

Портфолио преподавателя  
**Звягильская Рената Александровна**



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| Ученая степень                 | доктор биологических наук  |
| Ученое звание                  | профессор  |
| Должность                      | гл.н.с. лаборатории биоэнергетики ИНБИ им. А.Н. Баха   |
| Эл. почта                      | renata_z@inbi.ras.ru   |
| Образование                    | высшее, МГУ им. М.В. Ломоносова  |
| Область научных интересов      | Биохимия, биоэнергетика, обмен дрожжей   |
| Премии и награды (при наличии) | Премия имени А.Н. Баха (совместно с А.В. Котельниковой), 1984 г., за цикл работ «Биохимия дрожжевых митохондрий»   |
| Избранные публикации           | <p>1. Bazhenova E.N., Deryabina Yu.I., Eriksson O., <b>Zvyagil'skaya R.A.</b>, Saris N.-E. Characterization of a high-capacity calcium transport system in mitochondria of the yeast <i>Endomyces magnusii</i>. J. Biol. Chem., 1998, 273 (7): 4372-4377.</p> <p>2. Bazhenova E.N., Saris N.-E., Pentilla T., <b>Zvyagil'skaya R.A.</b> Stimulation of the mitochondrial calcium uniporter by hypotonicity and ruthenium red. Biochim. Biophys. Acta. Biomembr. 1998, 371(1): 96-100.</p> <p>3. Martinez P., <b>Zvyagil'skaya R.</b>, Allard P., Persson B. Physiological regulation of the derepressible phosphate transporter in <i>Saccharomyces cerevisiae</i>. J. Bacteriol., 1998, 180 (8): 2253-2256.</p> <p>4. Deryabina Yu, Bazhenova E., Saris N.-E., <b>Zvyagil'skaya R.</b> Ca<sup>2+</sup> efflux from mitochondria of the yeast <i>Endomyces magnusii</i>. J. Biol. Chem., 2001, 276: 47901-47906.</p> <p>5. <b>Zvyagil'skaya, R.A.</b>, Parchomenko, O., Abramova, N., Allard P., Panaretakis, T., Pattison-Granberg J., Persson B.L. Proton- and sodium-coupled phosphate transport systems and energy status of <i>Yarrowia lipolytica</i> cells grown at acidic and alkaline growth conditions. J. Membr. Biol., 2001, 183: 39-50.</p> <p>6. Lagerstedt, J.O., <b>Zvyagil'skaya, R.</b>, Pratt, J.R., Pattison-Granberg, J., Kruckeberg, A.L., Berden, J.A., Persson, B.L. Mutagenic and functional analysis of the C-terminus of the <i>Saccharomyces cerevisiae</i> Pho84 phosphate transporter. FEBS Lett., 2002, 526: 31-37.</p> <p>7. <b>Zvyagil'skaya R.</b>, Persson B. L. Dual regulation of proton- and sodium-coupled phosphate transport systems in the yeast <i>Yarrowia lipolytica</i> by</p> |

- phosphate and extracellular pH. IUBMB Life, 2003, 55 (3): 151-154.
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9. Polyakov K.M., Boyko K.M., Tikhonova T.V., Slutsky A., Antipov A.N., **Zvyagilskaya R.A.**, Popov A.N., Bourenkov G.P., Lamzin V.S., Popov V.O. 2009. High-Resolution Structural Analysis of a Novel Octaheme Cytochrome c Nitrite Reductase from the Haloalkaliphilic Bacterium *Thioalkalivibrio nitratireducens*. J. Mol Biol., 2009, 389(5): 846-62.
10. Skulachev V.P., Antonenko Yu.N., Cherepanov D.A., Chernyak B.V., Khailova L.S., Korshunova G.A., Lyamzaev K.G., Roginsky V.A., Rokitskaya T.I., Severin F.F., Severina I.I., Simonyan R.A., Skulachev M.V., Sumbatian N.V., Sukhanova E.I., Tashlitsky V.N., Trendeleva T.A., Vyssokikh M.Yu., **Zvyagilskaya R.A.** Prevention of cardiolipin oxidation and fatty acid cycling as two antioxidant mechanisms of cationic derivatives of plastoquinone (SkQs) (review). Biochim. Biophys. Acta, 2010, 1797 (6-7):878-889.
11. Trendeleva T., Sukhanova E., Ural'skaya L., Saris N.-E., **Zvyagilskaya R.** Mitochondria from *Dipodascus (Endomyces) magnusii* and *Yarrowia lipolytica* yeasts did not undergo a Ca<sup>2+</sup>-dependent permeability transition even under anaerobic conditions (2011) J. Bienerg. Biomembr. 43 (6): 623-631.
12. Trendeleva T., Sukhanova E., Ural'skaya L., Saris N.-E., **Zvyagilskaya R.** Effect of prooxidants on yeast mitochondria J. Bienerg. Biomembr. 43 (6): 633-644.
13. Chernyak B. V., Antonenko Y. N., Domnina L. V., Ivanova O. Yu., Lyamzaev K. G., Pustovidko A. V., Rokitskaya T. I., Severina I. I., Simonyan R. A., Trendeleva T. A., **Zvyagilskaya R. A.** (2013) Novel penetrating cations for targeting mitochondria. Curr. Parm. Design., 19, 2795-2806.
14. Trendeleva T.A., Sukhanova E.I., Rogov A.G., **Zvyagilskaya R.A.**, Severina I.I., Ilyasova T.M., Cherepanov D.A., Skulachev V.P. Role of charge screening and delocalization for lipophilic cation permeability of model and mitochondrial membranes. Mitochondrion. 2013, 13(5):500-506.
15. Pustovidko A.V., Rokitskaya T.I., Severina I.I., Simonyan R.A., Trendeleva T.A., Lyamzaev K.G., Antonenko Y.N., Rogov A.G., **Zvyagilskaya R.A.**, Skulachev V.P., Chernyak B.V. Derivatives of the cationic plant alkaloids berberine and palmatine amplify protonophorous activity of fatty acids in model membranes and mitochondria. Mitochondrion. 2013;13(5):520-525
16. Pustovidko A.V., Rokitskaya T.I., Severina I.I., Simonyan R.A., Trendeleva T.A., Lyamzaev K.G., Antonenko Y.N., Rogov A.G., **Zvyagilskaya R.A.**, Skulachev V.P., Chernyak B.V. Derivatives of the cationic plant alkaloids berberine and palmatine amplify protonophorous activity of fatty acids in model membranes and mitochondria. Mitochondrion. 2013;13(5):520-525
17. Severina I.I., Severin F.F., Korshunova G.A., Sumbatian N.V., Ilyasova T.M., Simonyan R.A., Rogov A.G., Trendeleva T.A., **Zvyagilskaya R.A.**, Dugina V.B., Domnina L.V., Fetisova E.K., Lyamzaev K.G., Vyssokikh M.Y., Chernyak B.V., Skulachev M.V., Skulachev V.P., Sadovnichii VA. In search of novel highly active

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|                                   | <p>mitochondria-targeted antioxidants: thymoquinone and its cationic derivatives. FEBS Lett. 2013; 587(13):2018-2024.</p> <p>18. Khailova L.S.; Silachev D.N.; Rokitskaya T.I.; Avetisyan A.V., Lyamsaev K.G., Severina I.I., Ilyasova T.M., Gulyaev M.V., Dedukhova V.I., Trendeleva T.A., Plotnikov E.Y., <b>Zvyagilskaya R.A.</b>, Chernyak B.V., Zorov D.B., Antonenko Y.N., Skulachev V.P. A short-chain alkyl derivative of Rhodamine 19 acts as a mild uncoupler of mitochondria and as a neuroprotector. Biochim. Biophys. Acta (Bioenerg.). 2014, 1837 1739–1747.</p> <p>19. Goleva T., Rogov A., <b>Zvyagilskaya R.</b> Alzheimer’s Disease: Molecular Hall marks and Yeast Models. J. Alzheimer’s Disease &amp; Parkinsonism, 2017, 7 (6): 394-401.</p> <p>20. Rogov, A.G., Ovchenkova, A.P., Goleva, T.N., Kireev, I.I., <b>Zvyagilskaya, R.A.</b> New yeast models for studying mitochondrial morphology as affected by oxidative stress and other factors. Anal. Biochem. Methods in Biological Sciences, 2018, 552, 24-29.</p> |
| Преподаваемые дисциплины          | Избранные главы биохимии  |
| Общий стаж работы, лет            | 60  |
| Стаж работы по специальности, лет | 60  |
| Повышение квалификации            | Информационные технологии в высшем образовании, 72 часа, 2019 г.  |