

# List of Publications

Principle investigators of CRC-TRR34 are highlighted.

red: University of Greifswald

purple: University of Münster

blue: University of Tübingen

green: University of Würzburg

2006    2007    2008    2009    2010    2011    2012    2013    2014  
2015    2016

## 2016

Maaß S, **Becher D**. 2016. Methods and applications of absolute protein quantification in Microbial Systems. J Proteomicspii: S1874-3919(16)30018-5. [Epub ahead of print]

Bonna F, **Pané-Farré J**, Schlüter R, Schaffer M, Fuchs S, Bernhardt J, **Riedel K**, Otto A, **Völker U**, Diji JM, **Hecker M**, **Mäder U**, **Becher D**. Global analysis of the impact of linezolid onto virulence factor production in S. aureus USA300. IJMM in press

# 2015

- Lee JH, Kim NH, Winstel V, Kurokawa K, Larsen J, An JH, Khan A, Seong MY, Lee MJ, Andersen PS, **Peschel A**, Lee BL. 2015. Surface Glycopolymers Are Crucial for In Vitro Anti-Wall Teichoic Acid IgG-Mediated Complement Activation and Opsonophagocytosis of *Staphylococcus aureus*. *Infect Immun*. 83:4247-55.
- Li X, Gerlach D, Du X, Larsen J, Stegger M, Kühner P, **Peschel A**, Xia G, Winstel V. 2015. An accessory wall teichoic acid glycosyltransferase protects *Staphylococcus aureus* from the lytic activity of Podoviridae. *Sci Rep*. 5:17219.
- Koç C, Gerlach D, Beck S, **Peschel A**, Xia G, **Stehle T**. 2015. Structural and enzymatic analysis of TarM from *Staphylococcus aureus* reveals an oligomeric protein specific for the glycosylation of wall teichoic acid. *J. Biol. Chem*. 290:9874-85.
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- Stentzel S, Sundaramoorthy N, Michalik S, Nordengrün M, Schulz S, Kolata J, Kloppot P, Engelmann S, Steil L, **Hecker M**, Schmidt F, **Völker U**, Roghmann MC, **Bröker BM**. 2015. Specific serum IgG at diagnosis of *Staphylococcus aureus* bloodstream invasion is correlated with disease progression. *J Proteomics*. 14;128:1-7. Epub 2015 Jul 5.
- Mayer S, Steffen W, Steuber J, **Götz F**. 2015. The *Staphylococcus aureus* NuoL-Like Protein MpsA Contributes to the Generation of Membrane Potential. *J Bacteriol* 197: 794-806.
- Nega M, Dube L, Kull M, Ziebandt AK, Ebner P, Albrecht D, Krismer B, Rosenstein R, **Hecker M**, **Götz F**. 2015. Secretome analysis revealed adaptive and non-adaptive responses of the *Staphylococcus carnosus* femB mutant. *Proteomics* 15: 1268-1279.
- Nguyen MT, Hanzelmann D, Hartner T, **Peschel A**, **Götz F**. 2015a. Skin-Specific Unsaturated Fatty Acids Boost the *Staphylococcus aureus* Innate Immune Response. *Infect Immun* 84: 205-215.
- Nguyen MT, Kraft B, Yu W, Demicrioglu DD, Hertlein T, Burian M, Schmalzer M, Boller K, Bekeredjian-Ding I, **Ohlsen K**, Schitteck B, **Götz F**. 2015b. The vSaa Specific Lipoprotein Like Cluster (lpl) of *S. aureus* USA300 Contributes to Immune Stimulation and Invasion in Human Cells. *PLoS Pathog* 11: e1004984.
- Naseem M, Sarukhanyan E, **Dandekar T**. 2015. LONELY-GUY Knocks Every Door: Crosskingdom Microbial Pathogenesis. *Trends Plant Sci*. pii:S1360-1385(15)00276-9. [Epub ahead of print]
- Dandekar T**, Eisenreich W. 2015. Host-adapted metabolism and its regulation in bacterial pathogens. *Front Cell Infect Microbiol*. 5:28. eCollection 2015.
- Surmann K, Simon M, Hildebrandt P, Pfortner H, Michalik S, Stentzel S, Steil L, Dhople VM, Bernhardt J, Schlüter R, Depke M, Gierok P, **Lalk M**, **Bröker BM**, Schmidt F, **Völker U**. 2015. A proteomic perspective of the interplay of *Staphylococcus aureus* and human alveolar epithelial cells during infection. *J Proteomics* 128:203-17. Epub 2015 Aug 2.
- Depke M, Michalik S, Rabe A, Surmann K, Brinkmann L, Jehmlich N, Bernhardt J, **Hecker M**, Wollscheid B, Sun Z, Moritz RL, **Völker U**, Schmidt F. 2015. A peptide resource for the analysis of *Staphylococcus aureus* in host-pathogen interaction studies. *Proteomics* 15(21):3648-61

- Cecil A, **Ohlsen K**, Menzel T, François P, Schrenzel J, Fischer A, Dörries K, Selle M, **Lalk M**, Hantzschmann J, Dittrich M, Liang C, Bernhardt J, Ölschläger TA, Bringmann G, Bruhn H, Unger M, Ponte-Sucre A, Lehmann L, **Dandekar T**. 2015. Modelling antibiotic and cytotoxic isoquinoline effects in *Staphylococcus aureus*, *Staphylococcus epidermidis* and mammalian cells. *Int J Med Microbiol*. 305(1):96-109, Epub 2014 Nov 27
- Kriegeskorte A, Lorè NI, Bragonzi A, Riva C, Kelkenberg M, Becker K, Proctor RA, **Peters G**, **Kahl BC**. 2015. Thymidine-Dependent *Staphylococcus aureus* Small-Colony Variants Are Induced by Trimethoprim-Sulfamethoxazole (SXT) and Have Increased Fitness during SXT Challenge. *Antimicrob Agents Chemother*. 59(12):7265-7272. Epub 2015 Sep 14.
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- Kloppot P, Selle M, Kohler C, Stentzel S, **Fuchs S**, Liebscher V, Müller E, Kale D, **Ohlsen K**, **Bröker BM**, Zipfel PF, **Kahl BC**, Ehricht R, **Hecker M**, Engelmann S. 2015. Microarray-based identification of human antibodies against *Staphylococcus aureus* antigens. *Proteomics Clin Appl*. doi: 10.1002/prca.201400123. Epub ahead of print
- Tuchscher L, Bischoff M, Lattar SM, Noto Llana M, Pfortner H, Niemann S, Geraci J, Van de Vyver H, **Fraunholz MJ**, Cheung AL, Herrmann M, **Völker U**, Sordelli DO, **Peters G**, **Löffler B**. 2015. Sigma Factor SigB Is Crucial to Mediate *Staphylococcus aureus* Adaptation during Chronic Infections. *PLoS Pathog* 11(4):e1004870. eCollection 2015
- Winstel V, Kühner P, Krismer B, **Peschel A**, Rohde H. 2015. Transfer of plasmid DNA to clinical coagulase-negative staphylococcal pathogens by using a unique bacteriophage. *Appl Environ Microbiol* 81(7):2481-8.
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- Cecil A, **Ohlsen K**, Menzel T, François P, Schrenzel J, Fischer A, Dörries K, Selle M, **Lalk M**, Hantzschmann J, Dittrich M, Liang C, Bernhardt J, Ölschläger TA, Bringmann G, Bruhn H, Unger M, Ponte-Sucre A, Lehmann L, **Dandekar T**. 2015. Modelling antibiotic and cytotoxic isoquinoline effects in *Staphylococcus aureus*, *Staphylococcus epidermidis* and mammalian cells. *Int J Med Microbiol* 305(1):96-109.
- Schmoeckel K, Traffehn S, Eger C, Pötschke C, **Bröker BM**. 2015. Full activation of CD4+ T cells early during sepsis requires specific antigen. *Shock* 43(2):192-200.

# 2014

- Bonn F, Bartel J, Büttner K, **Hecker M**, Otto A, **Becher D**. 2014. Picking vanished proteins from the void: how to collect and ship/share extremely dilute proteins in a reproducible and highly efficient manner. *Anal Chem* 86(15):7421-7.
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- Surmann K, Michalik S, Hildebrandt P, Gierok P, Depke M, Brinkmann L, Bernhardt J, Salazar MG, Sun Z, Shteynberg D, Kusebauch U, Moritz RL, Wollscheid B, **Lalk M**, **Völker U**, Schmidt F. 2014. Comparative proteome analysis reveals conserved and specific adaptation patterns of *Staphylococcus aureus* after internalization by different types of human non-professional phagocytic host cells. *Front Microbiol* 5:392
- Fischer A, Kambara K, Meyer H, Stenz L, Bonetti EJ, Girard M, **Lalk M**, Francois P, Schrenzel J. 2014. GdpS contributes to *Staphylococcus aureus* biofilm formation by regulation of eDNA release. *Int J Med Microbiol* 304(3-4):284-99. Epub 2013 Nov 1
- Gierok P, Harms M, Richter E, Hildebrandt JP, **Lalk M**, Mostertz J, Hochgräfe F. 2014. *Staphylococcus aureus* alpha-toxin mediates general and cell type-specific changes in metabolite concentrations of immortalized human airway epithelial cells. *PLoS One* 9(4):e94818.
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- Schröder W, Bernhardt J, Marincola G, Klein-Hitpass L, Herbig A, Krupp G, Nieselt K, **Wolz C**. 2014. Altering gene expression by aminocoumarins: the role of DNA supercoiling in *Staphylococcus aureus*. *BMC Genomics* 15:291.

- Ring J, **Hoerr V**, Tuchscher L, Kuhlmann MT, **Löffler B**, **Faber C**. 2014. MRI visualization of *Staphylococcus aureus*-induced infective endocarditis in mice. PLoS One 9(9):e107179.
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- Proctor RA, Kriegeskorte A, **Kahl BC**, Becker K, **Löffler B**, **Peters G**. 2014. *Staphylococcus aureus* Small Colony Variants (SCVs): a road map for the metabolic pathways involved in persistent infections. Front Cell Infect Microbiol 4:99
- Stentzel S, Vu HC, Weyrich AM, Jehmlich N, Schmidt F, Salazar MG, Steil L, **Völker U**, **Bröker BM**. 2014. Altered immune proteome of *Staphylococcus aureus* under iron-restricted growth conditions. Proteomics 16:1857-67. Epub 2014 Jul 9
- Bäsell K, Otto A, Junker S, Zühlke D, Rappen GM, Schmidt S, Hentschker C, Macek B, **Ohlsen K**, **Hecker M**, **Becher D**. 2014. The phosphoproteome and its physiological dynamics in *Staphylococcus aureus*. Int J Med Microbiol 304:121-132.
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- Bröker B**, **Hecker M**. 2014. Pathophysiology of staphylococci in the post-genomic era. Int J Med Microbiol 304:101-102. (Editorial)
- Depke M, Surmann K, Hildebrandt P, Jehmlich N, Michalik S, Stanca SE, Fritzsche W, **Völker U**, Schmidt F. 2014. Labeling of the pathogenic bacterium *Staphylococcus aureus* with gold or ferric oxide-core nanoparticles highlights new capabilities for investigation of host-pathogen interactions. Cytometry. Part A : the journal of the International Society for Analytical Cytology 85:140-150.
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- Kahl BC**. 2014. Small colony variants (SCVs) of *Staphylococcus aureus* - A bacterial survival strategy. Infect Genet Evol 21:515-522. (Review)
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Müller M, Reiß S, Schlüter R, **Mäder U**, Beyer A, Reiß W, Marles-Wright J, Lewis RJ, Pförtner H, **Völker U**, Riedel K, **Hecker M**, Engelmann S, **Pané-Farré J**. 2014. Deletion of membrane-associated Asp23 leads to upregulation of cell wall stress genes in *Staphylococcus aureus*. Mol Microbiol 93(6):1259-68.

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## 2013

Ahmed Z, Zeeshan S, Huber C, Hensel M, Schomburg D, Münch R, Eisenreich W, **Dandekar T**. 2013. Software LS-MIDA for efficient mass isotopomer distribution analysis in metabolic modelling. *BMC Bioinformatics* 14:218.

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**Bernhardt J**, Michalik S, Wollscheid B, **Völker U**, Schmidt F. 2013. Proteomics approaches for the analysis of enriched microbial subpopulations and visualization of complex functional information. *Curr Opin Biotechnol* 24:112-119. (Review)

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