

Peer reviewed publications

1,587 total citations, 18 h-index (Google Scholar); * indicates equally contributing authors; the five most significant original articles (IF>9) are highlighted

1. **Bulgheresi S.**, Kleiner E., Knoblich J.A. Inscuteable dependent apical localization of the microtubule-binding protein Cornetto suggests a role in asymmetric cell division. 2001. **Journal of Cell Science**. 114:3655-62.
2. Ott J.A., Bright M., **Bulgheresi, S.** Marine Microbial Thiotrophic Ectosymbioses. 2004. **Oceanography & Marine Biology, an Annual Review** 42:95-118.
3. Ott J.A., Bright M., **Bulgheresi S.** Symbioses between marine nematodes and sulfur-oxidizing chemoautotrophic bacteria. 2004. **Symbiosis** 36:103-126.
4. **Bulgheresi S.**, Schabussova I., Chen T., Mullin N. P., Maizels R. M., Ott J.A. A new C-type lectin similar to the human immunoreceptor DC-SIGN mediates symbiont acquisition by a marine nematode. 2006. **Applied and Environmental Microbiology**. 72:2950-2956.
 - First report of the functional role of a conserved, key innate immune effector in microbial symbiosis maintenance
5. Zhang P., Snyder S., Feng P., Azadi P., Zhang S., **Bulgheresi S.**, Sanderson K., He J.J., Klena J.D., Chen T. Role of N-Acetylglucosamine within Core Lipopolysaccharide of Several Species of Gram-negative Bacteria in Targeting the DC-SIGN (CD209). 2006. **Journal of Immunology**. 177(6):4002-4011.
6. Zhang P., Skurnik M., Zhang S., Schwartz O., Kalyanasundaram R., **Bulgheresi S.**, He J.J., Klena J.D., B. Hinnebusch J., Chen T. Human DC-SIGN (CD209) is a receptor for *Yersinia pestis* that promotes phagocytosis by dendritic cells. 2008. **Infection and Immunity**. 76(5):2070-9.
7. Nabatov A.A., de Jong M.A.W.P., de Witte L., **Bulgheresi S.***, Geijtenbeek T.H.B.* C-type lectin Mermaid inhibits dendritic cell mediated HIV-1 transmission to CD4+ T cell. 2008. **Virology**. 378(2):323-8.
8. Bayer C., Heindl R.N., Rinke C., Lücker S., Ott, J.A., **Bulgheresi S.** Molecular characterization of the symbionts associated with marine nematodes of the genus *Robbea*. 2009. **Environmental Microbiology Rep.** 1(2):136-144.
9. Mittal R., **Bulgheresi S.**, Emami C., Prasadarao N.V. *Enterobacter sakazakii* targets DC-SIGN to induce immunosuppressive responses in dendritic cells by modulating MAP kinases. 2009. **Journal of Immunology**. 183(10):6588-99.
10. Bright M., **Bulgheresi S.** Microbial symbiont transmission. 2010. **Nature Reviews Microbiology**. 8(3):218-30.

- Overview of the molecular mechanisms that mediate symbiont attraction and accumulation, inter-partner recognition and selection, as well as symbiont confrontation with the host immune system

11. **Bulgheresi S.**, Gruber-Vodicka H.R., Heindl N.R., Dirks U., Kostadinova M., Breiteneder H., Ott J.A. Sequence variability of the pattern recognition receptor Mermaid mediates specificity of marine nematode symbioses. 2011. **The ISME Journal**. 5(6):986-98.
12. Heindl N.R., Gruber-Vodicka H.R., Bayer C., Luecker S., Ott J.A., **Bulgheresi S.** First detection of thiotrophic symbiont phylotypes in the pelagic environment. 2011. **FEMS Microbiology Ecology**. 77(1):223-7.
13. Gruber-Vodicka H., Dirks U., Leisch N., Baranyi C., Stoecker K., **Bulgheresi S.**, Niels R. Heindl, Horn M., Lott C., Loy A., Wagner M., Ott J.A. *Paracatenula*: an ancient symbiosis between Thiotrophic *Alphaproteobacteria* and catenulid flatworms. 2011. **Proceedings of the National Academy of Sciences US**. 108(29):12078-83.
14. **Bulgheresi S.** Calling the roll on *Laxus oneistus* immune defense molecules. 2011. **Symbiosis** 55:127-135.
15. Dirks U., Gruber-Vodicka H.R., Leisch N., **Bulgheresi S.**, Egger B., Ladurner P., Ott J.A. Bacterial Symbiosis Maintenance in the Asexually Reproducing and Regenerating Flatworm *Paracatenula galateia*. 2012. **PLoS ONE** 7(4): e34709.
16. Goodrich-Blair H. Nematode-Bacterium Symbioses - Cooperation and Conflict Revealed in the 'Omics' Age. 2012. **The Biological Bulletin** 223(1):85-102.
17. Leisch N., Verheul J., Heindl N.R., Gruber-Vodicka H.R., Pende N., den Blaauwen T., **Bulgheresi S.** Growth in width and FtsZ ring longitudinal positioning in a gammaproteobacterial symbiont. 2012. **Current Biology**. 22(19):831-32.
 - First report of FtsZ-based longitudinal binary fission in a rod-shaped bacterium [http://www.cell.com/current-biology/pdf/S0960-9822\(12\)00998-0.pdf](http://www.cell.com/current-biology/pdf/S0960-9822(12)00998-0.pdf)
18. Pende N., Leisch N., Gruber-Vodicka H.R., Heindl N.R., Ott, A.J., den Blaauwen, T., **Bulgheresi S.** Size-independent division in extraordinary long polyploid cells. 2014. **Nature Communications**. 5:4803.
 - In a gammaproteobacterial symbiont symmetric binary fission occurs in 120 µl-long cells and in a second one fission occurs at virtually every size between 4 and 45 µm <https://www.nature.com/articles/ncomms5803.pdf>
19. Yang K., Gyu Park C., Cheong C., **Bulgheresi S.** *et al.* Host Langerin (CD207) is a receptor for *Yersinia pestis* phagocytosis and promotes dissemination. 2015. **Immunology & Cell Biology**. 93(9):815-24.
20. **Bulgheresi S.** All the microbiology nematodes can teach us. 2016. **FEMS Microbiology Ecology**. 94(1): fix170.

21. **Bulgheresi S.** Bacterial cell biology outside the streetlight. 2016. **Environmental Microbiology**. 18(8):2305-18.
22. Leisch N., Pende N., Weber M.P., Gruber-Vodicka R.H., Verheul J., Vischer N.O.E., Abby S., den Blaauwen T., **Bulgheresi S.** Asynchronous division by non-ring FtsZ in the gammaproteobacterial symbiont of *Robbea hypermnestra*. 2016. **Nature Microbiology**. 2:16182.
 - The FtsZ ring is dispensable in the first bacterium reported to divide by asynchronous longitudinal fission
<https://www.nature.com/articles/nmicrobiol2016182.pdf>
23. Petersen J.M., Kemper A., Gruber-Vodicka R.H., Cardini U., van der Geest M., **Bulgheresi S.**, Mußmann M., Seah K.B.B., Chakkiath P.A., Herbold C., Belitz A., Miriam W. Chemosynthetic sulphur-oxidizing symbionts of marine invertebrate animals are capable of nitrogen fixation. 2016. **Nature Microbiology**. 2:16195.
24. N., Michael S. VanNieuwenhze M., Brun Y.V., den Blaauwen T., **Bulgheresi S.** Host-polarized cell growth in animal symbionts. 2018. **Current Biology**. 28:1-13.
 - The actin homolog MreB is required for both septal growth and longitudinal fission in two gammaproteobacterial symbionts.
25. Yang K., He Y., Park C.G., Zhang P., Han Y., Cui Y., **Bulgheresi S.** *et al.* *Yersinia pestis* interacts With SIGNR1 (CD209b) for promoting host dissemination and infection. 2019. **Front Immunol**. 10: 96.
26. Weber P.M., Moessel F., Paredes G.F., Viehboeck T., Vischer N.O.E., **Bulgheresi S.** A bidimensional segregation mode maintains symbiont chromosome orientation toward its host. 2019. **Current Biology**. 29:1-11. **IF=9.2**
 - First study of DNA segregation in an animal symbiont reveals ParB-mediated transgenerational maintenance of chromosome configuration.
27. Wang J., Alvarez L., **Bulgheresi S.**, Cava F., den Blaauwen T. PBP4 is likely involved in cell division of the longitudinally dividing bacterium *Candidatus Thiosymbion oneisti*. 2021. **Antibiotics**. 10(3): 274.
28. Paredes G.F., Viehboeck T., Raymond L., Palatinszky M., Mausz M., Reipert S., Schintlmeister A., Volland J.M., Hirschfeld C., Wagner M., Berry D., Markert S., **Bulgheresi S.**, König L. Anaerobic sulfur oxidation underlies adaptation of a chemosynthetic symbiont to oxic-anoxic interfaces. 2021. **mSystems**. 6(3): e01186-20.
29. Weber P.M., Paredes G.F., Viehböck T., Pende N., Volland J.M., J.A. Ott, Gros O., **Bulgheresi S.** 2021. FtsZ localizes at the septum of naturally occurring cuboid bacteria. 2021. **iScience**, under review.

Book Chapters

Bulgheresi S. Microbial symbiont transmission: basic principles and dark sides. 2011. In *Beneficial Microorganisms in Multicellular Life Forms*, E. Rosenberg/U. Gophna (eds), Springer-Verlag, p.299-311.

Ott J.A., **Bulgheresi S.** *et al.* Chemosynthetic symbioses in meiofauna (in preparation) In *Meiofauna as a link between the micro- and macroworld*, O. Giere/J.A. Ott (eds), Springer-Verlag (in preparation).

Scientific book review

Bulgheresi S. I, microbe. 2016. **Nature Microbiology**. 1(8):16117.