

**PUBLICATIONS**

(October 2021)

**Original publications (● highlights)**

1. ● **Hilbi, H.**, Dehning, I., Schink, B. & Dimroth, P. (1992) Malonate decarboxylase of *Malonomonas rubra*, a novel type of biotin-containing acetyl enzyme. *Eur. J. Biochem.* 207: 117-123.
2. **Hilbi, H.**, Hermann, R. & Dimroth, P. (1993) The malonate decarboxylase enzyme system of *Malonomonas rubra*: evidence for the cytoplasmic location of the biotin-containing component. *Arch. Microbiol.* 160: 126-131.
3. **Hilbi, H.** & Dimroth, P. (1994) Purification and characterization of a cytoplasmic enzyme component of the Na<sup>+</sup>-activated malonate decarboxylase system of *Malonomonas rubra*: acetyl-S-acyl carrier protein: malonate acyl carrier protein-SH transferase. *Arch. Microbiol.* 162: 48-56.
4. Micklefield, J., Harris, K.J., Groger, S., Mocek, U., **Hilbi, H.**, Dimroth, P. & Floss, H.G. (1995) Stereochemical course of malonate decarboxylation in *Malonomonas rubra*. *J. Am. Chem. Soc.* 117: 1153-1154.
5. Berg, M., **Hilbi, H.** & Dimroth, P. (1996) The acyl carrier protein of malonate decarboxylase of *Malonomonas rubra* contains 2'-(5"-phosphoribosyl)-3'-dephosphocoenzyme A as prosthetic group. *Biochemistry* 35: 4689-4696.
6. Schmid, M., Berg, M., **Hilbi, H.** & Dimroth, P. (1996) Malonate decarboxylase of *Klebsiella pneumoniae* catalyses the turnover of acetyl and malonyl thioester residues on a coenzyme-A-like prosthetic group. *Eur. J. Biochem.* 237: 221-228.
7. Berg, M., **Hilbi, H.** & Dimroth, P. (1997) Sequence of a gene cluster from *Malonomonas rubra* encoding components of the malonate decarboxylase Na<sup>+</sup> pump and evidence for their function. *Eur. J. Biochem.* 245: 103-115. (H.H. and M.B. contributed equally).
8. **Hilbi, H.**, Chen, Y., Thirumalai, K. & Zychlinsky, A. (1997) The interleukin 1 $\beta$ -converting enzyme, caspase-1, is activated during *Shigella flexneri*-induced apoptosis in human monocyte-derived macrophages. *Infect. Immun.* 65: 5165-5170.
9. ● **Hilbi, H.**, Moss, J.E., Hersh, D., Chen, Y., Arondel, J., Banerjee, S., Flavell, R.A., Yuan, J., Sansonetti, P.J. & Zychlinsky, A. (1998) *Shigella*-induced apoptosis is dependent on caspase-1 which binds to IpaB. *J. Biol. Chem.* 273: 32895-32900.
10. **Hilbi, H.**, Puro, R.J. & Zychlinsky, A. (2000) Tripeptidyl peptidase II promotes maturation of caspase-1 in *Shigella flexneri*-induced macrophage apoptosis. *Infect. Immun.* 68: 5502-5508.
11. ● **Hilbi, H.**, Segal, G. & Shuman, H.A. (2001) Icm/Dot-dependent upregulation of phagocytosis by *Legionella pneumophila*. *Mol. Microbiol.* 42: 603-617.
12. **Hilbi, H.**, Jozsa E. & Tomkinson, B. (2002) Identification of the catalytic triad in tripeptidyl-peptidase II through site directed mutagenesis. *Biochem. Biophys. Acta* 1601: 149-154.
13. Otto, G.P., Wu, M.Y., Clarke, M., Lu, H., Anderson, O.R., **Hilbi, H.**, Shuman, H.A. & Kessin, R.H. (2004) Macroautophagy is dispensable for intracellular replication of *Legionella pneumophila* in *Dictyostelium discoideum*. *Mol. Microbiol.* 51: 63-72.  
● Faculty of 1000 Biology: <http://www.f1000biology.com/article/id/1016669/evaluation>
14. Albers, U., Reus, K., Shuman, H.A. & **Hilbi, H.** (2005) The amoebae plate test implicates a paralogue of *lpxB* in the interaction of *Legionella pneumophila* with *Acanthamoeba castellanii*. *Microbiology* 151: 167-182.
15. Mampel, J., Spirig, T., Weber, S. S., Haagensen, J. A. J., Molin, S. & **Hilbi, H.** (2006) Planktonic replication is essential for biofilm formation of *Legionella pneumophila* in a complex medium under static and dynamic flow conditions. *Appl. Environ. Microbiol.* 72: 2885-2895.  
● Faculty of 1000 Biology: <http://www.f1000biology.com/article/id/1011008/evaluation>
16. Spörri, R., Joller, N., Albers, U. **Hilbi, H.** & Oxenius, A. (2006) MyD88-dependent interferon gamma production by NK cells is key for control of *Legionella pneumophila* infection. *J. Immunol.* 176: 6162-6171.  
● Faculty of 1000 Biology: <http://www.f1000biology.com/article/id/1032227/evaluation>
17. Weber, S. S., Ragaz, C., Reus, K., Nyfeler Y. & **Hilbi, H.** (2006) *Legionella pneumophila* exploits PI(4)P to anchor secreted effector proteins to the replicative vacuole. *PLoS Pathog.* 2: e46.  
● Editor's Choice in *Science* 312: 974. Research Highlights in *Nature Rev. Microbiol.* 4: 492-493.  
● Faculty of 1000 Biology: <http://www.f1000biology.com/article/id/1033019/evaluation>

18. ● Schroeder, G. N. & **Hilbi, H.** (2007) Cholesterol is required to trigger caspase-1 activation and macrophage apoptosis after phagosomal escape of *Shigella*. *Cell. Microbiol.* 9: 265-278.
19. ● Tiaden, A., Spirig, T., Weber, S. S., Brüggemann, H., Bosshard, R., Buchrieser, C. & **Hilbi, H.** (2007) The *Legionella pneumophila* response regulator LqsR promotes host cell interactions as an element of the virulence regulatory network controlled by RpoS and LetA. *Cell. Microbiol.* 9: 2903-2920.
20. Schroeder, G. N., Jann, N. J. & **Hilbi, H.** (2007) Intracellular type III secretion by cytoplasmic *Shigella* promotes caspase-1-dependent macrophage apoptosis. *Microbiology* 153: 2862-2876.
21. Albers, U., Tiaden, A., Spirig, T., Al Alam, D., Goyert, S. M., Gangloff, S. C. & **Hilbi, H.** (2007) Expression of *Legionella pneumophila* paralogous lipid A biosynthesis genes under different growth conditions. *Microbiology* 153: 3817-3829.
22. Joller, N., Spörri, R., **Hilbi, H.** & Oxenius, A. (2007) Induction and protective role of antibodies in *Legionella pneumophila* infection. *Eur. J. Immunol.* 37: 3414-3423.
23. ● Spirig, T., Tiaden, A., Kiefer, P., Buchrieser, C., Vorholt, J. A. & **Hilbi, H.** (2008) The *Legionella* autoinducer synthase LqsA produces an  $\alpha$ -hydroxyketone signaling molecule. *J. Biol. Chem.* 283: 18113-18123.
24. ● Ragaz, C., Pietsch, H., Urwyler, S., Tiaden, A., Weber, S. S. & **Hilbi, H.** (2008) The *Legionella pneumophila* phosphoinositide-4-phosphate-binding type IV substrate SidC recruits endoplasmic reticulum vesicles to a replication-permissive vacuole. *Cell. Microbiol.* 10: 2416-2433.
25. Spörri, R., Joller, N., **Hilbi, H.** & Oxenius, A. (2008) A novel role for neutrophils as critical cytokine producers in microbial infection. *J. Immunol.* 181: 7121-7130.
26. Tiaden, A., Spirig, T., Carranza, P., Brüggemann, H., Riedel, K., Eberl, L., Buchrieser, C. & **Hilbi, H.** (2008) Synergistic contribution of the *Legionella pneumophila* *lqs* genes to pathogen-host interactions. *J. Bacteriol.* 190: 7532-7547.
27. ● Urwyler, S., Nyfeler, Y., Ragaz, C., Lee, H., Mueller, L. N., Aebersold, R. & **Hilbi, H.** (2009) Proteome analysis of *Legionella* vacuoles purified by magnetic immuno-separation reveals secretory and endosomal GTPases. *Traffic* 10: 76-87.
28. ● Brombacher, E., Urwyler, S., Ragaz, C., Weber, S. S., Kami, K., Overduin, M. & **Hilbi, H.** (2009) Rab1 guanine nucleotide exchange factor SidM is a major PtdIns(4)P-binding effector protein of *Legionella pneumophila*. *J. Biol. Chem.* 284: 4846-4856.
29. ● Weber, S. S., Ragaz, C. & **Hilbi, H.** (2009) The inositol polyphosphate 5-phosphatase OCRL1 restricts intracellular growth of *Legionella*, localizes to the replicative vacuole and binds to the bacterial effector LpnE. *Cell. Microbiol.* 11: 442-460.
30. ● Tiaden, A., Spirig, T., Sahr, T., Wälti, M. A., Boucke, K., Buchrieser, C. & **Hilbi, H.** (2010) The autoinducer synthase LqsA and putative sensor kinase LqsS regulate phagocyte interactions, extracellular filaments and a genomic island of *Legionella pneumophila*. *Environ. Microbiol.* 12: 1243-1259.
31. Joller, N., Weber, S. S., Müller, A. J., Spörri, R., Selchow, P., Sander, P., **Hilbi, H.** & Oxenius, A. (2010) Antibodies protect against intracellular bacteria by Fc Receptor-mediated lysosomal targeting. *Proc. Natl. Acad. Sci. USA.* 107: 20441-20446.
32. LeibundGut-Landmann, S., Weidner, K., **Hilbi, H.** & Oxenius, A. (2011) Non-hematopoietic cells are key players in innate control of bacterial airway infection. *J. Immunol.* 186: 3130-3137.
33. Weber, S. S., Joller, N., Küntzel, A. B., Spörri, R., Tchang, V., Scandella, E., Rösli, C., Neri, D., Ludewig, B., **Hilbi, H.** & Oxenius, A. (2012) Identification of protective B cell antigens of *Legionella pneumophila*. *J. Immunol.* 189: 841-849.
34. Anetzberger, C., Reiger, M., Fekete, A., Schell, U., Stammbräu, N., Plener, L., Kopka, J., Schmitt-Kopplin, P., **Hilbi, H.** & Jung, K. (2012) Autoinducers act as biological timers in *Vibrio harveyi*. *PLoS One* 7: e48310.
35. ● Kessler, A., Schell, U., Sahr, T., Tiaden, A., Harrison, C. F., Buchrieser, C. & **Hilbi, H.** (2013) The *Legionella pneumophila* orphan sensor kinase LqsT regulates competence and pathogen-host interactions as a component of the LAI-1 circuit. *Environ. Microbiol.* 15: 646-662.
36. Gazdag E. M., Streller, A., Haneburger, I., **Hilbi, H.**, Vetter, I., Goody, R. S. & Itzen, A. (2013) Mechanism of Rab1 deactivation by the *Legionella pneumophila* GAP LepB. *EMBO Rep.* 14: 199-205.

37. Schmid, S., Seiler, C., Gerecke, A. C., Hächler, H., **Hilbi, H.**, Frey, J., Weidmann, S., Meier, L., Berchtold, C. & Zenobi, R. (2013) Studying the fate of non-volatile organic compounds in a commercial plasma air purifier. *J. Hazard. Mat.* 256-257: 76-83.
38. • Finsel, I., Ragaz, C., Hoffmann, C., Harrison, C. F., Weber, S., van Rahden, V. A., Johannes, L. & **Hilbi, H.** (2013) The *Legionella* effector RidL inhibits retrograde trafficking to promote intracellular replication. *Cell Host Microbe* 14: 38-50.
39. Ahrendt, T., Miltenberger, M., Haneburger, I., Kirchner, F., Brachmann, A. O., Kronenwerth, M., **Hilbi, H.** & Bode, H. B. (2013) Biosynthesis of the natural fluorophore legiolulin from *Legionella*. *Chembiochem.* 14: 1415-1418.
40. Harrison, C. F., Kicka, S., Trofimov, V., Berschl, K., Ouertatani-Sakouhi, H., Hedberg, C., Ackermann, K., Cosson, P., Soldati, T. & **Hilbi, H.** (2013) Exploring anti-virulence compounds against intracellular *Legionella*. *PLoS One* 8: e74813.
41. • Rothmeier, E., Pfaffinger, G., Hoffmann, C., Harrison, C. F., Grabmayr, H., Repnik, U., Hannemann, M., Wölke, S., Bausch, A., Griffith, G., Müller-Taubenberger, A., Itzen, A. & **Hilbi, H.** (2013) Activation of Ran GTPase by a *Legionella* effector promotes microtubule polymerization, pathogen vacuole motility and infection. *PLoS Pathog.* 9: e1003598.
42. Simon, S., Wagner, M., Rothmeier, E., Müller-Taubenberger, A. & **Hilbi, H.** (2014) Icm/Dot-dependent inhibition of phagocyte migration by *Legionella* is antagonized by a translocated Ran GTPase activator. *Cell. Microbiol.* 16: 977-992.  
• Editor's Choice *Cell. Microbiol.* 16 (7).
43. • Hoffmann, C., Finsel, I., Otto, A., Pfaffinger, G., Rothmeier, E., Hecker, M., Becher, D. & **Hilbi, H.** (2014) Functional analysis of novel small GTPases identified in the proteome of purified *Legionella*-containing vacuoles from macrophages. *Cell. Microbiol.* 16: 1034-1052.
44. • Weber, S., Wagner, M. & **Hilbi, H.** (2014) Live cell imaging of phosphoinositide dynamics and membrane architecture during *Legionella* infection. *mBio* 5: e00839-13.
45. Kicka, S., Trofimov, V., Harrison, C. F., Ouertatani-Sakouhi, H., McKinney, J., Scapozza, L., **Hilbi, H.**, Cosson, P. & Soldati, T. (2014) Establishment and validation of whole-cell based fluorescence assays to identify anti-mycobacterial compounds using the *Acanthamoeba castellanii* - *Mycobacterium marinum* host-pathogen system. *PLoS One* 9: e87834.
46. • Schell, U., Kessler, A. & **Hilbi, H.** (2014) Phosphorylation signaling through the *Legionella* quorum sensing histidine kinases LqsS and LqsT converges on the response regulator LqsR. *Mol. Microbiol.* 92: 1039-1055.
47. Dolinsky, S., Haneburger, I., Hannemann, M., Cichy, A., Itzen, A. & **Hilbi, H.** (2014) The *Legionella longbeachae* Icm/Dot substrate SidC selectively binds PtdIns(4)P with nanomolar affinity and promotes pathogen vacuole-endoplasmic reticulum interactions. *Infect. Immun.* 82: 4021-4033.
48. • Weber, S., Stirnimann, C. U., Wieser, M., Frey, D., Meier, R., Engelhardt, S., Li, X., Capitani, G., Kammerer, R. A. & **Hilbi, H.** (2014) A type IV-translocated *Legionella* cysteine phytase counteracts intracellular growth restriction by phytate. *J. Biol. Chem.* 289: 34175-34188.
49. Jeschke, A., Zehethofer, N., Lindner, B., Krupp, J., Schwudke, D., Haneburger, I., Jovic, M., Backer, J. M., Balla, T., **Hilbi, H.** & Haas, A. (2015) Phosphatidylinositol 4-phosphate and phosphatidylinositol 3-phosphate regulate phagolysosome biogenesis. *Proc. Natl. Acad. Sci. USA* 112: 4636-4641.
50. Harrison, C. F., Kicka, S., Kranjc, A., Finsel, I., Chiriano, G., Ouertatani-Sakouhi, H., Soldati, T., Scapozza, L. & **Hilbi, H.** (2015) Adrenergic antagonists restrict replication of *Legionella*. *Microbiology*: 161: 1392-1406.
51. Harrison, C. F., Chiriano, G., Finsel, I., Manske, C., Hoffmann, C., Steiner, B., Kranjc, A., Pattey-Vuadens, O., Kicka, S., Trofimov, V., Ouertatani-Sakouhi, H., Soldati, T., Scapozza, L. & **Hilbi, H.** (2015) Amoebae-based screening reveals a novel family of compounds restricting intracellular *Legionella*. *ACS Infect. Dis.* 1: 327-338.  
• ACS Editor's Choice.
52. • Simon, S., Schell, U., Heuer, N., Hager, D., Albers, M. F., Matthias, J., Fahrnbauer, F., Trauner, D., Eichinger, L., Hedberg, C. & **Hilbi, H.** (2015) Inter-kingdom signaling by the *Legionella* quorum sensing molecule LAI-1 inhibits cell migration through an IQGAP1/CDC42/ARHGEF9-dependent pathway. *PLoS Pathog.* 11: e1005307.
53. • Schell, U., Simon, S., Sahr, T., Hager, D., Albers, M. F., Kessler, A., Fahrnbauer, F., Trauner, D., Hedberg, C., Buchrieser, C. & **Hilbi, H.** (2016) The  $\alpha$ -hydroxyketone LAI-1 regulates motility, Lqs-

- dependent phosphorylation signaling and gene expression of *Legionella pneumophila*. *Mol. Microbiol.* 99: 778-793.
54. • Häuslein, I., Manske, C., Goebel, W., Eisenreich, W. & **Hilbi, H.** (2016) Pathway analysis using <sup>13</sup>C-glycerol and other carbon tracers reveals bipartite metabolism of *Legionella pneumophila*. *Mol. Microbiol.* 100: 229-246.
  55. Naujoks, J., Tabeling, C., Dill, B. D., Hoffmann, C., Brown, A. S., Kunze, M., Kempa, S., Peter, A., Mollenkopf, H.-J., Dorhoi, A., Kershaw, O., Gruber, A. D., Sander, L. E., Witzentrath, M., Herold, S., Nerlich, A., Hocke, A. C., van Driel, I., Suttorp, N., Bedoui, S., **Hilbi, H.**, Trost, M. & Opitz, B. (2016) IFNs modify the proteome of *Legionella*-containing vacuoles and restrict infection via IRG1-derived itaconic acid. *PLoS Pathog.* 12: e1005408.
  56. Rolando, M., Escoll, P., Nora, T., Botti, J., Boitez, V., Bedia, C., Daniels, C., Abraham, G., Stogios, P. J., Skarina, T., Christophe, C., Dervins-Ravault, D., Cazalet, C., **Hilbi, H.**, Rupasinghe, T., Tull, D. L., McConville, M. J., Ong, S. Y., Hartland, E. L., Codogno, P., Levade, T., Naderer, T., Savchenko, A. & Buchrieser, C. (2016) *Legionella pneumophila* S1P-lyase targets host sphingolipid metabolism and restrains autophagy. *Proc. Natl. Acad. Sci. USA* 113: 1901-1906.
  57. Manske, C., Schell, U. & **Hilbi, H.** (2016) Metabolism of myo-inositol by *Legionella pneumophila* promotes infection of amoeba and macrophages. *Appl. Environ. Microbiol.* 82: 5000-5014.  
• Editor's Spotlight *Appl. Environ. Microbiol.* 82 (16).
  58. Slepikas, L., Chiriano, G., Perozzo, R., Tardy, S., Kranjc-Pietrucci, A., Patthey-Vuadens, O., Ouertatani-Sakouhi, H., Kicka, S., Harrison, C. F., Scignari, T., Perron, K., **Hilbi, H.**, Soldati, T., Cosson, P., Tarasevicius, E. & Scapozza, L. (2016) *In silico* driven design and synthesis of rhodanine derivatives as novel antibacterials targeting the enoyl reductase InhA. *J. Med. Chem.* 59: 10917-10928.
  59. Tobias, N. J., Ahrendt, T., Schell, U., Miltenberger, M., **Hilbi, H.** & Bode, H. B. (2016) *Legionella* shows a diverse secondary metabolism dependent on a single Sfp-type phosphopantetheinyl transferase. *PeerJ* 4: e2720.
  60. Schmölders, J., Manske, C., Otto, A., Hoffmann, C., Steiner, B., Welin, A., Becher, D. & **Hilbi, H.** (2017) Comparative proteomics of purified pathogen vacuoles correlates intracellular replication of *Legionella pneumophila* with the small GTPase Rap1. *Mol. Cell. Proteomics* 16: 622-641.
  61. Ouertatani-Sakouhi, H., Kicka, S., Chiriano, G., Harrison, C. F., **Hilbi, H.**, Scapozza, L., Soldati, T. & Cosson, P. (2017) Inhibitors of *Mycobacterium marinum* virulence identified in a *Dictyostelium discoideum* host model. *PLoS One* 12: e0181121.
  62. • Escoll, P., Song, O.-R., Viana, F., Steiner, B., Lagache, T., Olivo-Marin, J.-C., Impens, F., Brodin, P., **Hilbi, H.** & Buchrieser, C. (2017) *Legionella pneumophila* modulates mitochondrial dynamics to trigger metabolic repurposing of infected macrophages. *Cell Host Microbe* 22: 302-316.
  63. • Steiner, B., Swart, A. L., Welin, A., Weber, S., Personnic, N., Kaech, A., Freyre, C., Ziegler, U., Klemm, R. W. & **Hilbi, H.** (2017) ER remodeling by the large GTPase atlastin promotes vacuolar growth of *Legionella pneumophila*. *EMBO Rep.* 18: 1817-1836.
  64. • Bärlocher, K., Hutter, C. A., Swart, A. L., Steiner, B., Welin, A., Hohl, M., Letourneur, F., Seeger, M. & **Hilbi, H.** (2017) Structural insights into *Legionella* RidL-Vps29 retromer subunit interaction reveal displacement of the regulator TBC1D5. *Nat. Commun.* 8: 1543.
  65. Welin, A., Weber, S. & **Hilbi, H.** (2018) Quantitative imaging flow cytometry of *Legionella*-infected *Dictyostelium* reveals the impact of retrograde trafficking on pathogen vacuole composition. *Appl. Environ. Microbiol.* 84: e00158-18.
  66. Arnold, F. M., Hohl, M., Remm, S., Koliwer-Brandl, H., Adenau, S., Chusri, S., Sander, P., **Hilbi, H.** & Seeger, M. A. (2018) A uniform cloning platform for mycobacterial genetics and protein production. *Science Rep.* 8: 9539.
  67. • Weber, S., Steiner, B., Welin, A., & **Hilbi, H.** (2018) *Legionella*-containing vacuoles capture PtdIns(4)P-rich vesicles derived from the Golgi apparatus. *mBio* 9: e02420-18.
  68. • Hochstrasser, R., Kessler, A., Sahr, T., Simon, S., Schell, U., Gomez-Valero, L., Buchrieser, C. & **Hilbi, H.** (2019) The pleiotropic *Legionella* transcription factor LvbR links the Lqs and c-di-GMP regulatory networks to control biofilm architecture and virulence. *Environ. Microbiol.* 21: 1035-1053.
  69. Koliwer-Brandl, H., Knobloch, P., Barisch, C., Welin, A., Soldati, T. & **Hilbi, H.** (2019) Distinct *Mycobacterium marinum* lipid phosphatases determine pathogen vacuole phosphoinositide pattern, phagosome maturation and escape to the cytosol. *Cell. Microbiol.* 21: e13008.

70. Buckley, C. M., Heath, V., Guého, A., Bosmani, C., Knobloch, P., Sikakana, P., Personnic, N., Dove, S., Michel, R. H., Meier, R., **Hilbi, H.**, Soldati, T., Insall, R. H. & King, J. S. (2019) PIKfyve/Fab1 is required for efficient V-ATPase delivery to phagosomes, phagosomal killing, and restriction of *Legionella* infection. *PLoS Pathog.* 15: e1007551.
71. ● Personnic, N., Striednig, B., Lezan, E., Manske, C., Welin, A., Schmidt, A. & **Hilbi, H.** (2019) Quorum sensing modulates the formation of virulent *Legionella* persisters within infected cells. *Nat. Commun.* 10: 5216.
72. Knobloch, P., Koliwer-Brandl, H., Arnold, F. M., Hanna, N., Gonda, I., Adenau, S., Personnic, N., Barisch, C., Seeger, M. A., Soldati, T. & **Hilbi, H.** (2020) *Mycobacterium marinum* produces distinct mycobactin and carboxymycobactin siderophores to promote growth in broth and phagocytes. *Cell. Microbiol.* 22: e13163.  
● Editor's Choice *Cell. Microbiol.* 22 (5).
73. Hochstrasser, R., Hutter, C. A. J., Arnold, F. A., Bärlocher, K., Seeger, M. A. & **Hilbi, H.** (2020) The structure of the *Legionella* response regulator LqsR reveals amino acids critical for phosphorylation and dimerization. *Mol. Microbiol.* 113: 1070-1084.
74. Hanna, N., Kicka, S., Chiriano, G., Harrison, C., Ouertatani-Sakouhi, H., Trofimov, V., Kranjc, A., Nitschke, J., Pagni, M., Cosson, P., **Hilbi, H.**, Scapozza, L. & Soldati, T. (2020) Identification of anti-mycobacterium and anti-*Legionella* compounds with potential distinctive structural scaffolds from an HD-PBL using phenotypic screens in amoebae host models. *Front Microbiol.* 11: 266.
75. ● Swart, A. L., Steiner, B., Schütz, S., Gomez-Valero, L., Hannemann, M., Janning, P., Irminger, M., Rothmeier, E., Buchrieser, C., Itzen, A., Panse, V. G. & **Hilbi, H.** (2020) Divergent evolution of *Legionella* RCC1 repeat effectors defines the range of Ran GTPase cycle targets. *mBio* 11: e00405-20.
76. Lamrabet, O., Melotti, A., Burdet, F., Hanna, N., Perrin, J., Nitschke, J., Pagni, M., **Hilbi, H.**, Soldati, T. & Cosson, P. (2020) Transcriptional responses of *Dictyostelium discoideum* exposed to different classes of bacteria. *Front Microbiol.* 11: 410.
77. ● Personnic, N., Striednig, B. & **Hilbi, H.** (2021) Quorum sensing controls persistence, resuscitation and virulence of *Legionella* subpopulations in biofilms. *ISME J.* 15: 196-210.
78. Hanna, N., Koliwer-Brandl, H., Lefrançois, L. H., Kalinina, V., Cardenal-Muñoz, E., Appiah, J., Leuba, F., Gueho, A., **Hilbi, H.**, Soldati, T. & Barisch, C. (2021) Zn<sup>2+</sup> intoxication of *Mycobacterium marinum* during *Dictyostelium discoideum* infection is counteracted by induction of the pathogen Zn<sup>2+</sup> exporter CtpC. *mBio.* 12: e01313-20.
79. Hüsler, D., Steiner, B., Welin, A., Striednig, B., Swart, A. L., Molle, V., **Hilbi, H.\*** & Letourneur, F.\* (2021) *Dictyostelium* lacking the single atlastin homolog Sey1 shows aberrant ER architecture, proteolytic processes, and expansion of the *Legionella*-containing vacuole. *Cell. Microbiol.* 23: e13318 (\* co-corresponding).  
● Editor's Choice *Cell. Microbiol.* 23 (5).
80. ● Striednig, B., Lanner, U., Niggli, S., Katic, A., Vormittag, S., Brülisauer, S., Hochstrasser, R., Kaech, A., Welin, A., Flieger, A., Ziegler, U., Schmidt, A., **Hilbi, H.\*** & Personnic, N.\* (2021) Quorum sensing governs a transmissive *Legionella* subpopulation at the pathogen vacuole periphery. *EMBO Rep.* 22: e52972 (\* contributed equally, co-corresponding).
81. Böck, D., Hüsler, D., Steiner, B., Medeiros, J. M., Welin, A., Radomska, K. A., Hardt, W.-D., Pilhofer, M.\* & **Hilbi, H.\*** (2021) The polar *Legionella* Icm/Dot T4SS establishes distinct contact sites with the pathogen vacuole membrane. *mBio* 12: e02180-21 (\* co-corresponding).

### Reviews, book chapters

1. **Hilbi, H.** & Dimroth, P. (1993) Malonate decarboxylase of *Malonomonas rubra*: a novel decarboxylating enzyme system. *Biol. Chem. Hoppe-Seyler* 374: 810-811.
2. Dimroth, P. & **Hilbi, H.** (1997) Enzymic and genetic basis for bacterial growth on malonate. *Mol. Microbiol.* 25: 3-10.
3. **Hilbi, H.**, Zychlinsky, A. & Sansonetti, P.J. (1997) Macrophage apoptosis in microbial infections. *Parasitology* 115 suppl.: S79-S88.
4. **Hilbi, H.** (1999) Host responses to secreted *Shigella* virulence factors. *Curr. Opin. Infect. Dis.* 12: 221-228.

5. **Hilbi, H.** (2003) Fressen und gefressen werden – vom Umgang pathogener Bakterien mit Phagozyten. *Quartalheft der Naturforschenden Gesellschaft Zürich* 148: 113-121.
6. Oxenius, A., Hardt W.-D. & **Hilbi, H.** (2004) Infektionskrankheiten: Wechselspiel zwischen Erreger und Wirt. *ETH Bulletin* 11/2004: 48-51.
7. Schlumberger, M., **Hilbi, H.** & Hardt W.-D. (2005) Bakterielle Infektionen: Krankheit durch Injektionsnadeln im Nano-Massstab. *ETH Bulletin* 9/2005: 26-28.
8. Albers, U., Reus, K., & **Hilbi, H.** (2006) Identification of a cytotoxic *Legionella pneumophila* *lpxB* paralogue in a multicopy suppressor screen using *Acanthamoeba castellanii* as a selective host. In *Legionella: state of the art 30 years after its recognition*. N. P. Cianciotto *et al.* (eds.), ASM Press, Washington, D.C.; pp. 203-206.
9. Weber, S. S., Ragaz, C., Reus, K., & **Hilbi, H.** (2006) A role for phosphoinositide metabolism in phagocytosis and intracellular replication of *Legionella pneumophila*. In *Legionella: state of the art 30 years after its recognition*. N. P. Cianciotto *et al.* (eds.), ASM Press, Washington, D.C.; pp. 292-296.
10. Mampel, J., Spirig, T., Weber, S. S., Haagenen, J. A. J., Molin, S. & **Hilbi, H.** (2006) Biofilm formation of *Legionella pneumophila* in complex medium under static and dynamic flow conditions. In *Legionella: state of the art 30 years after its recognition*. N. P. Cianciotto *et al.* (eds.), ASM Press, Washington, D.C.; pp. 398-402.
11. **Hilbi, H.** (2006) Modulation of phosphoinositide metabolism by pathogenic bacteria. *Cell. Microbiol.* 8: 1697-1706.
12. **Hilbi, H.** (2006) Von Pathogenen und Phosphoinositiden. *BIOspektrum* 07/2006: 710-712.
13. **Hilbi, H.**, Weber, S. S., Ragaz, C., Nyfeler, Y. & Urwyler, S. (2007) Environmental predators as models for bacterial pathogenesis. *Environ. Microbiol.* 9: 563-575.
14. Schroeder, G. N. & **Hilbi, H.** (2008) Molecular pathogenesis of *Shigella* spp.: controlling host cell signaling, invasion and death by type III secretion. *Clin. Microbiol. Rev.* 21: 134-156.
15. **Hilbi, H.** (2009) Pathogene Bakterien als Zellbiologen - Wie Legionellen Phosphoinositid-Lipide von Wirtszellen ausnützen. *BIOforum* 01/2009: 23-25.
16. Weber, S. S., Ragaz, C. & **Hilbi, H.** (2009) Pathogen trafficking pathways and host phosphoinositide metabolism. *Mol. Microbiol.* 71: 1341-1352.
17. Urwyler, S., Brombacher, E. & **Hilbi, H.** (2009) Endosomal and secretory markers of the *Legionella*-containing vacuole. *Commun. Integr. Biol.* 2: 107-109.
18. **Hilbi, H.** (2009) Bacterial jailbreak sounds cellular alarm: phagosome membrane remnants trigger signaling. *Cell Host Microbe* 6: 102-4.
19. Urwyler, S., Finsel, I., Ragaz, C. & **Hilbi, H.** (2010) Isolation of *Legionella*-containing vacuoles by immuno-magnetic separation. *Curr. Prot. Cell Biol.*, Chapter 3: Unit 3.34.
20. **Hilbi, H.**, Jarraud, S., Hartland, E. & Buchrieser, C. (2010) Update on Legionnaires' disease: pathogenesis, epidemiology, detection and control. *Mol. Microbiol.* 76: 1-11.
21. Tiaden, A., Spirig, T. & **Hilbi, H.** (2010) Bacterial gene regulation by  $\alpha$ -hydroxyketone signaling. *Trends Microbiol.* 18: 288-297.
22. **Hilbi, H.**, Hoffmann, C. & Harrison, C. F. (2011) *Legionella* spp. outdoors: colonization, communication and persistence. *Environ. Microbiol. Rep.* 3: 286-296.
23. **Hilbi, H.**, Weber, S. & Finsel, I. (2011) Anchors for effectors: subversion of phosphoinositide lipids by *Legionella*. *Front. Microbiol.* 2: 91.
24. Tiaden, A. & **Hilbi, H.** (2012)  $\alpha$ -Hydroxyketone production and sensing by *Legionella* and *Vibrio*. *Sensors* 12: 2899-2919.
25. **Hilbi, H.** & Haas, A. (2012) Secretive bacterial pathogens and the secretory pathway. *Traffic* 13: 1187-1197.
26. Hoffmann, C., Finsel, I. & **Hilbi, H.** (2012) Purification of pathogen vacuoles from *Legionella*-infected phagocytes. *J. Vis. Exp.* 64: e4118.
27. **Hilbi, H.** & Buchrieser, C. (2013) *Legionella*: a versatile model to study host pathogen interactions. In *Meth. Mol. Biol.* 954, *Legionella: methods and protocols*. Buchrieser, C. & **Hilbi, H.** (eds.), Springer Press; editorial, pp. v-xix.
28. Tiaden, A., Kessler, A. & **Hilbi, H.** (2013) Analysis of *Legionella* infection by flow cytometry. In *Meth. Mol. Biol.* 954, *Legionella: methods and protocols*. Buchrieser, C. & **Hilbi, H.** (eds.), Springer Press; pp. 233-249.

29. Hoffmann, C., Finsel, I. & **Hilbi, H.** (2013) Pathogen vacuole purification from *Legionella*-infected amoeba and macrophages. In *Meth. Mol. Biol. 954, Legionella: methods and protocols*. Buchrieser, C. & **Hilbi, H.** (eds.), Springer Press; pp. 309-321.
30. Weber, S., Dolinsky, S. & **Hilbi, H.** (2013) Interactions of *Legionella* effector proteins with host phosphoinositide lipids. In *Meth. Mol. Biol. 954, Legionella: methods and protocols*. Buchrieser, C. & **Hilbi, H.** (eds.), Springer Press; pp. 367-380.
31. Finsel, I., Hoffmann, C. & **Hilbi, H.** (2013) Immuno-magnetic purification of fluorescent *Legionella*-containing vacuoles. In *Meth. Mol. Biol. 983, Dictyostelium discoideum protocols, second edition*. Eichinger, L. & Rivero, F. (eds.), Springer Press; pp. 431-443.
32. Cianciotto, N., **Hilbi, H.** & Buchrieser, C. (2013) Legionnaires' disease. In: *The Prokaryotes*, fourth edition. Rosenberg, E., DeLong, E. F., Lory, S., Stackebrandt, E. & Thompson, F. (eds.), Springer Press; pp. 147-217.
33. **Hilbi, H.** (2013) Preface. In *Curr. Top. Microbiol. Immunol. 376. Molecular mechanisms in Legionella pathogenesis*. **Hilbi, H.** (ed.), Wiley Press; pp. v-vii.
34. Haneburger, I. & **Hilbi, H.** (2013) Phosphoinositides and the *Legionella* pathogen vacuole. In *Curr. Top. Microbiol. Immunol. 376, Molecular mechanisms in Legionella pathogenesis*. **Hilbi, H.** (ed.), Wiley Press; pp. 155-173.
35. Hoffmann, C., Harrison, C. F. & **Hilbi, H.** (2014) The natural alternative: protozoa as cellular models for *Legionella* infection. *Cell. Microbiol. 16*: 15-26.
36. Weber, S. & **Hilbi, H.** (2014) Life cell imaging of phosphoinositide dynamics during *Legionella* infection. In *Meth. Mol. Biol. 1197, Pathogen-host interactions: method and protocols*. Vergunst, A. C. & O'Callaghan, D. (eds.), Springer Press; pp. 153-167.
37. **Hilbi, H.**, Rothmeier, E., Hoffmann, C. & Harrison, C. F. (2014) Beyond Rab GTPases *Legionella* activates the small GTPase Ran to promote microtubule polymerization, pathogen vacuole motility and infection. *Small GTPases 5*: 1-6.
38. Manske, C. & **Hilbi, H.** (2014) Metabolism of the vacuolar pathogen *Legionella* and implications for virulence. *Front. Cell. Infect. Microbiol. 4*: 125.
39. Finsel, I. & **Hilbi, H.** (2015) Formation of a pathogen vacuole according to *Legionella pneumophila*: how to kill one bird with many stones. *Cell. Microbiol. 17*: 935-950.
40. Herweg, J.-A., Hansmeier, N., Otto, A., Geffken, A. C., Subbarayal, P., Prusty, B. K., Becher, D., Hensel, M., Schaible, U. E., Rudel, T. & **Hilbi, H.** (2015) Purification and proteomics of pathogen-modified vacuoles and membranes. *Front. Cell. Infect. Microbiol. 5*: 48.
41. Simon, S. & **Hilbi, H.** (2015) Subversion of cell autonomous immunity and cell migration by *Legionella pneumophila* effectors. *Front. Immunol. 6*: 477.
42. Personnic, N., Bärlocher, K., Finsel, I. & **Hilbi, H.** (2016) Subversion of retrograde trafficking by translocated pathogen effectors. *Trends Microbiol. 24*: 450-462.
43. Harrison, C. F. & **Hilbi, H.** (2016) Identification of anti-infective compounds using amoebae. In: *Host - pathogen interaction: microbial metabolism, pathogenicity and anti-infectives*. Unden, G. Thines, E. & Schöffler, A. (eds). Wiley-Blackwell Press; pp. 139-152.
44. Schell, U., Simon, S. & **Hilbi, H.** (2016) Inflammasome recognition and regulation of the *Legionella* flagellum. In *Curr. Top. Microbiol. Immunol. 397. Inflammasome signaling and bacterial infections*. Backert, S. (ed.), Springer Press; pp. 161-181.
45. Hochstrasser, R. & **Hilbi, H.** (2017) Intra-species and inter-kingdom signaling of *Legionella pneumophila*. *Front. Microbiol. 8*: 79.
46. Bärlocher, K., Welin, A. & **Hilbi, H.** (2017) The *Legionella*-containing vacuole at the crossroads of retrograde trafficking. *Front. Cell. Infect. Microbiol. 7*: 482.
47. **Hilbi, H.**, Nagai, H., Kubori, T. & Roy, C. R. (2017) Subversion of host membrane dynamics by the *Legionella* Icm/Dot type IV secretion system. In *Curr. Top. Microbiol. Immunol. 413*. Backert, S. & Grohmann, E. (eds.), Springer Press; pp. 221-242.
48. Steiner, B., Weber, S. & **Hilbi, H.** (2017) Formation of the *Legionella*-containing vacuole: phosphoinositide conversion, GTPase modulation and ER dynamics. *Int. J. Med. Microbiol. 308*: 49-57.
49. Personnic, N., Salzgeber, B. & **Hilbi, H.** (2018) *Legionella* quorum sensing and its role in host-pathogen interaction. *Curr. Opin. Microbiol. 41*: 29-35.
50. Swart, A. L., Harrison, C. F., Eichinger, L., Steinert, M. & **Hilbi, H.** (2018) *Acanthamoeba* and *Dictyostelium* as host models for *Legionella* infection. *Front. Cell. Infect. Microbiol. 8*: 61.

51. Steiner, B., Weber, S., Kaech, A., Ziegler, U. & **Hilbi, H.** (2018) The large GTPase atlastin controls ER remodeling around a pathogen vacuole. *Commun. Integr. Biol.* *11*: 1-5.
52. Manske, C., Finsel, I., Hoffmann, C. & **Hilbi, H.** (2018) Analysis of *Legionella* metabolism by pathogen vacuole proteomics. In *Meth. Mol. Biol.* *1841*, Microbial proteomics. Becher, D. (ed.), Springer Press; pp. 59-76.
53. **Hilbi, H.** & Kortholt, A. (2019) Role of the small GTPase Rap1 in signal transduction, cell dynamics and bacterial infection. *Small GTPases* *10*: 336-342.
54. Buchrieser, C. & **Hilbi, H.** (2019) Preface. In *Meth. Mol. Biol.* *1921*, *Legionella: methods and protocols*, 2<sup>nd</sup> edition. Buchrieser, C. & **Hilbi, H.** (eds.), Springer Press; pp. v-xviii.
55. Hochstrasser, R. & **Hilbi, H.** (2019) Migration of *Acanthamoeba castellanii* through *Legionella* Biofilms. In *Meth. Mol. Biol.* *1921*, *Legionella: methods and protocols*, 2<sup>nd</sup> edition. Buchrieser, C. & **Hilbi, H.** (eds.), Springer Press; pp. 79-89.
56. Welin, A., Weber, S. & **Hilbi, H.** (2019) Quantitative imaging flow cytometry of *Legionella*-containing vacuoles in dually fluorescence-labelled *Dictyostelium*. In *Meth. Mol. Biol.* *1921*, *Legionella: methods and protocols*; 2<sup>nd</sup> edition. Buchrieser, C. & **Hilbi, H.** (eds.), Springer Press; pp. 161-177.
57. Personnic, N., Striednig, B. & **Hilbi, H.** (2019) Single cell analysis of *Legionella* and *Legionella*-infected *Acanthamoeba* by agarose embedment. In *Meth. Mol. Biol.* *1921*, *Legionella: methods and protocols*; 2<sup>nd</sup> edition. Buchrieser, C. & **Hilbi, H.** (eds.), Springer Press; pp. 191-204.
58. Steiner, B., Swart, A. L. & **Hilbi, H.** (2019) Perturbation of *Legionella* infection by RNA interference. In *Meth. Mol. Biol.* *1921*, *Legionella: methods and protocols*; 2<sup>nd</sup> edition. Buchrieser, C. & **Hilbi, H.** (eds.), Springer Press; pp. 191-204.
59. Hochstrasser, R. & **Hilbi, H.** (2020) *Legionella* quorum sensing meets cyclic-di-GMP signaling. *Curr. Opin. Microbiol.* *55*: 9-16.
60. Swart, A. L. & **Hilbi, H.** (2020) Phosphoinositides and the fate of *Legionella* in phagocytes. *Front. Immunol.* *11*: 25.
61. Swart, A. L., Gomez-Valero, L., Buchrieser, C. & **Hilbi, H.** (2020) Evolution and function of bacterial RCC1 repeat effectors. *Cell. Microbiol.* *22*: e13246.
62. Striednig, B. & **Hilbi, H.** (2021) Bacterial quorum sensing and phenotypic heterogeneity: how the collective shapes the individual. *Trends Microbiol.* Online ahead of print.
63. Swart, A. L. & **Hilbi, H.** (2020) *Legionella pneumophila*. In *Encyclopedia of Respiratory Medicine*. Elsevier. Accepted.
64. Katic, A., Hüsler, D., Letourneur, F. & **Hilbi, H.** (2021) *Dictyostelium* dynamin superfamily GTPases implicated in vesicle trafficking and host-pathogen interactions. *Front. Cell Dev. Biol.* Accepted.
65. Welin, A., Hüsler, D. & **Hilbi, H.** (2021) Imaging flow cytometry of *Legionella*-containing vacuoles in intact and homogenized wild-type and mutant *Dictyostelium*. In *Meth. Mol. Biol.*, Imaging flow cytometry. Barteneva, N. & Vorobyev I. A. (eds.), Springer Press. Accepted.

#### Patent

1. **Hilbi, H.** (2009) Bacterial protein phosphoinositide probes and effectors (US patent No. 7,629,130). Licensed to 2 companies.

**Hirsch-index:** 49

**Cumulative citations:** > 8000