

Jerzy Osipiuk

Argonne National Laboratory
9700 S. Cass Ave, Bldg.202, Argonne, IL60439
(630) 252 3885 (phone) / (630) 252 6126 (fax)
josipiuk@anl.gov

EDUCATION:

- 2003 **Second degree of Doctor of Philosophy** (habilitation)
University of Gdansk, Gdansk, Poland. Thesis topic: X-ray
crystallographic analyses of chaperones.
- 1985 - 1991 **Doctor of Philosophy** in Molecular Biology,
University of Gdansk, Gdansk, Poland. Thesis topic: Mutual
interactions of *Escherichia coli* heat-shock proteins and
bacteriophage lambda DNA replication proteins.
- 1979 - 1984 **Master of Science** in Physics,
Gdansk University of Technology, Gdansk, Poland.

PROFESSIONAL EXPERIENCE:

- 2003-present Macromolecular Crystallographer / Assistant Beamline
Scientist. Midwest Center for Structural Biology / Structural
Biology Center, Biosciences Division,
Argonne National Laboratory, Argonne, Illinois.
- 2000-2002 Senior Research Associate,
EURx Ltd., biotechnology company, Gdansk, Poland.
- 1997-2000 Research Associate, Department of Microbiology,
University of Gdansk, Gdansk, Poland.
- 1993-1997
1998-2000 Postdoctoral Fellow, Visiting Scientist, Biosciences Division,
Argonne National Laboratory, Argonne, Illinois.
- 1992-1993 Postdoctoral Fellow, Division of Biochemistry and Molecular
Biology, **University of California**, Berkeley, California.
- 1988 Research training, Wolfram Zillig research group,
Max-Planck-Institut für Biochimie, Martinsried, Germany.

Jerzy Osipiuk

Publications

1. Skórko, R, **Osipiuk, J**, Stetter, K.O. (1989) Glycogen-bound polyphosphate kinase from the archaebacterium *Sulfolobus acidocaldarius*. *Journal of Bacteriology* 171: 5162-4.
2. Liberek, K, **Osipiuk, J**, Żylicz, M, Ang, D. Skórko, J, Georgopoulos, C. (1990) Physical interactions between bacteriophage and *Escherichia coli* proteins required for initiation of lambda DNA replication. *Journal of Biological Chemistry* 265: 3022-9.
3. Trent, J.D, **Osipiuk, J**, Pinkau, T. (1990) Acquired thermotolerance and heat shock in the extremely thermophilic archaebacterium *Sulfolobus* sp.strain B12. *Journal of Bacteriology* 172: 1478-84.
4. **Osipiuk, J**, Zylicz, M. (1991) Role of the *Escherichia coli* grpE heat shock protein in the initiation of bacteriophage lambda DNA replication. *Acta Biochimica Polonica* 38: 191-200.
5. Ang, D., Ziegelhoffer, T., Maddock, A., Georgopoulos, C., Liberek, K., Skowyr, D., Marszałek, J., **Osipiuk, J.**, Wojtkowiak, S., and Zylicz, M. (1991) The biological role of the universally conserved E. coli heat shock proteins. In Maresca, B. and Lindquist, S. (Eds.): "*Heat Shock*". Heidelberg, Springer-Verlag,, pp. 45-53.
6. Liberek, K, Skowyr, D, Marszałek, J, **Osipiuk, J**, Żylicz, M , Ang, D. ; Maddock, A; Johnson, C, Georgopoulos, C. (1992) Bacteriophage lambda DNA replication and the role of the universally conserved dnaK, dnaJ and grpE heat shock proteins. In "*DNA replication: the regulatory mechanism.*" Springer-Verlag, 359-367.
7. **Osipiuk, J**, Georgopoulos, C, Żylicz, M. (1993) Initiation of lambda DNA replication: The *Escherichia coli* small heat shock proteins, dnaJ and grpE, increase dnaKs affinity for the λP protein. *Journal of Biological Chemistry* 268: 4821-7.
8. Petit, M.-A, Bedale, W; **Osipiuk, J**, Lu, C; Rajagopalan, M, McInerney, P, Goodman, M, Echols, H. (1994) Sequential folding of UmuC by the Hsp70 and Hsp60 chaperone complexes of *Escherichia coli*. *Journal of Biological Chemistry* 269: 23824-9.

9. Kagawa, H.K, **Osipiuk, J**, Maltsev, N, Overbeek, R, Quate-Randall, E, Joachimiak, A, Trent, J.D. (1995) The 60-kDa Heat Shock Proteins in the Hyperthermophilic Archaeon *Sulfolobus shibatae*. *Journal of Molecular Biology* 253: 712-725.
10. Collart, F.R, **Osipiuk, J**, Trent, J.D, Olsen, G.J, Huberman, E. (1996) Cloning, characterization and sequence comparison of the gene coding IMP dehydrogenase from *Pyrococcus furiosus*. *Gene* 174: 209-216.
11. Collart, F.R, **Osipiuk, J**, Trent, J.D, Olsen, G.J, Huberman, E. (1996) Cloning and characterization of the gene encoding IMP dehydrogenase from *Arabidopsis thaliana*. *Gene* 174: 217-220.
12. Sriram, M, **Osipiuk, J**, Freeman, B.C, Morimoto, R.J, Joachimiak, A. (1997) Human Hsp70 molecular chaperone binds two calcium ions within the ATPase domain. *Structure* 5: 403-414.
13. **Osipiuk, J**, Joachimiak, A. (1997) Cloning, Sequencing and Expression of *dnaK*-operon proteins from the Thermophilic Bacterium *Thermus thermophilus*. *Biochimica et Biophysica Acta* 1353: 253-265.
14. **Osipiuk, J**, Walsh, M, Freeman, B.C, Morimoto, R.J, Joachimiak, A. (1999) Structure of a new crystal form of human Hsp70 ATPase domain. *Acta Crystallographica Section D, Biological Crystallography* 55: 1105-1107.
15. **Osipiuk, J**, Sriram, M, Mai, X, Adams, M. W.W, Joachimiak, A. (2000) Cloning, expression, and crystallization of Cpn-60 proteins from *Thermococcus litoralis*. *Acta Biochimica Polonica* 47: 209-14.
16. **Osipiuk, J**, Gornicki P, Maj L, Dementieva I, Laskowski R, Joachimiak A. (2001) Streptococcus pneumonia YlxR at 1.35 Å shows a putative new fold. *Acta Crystallographica Section D, Biological Crystallography* 57: 1747-1751.
17. **Osipiuk, J**. (2002) Eukariotyczne i archebakteryjne białka opiekuńcze Cpn60 typu II. *Postępy Biochemii* 47: 94-100.
18. **Osipiuk, J**, Walsh, M, Joachimiak, A. (2003) Crystal structure of MboIIA methyltransferase. *Nucleic Acid Research* 31: 5440-5448.
19. Waleron, K, Waleron, M, **Osipiuk, J**, Podhajska, AJ, Lojkowska, E, (2006) Identification of a DNA restriction-modification system in *Pectobacterium carotovorum* strains isolated from Poland. *Journal of Applied Microbiology* 100:343-351.
20. **Osipiuk, J**, Maltseva, N, Dementieva I, Clancy, S, Collart, F, Joachimiak A. (2006) Structure of YidB protein from *Shigella flexneri* shows a new fold with homeodomain motif. *Proteins*. 65:509-13.
21. **Osipiuk, J**, Lesnyak, D.V., Skarina, T., Sergiev, P.V., Bogdanov, A.A., Edwards, A., Savchenko, A., Joachimiak, A., Dontsova, O.A. (2007) Methyltransferase that

modifies guanine 966 of the 16S rRNA: Functional identification and tertiary structure. *Journal of Biological Chemistry* 282:5880-7.

22. Kim, K, Quartey, P, Li, H, Volkart, L, Hatzos, C, Chang, C, Nocek, B, Cuff, M, **Osipiuk, J**, Tan, K, Fan, Y, Bigelow, L, Maltseva, N, Wu, R, Borovilos, M, Duggan, E, Zhou, M., Binkowski, T.A., Zhang, R., Joachimiak, A. (2008) A Large-Scale Evaluation of Protein Reductive Methylation. *Nature Methods*. 5:853-4.
23. Nocek, B, Kochinyan, S, Proudfoot, M, Brown, G, Evdokimova, E, **Osipiuk, J**, Edwards, A.M, Savchenko, A, Joachimiak, A, Yakunin, A.F. (2008) Polyphosphate-dependent synthesis of ATP and ADP by the family-2 polyphosphate kinases in bacteria. *Proc. Natl. Acad. Sci. USA* 105:17730-5
24. **Osipiuk, J**, Zhou, M, Moy, S; Collart, F, Joachimiak A. X-ray Crystal Structure of GarR - Tartronate Semialdehyde Reductase from *Salmonella typhimurium*. (2009) *Proteins: Structure, Function, and Bioinformatics* 10:249-53.
25. **Osipiuk J**, Xu X, Cui H, Savchenko A, Edwards A, Joachimiak A. Crystal structure of secretory protein Hcp3 from *Pseudomonas aeruginosa*. (2011) *Journal of Structural and Functional Genomics*. 12:21-6.
26. Ciesielski SJ, Schilke BA, **Osipiuk J**, Bigelow L, Mulligan R, Majewska J, Joachimiak A, Marszalek J, Craig EA, Dutkiewicz R. Interaction of J-protein co-chaperone Jac1 with Fe-S scaffold Isu is indispensable in vivo and conserved in evolution. (2012) *Journal of Molecular Biology* 417:1-12.
27. Gonzalez CF, Tchigvintsev A, Brown G, Flick R, Evdokimova E, Xu X, **Osipiuk J**, Cuff ME, Lynch S, Joachimiak A, Savchenko A, Yakunin AF. Structure and activity of the *Pseudomonas aeruginosa* hotdog-fold thioesterases PA5202 and PA2801. (2012) *Biochem Journal* 444:445-55.
28. **Osipiuk J**, Mulligan R, Bargassa M, Hamilton JE, Cunningham MA, Joachimiak A. Characterization of member of DUF1888 protein family, self-cleaving and self-assembling endopeptidase. (2012) *Journal of Biological Chemistry* 287:19452-61.