

## Publication record (peer-reviewed, chronological order)

### In review

Viquez-R L, Henrich M, Riegel V, Bader M, Wilhelm K, Heurich M, Sommer S. A Taste of Wilderness: Supplementary feeding of red deer (*Cervus elaphus*) increases individual microbiome diversity but lowers abundance of important gut symbionts.

### 2024

Böning P, Plewnia A, Virgo J, Adam J, Banowski N, Bleidißel S, Dabbagh N, Dalbeck L, Düssel H, Ellwart S, Feiler L, Ferner V, Fischer M, Gemeinhardt L, Guschal M, Geiger A, Hansbauer H, Hechinger M, Hildwein T, Hirz A, Hoppe M, Jung L, Jurczyk M, Kirst K, Kupfer A, Melville DW, Odenwälder G, Ohloff D, Peters M, Preissler K, Prietzel M, Reinhardt T, Schlüppmann M, Schneider M, Schreiber R, Schulte U, Schulz V, Schweinsberg M, Schwemmer H, **Sommer S**, Steinfartz S, Thein J, Twietmeyer S, Vences M, Vogt-Pokrant F, Wagner N, Wegge J, Ziemek H-P, Veith M, Lötters S (2024) Die Salamanderpest: Charakterisierung, aktuelle Situation in Deutschland, Handlungsempfehlungen. *Zeitschrift für Feldherpetologie*.

Fleischer R, Jones C, Ledezma-Campos P, Czirják GÁ, **Sommer S**, Gillespie TR, Vicente-Santos A (2024) Gut microbial shifts in vampire bats linked to immunity due to changed diet in human disturbed landscapes. *Science of the Total Environment*, 907, 167815. <https://doi.org/10.1016/j.scitotenv.2023.167815>.

Fleischer R, Eibner GJ, Schwensow NI, Paraskevopoulou S, Mayer G, Corman VM, Drosten C, Wilhelm K, Heni AC\*, **Sommer S\***, Schmid DW\* (2024) Immunogenetic-pathogen networks shrink in Tome's spiny rat, a generalist rodent inhabiting disturbed landscapes. *Communications Biology*. doi: 10.1038/s42003-024-05870-x. \* shared senior authors, contributed equally to the study.

Leibniz-Forschungsnetzwerk Biodiversität (2024): 10 Must-Knows aus der Biodiversitätsforschung 2024. Thonicke K, Rahner E, Arneth A, Bonn A, Borchard N, Chaudhary A, Darbi M, Dutta T, Eberle U, Eisenhauer N, Farwig N, Flocco CG, Freitag J, Grobe P, Grosch R, Grossart HP, Grosse A, Grützmaker K, Hagemann N, Hansjürgens B, Hartman Scholz A, Hassenrück C, Häuser C, Hickler T, Hölker F, Jacob U, Jähnig S, Jürgens K, Kramer-Schadt S, Kretsch C, Krug C, Lindner JP, Loft L, Mann C, Matzdorf B, Mehring M, Meier R, Meusemann K, Müller D, Nieberg M, Overmann J, Peters RS, Pörtner L, Pradhan P, Prochnow A, Rduch V, Reyer C, Roos C, Scherber C, Scheunemann N, Schroer S, Schuck A, Sioen GB, **Sommer S**, Sommerwerk N, Tanneberger F, Tockner K, van der Voort H, Veenstra T, Verburg P, Voss M, Warner B, Wende W, Wesche K. Potsdam, Deutschland. 72 Seiten. DOI: 10.5281/zenodo.10794362.

- Meyer M\*, Schmid DW\*, Baldwin H, Wilhelm K, Nkrumah EE, Badu EK, Oppong SK, Schwensow N, Vallo P, Corman VM, Tschapka M, Drosten C, **Sommer S** (2024) Bat species assemblage predicts coronavirus prevalence. *Nature Communications*, 15(1), 2887. doi: 10.1038/s41467-024-46979-1.
- Olayemi A, Schmid DW, Fleischer R, Wilhelm K, Heni A, Mueller-Klein N, Haikukutu L, Fichet-Calvet E, Günther S, **Sommer S** (2024). MHC-I alleles mediate clearance and antibody response to the zoonotic Lassa virus in *Mastomys* rodent reservoirs. *PLoS Neglected Tropical Diseases*, 18(2), e0011984. <https://doi.org/10.1371/journal.pntd.0011984>.
- Sommer S** (2024) Darmmikrobiom - Mikroplastik und Klimaveränderungen beeinflussen die (mikrobielle) Gesundheit. Karriere, Köpfe und Konzepte. *BIOspektrum*, 02.24.

## 2023

134. Fackelmann G, Pham CK, Rodríguez Y, Mallory ML, Provencher JF, Baak JE, **Sommer S** (2023) Current levels of microplastic pollution impact wild seabird gut microbiomes. *Nature Ecology & Evolution*, 7, 698-706. doi: 10.1038/s41559-023-02013-z.
133. Haikukutu L, Lyaku JR, Lyimo CM, Eiseb S, Makundi RH, Wilhelm K, Olayemi A, Müller-Klein N, Schmid DW, Fleischer R, **Sommer S** (2023) Immunogenetics, sylvatic plague and its vectors: Insights from the pathogen reservoir *Mastomys natalensis* in Tanzania. *Immunogenetics*, 75, 517-530. doi: 10.1007/s00251-023-01323-7.
132. Heni AC, Fackelmann G, Eibner G, Kreinert S, Schmid J, Schwensow NI, Wiegand J, Wilhelm K, **Sommer S** (2023) Wildlife gut microbiomes of sympatric generalist species respond differently to anthropogenic landscape disturbances. *Animal Microbiome*, 5:22. doi: 10.1186/s42523-023-00237-9.
131. Risely A, Müller-Klein N, Schmid DW, Wilhelm K, Clutton-Brock T, Manser MB, **Sommer S** (2023) Climate change drives loss of bacterial gut mutualists at the expense of host survival in wild meerkats. *Global Change Biology*, 29, 5816 – 5828. doi: 10.1111/gcb.16877.
130. Schmid DW, Capilla-Lasheras P, Dominoni D, Müller-Klein N, **Sommer S**, Risely A (2023) Circadian rhythms of hosts and their gut microbiomes: implications for animal physiology and ecology. *Functional Ecology*, 37, 476–487. doi: 10.1111/1365-2435.14255.
129. Schmid DW\*, Meyer M\*, Wilhelm K, Tilley T, Link-Hessing T, Fleischer R, Badu EK, Nkrumah EE, Oppong SK, Schwensow N, Tschapka M, Baldwin HJ, Vallo P, Corman VM, Drosten C, **Sommer S** (2023) MHC class II genes mediate susceptibility and resistance to coronavirus infections in bats. *Molecular Ecology*, 32, 3989–4002. doi: 10.1111/mec.16983.
128. Veith T, Bleicker T, Eschbach-Bludau M, Brünink S, Mühlemann B, Schneider J, Beheim-Schwarzbach J, Rakotondranary SJ, Ratovonamana YR, Tsagnangara C, Ernest R, Randriantafika F, **Sommer S**, Stetter N, Jones TC, Drosten C, Ganzhorn JU, Corman VM (2023) Non-structural genes of novel lemur adenoviruses reveal codivergence of virus and host. *Virus Evolution*, 9:1. <https://doi.org/10.1093/ve/vead024>.

**2022**

127. Carranco AS, Gillingham MAF, Wilhelm K, Romo D, de Lourdes Torres M, **Sommer S\***, Romo D\* (2022) Transcending sea turtles: first report of hatching failure in eggs of an Amazonian freshwater turtle with symptoms of the fungal emerging disease fusariosis. *Transboundary and Emerging Diseases*, 69, e3282–e3288. doi: 10.1111/tbed.14596. \* contributed equally to the study.
126. Carranco AS, Romo D, de Lourdes Torres M, Wilhelm K, **Sommer S\***, Gillingham MAF\* (2022) Egg microbiota is the starting point of hatchling gut microbiota the endangered yellow-spotted Amazon river turtle. *Molecular Ecology*, 31(14), 3917-3933. doi: 10.1111/mec.16548. \* contributed equally to the study.
125. Donadio J, Risely A, Müller-Klein N, Wilhelm K, Clutton-Brock T, Manser MB, **Sommer S** (2022) Characterizing tuberculosis progression in wild meerkats (*Suricata suricatta*) from faecal samples and clinical signs. *Journal of Wildlife Diseases*, 58(2), 309–321. doi: 10.7589/JWD-D-21-00063.
124. Fleischer R, Schmid DW, Wasimuddin, Brändel SD, Rasche A, Corman VM, Drosten C, Tschapka M, **Sommer S** (2022) Interaction between MHC diversity and constitution, gut microbiome composition and Astrovirus infections in a neotropical bat. *Molecular Ecology*, 31, 3342–3359. doi: 10.1111/mec.16491.
- 123a. Leibniz-Forschungsnetzwerk Biodiversität (2022) 10 Must-Knows aus der Biodiversitätsforschung 2022. Thonicke K, Rahner E, Arneth A, Bartkowski B, Bonn A, Döhler C, Finger R, Freitag J, Grosch R, Grossart H.-P, Grützmaker K, Hartman Scholz A, Häuser C, Hickler T, Hölker F, Jähnig SC, Jeschke J, Kasen R, Kastner T, Kramer-Schadt S, Krug C, Lakner S, Loft L, Matzdorf B, Meakins F, De Meester L, Monaghan MT, Müller D, Overmann J, Quaas M, Radchuk V, Reyer C, Roos C, Scholz I, Schroer S, Sioen GB, **Sommer S**, Sommerwerk N, Tockner K, Turk Z, Warner B, Wätzold F, Wende W, Veenstra T, van der Voort H. Potsdam, Deutschland. 60 Seiten. doi: 10.5281/zenodo.6257476.
- 123b. Leibniz Research Network Biodiversity (2022) engl version available: 10 Must Knows from Biodiversity Science 2022. Thonicke K, Rahner E, Arneth A, Bartkowski B, Bonn A, Döhler C, Finger R, Freitag J, Grosch R, Grossart H.-P, Grützmaker K, Hartman Scholz A, Häuser C, Hickler T, Hölker F, Jähnig SC, Jeschke J, Kasen R, Kastner T, Kramer-Schadt S, Krug C, Lakner S, Loft L, Matzdorf B, Meakins F, De Meester L, Monaghan MT, Müller D, Overmann J, Quaas M, Radchuk V, Reyer C, Roos C, Scholz I, Schroer S, Sioen GB, **Sommer S**, Sommerwerk N, Tockner K, Turk Z, Warner B, Wätzold F, Wende W, Veenstra T, van der Voort H. Potsdam, Deutschland. 60 pages.
122. Müller-Klein N, Risely A, Schmid DW, Manser MB, Clutton-Brock T, **Sommer S** (2022) Two decades of tuberculosis surveillance reveal disease spread, high levels of exposure and

- mortality, and marked variation in disease progression in wild meerkats. *Transboundary and Emerging Diseases*. doi: 10.1111/tbed.14679.
121. Risely A, Schmid DW, Müller-Klein N, Wilhelm K, Clutton-Brock T, Manser MB, **Sommer S** (2022) Gut microbiota individuality is contingent on temporal scale and age in wild meerkats. *Proceedings of the Royal Society B*, 289, 20220609. <https://doi.org/10.1098/rspb.2022.0609>.
120. Schmid DW, Fackelmann G, Wasimuddin, Rakotondranary J, Ratvonamana YR, Montero K, Ganzhorn JU, **Sommer S** (2022) A framework for testing the impacts of co-infections on host gut microbiomes. *Animal Microbiome*, 4:48. <https://doi.org/10.1186/s42523-022-00198-5>.
119. Schwensow N\*, Heni A\*, Schmid J, Montero BK, Brändel S, Halczok TK, Mayer G, Fackelmann G, Wilhelm K, Schmid D\*, **Sommer S\*** (2022). Disentangling direct from indirect effects of habitat disturbance on multiple components of biodiversity. *Journal Animal Ecology*, 91, 2220-2234. \* shared first / senior authors. doi: 10.1111/1365-2656.13802.
118. Wasimuddin, Malik H, Ratvonamana YR, Rakotondranary SJ, Ganzhorn JU, **Sommer S** (2022) Anthropogenic disturbance impacts gut microbiome homeostasis in a Malagasy primate. *Frontiers Microbiology*, Community Series in the Wildlife Gut Microbiome and Its Implication for Conservation Biology, Volume II, 13, 911275. doi: 10.1101/2022.04.02.486803.

## 2021

117. Alpízar P, Risely A, Tschapka M, **Sommer S** (2021) Agricultural fast food: Bats feeding in banana monocultures are heavier but have less diverse gut microbiomes. *Frontiers in Ecology and Evolution*, 9, 746783. <https://doi.org/10.3389/fevo.2021.746783>.
116. Fackelmann F, Gillingham MAF, Schmid J, Heni AC, Wilhelm K, **Sommer S** (2021) Human encroachment into wildlife gut microbiomes. *Communications Biology*, 4, 800. [doi.org/10.1038/s42003-021-02315-7](https://doi.org/10.1038/s42003-021-02315-7).
115. Gillingham MAF, Borghesi F, Montero BK, Migani F, Béchet A, Rendón-Martos M, Amat JA, Dinelli E, **Sommer S** (2021) Bioaccumulation of trace elements affects chick body condition and gut microbiome in greater flamingos. *Science of the Total Environment*, 761, 143250. doi: 10.1016/j.scitotenv.2020.143250.
114. Gillingham MAF, Montero BK, Wilhelm K, Grudzus K, **Sommer S**, Santos PSC (2021) A novel workflow to improve genotyping of multigene families in wildlife species: an experimental set-up with a known model system. *Molecular Ecology Resources*, 21, 982-998. <https://doi.org/10.1111/1755-0998.13290>.
113. Jiménez RR, Alvarado G, Mena F, Ruedert C, Ballester E, **Sommer S** (2021) The fungicide chlorothalonil changes the amphibian skin microbiome: a potential factor disrupting a host disease-protective trait. *Applied Microbiology*, 1, 26–37.

doi.org/10.3390/applmicrobiol1010004.

112. Montero BK, Wasimuddin, Schwensow N, Gillingham MAF, Ratvonamana YR, Rakotondranary SJ, Corman V, Drosten C, Ganzhorn JU, **Sommer S** (2021) Evidence for MHC class I and II influencing viral and helminth infection via the microbiome in a non-human primate. *PLOS Pathogens*, 17(11): e1009675. <https://doi.org/10.1371/journal.ppat.1009675>.
111. Risely A, Gillingham MAF, Béchet A, Brändel S, Heni A, Heurich M, Menke S, Manser M, Schmid J, Tschapka M, Wasimuddin, **Sommer S** (2021) Phylogeny- and abundance-based metrics allows for consistent comparison of core gut microbiome diversity indices across host species. *Frontiers in Microbiology*, 12, 659918. doi: 10.3389/fmicb.2021.659918.
110. Risely A, Wilhelm K, Clutton-Brock T, Manser MB, **Sommer S** (2021) Diurnal oscillations in gut bacterial load and composition eclipse seasonal and lifetime dynamics in wild meerkats, *Suricata suricatta*. *Nature Communications*, 12, 6017. <https://doi.org/10.1038/s41467-021-26298-5>.
109. Viquez-R L, Speer K, Wilhelm K, Simmons N, Medellín RA, **Sommer S\***, Tschapka M\* (2021) A faithful gut: Core features of gastrointestinal microbiota of long-distance migratory bats remain stable despite dietary shifts driving differences in specific bacterial taxa. *Microbiology Spectrum*, 9(3): e01525-21. \* contributed equally to the study. doi: 10.1128/Spectrum.01525-21.

## 2020

108. Fleischer R, Risely A, Hoeck PEA, Keller LF, **Sommer S** (2020) Mechanisms governing avian phyllosymbiosis: genetic dissimilarity based on neutral and MHC regions exhibits little relationship with gut microbiome distributions of Galápagos mockingbirds. *Ecology and Evolution*, 10, 13345–13354.
107. Heni AC, Schmid J, Rasche A, Corman VM, Drosten C, **Sommer S** (2020) Pathogen-associated selection on innate immunity genes (TLR4, TLR7) in a neotropical rodent in landscapes differing in anthropogenic disturbance. *Heredity*, 125, 184-199. doi.org/10.1038/s41437-020-0331-y.
106. Jiménez RR, Alvarado G, Sandoval J, **Sommer S** (2020) Habitat disturbance influences the skin microbiome of a rediscovered neotropical-montane frog. *BMC Microbiology*, 20, 292.
105. Paraskevopoulou S, Pirzer F, Schmid J, Corman VM, Schroeder S, Rasche A, Muth D, Goldmann N, Gottula LT, Drexler JF, Heni AC, Eibner GJ, Page R, Jones TC, Müller MA, **Sommer S**, Glebe D, Drosten C (2020) Mammalian hepatitis delta virus without hepadnavirus coinfection in the neotropical rodent *Proechimys semispinosus*. *PNAS*, 117 (30), 17977-17983. doi: org/10.1073/pnas.2006750117

104. **Sommer S**, Carleton MD. Natural history of *Hypogeomys antimena*, the Malagasy Giant Jumping Rat. In Goodman, S. M. (ed.) (in press). *The new natural history of Madagascar*. Princeton, Princeton University Press.
103. Viquez-R L, Fleischer R, Wilhelm K, Tschapka M, **Sommer S** (2020) Jumping the green wall: the use of PNA-DNA clamps to enhance microbiome sampling depth in wildlife microbiome research. *Ecology and Evolution*, 10, 11779-11786. DOI: 10.1002/ece3.6814.
102. Volleth M, Müller S, **Sommer S**, Santos P (2020) Cytogenetic investigations in Emballonuroidea: Extensive chromosomal reorganization characterizes the karyotype of *Saccopteryx bilineata*. *Acta Chiropterologica*, 22(1), 49–55.

## 2019

101. Fackelmann G, **Sommer S** (2019) Microplastics and the gut microbiome: how chronically exposed species may suffer from gut dysbiosis. *Marine Pollution Bulletin*, 143, 193-203.
100. Gillingham MAF, Béchet A, Cézilly FW, Wilhelm K, Rendón-Martos M, Amat JA, Borghesi F, Nissardi S, Baccetti N, Menke S, Kayser Y, **Sommer S** (2019) Offspring microbiomes differ across breeding sites in a panmictic species. *Frontiers in Microbiology*, 10, 35.
99. Jiménez RR, Alvarado G, Estrella J, **Sommer S** (2019) Moving beyond the host: unravelling the skin microbiome of endangered Costa Rican amphibians. *Frontiers in Microbiology*, 10, 2060.
98. Menke S, Heurich M, Henrich M, Wilhelm K, **Sommer S** (2019) Impact of winter enclosures on the gut bacterial microbiota of red deer in the Bavarian Forest National Park. *Wildlife Biology*, 2019(1). DOI: 10.2981/wlb.00503.
97. Montero K, Ramanamanjato J-B, Ernest R, Rakotondranary SJ, Ganzhorn JU, **Sommer S** (2019) Challenges of NGS in conservation management: insights from long-term monitoring of corridor effects on the genetic diversity of mouse lemurs in a fragmented landscape. *Evolutionary Applications*, 12, 425-442.
96. Qurkhuli T, Schwensow N, Brändel SD, Tschapka M, **Sommer S** (2019) Can extreme MHC class I diversity be a feature of a wide geographic range? The example of Seba's short-tailed bat (*Carollia perspicillata*). *Immunogenetics*, 71(8), 575-587.
95. Schwensow N, Castro-Prieto A, Wachter B, **Sommer S** (2019) Immunological MHC supertypes and allelic expression: how low is the functional MHC variability in wild endangered Namibian cheetahs? *Conservation Genetics*, 20(1), 65-80.
94. Šrut M, Menke S, Höckner M, **Sommer S** (2019) Earthworms and Cadmium - heavy metal resistant gut bacteria as indicators for heavy metal pollution in soils? *Ecotoxicology and Environmental Safety*, 171, 843-853.
93. Wasimuddin, Corman VM, Ganzhorn JU, Rakotondranary SJ, Ratvonamana YR, Drosten C, **Sommer S** (2019) Adenovirus infection is associated with altered gut microbial communities in a non-human primate. *Scientific Reports*, 9, 13410.

**2018**

92. Santos PSC, Mezger M, Kolar M, Michler F-U, **Sommer S** (2018) The best smellers make the best choosers: mate choice is affected by female chemosensory receptor gene diversity in a mammal. *Proceedings of the Royal Society London B*, 285, 20182426.
91. Schmid J, Rasche A, Eibner G, Jeworowski L, Page RA, Corman VM, Drosten C, **Sommer S** (2018) Ecological drivers of *Hepacivirus* infection in a Neotropical rodent inhabiting landscapes with various degrees of human environmental change. *Oecologia*, 188(1), 289-302.
90. Schmidt-Küntzel A, Dalton DL, Menotti-Raymond M, Fabiano E, Charruau P, Johnson WE, **Sommer S**, Marker L, Kotzé A, O'Brien S (2018) Conservation genetics of the cheetah (*Acinonyx jubatus*): genetic history and implications for conservation. In: *Cheetahs: Biology and Conservation of Cheetahs* (edited by L Marker, L Boast, A Schmidt-Küntzel). *Biodiversity of the World: Conservation from Genes to Landscapes* (series editor: PJ Nyhus). Academic Press, USA.
89. Wasimuddin, Brändel SD, Tschapka M, Page R, Rasche A, Corman VM, Drosten C, **Sommer S** (2018) Astrovirus infections induce age-dependent dysbiosis in gut microbiomes of bats. *The ISME Journal*, 12, 2883-2893. DOI: 10.1038/s41396-018-0239-1.

**2017**

88. Borghesi B, Dinelli E, Migani F, Béchet A, Rendón-Martos M, Amat JA, **Sommer S**, Gillingham MAF (2017) Assessing environmental pollution in birds: a new methodological approach for interpreting bioaccumulation of trace elements in feather shafts using geochemical sediment data. *Methods in Ecology and Evolution*, 8, 96-108.
87. Gillingham MAF, Bechet A, Courtiol A, Rendón-Martos M, Amat JA, Samraoui, Onmus O, **Sommer S**, Cezilly F (2017) Very high MHC Class IIB diversity without spatial differentiation in the Mediterranean population of greater flamingos. *BMC Evolutionary Biology*, 17(1), 56.
86. Jiménez Randall R, **Sommer S** (2017) The amphibian microbiome: natural range of variation, pathogenic dysbiosis and role in conservation. *Biodiversity and Conservation*, 26(4), 763-786.
85. Menke S, Gillingham MAF, Wilhelm K, **Sommer S** (2017) Home-made cost effective preservation buffer stands the test against commercial preservation methods for microbiome research. *Frontiers in Microbiology*, 8, 102.
84. Menke S, Meier M, Mfune JKE, Melzheimer J, Wachter B, **Sommer S** (2017) Effect of host traits and land-use changes on the gut microbiome of the Namibian black-backed jackal (*Canis mesomelas*). *FEMS*, 93(11), DOI: 10.1093/femsec/fix123.

83. Santos PSC, Michler F-U, **Sommer S** (2017) Can MHC-assortative partner choice promote offspring diversity? A new combination of MHC-dependent behaviors among sexes in a highly successful invasive mammal. *Molecular Ecology*, 26, 2392-2404.
82. Schwensow NI, Detering H, Pederson S, Mazzoni C, Sinclair R, Peacock D, Kovaliski J, Cooke B, Fickel J, **Sommer S** (2017) Resistance to RHD virus in wild Australian rabbits: comparison of susceptible and resistant individuals using a genome-wide approach. *Molecular Ecology*, 26, 4551-4561.
81. Schwensow NI, Mazzoni CJ, Marmesat E, Fickel J, Peacock D, Kovaliski J, Sinclair R, Cassey P, Cooke B, **Sommer S** (2017) High adaptive variability and virus-driven selection on Major Histocompatibility Complex (MHC) genes in invasive wild rabbits in Australia. *Biological Invasions*, 19(4), 1255-1271.
80. Wasimuddin, Menke S, Melzheimer J, Thalwitzer S, Heinrich H, Wachter B, **Sommer S** (2017) Gut microbiomes of free-ranging and captive Namibian cheetahs: diversity, putative functions, and occurrence of potential pathogens. *Molecular Ecology*, 26, 5515-5527.

## 2016

79. Marmesat E, Soriano L, Mazzoni CJ, **Sommer S**, Godoy JA (2016) PCR strategies for complete allele calling in multigene families using high-throughput sequencing approaches. *PLoS One*, 11(6), e0157402.
78. Santos PSC, Courtiol A, Heidel AJ, Höner OP, Heckmann I, Nagy M, Mayer F, Platzer M, Voigt CC, **Sommer S** (2016) MHC-dependent mate choice is linked to a trace-amine-associated receptor gene in a mammal. *Scientific Reports*, 6, 38490.
77. Schuster AC, Herde A, Mazzoni CJ, Eccard JA, **Sommer S** (2016) Evidence for selection maintaining MHC diversity in a rodent species despite strong density fluctuations. *Immunogenetics*, 68(6), 429-437.

## 2015

76. Clozato CL, Mazzoni CJ, Moraes-Barros N, Morgante JS, **Sommer S** (2015) Spatial pattern of adaptive and neutral genetic diversity across different biomes in the lesser anteater (*Tamandua tetradactyla*). *Ecology and Evolution*, 5(21), 4932-4948.
75. Menke S, Meier M, **Sommer S** (2015) Shifts in the gut microbiome observed in wildlife (*Giraffa camelopardalis*, *Antidorcas marsupialis*) fecal samples exposed to natural weather conditions: lessons from time-series analyses using next generation sequencing for application in field studies. *Methods in Ecology and Evolution*, 6(9), 1080-1087.

## 2014

74. Brouat C, Tollenaere C, Estoup A, Loiseau A, **Sommer S**, Soanandrasana R, Rahalison L, Rajerison M, Piry S, Goodman SM, Duplantier J-M (2014) Invasion genetics of a human



commensal rodent: the black rat *Rattus rattus* in Madagascar. *Molecular Ecology*, 23, 4153-4167.

73. Froeschke G, **Sommer S** (2014) Role of selection versus neutral processes determining genetic variation in a small mammal along a climatic gradient in southern Africa. *Evolutionary Ecology*, 28(6), 1169-1190.
72. Menke S, Wasimuddin, Meier M, Melzheimer J, Mfunne JKE, Heinrich S, Thalwitzer S, Wachter W, **Sommer S** (2014) Oligotyping reveals differences between gut microbiomes of free-ranging sympatric Namibian carnivores (*Acinonyx jubatus*, *Canis mesomelas*) on a bacterial species-like level. *Frontiers in Microbiology*, 5, 526.
71. Schwensow N, Cooke B, Kovaliski J, Sinclair R, Peacock D, Fickel J, **Sommer S** (2014) Rabbit haemorrhagic disease: virus persistence and adaptation in Australia. *Evolutionary Applications*, 7(9), 1056-1067.
70. **Sommer S**, Rakotondranary SJ, Ganzhorn JU (2014) Maintaining microendemic primate species along an environmental gradient – parasites as drivers for species differentiation. *Ecology and Evolution*, 4(24), 4751-4765.

## 2013

69. Balkenhol N, Fernandes F, Cornelius C, Pardini R, **Sommer S** (2013) Landscape-level comparison of genetic diversity and differentiation in a small mammal inhabiting different fragmented landscapes of the Brazilian Atlantic Forest. *Conservation Genetics*, 14(2), 355-367.
68. Ganzhorn JU, Hapke A, Lahann P, Raharivololona BM, Ramanamanjato J-B, Refaly E, Schmid J, Schad J & **Sommer S** (2013). Population genetics, parasitism and long-term population dynamics of *Microcebus murinus* in littoral forest fragments of south-eastern Madagascar. In: *Leaping ahead: Advances in Prosimian Biology* (Masters J, Gamba M & Génin F, eds). Springer, Heidelberg, 61 - 69.
67. Püttker T, Bueno AA, dos Santos de Barros C, **Sommer S**, Pardini R (2013) Habitat specialization interacts with habitat amount to determine dispersal success of rodents in fragmented landscapes. *Journal of Mammalogy*, 94(3), 714-726.
66. Püttker T, Prado PI, dos Santos de Barros C, Martins TK, **Sommer S**, Pardini R (2013) Animal movements and geometry: a response to Oliveira-Santos et al. 2013. *Journal of Mammalogy*, 94(4), 954-956.
65. **Sommer S**, McDevitt A, Balkenhol N (2013) Landscape genetic approaches in conservation biology and management. *Conservation Genetics*, 14(2), 249-251.
64. **Sommer S**, Courtiol A, Mazzoni CJ (2013) MHC genotyping of non-model organisms using next-generation sequencing: a new methodology to deal with artefacts and allelic dropout. *BMC Genomics*, 14, 542.

**2012**

63. Axtner J, **Sommer S** (2012) The role of sequence versus expression variability of immune genes in pathogen resistance. *Genetica*, 140, 407-420.
62. Castro-Prieto A, Wachter B, Melzheimer J, Thalwitzer S, Hofer H, **Sommer S** (2012) Immune gene variation and differential pathogen exposure in free-ranging cheetahs across Namibian farmlands. *PLoS ONE*, 7(11), e49129.
61. Froeschke G, **Sommer S** (2012) Insights into the complex associations between MHC class II DRB polymorphism and multiple gastrointestinal parasite infestations in the Striped Mouse (*Rhabdomys pumilio*) in southern Africa. *PLoS ONE*, 7(2), e31820.
60. Henle K, Bell S, Brotons L, ...**Sommer S**,...Penev L (2012) Nature Conservation – a new dimension in Open Access publishing bridging science and application. *Nature Conservation*, 1, 1–10.
59. Ploshnitsa A, Goltsman M, Macdonald DW, Kennedy L, **Sommer S** (2012) Impact of historical founder effects and a recent bottleneck on MHC variability in Commander Arctic foxes (*Vulpes lagopus*). *Ecology and Evolution*, 2(1), 165-180.
58. Püttker T, dos Santos de Barros C, Martins TK, **Sommer S**, Pardini R (2012) Suitability of distance metrics as indices of home range size in tropical rodent species. *Journal of Mammalogy*, 93(1), 115–123.
57. Schad J, Dechmann D, Voigt C, **Sommer S** (2012) Evidence for the ‘good genes’ theory: association of parasitism and reproductive state with immune gene constitution in the bat, *Noctilio albiventris*. *PLoS ONE*, 7(5), e37101.
56. Schad J, Voigt C, Greiner S, Dechmann D, **Sommer S** (2012) Independent evolution of functional MHC class II DRB genes in New World bat species. *Immunogenetics*, 64(7), 535-547.
55. Schwensow N, Cooke B, Fickel J, Lutz W, **Sommer S** (2012) Changes in liver gene expression indicate genetic pathways associated with rabbit haemorrhagic disease infection in wild rabbits. *The Open Immunology Journal*, 5, 23-29.

**2011**

54. Axtner J, **Sommer S** (2011) *Heligmosomoides polygyrus* infection is associated with lower MHC class II gene expression in *Apodemus flavicollis*: indication for immune suppression? *Infection, Genetics and Evolution*, 11(8), 2063-2071.
53. Castro-Prieto A, Wachter B, **Sommer S** (2011) Cheetah paradigm revisited: MHC diversity in the world’s largest free-ranging population. *Molecular Biology and Evolution*, 28(4), 1455-1468.
52. Castro-Prieto A, Wachter B, Melzheimer J, Thalwitzer S, **Sommer S** (2011) Diversity and evolutionary patterns of immune genes in free-ranging Namibian leopards (*Panthera pardus pardus*). *Journal of Heredity*, 102(6), 653-665.

51. Püttker T, Bueno AA, dos Santos de Barros C, **Sommer S**, Pardini R (2011) Immigration rates in fragmented landscapes – empirical evidence for the importance of habitat amount for species persistence. *PLoS ONE*, 6(11), e27963.
50. Schad J, Dechmann D, Voigt C, **Sommer S** (2011) MHC class II DRB diversity, selection pattern and population structure in a neotropical bat species, *Noctilio albiventris*. *Heredity*, 107, 115-126.
49. Schwensow N, Axtner J, **Sommer S** (2011) Are associations of immune gene expression, body condition and parasite burden detectable in nature? A case study in an endemic rodent from the Brazilian Atlantic Forest. *Infection, Genetics and Evolution*, 11, 23-30.

## 2010

48. Froeschke G, Harf R, **Sommer S**, Matthee S (2010) Effects of precipitation on parasite burden along a climatic gradient in southern Africa – implications for possible shifts in disease patterns due to global changes. *Oikos*, 119, 1029-1039. (SS and MS supervised equally the study).
47. Meyer-Lucht Y, Otten C, Püttker T, Pardini R, Metzger JP, **Sommer S** (2010) Variety matters: adaptive genetic diversity and parasite load in two mouse opossums from the Brazilian Atlantic Forest differing in their sensitivity to habitat fragmentation. *Conservation Genetics*, 11(5), 2001-2013.
46. Schwensow N, Dausmann K, Eberle M, Fietz J, **Sommer S** (2010) Functional associations of similar MHC alleles and shared parasite species in two sympatric lemurs. *Infection, Genetics and Evolution*, 10, 662-668.
45. Schwensow N, Eberle M, **Sommer S** (2010) Are there ubiquitous parasite-driven MHC selection mechanisms in gray mouse lemurs? *International Journal of Primatology*, 31(4), 519-537.
44. **Sommer S**, Taubert R, Schmidt A (2010) Isolation of new microsatellite markers using genome screening and restriction-ligation for *Apodemus flavicollis*. Added to Permanent Genetic Resources Database (1 February 2010–31 March 2010). *Molecular Ecology Resources*, 10 (4), 751-754.
43. **Sommer S**, Taubert R, Schmidt A, Axtner J, Lieckfeldt D (2010) Development of polymorphic microsatellite marker for *Delomys sublineatus*, an endemic rodent of the Brazilian Atlantic rain forest by a time and cost-efficient enrichment protocol using genomic DNAs of unrelated organisms for cross-hybridization. Added to Permanent Genetic Resources Database (1 April 2010–31 May 2010). *Molecular Ecology Resources*, 10 (6), 1098-1105.
42. Weyrich A, Axtner J, **Sommer S** (2010) Selection and validation of reference genes for real-time RT-PCR studies in the non-model species *Delomys sublineatus*, an endemic Brazilian rodent. *Biochemical and Biophysical Research Communications*, 392(2), 145-149.

**2009**

41. Axtner J, **Sommer S** (2009) Validation of internal reference genes for quantitative real-time PCR in a non-model organism, the yellow-necked mouse, *Apodemus flavicollis*. *BMC Research Notes*, 2:264.
40. Lenz TL, Wells K, Pfeiffer M, **Sommer S** (2009) Divergent MHC IIB allele repertoire increases parasite resistance and body condition in the Long-tailed giant rat (*Leopoldamys sabanus*). *BMC Evolutionary Biology*, 9, 269.
39. Meyer-Lucht Y, **Sommer S** (2009) Number of MHC alleles is related to parasite loads in natural populations of yellow necked mice (*Apodemus flavicollis*). *Evolutionary Ecology Research*, 11(7), 1085-1097.
38. **Sommer S**, Schmidt A, Fernandez F, Püttker T, Pardini R (2009) Development and characterization of microsatellite loci in the marsupial *Marmosops incanus* (Lund, 1840) of the Brazilian Atlantic rain forest using genome screening and restriction ligation. Added to Permanent Genetic Resources Database (1 May 2009–31 July 2009). *Molecular Ecology Resources*, 9, 1460-1466.

**2008**

37. Ganzhorn JU, Andrianasolo T, Andrianjazalahatra T, Donati G, Fietz J, Lahann P, Norscia I, Rakotondranary J, Rakotondratsima BM, Ralison J, Ramarokoto REAF, Randriamanga S, Rasarimanana S, Rakotosamimanana B, Ramanamanjato JB, Randria G, Rasolofoharivelo MT, Razanahoera-Rakotomalala M, Schmid J, **Sommer S** (2008) Lemurs in evergreen littoral forest fragments. In: *Biodiversity, Ecology and Conservation of Littoral Ecosystems in Southeastern Madagascar* (Ganzhorn JU, Goodman SM & Vincelette M, eds). Smithsonian Institution, Washington DC, USA. 223-236.
36. Meyer-Lucht Y, Otten C, Püttker T, **Sommer S** (2008) Selection, diversity and evolutionary patterns of the MHC class II DAB in free-ranging Neotropical marsupials. *BMC Genetics*, 9, 39.
35. Püttker T, Meyer-Lucht Y, **Sommer S** (2008) Effect of fragmentation on parasite burden (Nematodes) of generalist and specialist small mammal species in secondary forest fragments of the coastal Atlantic Rain Forest, Brazil. *Ecological Research*, 23, 207-215.
34. Püttker T, Meyer-Lucht Y, **Sommer S** (2008) Fragmentation effects on population density of three rodent species in secondary Atlantic Rainforest, Brazil. *Studies on Neotropical Fauna and Environment*, 43(1), 11-18.
33. Püttker T, Pardini R, Meyer-Lucht Y, **Sommer S** (2008) Responses of five small mammal species to micro-scale variations in vegetation structure in secondary Atlantic Forest remnants, Brazil. *BMC Ecology*, 8, 9.

32. Schwensow N, Eberle M, **Sommer S** (2008) Compatibility counts: MHC-associated mate choice in a wild promiscuous primate. *Proceedings of the Royal Society London B*, 275, 555-564.
31. Schwensow N, Fietz J, Dausmann K and **Sommer S** (2008) MHC-dependent mating strategies and the importance of overall genetic diversity in a pair-living primate. *Evolutionary Ecology*, 22, 617-636.
30. **Sommer S** (2008) Forest fragmentation effects on functional genes: immune gene variability (MHC) of *Microcebus murinus* and *Rattus rattus* in the Mandena forest. In: *Biodiversity, Ecology and Conservation of Littoral Ecosystems in Southeastern Madagascar* (Ganzhorn JU, Goodman SM & Vincelette M, eds). Smithsonian Institution, Washington DC, USA. 259-272.

## 2007

29. Axtner J, **Sommer S** (2007) Gene duplication, allelic diversity, selection processes and adaptive value of MHC class II DRB-genes of the bank vole, *Clethrionomys glareolus*. *Immunogenetics*, 59(5), 417-426.
28. Schwensow N, Fietz J, Dausmann K and **Sommer S** (2007) Neutral versus adaptive genetic variation in parasite resistance: importance of MHC-supertypes in a free-ranging primate. *Heredity*, 99, 265 – 277.

## 2006

27. Püttker T, Meyer-Lucht Y, **Sommer S** (2006) Movement distances of five rodent and two marsupial species in forest fragments of the coastal Atlantic Rainforest, Brazil. *Ecotropica*, 12(2), 131-139.

## 2005

26. Froeschke G, **Sommer S** (2005). MHC Class II DRB constitution and parasite load in the striped mouse, *Rhabdomys pumilio*, in the Southern Kalahari. *Molecular Biology and Evolution*, 22(5), 1254-1259.
25. Harf R, Froeschke G, **Sommer S** (2005) Effects of different land use on the parasite burden and genetic constitution of two rodent species (*Gerbillurus paeba*, *Rhabdomys pumilio*) in the Southern Kalahari Desert. In: *African Biodiversity – molecules, organisms, ecosystems* (Huber BA, Sinclair BJ & Lampe K-H, eds). Springer Verlag, 351-361.
24. Harf R, **Sommer S** (2005) Association between MHC Class II DRB alleles and parasite load in the hairy-footed gerbil, *Gerbillurus paeba*, in the Southern Kalahari. *Molecular Ecology*, 14, 85-91.

23. Hingston M, Goodman SM, Ganzhorn JU, **Sommer S** (2005) Reconstruction of the colonization of southern Madagascar by introduced *Rattus rattus*. *Journal of Biogeography*, 32, 1549-1559.
22. Meyer-Lucht Y, **Sommer S** (2005) MHC diversity and the association to nematode parasitism in the yellow necked mouse (*Apodemus flavicollis*). *Molecular Ecology*, 14, 2233-2243.
21. Pederson CA, Ahnert L, Anzenberger G, Belsky J, Draper P, Fleming AS, Grossman K, Sachser N, **Sommer S**, Tietze DP, Young LJ (2005) Beyond infant attachment – The origins of bonding in later life. In: *Attachment and Bonding: A New Synthesis* (Carter CS, Ahnert L, Grossmann KE, Hrdy SB, Lamb ME, Porges SW & Sachser N, eds). Dahlem Workshop Report 92. Cambridge, MA. The MIT Press, 385-427.
20. Schad J, Ganzhorn JU, **Sommer S** (2005) MHC constitution and parasite burden in the Malagasy mouse lemur, *Microcebus murinus*. *Evolution*, 59(2), 439-450.
19. **Sommer S** (2005) MHC-dependent mate choice in a monogamous rodent. *Behavioural Ecology and Sociobiology*, 58, 181-189.
18. **Sommer S** (2005) Invited Review: The importance of immune gene variability (MHC) in evolutionary ecology and conservation. *Frontiers of Zoology*, 2:16. (**highlighted as 'highly accessed'**).

## 2004

17. Musolf, K, Meyer-Lucht Y, **Sommer S** (2004) Evolution of MHC-DRB class II polymorphism in the genus *Apodemus* and a comparison of DRB sequences within the family Muridae (Mammalia: Rodentia). *Immunogenetics*, 56(6), 420-426.
16. Schad J, **Sommer S**, Ganzhorn JU (2004) MHC variability of a small lemur in the littoral forest fragments of southeastern Madagascar. *Conservation Genetics*, 5(3), 299-309.

## 2003

15. **Sommer S** (2003) Effects of habitat fragmentation and changes of dispersal behaviour after a recent population decline on the genetic variability of non-coding and coding DNA of a monogamous rodent. *Molecular Ecology*, 12, 2845-2851.
14. **Sommer S** (2003) Social and reproductive monogamy in rodents: the case of the Malagasy giant jumping rat (*Hypogeomys antimena*). In: *Monogamy: Partnerships in Birds, Humans and other Mammals* (Reichard U & Boesch C, eds). Cambridge University Press. 109-124.

13. **Sommer S** (2003) Natural history of the Malagasy Giant Jumping Rat, *Hypogeomys antimena*. In: *The Natural History of Madagascar* (Goodman S & Benstead J, eds). University of Chicaco Press. 1383-1385.

## 2002

12. **Sommer S**, Schwab D, Ganzhorn JU (2002) MHC diversity of endemic Malagasy rodents in relation to geographic range and social system. *Behavioural Ecology and Sociobiology*, 51, 214-221.
11. **Sommer S**, Seal US (2002) A population and habitat viability assessment (PHVA) for the highly endangered Giant Jumping Rat (*Hypogeomys antimena*), the largest endemic rodent of Madagascar. In: *Evaluation et Plans de Gestion pour la Conservation (CAMP) de la Faune de Madagascar: Lémuriens, autres Mammifères, Reptiles et Amphibiens, Poissons d'Eau douce et Evaluation de la Viabilité des Populations et des Habitats de Hypogeomys antimena (Vositse)*. Conservation Breeding Specialist Group (SSC/IUCN). CBSG, Apple Valley, MN. 101 pp.
10. **Sommer S**, Toto Volahy A, Seal US (2002) A population and habitat viability assessment for the highly endangered Giant Jumping Rat (*Hypogeomys antimena*), the largest extant endemic rodent of Madagascar. *Animal Conservation*, 5, 263-273.

## 2001

9. Ganzhorn JU, Porter P, Lowry II, Schatz GE, **Sommer S** (2001) Madagascar: one of the world's hottest biodiversity hotspot on its way out. *Oryx*, 35, 346-348.
8. **Sommer S** (2001) Reproductive ecology of the endangered monogamous Malagasy giant jumping rat, *Hypogeomys antimena*. *Mammalian Biology*, 66, 111-115.

## 2000

7. **Sommer S** (2000) Sex specific predation on a monogamous rat, *Hypogeomys antimena* (Muridae: Nesomyinae). *Animal Behaviour*, 59, 1087-1094.
6. **Sommer S**, Hommen U (2000) Modelling the effects of life-history traits and changing ecological conditions on the population dynamics and persistence of the endangered Malagasy giant jumping rat (*Hypogeomys antimena*). *Animal Conservation*, 4, 333-343.

## Before 2000

5. **Sommer S**, Tichy H (1999) MHC-Class II polymorphism and paternity in the monogamous *Hypogeomys antimena*, the endangered, largest endemic Malagasy rodent. *Molecular Ecology*, 8, 1259-1272.
4. **Sommer S** (1998) Populationsökologie und -genetik von *Hypogeomys antimena*, einer endemischen Nagerart im Trockenwald Westmadagaskars. Cuvillier Verlag, Göttingen. ISBN 3-89712-055-0.
3. **Sommer S** (1997) Monogamy in *Hypogeomys antimena*, an endemic rodent of the deciduous dry forest in western Madagascar. *Journal of Zoology*, 241, 301-314.
2. Ganzhorn JU, **Sommer S**, Abraham J-P, Ade M, Raharivololona BM, Rakotovao ER, Rakotondrasoa C & Randriamarosoa R (1996) Mammals of the Kirindy Forest with special emphasis on *Hypogeomys antimena* and the effects of logging on the small mammal fauna. In: *Ecology and Economy of a Tropical Dry Forest in Madagascar* (Ganzhorn JU & Sorg J-P, eds). Primate Report, 46-1, June 1996, Göttingen. 215-232.
1. **Sommer S** (1996) Ecology and social structure of *Hypogeomys antimena*, an endemic rodent of the deciduous dry forest in western Madagascar. In: *Biogeography of Madagascar* (Lourenco WR, ed). Editions de l'ORSTOM, Paris. 295-302.