Research Molecular Parasitology 2021

Publications

Benesh DP, Parker GA, Chubb JC (2021) Life-cycle complexity in helminths: what are the benefits? **Evolution** 75: 1936-1952.

Benesh DP, Parker GA, Chubb JC, Lafferty KD (2021) Tradeoffs with growth limit host range in complex life cycle helminths. **Am. Nat.** 197: E40-E54.

Brendsma A, Hilmer C, Rauch M, Matuschewski K, Montagna GN. *Plasmodium* early transcribed membrane proteins appear tailored to the host range of malaria parasites. **Int. J. Parasitol.**, *in press*.

Chen K, Günay-Esiyok Ö, Klingeberg M, Marquardt S, Günther-Pomorski T, Gupta N (2021) Aminoglycerophospholipid flipping and P4-ATPases in *Toxoplasma gondii*. **J. Biol. Chem.** 296: 100315

Chumnandee C, Pha-obnga N, Werb O, Matuschewski K, Schaer J (2020) Molecular characterization of *Polychromophilus* parasites of *Scotophilus kuhlii* bats in Thailand. **Parasitol.** 148: 495-499.

Ejotre I, Reeder D, Matuschewski K**,** Schaer J (2021) *Hepatocystis*. **Trends Parasitol.** 37: 456-457. [Review]

Fraser M, Jing W, Bröer S, Kurth F, Sander LE, Matuschewski K, Maier AG (2021) Breakdown in membrane asymmetry regulation leads to monocyte recognition of *P. falciparum*-infected red blood cells. **PLoS Pathog.** 17: e1009259.

Fraser M, Matuschewski K, Maier AG (2021) Of membranes and malaria: Phospholipid asymmetry in *Plasmodium falciparum*-infected red blood cells. **Cell. Mol. Life Sci.**, 78**:** 4545-4561. [Review]

Froelick S, Gramolini L, Benesh DP (2021) Comparative analysis of helminth infectivity: growth in intermediate hosts increases establishment rates in the next host. **Proc. Royal Soc. B** 288: 20210142.

Gibbins MP, Müller K, Matuschewski K, Silvie O, Hafalla JCR (2021) Inferior T cell immunogenicity of a *Plasmodium berghei* model liver stage antigen expressed throughout pre-erythrocytic maturation. **Parasite Immunol.** 43: e12877.

Hon C, Friesen J, Ingmundson A, Scheppan D, Hafalla JCR, Müller K, Matuschewski K (2021) Conservation of S20 as an ineffective and disposable IFNγ-inducing determinant of *Plasmodium* sporozoites indicates diversion of cellular immunity. **Front. Microbiol**. 12: 703804.

Korbmacher F, Drepper B, Sanderson T, Martin P, Stach T, Maier AG, Matuschewski K, Matz JM (2021). An apicoplast-resident folate transporter is essential for sporogony of malaria parasites. **Cell. Microbiol**. 23: e13266.

Kordes M, Ormond L, Rausch S, Matuschewski K, Hafalla JCR. Augmentation of innate defence against *Plasmodium* liver infection by Toll-like receptor 9 activation of macrophages. **Eur. J. Immunol.**, *in press.*

Publications (contin.)

Kreutzfeld O., Gruetzke J., Ingmundson A., Müller K., Matuschewski K. Absence of PEXEL-dependent protein export in *Plasmodium* liver stages cannot be restored by gain of the HSP101 protein translocon ATPase. **Front. Genet**. 12:742153

Le MLV, Novosolov M, Huchon D, Stach T. (2021) The pericardium of *Oikopleura dioica* (Tunicata, Appendicularia) contains two distinct cell types and is rotated by 90 degrees to the left. **Zoomorphol**. 140: 527–537

Li F, Qing P, Ye L, Gupta N, Hu M (2021) A novel BR-SMAD protein controls the larval development in barber's pole worm, *Haemonchus contortus*. ***Microb. Cell*** 8: 57-64

Müller K, Gibbins MP, Roberts M, Reyes-Sandoval A, Hill AVS, Draper SJ, Matuschewski K, Silvie O, Hafalla JCR. (2021) Low immunogenicity of malaria pre-erythrocytic stages can be overcome by vaccination. **EMBO Mol Med.** 13: e13390.

Müller K, Silvie O, Mollenkopf HJ, Matuschewski K (2021) Pleiotropic roles for the *Plasmodium berghei* RNA binding protein UIS12 in transmission and oocyst formation. **Front. Cell. Infect. Microbiol**. 11: 624945.

Puechmaille SJ, Gouilh MA, Dechmann D, Fenton B, Geiselman C, Medellin R, Mittermeier R, Racey P, Reeder DM, Schaer J, Vicente-Santos A, Sechrest W, Viquez-R L, Weber N (2021) Misconceptions and misinformation about bats and viruses. **Int. J. Infect. Dis**. 105: 606-607 [Letter to Editor]

Razghandi K, Janssen N, Le MLV, Stach T (2021) The filter-house of the larvacean *Oikopleura dioica* . A complex extracellular architecture: From fiber production to rudimentary state to inflated house. **J. Morphol.** 282: 1259-1273

Ren B, Schmid M, Scheiner M, Mollenkopf HP, Lucius R, Heitlinger E, Gupta N (2021) *Toxoplasma* and *Eimeria* co-opt the host cFos and its network proteins in mammalian cells. ***Comp. Struct. Biotechnol. J.*** 19: 719-731

Rohlfs L, Müller K, Stach T (2021) The pericardial body of *Ciona intestinalis* contains hemocytes and degenerating muscle cells, but no parasites. **Acta Parasitol.** 66: 560–568.

Tsague J, Bakwo-Fils EM, Atanga JP, Dongue NV, Mbeng DW, Schaer J*, Tchuinkam T* (2021) *Hepatocystis* and *Nycteria* (Haemosporida) parasite infections of bats in the Central Region of Cameroon. **Parasitol.**, *in press*. (*shared senior authors)

Wang C, Gao W, Yan S, Zhang T, Zhu X-Q, Suo X, Liu X, Gupta N, Hu M (2021) N-glycome and N-glycoproteome of a hematophagous parasitic nematode *Haemochus*. ***Comp. Struct. Biotechnol. J.*** 19: 2486-2496

BSc theses

Merino CC. Histological investigation of *Hepatocystis*-infected African fruit bats. (PI: J. Schaer)

Palm L. Molekulare Charakterisierung von *Nycteria*-Parasiten und Trypanosomen in afrikanischen Fledermäusen. (PI: J. Schaer)

Schwede J. Extracting and quantifying RNA from the early larval stages of the tapeworm *Schistocephalus solidus* (PI: D. Benesh)

Wawrzynczak O. Die Vielfalt der *Hepatocystis*-Parasiten bei afrikanischen Epauletten-Flughunden (PI: J Schaer).

BSc projects

Palm L. *Polychromophilus*-, *Nycteria*- und *Plasmodium*-Parasiten und ihre Fledermaus-Wirte (PI: J. Schaer)

Wawrzynczak O. Blutparasiten bei afrikanischen Flughunden. (PI: J. Schaer)