

Wykaz ważniejszych publikacji z ostatnich trzech lat

a. Najważniejsze pozycje dorobku naukowego zespołu z ostatnich 3 lat

Sabat, A., Russian-Krzyszton, J., **Strzalka, W., Filipek, R., Kosowska, K.,** Hryniewicz, W., Travis, J., & **Potempa, J.** (2003) A new method for typing of *Staphylococcus aureus* strains: Multiple-locus variable-number tandem repeat analysis of polymorphism and genetic relationships of clinical isolates. *J Clin. Microbiol.* 41: 1801-1804 (21)**

Rzychon, M., **Sabat, A., Kosowska, K., Potempa, J.,** Dubin, A. (2003) Staphostatins: an expanding new group of proteinase inhibitors with a unique specificity for the regulation of staphopains, *Staphylococcus spp.* cysteine proteinases. *Mol. Microbiol.* 49: 1051-1066 (21)

Rzychon, M., **Filipek, R., Sabat, A., Kosowska, K.,** Dubin, A., **Potempa, J.,** Bochtler, M. (2003) Staphostatins resemble lipocalins, not cystatins in fold.. *Protein Sci.* 12: 2252-2256(21)

Tada, H., Sugawara, S., Nemoto, E., Imamura, T., **Potempa, J.,** Travis, J., Shimauchi, H., & Takada, H. (2003) Proteolysis of ICAM-1 on human oral epithelial cells by gingipains. *J. Dent. Res.* 82: 796-801 (21)

Dulinski, R., Suder, P., Guevara, I., Rapala-Kozik, M., **Potempa, J.,** Silberring, J., Imamura, T., Travis, J., & Kozik, A. (2003) Attenuated kinin release from human neutrophil elastase-pretreated kinonogens by plasma and tissue kallikreins. *Biol. Chem.* 384: 929-937(16)

Filipek, R., Rzychon, M., **Oleksy, A., Gruca, M.,** Dubin, A., **Potempa, J.,** & Bochtler, M. (2003) The staphostatin-staphopain complex: a forward binding inhibitor in complex with its target cysteine protease. *J. Biol Chem.* 278: 40959-40966 (21)

Dubin, G., Krajewski, M., Popowicz, G., Stec-Niemczyk, J., Bochtler, M., **Potempa, J.,** Dubin, A., & Holak, T.A. (2003) A novel class of cysteine protease inhibitors: Solution structure of staphostatin A from *Staphylococcus aureus*. *Biochemistry* 42: 13449-13456 (21)

Potempa, J., Sroka, A., Imamura, T., & Travis, J. (2003) Gingipains, the major cysteine proteinase and virulence factors of *Porphyromonas gingivalis*: structure, function and assembly of multidomain protein complexes. *Curr. Protein Pept. Sci.* 4: 397-407 (-)

- Imamura, T., Travis, J., & Potempa, J. (2003) The Biphasic Virulence Activities of Gingipains: Activation and Inactivation of Host Proteins. *Curr. Protein Pept. Sci.* 4: 443-449(-)
- Ally, N., Whisstock, J.C., **Sieprawska-Lupa, M.**, Potempa, J., Le Bonnier, B.F., Travis, J., and Pike, R.N. (2003) Characterization of the specificity of arginine-specific gingipains from *Porphyromonas gingivalis* reveals active site differences between different forms of the enzymes. *Biochemistry* 42: 11693-11700 (21)
- Garcia-Castellanos, R., Marrero, A., Mallorqui-Ferdandez, G., Potempa, J., Coll, M., & Gumis-Ruth, F.X. (2003) Three-dimensional structure of Mecl: molecular basis for transcriptional regulation of staphylococcal methicillin resistance. *J. Biol. Chem.* 278: 39897-39905. (21)
- Mikolajczyk, J., Boatright, K.M., Stennicke, H.R., Nazif, T., Potempa, J., Bogoyo, M., and Salvesen, G.S. (2003) Sequential autolytic processing activates the zymogen of Arg-gingipain. *J. Biol. Chem.* 278: 10458-10464 (21)
- Chlopicki S, Olszanecki R, Janiszewski M, Laurindo FRM, Panz T, Miedzobrodzki J (2004) Functional role of NADPH oxidase in activation of platelets. *ANTIOXIDANTS & REDOX SIGNALING* 6: 691-698 (21)
- Shaw, L., **Golonka, E.**, Potempa, J. & Foster, S. (2004) The role and regulation of the extracellular proteases of *Staphylococcus aureus*. *Microbiol.* 150: 217-228 (21)
- Garcia-Castellanos R, Mallorqui-Fernandez G, Marrero A, Potempa J. Coll M, Gomis-Ruth FX. (2004) On the transcriptional regulation of methicillin resistance: Mecl repressor in complex with its operator. *JBiol Chem.* 279(17):17888-96 (21)
- Dubin G**, Popowicz G, Krajewski M, Potempa J. Dubin A, Holak TA. (2004) 1H, 15N and 13C NMR resonance assignments of staphostatin A, a specific *Staphylococcus aureus* cysteine proteinase inhibitor. *JBiomol NMR.* 28(3):295-6 (21)
- Shaw L, **Golonka E**, Potempa J. Foster SJ. (2004) The role and regulation of the extracellular proteases of *Staphylococcus aureus*. *Microbiology* 150:217-28. (21)
- Golonka E, Filipek R**, Sabat A, Sinczak A, Potempa J. (2004) Genetic characterization of staphopain genes in *Staphylococcus aureus*. *Biol Chem.* 385:1059-67. (16)
- Liu X, Sroka A, Potempa J. Genco CA. (2004) Coordinate expression of the *Porphyromonas gingivalis* lysine-specific gingipain proteinase, Kgp, arginine-specific gingipain proteinase, RgpA, and the heme/hemoglobin receptor, HmuR. *Biol Chem.* 385:1049-57. (16)
- Imamura T, Potempa J. Travis J. (2004) Activation of the kallikrein-kinin system and release of new kinins through alternative cleavage of kininogens by microbial and human cell proteinases. *Biol Chem.* 385:989-96. (16)
- Sieprawska-Lupa M, Mydel P, Krawczyk K, Wojcik K, Puklo M, Lupa B**, Suder P, Silberring J, Reed M, Pohl J, Shafer W, McAleese F, Foster T, Travis J, Potempa J. (2004) Degradation of human antimicrobial peptide LL-37 by *Staphylococcus aureus*-derived proteinases. *Antimicrob Agents Chemother.* 48:4673-9. (21)
- Sztukowska M, Sroka A**, Bugno M, Banbula A, Takahashi Y, Pike RN, Genco CA, Travis J, Potempa J. (2004) The C-terminal domains of the gingipain K polyprotein are necessary

for assembly of the active enzyme and expression of associated activities. *Mol Microbiol.* 54:1393-408. (21)

Filipek R, Szczepanowski R, SabatA, Potempa J, Bochtler M. (2004) Prostaphopain B structure: a comparison of proregion-mediated and staphostatin-mediated protease inhibition. *Biochemistry.* 43:14306-15. (21)

Dubin G, Stec-Niemczyk J, Dylag T, Silberring J, Dubin A, Potempa J. (2004) Characterisation of a highly specific, endogenous inhibitor of cysteine protease from *Staphylococcus epidermidis*, a new member of the staphostatin family. *Biol Chem.* 385:543-6. (16)

Oleksy A, GolonkaE, Banbula A, Szmyd G, Moon J, Kubica M, Greenbaum D, Bogyo M, Foster TJ, Travis J, Potempa J. (2004) Growth phase-dependent production of a cell wall-associated elastinolytic cysteine proteinase by *Staphylococcus epidermidis*. *Biol Chem.* 385:525-35. (16)

Ekici, O.D., Gotz, M.G., James, K.E, Li, Z.Z., Rukamp, B.J., Asgian, L.J., Caffrey, C.R., Hansell, E., Dvorak, J., McKerrow, J.H., Potempa, J., Travis, J., Mikolajczyk, J., Salvesen, G.S., & Powers, J.C. (2004) Aza-peptide Michael acceptors: a new class of inhibitors specific for caspases and other clan CD cysteine proteases. *J. Med. Chem.* 47: 1889-1892.(21)

Potempa, J., & Travis, J. (2004) Aureolysin. In: Handbook on Proteolytic Enzymes, Second Edition (A. J. Barrett, N.D. Rawlings, & F. Woessner, Eds.), Chapter no. 96, pp. 289-293, Academic Press, Amsterdam (-)

Potempa, J., & Travis, J. (2004) Staphyloproteins. In: Handbook on Proteolytic Enzymes, Second Edition. (A. J. Barrett, N.D. Rawlings, & F. Woessner, Eds.), Chapter no. 386, pp. 1249 - 1253, Academic Press, Amsterdam (-)

Imamura, T., Potempa, J., & Travis, J. (2004) Gingipain R. In: Handbook on Proteolytic Enzymes, Second Edition. (A. J. Barrett, N.D. Rawlings, & F. Woessner, Eds.), Chapter no. 410, pp. 1319 - 1328, Academic Press, Amsterdam ()

Pike, R, T., Potempa, J., & Travis, J. (2004) Gingipain K. In: Handbook on Proteolytic Enzymes, Second Edition. (A. J. Barrett, N.D. Rawlings, & F. Woessner, Eds.), Chapter no. 411, pp. 1328 - 1333, Academic Press, Amsterdam (-)

Potempa, J., & Poulsen, K. (2004) The IgA protease of *Clostridium ramosum*. In: Handbook on Proteolytic Enzymes, Second Edition. (A. J. Barrett, N.D. Rawlings, & F. Woessner, Eds.), Chapter no. 222, pp. 759-762, Academic Press, Amsterdam (-)

Potempa, J., Banbula, A., & Travis, J. (2004) Dipeptidyl-peptidase 7 of *Porphyromonas gingivalis*. In: Handbook on Proteolytic Enzymes, Second Edition. (A. J. Barrett, N.D. Rawlings, & F. Woessner, Eds.), Chapter no. 636, pp. 2037-2039, Academic Press, Amsterdam (-)

Kawalec, M., Potempa, J., Moon, J.L., Travis, J., & Murray, B.E. (2005) Molecular diversity of a putative virulence factor: Purification and characterization of isoforms of an extracellular serine glutamylendopeptidase of *Enterococcus faecalis* with broadly different enzymatic activities *J. Bacteriol.* 187: 266-275. (21)

- Sheets, S.M., Potempa, J., Travis, J., Casiano, C.A., & Fletcher, H.M. (2005) Gingipains from *Porphyromonas gingivalis* W83 induce cell adhesion molecule cleavage and apoptosis in endothelial cells. *Infect. Immun.* 73: 1543-1552. (21)
- Mezyk-Kopec, R., Bzowska, M., Potempa, J., Bzowska, M., Jura, N., Sroka, A., Black, R.A., & Bereta, J. (2005) Inactivation of membrane TNF α by Gingipains from *Porphyromonas gingivalis*. *Infect. Immun.* 73: 1506-1514. (21)
- Shaw, L.N., **Golonka**, E., Szmyd, G., Foster, S.J., Travis, J., & Potempa, J. (2005) Cytoplasmic control of premature activation of a secreted protease zymogen: Deletion of staphostatin B (SspC) in *Staphylococcus aureus* 8325-4 yields a profound pleiotropic phenotype. *J. Bacteriol.* 187: 1751-1762 (21)
- Filipek**, R., Potempa, J., & Bochtler, M. (2005) A comparison of staphostatin B with standard mechanism serine protease inhibitors. *J. Biol. Chem.* 280: 14669-14674 (21)
- Tancharoen, S., Sarker, K.P., Imamura, T., Biswas, K.K., Matsushita, K., Tatsuyama, S., Travis, J., Potempa, J., Torii, M., and Maruyama, I. (2005) Neuropeptide release from dental pulp cells by RgpB via proteinase-activated receptor-2 signaling. *J. Immunol.* 174: 5796-5804 (21)
- Imamura, T., Tanase, S., Szmyd, G., Kozik, A., Travis, J., & Potempa, J. (2005) Induction of vascular leakage through release of bradykinin and a novel kinin by cysteine proteinases from *Staphylococcus aureus*. *J. Exp. Med.* 201: 1669-1676 (21)
- Potempa, J., **Golonka**, E., **Filipek** R., & Shaw, L.N. (2005) Fighting an enemy within: cytoplasmic inhibitors of bacterial cysteine proteases. *Mol. Microbiol.* 57: 605-610 (21)
- Kruńkosky, T.M., Maruo, K., Potempa, J., Jarrett, GL., & Travis, J. (2005) Inhibition of TNF α -induced RANTES secretion by alkaline protease in A549 cells. *Am. J. Resp. Cell Mol. Biol.* 33: 483-489. (21)
- Mezyk-Kopec, R., Bzowska, M., Bzowska, M., Mickowska, B., Mak, P., Potempa, J. & Bereta, J. (2005) The effects of elastase and cathepsin G on the levels of membrane and soluble TNF α . *Biol. Chem.* 386: 801-811. (16)
- Malachowa** N, Sabat A, Gniadkowski M, Krzyszton-Russjan J, Empel J, Miedzobrodzki J, Kosowska-Shirk K, Appelbaum PC, Hryniewicz W. (2005) Comparison of multiple-locus variable-number tandem-repeat analysis with pulsed-field gel electrophoresis, *spa* typing, and multilocus sequence typing for clonal characterization of *Staphylococcus aureus* isolates. *J. Clin. Microbiol.* 43: 3095-3100. (21)
- Kedzierska A, Kaszuba-Zwoinska J, Slodowska-Hajduk Z, Kapinska-Mrowiecka M, Czubak M, Thor P, **Wojcik** K, Pryjma J. (2005) SEB-induced T cell apoptosis in atopic patients--correlation to clinical status and skin colonization by *Staphylococcus aureus*. *Arch. Immunol. Ther. Exp. (Warsz)* 53: 63-70. (-)
- Guzik TJ, Bzowska M, Kasproicz A, Czerniawska-Mysik G, Wojcik K, Szmyd D, Adamek-Guzik T, Pryjma J. (2005) Persistent skin colonization with *Staphylococcus aureus* in atopic dermatitis: relationship to clinical and immunological parameters. *Clin. Exp. Allergy.* 35: 448-455. (21)

Dubin A, Mak P, **Dubin G**, Rzychon M, Stec-Niemczyk J, Wladyka B, Maziarka K, Chmiel D (2005) New generation of peptide antibiotics. *Acta Biochim. Pol.* **52**: 633-638 (**6**)

Strzelecka M, Bzowska M, **Koziel J**, Szuba B, Dubiel O, Riviera-Nunez D, Heinrich M, Bereta J. (2005) Anti-inflammatory effects of extracts from some traditional Mediterranean diet plants. *J. Physiol. Pharmacol.* **56** (Suppl 1): 139-156. (11)

Uehara, A., Muramoto, K., Imamura, T., Nakayama, K., Potempa, J., Travis, J., Sugawara, S., Takada, H. (2005) Arginine-specific gingipains from *Porphyromonas gingivalis* stimulate production of hepatocyte growth factor (Scatter Factor) through Protease-activated receptors in human gingival fibroblasts in culture. *J Immunol.* **175**: 6076-6084. (**21**)

Dubin G. (2005) Proteinaceous cysteine protease inhibitors. *Cell. Mol. Life Sci.* **62**: 653-669. (21)