 1	35686084	17-Mar-2020	16-Mar-2024
Biosafety - Group 3: Translational Scientists and Laboratory Staff (if any)	ID 102895	Stage 1	35910200	11-Mar-2020	10-Mar-2024
Information Privacy Security (IPS) - Clinician Scientist	ID 117690	Basic Stage / Basic Stage	35910537 / 46334845	11-Mar-2020 / 11-Dec-2021	11-Mar-2022 / 11-Dec-2023
Revised Common Rule	ID 182155	Basic Course	35924751	09-Aug-2020	09-Aug-2023
COVID-19: Back to Campus (Fall 2020)	ID 202482	Basic	37447845	31-Jul-2020	N/A
COVID-19: Public Training Series - Remote Contact Tracing	ID 211678	Basic Course	38716967 / 44750398 / 51402214	2-Dec-2020 / 11-Dec-2021 / 24-Mar-2023	2-Dec-2021 / 11-Dec-2022 / 24-Mar-2024
COVID-19: Public Training Series - Participating in Vaccine Research	ID 218036	Basic	39284680	2-Dec-2020	N/A
COVID-19: Public Training Series - COVID-19: Insights for Higher Ed Leaders	ID 223321	Basic	39545819	2-Dec-2020	N/A
COVID-19: Public Training Series - What You Need to Know About COVID-19 Vaccine	ID 232284	Basic	41318589	11-Dec-2021	N/A
COVID-19: Public Training Series - Mental Health for Higher Ed and Healthcare	ID 245214	Basic	43918828	11-Dec-2021	N/A
COVID-19: Public Training Series - COVID-19: Back to Campus (2020-2023)	ID 256282	Basic	48369745	24-Mar-2023	N/A
COVID-19: Public Training Series - Remote Contact Tracing	ID 256283	Basic	48369746	24-Mar-2023	N/A
COVID-19: Public Training Series - Participating in Vaccine Research	ID 256284	Basic	48369747	24-Mar-2023	N/A
COVID-19: Public Training Series - COVID-19: Insights for Higher Ed Leaders	ID 256285	Basic	48369748	24-Mar-2023	N/A

COVID-19: Public Training Series - What You Need to Know About COVID-19 Vaccine	ID 256286	Basic	48369749	24-Mar-2023	N/A
COVID-19: Public Training Series - Mental Health for Higher Ed and Healthcare	ID 256287	Basic	48369750	24-Mar-2023	N/A

- Teaching related courses
  - Learning Management System (LMS) Essentials: CANVAS (certificate 7 Jul 2022; 2.5 hrs)
  - CETLA “Fresh Start” is a self-paced guided course including best practices for initial remote course design and delivery. (11 Jan 2021, 2.5 hr)
  - ‘Proctorio training’, Howard University via CETLA, (21 Aug 2020, 1hr)
  - ‘Get Started Using Echo360 Platform’, Echo Team and Howard University, CETLA (14 Jul 2020, 1hr)
  - ‘Blackboard - Distance Learning Certification’, CETLA & Dr. Dion Gnanakkan, 1 week online course (5/25-5/29, ca. 20 hours total effort, certificate 5/25/2020)
  - “Howard Med Forward: The Curricular Reform Imperative.” College of Medicine 11<sup>th</sup> Annual Faculty Retreat. Office of Faculty Development (27 May 2020, 8 hrs)
  - Blackboard certification, Dr. Dion Gnanakkan, I-Lab, Howard University (test-out: 22 Nov 2019, 1hr; preparation 10hrs)
  - Examssoft Workshop, led by Ms. Monique Frazier, Director, Data analyze center (2hrs, 19 Nov 2019)
  - ‘Course Coordinators’/Clerkship Directors’ Orientation’ Office of Faculty Development (7hrs, 23 Aug 2018)
  - CETLA workshop: PE01 Polling with Poll Everywhere (2hrs; 23 Oct 2017)
  - Office of Faculty Development: Small group facilitators workshop ‘Effective active learning facilitation’ (1h, 25 Aug 2017)
  - Office of Faculty Development: ‘How Smart are your Learning Objectives?’ (1.5hrs, 13 Apr 2017)
  - ‘Training: Teaching at Howard University’ online training (8 Jan 2016)
  - ‘Teaching Skills for Residents and Graduate Students’ Instructional session to the LCME standards (2013)
- Grant & Research related (application, management, ordering)
  - ‘Workday Grants Training’ May 2021
  - ‘PeopleSoft Requester Training’ organized by Sanjay Shrestha and Tawfeeq Al-Gailani (28 Jul 2020, 6hrs)
  - NSF HBCU EIR 2019 course
  - GHUCCTS ‘Discovery through diversity’ (1hr; 27 Feb 2018)
  - ‘Mandatory PeopleSoft Requester Training 2016’ (3 Mar 2016)
  - Office of Research Development Seminar Series (3 Seminars, each 1 hour; January - March 2016):
    - Project Evaluation (28 Jan 2016)
    - Data Management 101 (25 Feb 2016)
    - NIH Biosketch (24 Mar 2016)

- ‘Using the Human Research Protection Regulations as Tool to Facilitate Responsible Conduct of Research’ Workshop (5 Feb 2015)
- ‘Physician’ courses
  - ‘Implicit Bias: A Practical Guide for Healthcare Settings’ online & asynchronous by The George Washington University School of Medicine and Health Sciences (1hr, 16 Feb 2023, certificate)
  - ‘Harassment and Discrimination Prevention’ EVERFI online course (2hrs, 24 Oct 2019)
  - ‘HCCS Fraud Awareness-Corporate Compliance’ (2012, 2014, 2015)

<b>HealthStream courses (HCCS): Course Title</b>	<b>Certification date</b>
CQ: Anti-Kickback Statute	Oct 1, 2022
CQ: Compliance Program	Oct 1, 2022
CQ: Documentation for Practitioners, Evaluation and Management	Oct 1, 2022
CQ: Documentation for Practitioners, Overview	Oct 1, 2022
CQ: EMTALA for Qualified Medical Professionals	Oct 1, 2022
CQ: False Claims Act	Oct 1, 2022
CQ: Fraud, Waste, and Abuse	Oct 1, 2022
CQ: HIPAA, Patient Rights	Oct 1, 2022
CQ: HIPAA, Privacy Rule	Oct 1, 2022
CQ: HIPAA, Security Rule	Oct 1, 2022
CQ: HIPAA, Violations and Penalties	Sep 23, 2022
CQ: Medical Identity Theft	Sep 23, 2022
CQ: Stark Law	Sep 23, 2022
SQ: Bloodborne Pathogens and Standard Precautions, Clinical	Sep 23, 2022
SQ: Emergency Preparedness	Sep 23, 2022
SQ: Fire Safety, Fire Extinguisher Use	Sep 23, 2022
SQ: Infection, Emerging	Sep 23, 2022
SQ: Suicide Risks and Prevention	Sep 23, 2022
SQ: Workplace Violence	Sep 23, 2022
Cooperate Compliance for Physicians – COMP3002	Sep 6, 2021; Nov 29, 2020; Jun 10, 2019; Feb 12, 2018; Feb 15, 2017
HIPAA Privacy and Security for Physicians – HIP3002	Sep 6, 2021; Nov 30, 2020; Jun 10, 2019; Mar 6, 2018; Feb 15, 2017
Professional Compliance 07: Basic Documentation	Oct 12, 2019; Jul 2, 2018
Professional Compliance 09: Teaching Physician Rules	Oct 12, 2019; Jul 2, 2018
Soarian Clinical Physician Training Video 1-13	Feb 15, 2019
Soarian Clinical Physician Training Video Introduction	Feb 15, 2019
Soarian Clinical Physician Training Curriculum	Feb 15, 2019
Rapid Regulatory Compliance: Clinical I: Compliance, Ethics, Sexual Har., Patient Rights, Informed Consent, Adv. Directives, EMTALA, Grievances, Dev. Appropriate Care, Cult. Competence, Restraint/Seclusion, Patient/Abuse/Assault/Neglect	Mar 6, 2018
Rapid Regulatory Compliance: Clinical II: Gen/Fire/Elec/Back/Rad./MRI Safety, Ergo, Lift/Transp, Slips/Trips/Falls, LatexAllergy, HazComm, Workplace Viol., EmergPrep, Infec.Control:HAI, HandHyg, Bloodborne, StdPrec, Airborn/Contact/Droplet Prec, PPE	Mar 6, 2018
IT Security Awareness Training 2018	Feb 12, 2018
Cooperate Compliance 2015-2016, 2014-2015, 2013, 2012-2013	Oct 7, 2015; Oct 29, 2014; Dec 5, 2013; Nov 24, 2012

HIPAA Compliance 2015-2016, 2014-2015, 2013, 2012-2013	Oct 7, 2015; Oct 29, 2014; Dec 5, 2013; Nov 23, 2012
Cares 1 – Performance Excellence 101 – Session 1	Nov 17, 2012
Cares 2-4 – Values: Benefitting from a Culture of Engagement – Session 2-4	Nov 17, 2012 (2) & Nov 23, 2012 (3-4)
Cares 5-11 – The Key Principles of Performance Excellence – Session 5-11	Nov 23, 2012

- Other Howard University Courses
  - KnowBe4
    - 2022 KnowBe4 Security Awareness Training - 30 minutes; (12 Oct 2022)
    - Creating Strong Passwords - Security Awareness Training (8 min; 12 Oct 2022)
  - Office of Faculty Development and Diversity; Mentorship Program Development: Ideas Summit 2022-2023: “The Continuum” (11 Aug 2022, 5-6:30pm)
  - Workday courses via Precepio
    - Faculty Success 101 (7 Feb 2022; 1 hr)
    - Faculty Success 102 (30 Mar 22; 15 min)
    - Grants-Expenses and Procurement (1 July 2021, 1.5hrs)
    - Workday Training- Employee Self Service (ESS) Module 1 (1 July 2021, 1.5hrs)
  - HSI Platform: Member Janine Ziermann has completed
    - Faculty & Staff Return to Campus Training- 2021 assignment, satisfying the Faculty and Staff Reopening Training 2021 Requirement on 07/20/2021 (0.5 hrs)
    - Faculty and Staff Reopening Training 2021- V2 assignment, satisfying the Faculty and Staff Reopening Training 2021 Requirement on 07/21/2021 (1.25 hrs)
    - Faculty and Staff Return to Campus v2 assignment, satisfying the Campus Reopening Training for Faculty and Staff Requirement on 07/21/2021 (1.5 hrs)
    - Hazard Communication and Lab Safety (v3) on 12/11/2021 (0.5 hrs)
  - ‘IT Security Awareness Training 2018’ (1hr; 22 Feb 2018)
  - ‘CARES 1-11’ Howard University College of Medicine: online training “Performing Excellence” (17 Nov 2012, 23 Nov 2012)

#### Other workshops attended in USA

2017-ongoing

- ‘Fundamentals of Teaching and Learning in the Health Professions’ (2 Feb 2021, 4 hrs) organized by Interstate Postgraduate Medical Association via university.OSMOSIS.org
- ‘Tell Them We Are Not Monsters: A Preview’ organized by <https://jamiisisterhood.com/about/> (3 Aug 2020, 1hr)
- ‘Face-to-Face, Hybrid, Remote Approaches to Gross Anatomy Lab’ FACE-TO-FACE, HYBRID’ & ‘Developing Soft Clinical Skills in Remote/Hybrid Anatomy Lab’ provided by American Association for Anatomy (July 7 & 14, 2020; 1.5 hrs each)
- Anatomage Table User Group Meeting 2018’; San Jose, CA, July 20–21, 2018 (2 full days = 16 hrs)
- ‘New Models for Educational Materials’ Webinar from Inside Higher Ed (1hr; 18 Apr 2018)
- Participation at the NIH BioTech 55: Engineering with CRISPR, TALENs, & ZFNs - July 31- August 4, 2017 (40hrs). NIH, Bethesda, MD, USA.

#### Netherlands

2009 – 2011

- Knowledge utilization in "NWO Vernieuwingsimpuls" applications: HR Training Department, University Leiden, The Netherlands (14 Dec 2011)

- Diploma NT2-Programma II: Staatsexamen Nederlands als tweede taal – programma II (Dutch as second language – niveau II) (14 Dec 2011)
- Cursus Proefdierkunde Artikel 9: Animal experimentation certificate: allowance to self-dependent determination of the way of accomplishment of animal experiments (successfully passed), Erasmus MC Rotterdam, The Netherlands (20 Mar 2009)

## INVITED TALKS

### Invited Talks at Conferences

- February 2021: **Ziermann JM**. ‘Fascinating insights into head muscle development and evolution in vertebrates’. Keynote speaker at Simposio Brasileiro de Morfologia Comparada de Vertebrados, University of Brasilia, Brazil. Online Event.
- July 2016: **Ziermann JM**, Diogo R. ‘Major challenges in vertebrate morphology, muscle evolution and the understanding of heterochrony’. Symposium ‘Challenges in Vertebrate Morphology’ organized by Julia Hoyos, Rui Diogo. Presented at the 11th International Congress of Vertebrate Morphology (ICVM11). 29 June – 3 July 2016, Washington, DC, USA. The Anatomical Record 299, Special Feature p82. DOI: 10.13140/RG.2.1.3163.0329.
- May 2014: **Ziermann JM**, Diogo R. ‘Cyclostomes (lampreys and hagfishes) - what vertebrate animals without jaws teach us about the origin and evolution of vertebrate muscles’. Presented at the first international meeting of evolutionary and developmental biology of heart and head muscles. Organizers of the meeting: Rui Diogo, Janine Ziermann. 12 May 2014, Washington, DC, USA.
- July 2013: **Ziermann JM**. ‘Analyzing developmental sequences with Parsimov’. Symposium: ‘Quantifying evolutionary development using non-model organisms: integrating metrical frameworks, gene expression, and morphology’ organized by Ingmar Werneburg and Laura Wilson. Presented at the 10th International Congress of Vertebrate Morphology (ICVM 2013). 8-12 July 2013, Barcelona, Spain. The Anatomical Record 296, Special Feature p134.
- April 2013: **Ziermann J**, Diogo R, Bhatia N. Comparative anatomy of mammalian and primate facial muscles and evolutionary genetics of atavistic muscles in humans with trisomy”. American Association of Anatomists. Symposium ‘Comparative Perspectives on the Human Face: Biomedical Implications of Evolutionary Anatomical Research.’ Presented at the annual meeting of the American Association of Anatomy at the Experimental Biology conference EB2013. 22 April 2013, Boston, MA, USA. The FASEB Journal April 2013 (27), 192.1.

### Invited Talks at Research Institutions

- May 2022: Seminar ‘NSF TRAINEESHIP IN EVOLUTIONARY BIOLOGY, MEDICINE AND DATABASES’ Department of Anatomy, Howard University College of Medicine, Washington, DC. USA. ‘Head Muscle Evolution in Vertebrates’ Invited by Dr. Raymond Bernor
- March 2021: Webinar/Host: NEXTCLINIC IVF Zentren Prof Zech – Bregenz, Austria. MedImpulse: Title ‘Cardiopharyngeal Syndromes in Humans - Syndrome in Anbetracht der Entwicklungsgeschichte von Herz- und Kopfmuskulatur’ Invited by Dr. Maximilian Schuff.
- October 2021: Departmental seminar of the Department of Anatomy, Howard University College of Medicine, Washington, DC. USA. ‘Evolution and Development of Head & Heart Musculature’ – Talk for Tenure consideration. Invited by Dr. Antonei Csoka.
- April 2019: Belem, Brazil, at the Museo Paraense Emilio Goeldi. Title ‘Head Muscle Evolution in Vertebrates’. Invited by Dr. Wolmar Wosiacki

- April 2019: Rio de Janeiro, Brazil; at the Museo Nacional UFRJ. Title 'Head and Neck Muscle Evolution in Vertebrates' Invited by Dr. Marcelo Ribeiro de Britto & Fórum PPGZoo.
- March 2019: Gettysburg College, PA. Title 'Evolutionary Development of the Head and Heart: An Evolutionary Medicine Perspective'. Invited by Dr. Ryan Kerney.
- October 2018: George Washington University Students visiting Howard University. Seminar organized by Dr. Rui Diogo. Title: 'EvoDevo-Medicine of Head & Heart Musculature'. Invited by Dr. Rui Diogo
- March 2018: Museu de Zoologia da Universidade de São Paulo (MZUSP), Brazil. Title: 'Evolution and Development of Head Musculature in Vertebrates'. Invited by Dr. Naércio A. Menezes.
- Sept 2017: George Washington University Students visiting Howard University. Seminar organized by Dr. Rui Diogo. Title 'The Cardiopharyngeal Field – Research in Evolutionary Medicine'. Invited by Dr. Rui Diogo.
- July 2017: Departmental seminar of the Department of Anatomy, Howard University College of Medicine, Washington, DC. USA. Title 'The Cardiopharyngeal Field – Research in Evolutionary Medicine'. Invited by Dr. Donald Orlic.
- June 2017: 2017 Spring Seminar Series at the Department of Cell Biology and Anatomy, Louisiana State University Health Science Center, New Orleans, LA, USA. Title 'The Cardiopharyngeal Field in the Light of the Emerging Field of Evolutionary Medicine'. Invited by Dr. Bill McClugage.
- Mar 2015: Guest lecture at 'Evolutionary & Systematic Biology' class Department of Biology, Howard University, Washington, DC, USA. Title 'Cephalic musculature from Sharks to Humans'. Invited by Dr. Nathan Smith.
- Feb 2015: Short oral presentations at Journal club of the Department of Anthropology, George Washington University, Washington, DC, USA. Title 'Evolution of Cephalic Musculature in Vertebrates'. Invited by Dr. Bernhard Wood.
- Oct 2014: 45min talk as part of the Graduate student program of the Department of Anatomy, Howard University College of Medicine, Washington, DC. USA. Title 'Head muscle development and evolution in vertebrates – from shark to humans.'. Invited by Dr. Thomas Heinbockel
- Oct 2011: Talk at Department symposium at Integrative Zoology, Institute for Biology, Leiden, The Netherlands. Title 'Biodiversiteit en vergelijkende zoölogie' (Biodiversity and comparative zoology). Invited by Dr. Michael Richardson.
- Dec 2010: Next Generation Sequencing mini-symposium at NCB Naturalis, Leiden, The Netherlands. Title 'Salamander transcriptome sequencing for evo-devo research'. Invited by Dr. Jan W. (Pim) Arntzen.
- Mar 2008: Talk at the Department of Evolutionary Morphology and Palaeobiology of Vertebrates, Zürich University, Switzerland. Title 'Sequence Heterochrony in Lissamphibia'. Invited by Dr. Marcelo Sanchez-Villagra.
- Mar 2008: Talk at Department symposium at Integrative Zoology, Institute for Biology, Leiden, The Netherlands. Title 'Sequence Heterochrony in Lissamphibia'. Invited by Dr. Michael Richardson.
- Nov 2007: Talk at the Institutskolloquium (Institute's seminar) Institut für spezielle Zoologie und Evolutionsbiologie mit phyletischem Museum, Friedrich Schiller University, Jena, Germany. Title 'Evolution und Entwicklung der Kopfmuskulatur von Anuren'. Invited by Dr. Martin Fischer.

## 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 2<sup>nd</sup> 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](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#](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 21<sup>st</sup> 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 11<sup>th</sup> 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.