

Research Molecular Parasitology 2023

Publications

- Abberger H, Hose M, Ninnemann A, Menne C, Eilbrecht M, Lang KS, Matuschewski K, Geffers R, Herz J, Buer J, Westendorf AM, Hansen W (2023) Neuropilin-1 identifies a subset of highly activated CD8+ T cells during parasitic and viral infections. **PLoS Pathog.** 19: e1011837. doi: 10.1371/journal.ppat.1011837
- Bajić B, Werb O, Budinski I, Blagojevic J, Schaer J, van Schaik J (2023). Non-invasive investigation of *Polychromophilus* parasite infections in bat populations in Serbia using bat flies. **Parasites Vectors** 16: 170. doi: 10.1186/s13071-023-05786-1
- Becker C, Adam A, Dommisch H, Stach T, Schaefer AS (2023) *In vitro* induction of *Entamoeba gingivalis* cyst-like structures from trophozoites in response to antibiotic treatment. **Front. Cell. Infect. Microbiol.** 13: 1201394. doi: 10.3389/fcimb.2023.1201394
- Benesh DP (2023). Selection on an extreme-yet-conserved larval life-history strategy in a tapeworm. **Evolution** 77, 1188–1202. doi: 10.1093/evolut/qpad034
- Ferreira SCM, Jarquín-Díaz VH, Heitlinger E (2023) Amplicon sequencing allows differential quantification of closely related parasite species: an example from rodent Coccidia (Eimeria) **Parasites Vectors** 16: 204 doi: 10.1186/s13071-023-05800-6
- Fraser M, Matuschewski K, Maier AG The enemy within: Lipid asymmetry in intracellular parasite-host interactions. **Emerging Top. Life Sci.** 7: 67-79. [Review] doi: 10.1042/ETLS20220089
- Harit K, Bhattacharjee R, Matuschewski K, Becker J, Kalinke U, Schlüter D, Nishanth G (2023) The deubiquitinating enzyme OTUD7b protects dendritic cells from TNF-induced apoptosis by stabilizing the E3 ligase TRAF2. **Cell Death Dis.** 14: 480. doi: 10.1038/s41419-023-06014-5
- Hildebrand F, Ankarklev J, Matuschewski K. (2023) Delineating *Plasmodium* liver infection across space and time. **Trends Parasitol.** 39: 80-82. [Review] doi: 10.1016/j.pt.2022.12.005
- Kamani J, Schaer J, Nachum-Biala Y, Baneth G, Shand M, Harrus S (2023). *Bartonella bovis* in cattle in Nigeria: molecular detection and the analysis of risk factors. **Israel J. Vet. Med.** 78: 24-33. <https://www.ijvm.org.il/node/772>
- Kamani J, Shand M, Shekaro A, Laminu B, Toyin O, Abasiama M S, Schaer J, Harrus S (2023). *Mycoplasma wenyonii* and *Candidatus Mycoplasma Haemobos* in Pastoralists Cattle in Nigeria. **Acta Parasitol.** 68: 430-438. doi: 10.1007/s11686-023-00683-0
- Kina Ü, Kamil M, Deveci G, Rafiqi AM, Matuschewski K, Aly ASI (2023) A candidate bacterial-type amino acid decarboxylase is essential for male gamete exflagellation and mosquito transmission of the malaria parasite. **Infect. Immun.** 91: e0016723. doi: 10.1128/iai.00167-23
- Le MLV, Müller LM, Stach T (2023) The oral sensory organs in *Bathochordaeus stygius* (Tunicata Appendicularia) are unique in structure and homologous to the coronal organ. **Front. Zool.** 20: 40. doi: 10.1186/s12983-023-00518-8
- Matuschewski K, Lucius R, von Samson-Himmelstjerna G (2023) *In memoriam*: Theodor Hiepe (1929-2022) - great German scholar of parasitology. **Parasitol. Res.** 122: 1033-1035. [Obituary] doi: 10.1007/s00436-023-07791-w

Publications (contin.)

- Stach T (2023) '... und lasse mir den Orion vom Zenith auf den Bauch scheinen' – Oskar Heinroth und die Erste Deutsche Südsee-Expedition. ['... and let Orion shine on my belly from the zenith' - Oskar Heinroth and the First German South Seas Expedition.] **Sber. Ges. Naturf. Freunde Berl.** 57: 257-287. [Review] doi: 10.25671/GNF_Sber_NF_57_##
- Stach T, Starck M (2023) Can you tell me anything about homology? Any one thing that is new? **J. Morph.** 284: e21578. [Editorial] doi: 10.1002/jmor.21578
- Thiombiano NG, Bounou M, Chabi BAM, Oueda A, Werb O, Schaer J (2023) First investigation of blood parasites of bats in Burkina Faso detects *Hepaticystis* parasites and infections with diverse *Trypanosoma* spp. **Parasitol. Res.** 122: 3121-3129. doi: 10.1007/s00436-023-08002-2
- Veith Y, Wende AL, Matuschewski K, Schaer J, Müller K, Bannert B (2023) Molecular characterization of *Schellackia* parasites in an urban population of Sand lizards (*Lacerta agilis*) from Berlin, Germany. **Parasitol. Res.** 122: 1759-1764. doi: 10.1007/s00436-023-07856-w
- Weber N, Nagy M, Markotter W, Schaer J, Puechmaille S, Sutton J, Dávalos L, Dusabe MC, Ejotre I, Fenton MB, Knörnschild M, López-Baucells A, Medellín R, Metz M, Mubareka S, Nsengimana O, O'Mara MT, Racey P, Tuttle M, Twizeyimana I, Vicente-Santos A, Tschapka M, Voigt C, Wikelski M, Dechmann D, Reeder D (2023). Robust evidence for bats as reservoir hosts is lacking in most African virus studies: a review and call to optimize sampling and conserve bats. **Biol. Lett.** 19: 20230358. [Review] doi: 10.1098/rsbl.2023.0358
- Zemann B, Le M-L V, Sherlock R E, Baum D, Katija K, Stach T (2023). Evolutionary traces of miniaturization in a giant—Comparative anatomy of brain and brain nerves in *Bathochordaeus stygius* (Tunicata, Appendicularia). **J. Morphol.** 284: e21598. doi: 10.1002/jmor.21598

PhD theses

- Ejotre I. Investigation of haemosporidian parasites in Ugandan epauletted fruit bats in context of One Health (PI: J. Schaer)
- Katelas D.A. The physiological relevance of phosphatidylserine synthase and SERCA pump in *Toxoplasma gondii* (PI: N. Gupta)
- Vo K.C. Plasticity and therapeutic potential of cAMP and cGMP-specific phosphodiesterases in *Toxoplasma gondii*. (PI: N. Gupta)

PhD projects

- Thiombiano N. (Ki-Zerbo University, Burkina Faso) Molecular characterization of bat parasites in Burkina Faso (PI: J Schaer)

MSc theses

- Buchwalder, L. Vergleichend anatomische und histologische Untersuchung von *Kowalevskia tenuis* Fol, 1872 (Tunicata Appendicularia) (PI: T. Stach)
- Bulathsinhala, D. DNA-based quantification of parasite load compared to oocyst count in *Eimeria falci-formis* infected mice (PI: E. Heitlinger)
- Hasler, L.M. The innate immune response on alveolar macrophages to an infection with *Legionella pneumophila* (PI: T. Stach)
- Mantel, P. Vergleichende Anatomie des Gehirns der Appendikularie *Fritillaria pellucida* Busch, 1851 (PI: T. Stach)
- Markus L. Prevalence and trends in *Plasmodium malariae* infections in Sub-Saharan Africa: a meta-analysis (PI: K. Matuschewski)
- Wirth, M. Vergleichend anatomische Untersuchung des Gehirns von *Fritillaria formica* Fol, 1872 (Tunicata, Appendicularia, Fritillariidae) (PI: T. Stach)

MSc projects

- Mantel, P. Anfertigung einer histologischen Schnittserie und Einführung in 3D-Rekonstruktionsverfahren am Beispiel der Appendikularienart *Fritillaria pellucida* (PI: T. Stach)
- Wirth, M. Anfertigung einer histologischen Schnittserie und Einführung in 3D-Rekonstruktionsverfahren am Beispiel der Appendikularienart *Fritillaria formica* (PI: T. Stach)
- Buchwalder, L. Anfertigung einer histologischen Schnittserie und Einführung in 3D-Rekonstruktionsverfahren am Beispiel der Appendikularienart *Kowalevskia tenuis* (PI: T. Stach)

BSc theses

- Heide, A. Vergleichend anatomische Untersuchung der Appendikularie *Kowalevskia oceanica* Lohmann, 1899 (PI: T. Stach)
- Luke M. Food or parasite? Classification of fecal DNA based on taxonomic profiling of interaction data (PI: E. Heitlinger)
- Siebeck M. Genetic characterization of the *Plasmodium berghei* SERA5 protease (PI: K. Müller)
- Vlachonikolos, I. Vergleichend anatomische Untersuchung des Endostyls von *Megalocercus huxleyi* Ritter, 1905, einer Tiefseeappendikularie (PI: T. Stach)

BSc projects

- Erdmann R. Quantification of anti-microbial resistance genes in the gastrointestinal tract of house mice (PIs: E. Heitlinger; V. Jarquin-Diaz)
- Heide, A.. Einführung in histologische Techniken und 3D-Rekonstruktionsverfahren am Beispiel der Appendikularienart *Kowalevskia oceanica* (PI: T. Stach)
- Luke M. Obtaining and using interaction data from GloBI (PI: E. Heitlinger)

BSc projects (contin.)

Mouzakis D. Molecular cloning of a CRISPR plasmid for genome editing of *Plasmodium falciparum* (PI: K. Matuschewski)

Schmidt Villavicencio A. A novel genotyping system for *Cryptosporidium tyzzeri* (PI: E. Heitlinger)

Stelzl L. Generation of *Plasmodium falciparum* transfection plasmids (PI: K. Matuschewski)

Vlachonikolos, I. Einführung in histologische Techniken und 3D-Rekonstruktionsverfahren am Beispiel der Appendikularienart *Megalocercus huxleyi* (PI: T. Stach)