Curriculum vitae: Irina Boni

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Education

1970–1975	USSR, Moscow	Institute of bioorganic chemistry RAS	PhD on bioorganic chemistry
1965–1970	USSR, Moscow	Lomonosov Moscow State University, chemistry department	diploma, honors degree

IBCh positions

2021–to date	Senior research fellow	
	Senior research fellow	

Language Proficiency

Rusian, English, French

Scientific societies' membership

RNA Society

American Society for Microbiology

Titles

	Doctor of Philosophy (Chemistry)

Grants and projects

2018–2020	-

Publications

1. Aseev LV, Koledinskaya LS, **Boni IV** (2024). Extraribosomal Functions of Bacterial Ribosomal Proteins—An Update, 2023. *Int J Mol Sci* 25 (5), 2957, 10.3390/ijms25052957
2. Grigorov AS, Skvortsova YV, Bychenko OS, Aseev LV, Koledinskaya LS, **Boni IV**, Azhikina TL (2023). Dynamic Transcriptional Landscape of Mycobacterium smegmatis under Cold Stress. *Int J Mol Sci* 24 (16), , 10.3390/ijms241612706
3. Aseev LV, Koledinskaya LS, Bychenko OS, **Boni IV** (2021). Regulation of Ribosomal Protein Synthesis in Mycobacteria: The Autogenous Control of rpsO. *Int J Mol Sci* 22 (18), , 10.3390/ijms22189679
4. Aseev LV, Koledinskaya LS, **Boni IV** (2020). Autogenous regulation in vivo of the rpmE gene encoding ribosomal protein L31 (bL31), a key component of the protein-protein intersubunit bridge B1b. *RNA* 26 (7), 814–826, 10.1261/rna.074237.119
5. Caillet J, Baron B, **Boni IV**, Caillet-Saguy C, Hajnsdorf E (2019). Identification of protein-protein and ribonucleoprotein complexes containing Hfq. *Sci Rep* 9 (1), 14054, 10.1038/s41598-019-50562-w

6. Aseev LV, Koledinskaya LS, **Boni IV** (2016). Regulation of ribosomal protein operons rplM-rpsI, rpmB-rpmG, and rplU-rpmA at the transcriptional and translational levels. *J Bacteriol* 198 (18), 2494–2502, 10.1128/JB.00187-16
7. Aseev LV, Bylinkina NS, **Boni IV** (2015). Regulation of the rplY gene encoding 5S rRNA binding protein L25 in Escherichia coli and related bacteria. *RNA* 21 (5), 851–861, 10.1261/rna.047381.114
8. Aseev LV, Koledinskaya LS, **Boni IV** (2014). Dissecting the extended “-10” Escherichia coli rpsB promoter activity and regulation in vivo. *Biochemistry (Mosc)* 79 (8), 776–784, 10.1134/S0006297914080057
9. Aseev LV, Chugunov AO, Efremov RG, **Boni IV** (2013). A single missense mutation in a coiled-coil domain of Escherichia coli ribosomal protein S2 confers a thermosensitive phenotype that can be suppressed by ribosomal protein S1. *J Bacteriol* 195 (1), 95–104, 10.1128/JB.01305-12
10. Hajnsdorf E, **Boni IV** (2012). Multiple activities of RNA-binding proteins S1 and Hfq.*Biochimie* 94 (7), 1544–1553, 10.1016/j.biochi.2012.02.010
11. Aseev LV, **Boni IV** (2011). Extraribosomal functions of bacterial ribosomal proteins.*Mol Biol* 45 (5), 739–750, 10.1134/S0026893311050025
12. Le Derout J, **Boni IV**, Régnier P, Hajnsdorf E (2010). Hfq affects mRNA levels independently of degradation. *BMC Mol Biol* 11, 17, 10.1186/1471-2199-11-17
13. Aseev LV, Levandovskaya AA, Skaptsova NV, **Boni IV** (2009). Conservation of regulatory elements controlling the expression of the rpsB-tsf operon in γ-proteobacteria. *Mol Biol* 43 (1), 101–107, 10.1134/S0026893309010142
14. Aseev LV, Levandovskaia AA, Skaptsova NV, **Boni IV** (2009). Conservation of the regulatory elements implicated in the control of the rpsB-tsf operon expression in gamma-proteobacteria. *Mol Biol (Mosk)* 43 (1), 111–118.
15. Aseev LV, Levandovskaya AA, Tchufistova LS, Scaptsova NV, **Boni IV** (2008). A new regulatory circuit in ribosomal protein operons: S2-mediated control of the rpsB-tsf expression in vivo. *RNA* 14 (9), 1882–1894, 10.1261/rna.1099108
16. **Boni IV** (2006). Diverse molecular mechanisms of translation initiation in prokaryotes.*Mol Biol* 40 (4), 587–596, 10.1134/S002689330604011X
17. Ziolkowska K, Derreumaux P, Folichon M, Pellegrini O, Régnier P, **Boni IV**, Hajnsdorf E (2006). Hfq variant with altered RNA binding functions. *Nucleic Acids Res* 34 (2), 709–720, 10.1093/nar/gkj464
18. Komarova AV, Chufistova LS, Aseev LV, **Boni IV** (2005). An Escherichia coli strain producing a leaderless mRNA from the chromosomal lac promoter. *Bioorg Khim* 31 (5), 557–560.
19. Komarova AV, Tchufistova LS, Aseev LV, **Boni IV** (2005). An Escherichia coli strain producing a leaderless mRNA from the chromosomal lac promoter. *Russ. J. Bioorganic Chem.* 31 (5), 502–505, 10.1007/s11171-005-0069-6
20. Komarova AV, Tchufistova LS, Dreyfus M, **Boni IV** (2005). AU-rich sequences within 5′ untranslated leaders enhance translation and stabilize mRNA in Escherichia coli. *J Bacteriol* 187 (4), 1344–1349, 10.1128/JB.187.4.1344-1349.2005
21. Tchufistova LS, Komarova AV, **Boni IV** (2003). A key role for the mRNA leader structure in translational control of ribosomal protein S1 synthesis in γ-proteobacteria. *Nucleic Acids Res* 31 (23), 6996–7002, 10.1093/nar/gkg883
22. Komarova AV, Tchufistova LS, Supina EV, **Boni IV** (2002). Protein S1 counteracts the inhibitory effect of the extended Shine-Dalgarno sequence on translation. *RNA* 8 (9), 1137–1147, 10.1017/S1355838202029990
23. Komarova AV, Tchufistova LS, Supina EV, **Boni IV** (2001). Extensive Complementarity of the Shine-Dalgarno Region and 3′-End of 16S rRNA Is Inefficient for Translation in vivo. *Russ. J. Bioorganic Chem.* 27 (4), 248–255, 10.1023/A:1011356520576
24. **Boni IV**, Artamonova VS, Tzareva NV, Dreyfus M (2001). Non-canonical mechanism for translational control in bacteria: Synthesis of ribosomal protein S1. *EMBO J* 20 (15), 4222–4232, 10.1093/emboj/20.15.4222

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26. **Boni IV**, Artamonova VS, Dreyfus M (2000). The last RNA-binding repeat of the Escherichia coli ribosomal protein S1 is specifically involved in autogenous control. *J Bacteriol* 182 (20), 5872–5879, 10.1128/JB.182.20.5872-5879.2000
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29. Poot RA, Tsareva NV, **Boni IV**, Van Duin J (1997). RNA folding kinetics regulates translation of phage MS2 maturation gene. *Proc Natl Acad Sci U S A* 94 (19), 10110–10115, 10.1073/pnas.94.19.10110
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38. **Boni IV**, Budowsky EI (1973). Transformation of non-covalent interactions in nucleoproteins into covalent bonds induced by nucleophilic reagents: I. The preparation and properties of the products of bisulfite ion-catalyzed reaction of amino acids and peptides with cytosine derivatives. *J Biochem* 73 (4), 821–830, 10.1093/oxfordjournals.jbchem.a130145