

## Microbial ecology

- 1 Scherer S, Ernst A, Chen TW, Böger P** (1984) Rewetting of drought-resistant blue-green algae: Time course of water uptake and reappearance of respiration, photosynthesis and nitrogen fixation. *Oecologia* 62,418-423.
- 2 Scherer S, Chen TW, Böger P** (1986) Recovery of nucleotide pools in terrestrial blue-green algae after prolonged drought periods. *Oecologia* 68,585-588.
- 3 Scherer S, Chen TW, Böger P** (1988) A new UV-A/B protecting pigment in the terrestrial cyanobacterium *Nostoc commune*. *Plant Physiology* 88, 1055-1057.
- 4 Scherer S, Potts M** (1989) A novel water stress protein from desiccation tolerant cells: Purification and partial characterization. *Journal of Biological Chemistry* 264, 12546-12553.
- 5 Scherer S, Zhong ZP** (1991) Desiccation independence of terrestrial *Nostoc commune* ecotypes (Cyanobacteria). *Microbial Ecology* 22,271-293.
- 6 Chen TW, Scherer S, Böger P** (1992) Nitrogen fixation of Azorhizobium in artificially induced root para-nodules in wheat. *Science in China* 35B,1463-1470.
- 7 Scherer S** (1994) Anpassungen von Cyanobakterien in Wüsten. In: *Extremophile Mikroorganismen in ausgefallenen Lebensräumen*, K. Hausmann, BP Kremer (eds), Verlag Chemie, Weinheim, pp. 179-193.
- 8 Hill DR, Hladun SL, Scherer S, Potts M** (1994) Water stress proteins (Wsp) of *Nostoc commune* (cyanobacteria) are secreted with UV-A/B-absorbing pigments and have an associated 1,4-beta-D-xylanxylanaohydrolase (EC 3.2.1.8) activity. *Journal of Biological Chemistry* 269,7726-7734.
- 9 Böhm G, Pfeleiderer W, Böger P, Scherer S** (1995) Structure of a novel oligosaccharide-mycosporine-amino acid ultraviolet A/B sunscreen pigment from the terrestrial cyanobacterium *Nostoc commune*. *Journal of Biological Chemistry* 270, 8536-8539.
- 10 Mayr B, Kaplan T, Lechner S, Scherer S** (1996) Identification and purification of a family of dimeric cold shock protein homologs from the psychrotrophic *Bacillus cereus* WSBC 10201. *Journal of Bacteriology* 178:2916-2925.
- 11 Ehling-Schulz M, Bilger W, Scherer S** (1997) UVB induced synthesis of photoprotective pigments and extracellular polysaccharides in the terrestrial cyanobacterium *Nostoc commune*. *Journal of Bacteriology* 179,1940-1945.
- 12 Francis KP, Mayr R, von Stetten F, Stewart GSAB, Scherer S** (1998) Discrimination of psychrotolerant and mesophilic strains of the *Bacillus cereus* group by PCR targeting of major cold shock protein genes. *Applied and Environmental Microbiology* 64,3525-3529.
- 13 von Stetten, F, Francis KP, Lechner S, Neuhaus K, Scherer S** (1998) Rapid discrimination of psychrotolerant and mesophilic strains of the *Bacillus cereus* group by PCR targeting of 16S rDNA. *Journal of Microbiological Methods* 34:99-106.
- 14 Ehling-Schulz M, Scherer S** (1999) UV protection in cyanobacteria. *European Journal of Phycology* 34,329-338. (R)
- 15 Prüß BM, Francis KP, von Stetten F, Scherer S** (1999) Correlation of 16S ribosomal DNA signature sequences with temperature-dependent growth rates of mesophilic and psychrotolerant strains of the *Bacillus cereus* group. *Journal of Bacteriology* 181: 2624-2630.
- 16 Neuhaus K, Francis KP, Rapposch S, Görg A, Scherer S** (1999) Pathogenic *Yersinia* species carry a novel, cold-inducible major cold shock protein tandem gene duplication producing both bicistronic and monocistronic mRNA. *Journal of Bacteriology* 181:6449-6455.
- 17 von Stetten F, Mayr R, Scherer S** (1999) Climatic influence on mesophilic *Bacillus cereus* and psychrotolerant *Bacillus weihenstephanensis* populations in tropical, temperate and alpine soil. *Environmental Microbiology* 1:503-515

- 18 Neuhaus K, Rapposch S, Francis KP, Scherer S** (2000) Restart of exponential growth of *Yersinia enterocolitica* after cold shock corresponds with down regulation of *cspA* mRNA. *Journal of Bacteriology* 182:3285-3288
- 19 Ehling-Schulz M, Schulz S, Wait R, Görg A, Scherer S** (2002) The UV-B stimulon of the terrestrial cyanobacterium *Nostoc commune* comprises early shock proteins and late acclimation proteins. *Molecular Microbiology* 46:827-843
- 20 Neuhaus K, Anastasov N, Kaberdin W, Francis K, Miller V, Scherer S** (2003) The AGUAAA motif in *cspA1/A2* mRNA is important for adaptation of *Yersinia enterocolitica* to grow at low temperature. *Molecular Microbiology* 50:1629-1645
- 21 Neuhaus K, Scherer S** (2005) Life at low temperature. In M. Dworkin et al., eds., *The Prokaryotes: An Evolving Electronic Resource for the Microbiological Community*, 3rd edition, release 4.0, Springer-Verlag, New York. (R)
- 22 Wright DJ, Smith SC, Joardar V, Scherer S, Jervis J, Warren A, Helm RF, Potts M** (2005) UV Irradiation and desiccation modulate the threedimensional extracellular matrix of *Nostoc commune* (Cyanobacteria). *The Journal of Biological Chemistry* VOL 280, 48:40271-40281
- 23 Bresolin G, Morgan JAW, Ilgen D, Scherer S, Fuchs TM** (2006) Low temperature-induced insecticidal activity of *Yersinia enterocolitica*. *Molecular Microbiology* 59:503-512
- 24 Bresolin G, Neuhaus K, Scherer S, Fuchs TM** (2006) Transcriptional analysis of long-term adaptation of *Yersinia enterocolitica* to low-temperature growth. *Journal of Bacteriology* VOL 188, 8:2945-2958
- 25 Ehling-Schulz M, Fricker M, Grallert H, Rieck P, Wagner M, Scherer S** (2006) Cereulide synthetase gene cluster from emetic *Bacillus cereus*: Structure and location on a mega virulence plasmid related to *Bacillus anthracis* toxin plasmid pXOI. *MBC Microbiology* 1-11
- 26 Bresolin G, Scherer S, Fuchs TM** (2006) *Yersinia* als Insektenkiller. *BIOspektrum* 2:171-172 (R)
- 27 Jakob K, Satorhelyi P, Lange C, Wendisch VR, Silakowski B, Scherer S, Neuhaus K** (2007) Gene expression analysis of *Corynebacterium glutamicum* subjected to long-term lactic acid adaptation. *Journal of Bacteriology* Vol. 189, 15:5582-5590
- 28 Hain T, et al.** (2007) Pathogenomics of *Listeria* spp. *Int. J. Med. Microbiol.* 297:541-557.
- 29 Bresolin G, Trcek J, Scherer S, Fuchs TM** (2008) Presence of a functional flagellar cluster Flag-2 and low-temperature expression of flagellar genes in *Yersinia enterocolitica* W22703. *Microbiology* 154:196-206
- 30 Lücking G, Dommel M, Scherer S, Fouet A, Ehling-Schulz M** (2009) Cereulide synthesis in emetic *Bacillus cereus* is controlled by the transition state regular AbrB, but not by the virulence regulator PlcR. *Microbiology* 155:922-931
- 31 Schauer K, Stolz J, Scherer S, Fuchs TM** (2009) Both thiamine uptake and biosynthesis of thiamine precursors are required for intracellular replication of *Listeria monocytogenes*. *Journal of Bacteriology* 191, No. 7:2218-2227
- 32 Spanier B, Starke M, Higel F, Scherer S, Fuchs TM** (2010) *Yersinia enterocolitica* infection and *tcaA*-dependent killing of *Caenorhabditis elegans*. *Appl. Environ Microbiol.* Vol. 76, No.18:6277-6285
- 33 Frenzel E, Letzel T, Scherer S, Ehling-Schulz M** (2011) Inhibition of cereulide toxin synthesis by emetic *Bacillus cereus* via long-chain polyphosphates. *Applied and Environmental Microbiology* 77, No.4:1475-1482
- 34 Frenzel E, Doll V, Pauthner M, Lücking G, Scherer S, Ehling-Schulz M** (2012) CodY orchestrates the expression of virulence determinants in emetic *Bacillus cereus* by impacting key regulatory circuits. *Molecular Microbiology* 85:67-88

- 35 Neuhaus K, Satorhelyi P, Schauer K, Scherer S, Fuchs TM** (2013) Acid shock of *Listeria monocytogenes* at low environmental temperatures induces *prfA*, epithelial cell invasion, and lethality towards *Caenorhabditis elegans*. *BMC Genomics* 2013, 14:285
- 36 Fuchs TM, Neuhaus K, Scherer S** (2013) Life at Low Temperatures. In: Rosenberg et al. (eds) *The Prokaryotes - Prokaryotic Communities and Ecophysiology*, Springer-Verlag Berlin Heidelberg 2013
- 37 Müller-Herbst S, Wüstner S, Krementowski A, Eder D, Fuchs TM, Hedl C, Ehrenreich A, Scherer S** (2014) Identification of genes essential for anaerobic growth of *Listeria monocytogenes*. *Microbiology* 160:752-765
- 38 Landstorfer R, Simon S, Schober S, Keim D, Scherer S, Neuhaus K** (2014) Comparison of strand-specific transcriptomes of enterohemorrhagic *Escherichia coli* O157:H7 EDL933 (EHEC) under eleven different environmental conditions including radish sprouts and cattle feces. *BMC Genomics* 15:353
- 39 Kaspar D, Auer F, Schardt J, Schindele F, Ospina A, Held C, Ehrenreich A, Scherer S, Müller-Herbst S** (2014) Temperature- and nitrogen source-dependent regulation of GlnR target genes in *Listeria monocytogenes*. *FEMS Microbiol Lett* 355:131-141
- 40 Lücking G; Frenzel F, Rüttschle A, Marxen S, Stark TD, Hofmann T, Scherer S, Ehling-Schulz M** (2015) Ces locus embedded Proteins control the non-ribosomal Synthesis of the cereulide Toxin in emetic *Bacillus cereus* on multiple Levels. *Frontiers in Microbiology* 6, Article 1101
- 41 Didier A, Jeßberger N, Krey V, Dietrich R, Scherer S, Märtlbauer E** (2015) The mutation Glu151Asp in the B-component of the *Bacillus cereus* non-hemolytic enterotoxin (Nhe) leads to a diverging reactivity in antibody-based detection Systems. *Toxins* 7:4655-4667
- 42 Böhm M-E, Krey VM, Jeßberger N, Frenzel E, Scherer S** (2016) Comparative Bioinformatics and Experimental Analysis of the Intergenic Regulatory Regions of *Bacillus cereus* hbl and nhe Enterotoxin Operons and the Impact of CodY on Virulence Heterogeneity. *Frontiers in Microbiology* 7, Article 768
- 43 Lang Halter E, Schober S, Scherer S** (2016) Permanent colonization of creek sediments, creek water and limnic water plants by four *Listeria* species in low population densities. *BIOSCIENCES Zeitschrift für Naturforschung*, Vol. 71(9-10):335-345
- 44 Hücker SM, Simon S, Scherer S, Neuhaus K** (2017) Transcriptional and translational regulation by RNA thermometers, riboswitches and the sRNA DsrA in *Escherichia coli* O157:H7 Sakai under combined cold and osmotic stress adaptation. *FEMS Microbiology Letters*, 364, DOI 10.1093/femsle/fnw262
- 45 Ferrari E, Walter MC, Huptas C, Scherer S, Müller-Herbst S** (2017) Complete circular genome sequence and temperature independent adaptation to Anaerobiosis of *Listeria weihenstephanensis* DSM 24698. *Frontiers in Microbiology* Vol.8, 1672
- 46 Bossert M, Kracht D, Scherer S, Landstorfer R, Neuhaus K** (2018) Improving the reliability of RNA-seq: Approaching single-cell transcriptomics to explore individuality in bacteria. In: Martin Bossert: Information- and Communication Theory in Molecular Biology, Springer, pp 181-198. DOI 10.1007/978-3-319-54729-9\_7