

## Ivan Mijakovic: list of publications

1. Kalantari A, Chen T, Ji B, Stancik IA, Ravikumar V, Franjevic D, Saulou-Bérion C, Goelzer A, **Mijakovic I** (2017) Conversion of glycerol to 3-hydroxypropanoic acid by genetically engineered *Bacillus subtilis*. *Front Microbiol* 8: 638.
2. Helgadóttir S, Pandit S, Mokkaapati VRSS, Westerlund F, Apell P, **Mijakovic I** (2017) Vitamin C pretreatment enhances the antibacterial effect of cold atmospheric plasma. *Front Cell Infect Microbiol* 7: 43.
3. Derouiche A, Petranovic D, Macek B, **Mijakovic I** (2017) *Bacillus subtilis* single-stranded DNA-binding protein SsbA is phosphorylated at threonine 38 by the serine/threonine kinase YabT. *Period Biol* 118: 99-104.
4. Mokkaapati VRSS, Yuksel D, Imerbc K, Yilmazd N, **Mijakovic I**, Koyuncu I (2017) Membrane properties and antibacterial activity of polysulfone-graphene oxide composite membranes phase inversed in graphene oxide anti-solvent. *RSC Adv* 7: 4378-4386.
5. Motwalli O, Essack M, Jankovic BR, Ji B, Liu X, Ansari HR, Hoehndorf R, Gao X, Arold ST, Mineta K, Archer JAC, Gojobori T, **Mijakovic I**, Bajic VB (2017) In silico screening for candidate chassis strains of free fatty acid-producing cyanobacteria. *BMC Genomics* 18:33.
6. Wang N, Pandit S, Ye L, Edwards M, Mokkaapati VRSS, Murugesan M, Kuzmenko V, Zhao C, Westerlund F, **Mijakovic I**, Liu J (2017) Efficient surface modification of carbon nanotubes for fabricating high performance CNT based hybrid nanostructures. *Carbon* 111: 402-410.
7. Derouiche A, Shi L, Kalantari A, **Mijakovic I** (2016) Substrate specificity of the *Bacillus subtilis* BY-kinase PtkA is controlled by alternative activators: TkmA and SalA. *Front Microbiol* 7: 1525.
8. Shi L, Ravikumar V, Derouiche A, Macek B, **Mijakovic I** (2016) Tyrosine 601 of *Bacillus subtilis* DnaK undergoes phosphorylation and is crucial for chaperone activity and heat shock survival. *Front Microbiol* 7: 533.
9. Zhao C, Pandit S, Fu Y, **Mijakovic I**, Jesorka A, Liu J (2016) Graphene oxide based coatings on nitinol for biomedical implant applications: effectively promote mammalian cell growth but kill bacteria. *RSC Adv* 6: 38124.
10. **Mijakovic I**, Grangeasse C, Turgay K (2016) Exploring the diversity of protein modifications: special bacterial phosphorylation systems. *FEMS Microbiol Rev* 40: 398-417.
11. Garcia-Garcia T, Poncet S, Derouiche A, Shi L, **Mijakovic I**, Noiro-Gros MF (2016) Role of Protein Phosphorylation in the Regulation of Cell Cycle and DNA-Related Processes in Bacteria. *Front Microbiol* 7: 184.
12. Ravikumar V, Macek B, **Mijakovic I** (2016) Resources for assignment of phosphorylation sites on peptides and proteins. *Methods Mol Biol* 1355: 293-306.
13. Derouiche A, Shi L, Kalantari A, **Mijakovic I** (2016) Evolution and tinkering: what do a protein kinase, a transcriptional regulator and chromosome segregation/cell division proteins have in common? *Curr Genet* 62: 67-70.
14. Ravikumar V, Jers C, **Mijakovic I** (2015) Elucidating host-pathogen interactions based on post-translational modifications using proteomics approaches. *Front Microbiol* 6: 1312.
15. Kalantari A, Derouiche A, Shi L, **Mijakovic I** (2015) Serine/threonine/tyrosine phosphorylation regulates DNA-binding of bacterial transcription regulators. *Microbiology* 161: 1720-1729.
16. Derouiche A, Shi L, Bidnenko V, Ventroux M, Pignonneau N, Franz-Wachtel M, Kalantari A, Nessler, S, Noiro-Gros MF, **Mijakovic I** (2015) *Bacillus subtilis* SalA is a phosphorylation-dependent transcription regulator which represses *scoC* and activates the production of the exoprotease AprE. *Mol Microbiol* 97: 1195-1208.

17. Grangeasse C, Stülke J, **Mijakovic I** (2015) Regulatory potential of post-translational modifications in bacteria. *Front Microbiol* 6: 500.
18. **Mijakovic I**, Deutscher J (2015) Protein-tyrosine phosphorylation in *Bacillus subtilis*: a 10-year retrospective. *Front Microbiol* 6: 18.
19. Shi L, Pigeonneau N, Ventroux M, Derouiche A, Bidnenko V, **Mijakovic I**, Noirot-Gros MF (2014) Protein-tyrosine phosphorylation interaction network in *Bacillus subtilis* reveals new substrates, kinase activators and kinase cross-talk. *Front Microbiol* 5: 538.
20. Shi L, Pigeonneau N, Ravikumar V, Dobrinic P, Macek B, Franjevic D, Noirot-Gros MF, **Mijakovic I** (2014) Cross-phosphorylation of bacterial serine/threonine and tyrosine protein kinases on key regulatory residues. *Front Microbiol* 5: 495.
21. Sohoni SV, Lieder S, Bapat P, **Mijakovic I**, Lantz AE (2014) Low molecular weight protein tyrosine phosphatases control antibiotic production in *Streptomyces coelicolor* A3(2). *Enz Eng* 3: 122.
22. Sohoni SV, Fazio A, Workman CT, **Mijakovic I**, Eliasson Lantz A (2014) Synthetic promoter library for modulation of actinorhodin production in *Streptomyces coelicolor* A3(2). *PLoS One* 9: e99701.
23. Kobir A, Poncet S, Bidnenko V, Delumeau O, Jers C, Zouhir S, Grenha R, Nessler S, Noirot P, **Mijakovic I** (2014) Phosphorylation of *Bacillus subtilis* gene regulator AbrB modulates its DNA-binding properties. *Mol Microbiol* 92: 1129-1141.
24. Shi L, Ji B, Kolar-Znika L, Boskovic A, Jadeau F, Combet C, Grangeasse C, Franjevic D, Talla E, **Mijakovic I** (2014) Evolution of bacterial protein-tyrosine kinases and their relaxed specificity towards substrates. *Genome Biol Evol* 6: 800-817.
25. Ravikumar V, Shi L, Krug K, Derouiche A, Jers C, Cousin C, Kobir A, **Mijakovic I**, Macek B (2014) Quantitative phosphoproteome analysis of *Bacillus subtilis* reveals novel substrates of the kinase PrkC and phosphatase PrpC. *Mol Cell Proteom* 13: 1965-1978.
26. Derouiche A, Bidnenko V, Grenha R, Pigeonneau N, Ventroux M, Franz-Wachtel M, Nessler S, Noirot-Gros MF, **Mijakovic I** (2013) Interaction of bacterial fatty-acid-displaced regulators with DNA is interrupted by tyrosine phosphorylation in the helix-turn-helix domain. *Nucleic Acids Res* 41: 9371-9381.
27. Cousin C, Derouiche A, Shi L, Pagot Y, Poncet S, **Mijakovic I** (2013) Protein-serine/threonine/tyrosine kinases in bacterial signaling and regulation. *FEMS Microbiol Lett* 346: 11-19.
28. Bidnenko V, Shi L, Kobir A, Ventroux M, Pigeonneau N, Henry C, Trubuil A, Noirot-Gros MF, **Mijakovic I** (2013) *Bacillus subtilis* serine/threonine protein kinase YabT is involved in spore development via phosphorylation of a bacterial recombinase. *Mol Microbiol* 88: 921-935.
29. Grangeasse C, Nessler S, **Mijakovic I** (2012) Bacterial tyrosine-kinases: evolution, biological function and structural insights. *Philos Trans R Soc Lond B Biol Sci* 367: 2640-2655.
30. Derouiche A, Coussin C, **Mijakovic I** (2012) Protein phosphorylation from the perspective of systems biology. *Curr Opin Biotechnol* 23: 585-590.
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33. Misra S, Milohanic E, Ake F, **Mijakovic I**, Deutscher J, Monnet V, Henry C (2011) Analysis of the Serine/Threonine/Tyrosine phosphoproteome of the pathogenic bacterium *Listeria monocytogenes* reveals phosphorylated proteins related to virulence. *Proteomics* 11: 4155-4165.
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36. Jers C, Kobir A, Sondergaard EO, Jensen PR, **Mijakovic I** (2011) *Bacillus subtilis* two-component system sensory kinase DegS is regulated by serine phosphorylation in its input domain. *PLoS One* 6: e14653.
37. Soufi B, Kumar C, Gnad F, Mann M, **Mijakovic I**, Macek B (2010) Stable Isotope Labeling by Amino Acids in Cell Culture (SILAC) applied to quantitative proteomics of *Bacillus subtilis*. *J Proteome Res* 9: 3638-3646.
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39. Jers C, Pedersen MM, Paspaliari DK, Schutz W, Johnsson C, Soufi B, Macek B, Jensen PR, **Mijakovic I** (2010) *Bacillus subtilis* BY-kinase PtkA controls enzyme activity and protein localization of its protein substrates. *Mol Microbiol* 77: 287-299.
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41. Solem C, Petranovic D, Koebmann B, **Mijakovic I**, Jensen PR (2010) Phosphoglycerate mutase is a highly efficient enzyme without flux control in *Lactococcus lactis*. *J Mol Microbiol Biotechnol* 18: 174-180.
42. Mijakovic, I. (2010) Protein phosphorylation in bacteria. *Microbe* 5, 21-25.
43. Hansen ME, Wangari R, Hansen EB, **Mijakovic I**, Jensen PR (2009) Engineering of *Bacillus subtilis* 168 for increased nisin resistance. *Appl Environ Microbiol* 75: 6688-6695.
44. Petranovic D, Grangeasse C, Macek B, Abdillatef M, Gueguen-Chaignon V, Nessler S, Deutscher J, **Mijakovic I** (2009) Activation of *Bacillus subtilis* Ugd by the tyrosine kinase PtkA proceeds via phosphorylation of its residue tyrosine 70. *J Mol Microbiol Biotechnol* 17: 83-89.
45. Bechet E, Guiral S, Torres S, **Mijakovic I**, Cozzone AJ, Grangeasse C (2009) Tyrosine-kinases in bacteria: from a matter of controversy to the status of key regulatory enzymes. *Amino Acids* 37: 499-507.
46. Miller M, Soufi B, Jers C, Pedersen TN, Macek B, Blom N, **Mijakovic I** (2009) NetPhosBac - Prediction of protein phosphorylation sites in bacteria. *Proteomics* 9: 116-125.
47. Jers C, Soufi B, Grangeasse C, Deutscher J, **Mijakovic I** (2008) Phosphoproteomics in bacteria – towards a systemic understanding of bacterial pathogens. *Expert Rev Proteomics* 5: 619-627.
48. Lacour S, Bechet E, Cozzone AJ, **Mijakovic I**, Grangeasse C (2008) Tyrosine phosphorylation of the UDP-glucose dehydrogenase of *Escherichia coli* is at the crossroads of colanic acid synthesis and polymyxin resistance. *PLoS One* 3: e3053.
49. Olivares-Illana V, Meyer P, Gueguen-Chaignon V, Soulat D, b, Deutscher J, Cozzone AJ, Morera S, Grangeasse C, Nessler S (2008) Structural basis for the regulation mechanism of the tyrosine kinase CapB from *Staphylococcus aureus*. *PLoS Biology* 6: e143.
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52. Soufi B, Jers C, Macek N, Hansen M, Petranovic D, b (2008) Insights from site-specific phosphoproteomics in bacteria. *Biochim Biophys Acta* 1784: 186-192.

53. Petranovic D, Michelsen O, Zahradka K, Silva C, Petranovic M, Jensen PR, **Mijakovic I** (2007) *Bacillus subtilis* strain deficient for the protein-tyrosine kinase PtkA exhibits impaired DNA replication. *Mol Microbiol* 63: 1797-1805.
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64. Poncet S, **Mijakovic I**, Nessler S, Gueguen-Chaignon V, Chaptal V, Galinier A, Boel G, Maze A, Deutscher J (2004) HPr kinase/phosphorylase, a Walker motif A-containing bifunctional sensor enzyme controlling catabolite repression in Gram-positive bacteria. *Biochim Biophys Acta* 1697: 123-135.
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66. Petranovic D, **Mijakovic I** (2004) Photometric assay for measuring the intracellular concentration of branched-chain amino acids in bacteria. *J Meth Microbiol* 56: 133-136.
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### **Submitted manuscripts and manuscripts in preparation:**

1. Stancik IA, Sestak MS, Ji B, Axelson-Fisk M, Franjevic D, Domazet-Lozo T, **Mijakovic I**. Serine/Threonine protein kinases from Bacteria, Archaea and Eukarya share a common evolutionary origin deeply rooted in the tree of life. Submitted to *J Mol Biol*.
2. Nielsen J, Archer J, Essack M, Bajic VB, Gojobori T, **Mijakovic I**. Building a biobased industry in the Middle East through harnessing the potential of the Red Sea biodiversity. Submitted to *Appl Microbiol Biotechnol*.
3. Motwalli O, Essack M, Salhi A, Hanks J, **Mijakovic I**, Bajic VB. BioPS system: Screening and evaluation system for assessment of biofuel-production potential of cyanobacteria. Submitted to *PLoS One*.
4. Pandit S, Ravikumar V, Abdel-Haleem AM, Derouiche A, Mokkaati VRSS, Sihlbom C, Gojobori T, Gao X, Westerlund F, **Mijakovic I**. Vitamin C destabilizes bacterial biofilms by inhibiting the synthesis of extracellular polysaccharides. In preparation for *Nat Microbiol*.
5. Pandit S, Cao Z, Mokkaati VRSS, Celauro E, González JCF, Yurgens A, Lovmar M, Westerlund F, Sun J, **Mijakovic I**. Spatial orientation controls antibacterial properties of graphene coating: horizontal is harmless and vertically aligned is bactericidal. In preparation for *Nature*.