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LIST OF PUBLICATIONS

Research articles

1. Doychev K, Georgieva V, Boteva E, **Mironova R.** Modification of DNA with glucose 6-phosphate to examine the glycolytic enzyme phosphoglucose isomerase for DNA-amadoriase activity. C Rend Bulg Acad Sci. 2021 Jan 1;74(6):843-51.
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30. Handzhiyski Y, Tsekovska R, Kirilov K, Niw, T, Ivanov I, **Mironova R**. Enhancing effect of L-lysine on glycation of histone H1 and bovine serum albumin in vitro. Chapter 3 in: A Closer Look at Glycation: A Potential Hotspot for Age-related Complications and Diseases, Nova Science Publishers, Inc, NY, USA (2021-March), pp. 79-98, ISBN: 978-1-53619-176-9.
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LIST OF PARTICIPATION IN SCIENTIFIC MEETINGS

The names of the presenting authors are underlined

1. **Mironova R**. Repair of sugar-damaged DNA by the glycolytic enzyme phosphoglucose isomerase. **Oral presentation**. Genome Architecture and Dynamics Workshop and International Summer School, 12-19 July, 2019, Varna, Bulgaria.
2. Boteva E, Doychev K, Petkova N, **Mironova R**. Protein amadoriase activity of the glycolytic enzyme phosphoglucose isomerase. **Poster**. Third Seminar on Genetics with International Participation, 2-4 October,

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3. Boteva E, Tileva M, Kratchmarova E, **Mironova R**. Nuclear localization of the glycolytic enzyme phosphoglucose isomerase. **Poster**. The 43rd FEBS Congress, 7-12 July 2018, Prague, Czech Republic.
4. Boteva E, Doychev K, Georgieva V, Handzhiyski Y, Gatev E, Pischetsrieder M, **Mironova R**. DNA-fructosamine-6-phosphate amadoriase activity of the glycolytic enzyme phosphoglucose isomerase. **Oral presentation**. The 13th International Symposium on the Maillard Reaction, 10-13 September 2018, Montreal, Canada.
5. Boteva E, Tileva M, Kratchmarova E, **Mironova R**. Nuclear localization and function of the glycolytic enzyme phosphoglucose isomerase. **Poster**. The 13th International Symposium on the Maillard Reaction, 10-13 September 2018, Montreal, Canada.
6. Georgieva V, Doychev K, Boteva E, Ganchev T, **Mironova R**. DNA amadoriase activity of the glycolytic enzyme phosphoglucose isomerase. **Poster**. Second Young Scientists Seminar on Genetics with International Participation, 3-5 October, 2018, Sofia, Bulgaria.
7. Georgieva V, Doychev K, Boteva E, Ganchev T, **Mironova R**. DNA amadoriase activity of the glycolytic enzyme phosphoglucose isomerase. **Poster**. International Biomedical Congress, 16-18 November, 2018, Sofia Tech Park, Bulgaria.
8. Georgieva V, Doychev K, Boteva E, **Mironova R**. DNA repair activity of the glycolytic enzyme phosphoglucose isomerase. **Oral presentation**. Kliment's Days, 8-9 November, 2018, Sofia, Bulgaria.
9. **Mironova R**. Maillard reaction and immunogenicity of protein therapeutics. **Oral presentation**. Photodynamic therapy and related therapies workshop, April 7, 2017, Sofia, Bulgaria.
10. Boteva E, Pischetsrieder M, **Mironova R**. Creation of a PNA:DNA model to study the repair of DNA damaged by reducing sugars. **Oral presentation**. Second Doctoral Symposium "Molecular Biology – New Horizons, 6-7 April, 2017, Sofia, Bulgaria.
11. Boteva E, Tileva M, Pischetsrieder M, **Mironova R**. PNA:DNA model to explore the glycolytic enzyme glucose 6-phosphate isomerase for DNA repair activity. **Poster**. World BioDiscovery Congress 2017, 17-19 July 2017, Sofia, Bulgaria.
12. Boteva E, Tileva M, Krachmarova E, Pischetsrieder M and **Mironova R**. Repair of glucose 6-phosphate damaged DNA in Escherichia coli K-12. **Poster**. NuGOweek 2017, 28-31 August 2017, Varna, Bulgaria.
13. **Mironova R**. Aging at the molecular level: Can bacteria shed light on? **Poster**. NuGOweek 2017, 28-31 August 2017, Varna, Bulgaria.
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15. **Mironova R**. Spreading Excellence and Widening Participation & Marie Sklodowska-Curie Actions. Workshop: How to write a successful proposal! **Participant**. October 27, 2015, Sofia, Bulgaria.
16. Popova E, **Mironova R**, Odjakova M. Generation of a monoclonal ScFv antibody to study protein glycation in embriogenic suspension culltres of Dactylis glomerata L. under salinity stress. **Poster.** 55 Years Anniversary Conference of the Roumen Tsanev Institute of Molecular Biology, October 5-6, 2015, Sofia, Bulgaria.
17. Boteva E, Handzhiyski Y, Kotseva M, **Mironova R.** Phosphoglucose isomerase defficiency is linked to increased spontaneous mutagenesis in Escherichia coli. **Poster.** 55 Years Anniversary Conference of the Roumen Tsanev Institute of Molecular Biology, October 5-6, 2015, Sofia, Bulgaria.
18. Tsekovska R, Sredovska-Bozhinov A, Handzhiyski Y, Atanasova A, **Mironova R**. An attempt to deglycate human interferon-gamma with Escherichia coli FrlB amadoriase. **Poster.** 55 Years Anniversary Conference of the Roumen Tsanev Institute of Molecular Biology, October 5-6, 2015, Sofia, Bulgaria.
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20. Todorova N, **Mironova R**, Karamfilov V. Oil polluted and pristine Black Sea coastal sediments: comparative molecular analysis of inhabiting bacterial communities. **Oral presentation**. The 4th Biannual Black Sea Scientific Conference, October 28-31, 2013, Constanta, Romania
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23. **Mironova R,** Bozhinov A, Genov K, Daskalovska V, Niwa T, Ivanov I. Advanced glycation end products contribute to immunogenicity of interferon-beta pharmaceuticals. **Poster.** 36th FEBS Congress, 25-30 June 25-30, 2011, Torino, Italy.
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25. Tsekovska R, Maya Boyanova M, **Mironova R**, Ivanov I. Impact of glycation inhibitors on the biologic activity of recombinant human interferon-gamma. **Poster**. Anniversary Molecular Biology Conference "50 Years Roumen Tsanev Institute of Molecular Biology", October 6-7, 2011, Sofia, Bulgaria.
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27. **Mironova R**, Ivanov I, Stambolieva N, Ivanov IG, Niwa T. Antiglycation Activity of Pyridoxal 5'-Phosphate: **Poster selected for oral presentation**. 35th FEBS Congress, June 26 – July 1, 2010, Gothenburg, Sweden.
28. Atanasova A, Mittelmaier S, Handzhiyski Y, Sredovska A, Ivanov I, **Mironova R.** Substrate specificity and catalytic mechanism of the Escherichia coli FrlB amadoriase. **Poster**. 35th FEBS Congress, June 26 – July 1, 2010, Gothenburg, Sweden.
29. Handzhiyski Y, Nikolov L, Ivanov IK, Boteva E, Berzal A, Datsenko KA, Wanner BL, Ivanov IG, **Mironova R**. Maillard reaction and spontaneous mutagenesis in Escherichia coli. **Poster**. Jacques Monod Commemorative Minisymposium, May 31, 2010, Paris, France.
30. Handzhiyski Y, Kristeva M, Ivanov IG, **Mironova R.** Effect of aminoguanidine, aspirin, pyridoxal 5'-phosphate and pyridoxine on the spontaneous mutation rate in Escherichia coli. **Oral presentation**. 20th Anniversary International Scientific Conference, June 3-4, 2010, Stara Zagora, Bulgaria.
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33. Ivanov I, **Mironova R**. Glycation and post-translational processing of human interferon-gamma expressed in *Escherichia coli*. **Oral presentation**. 34th FEBS Congress, July 4-9, 2009, Prague, Czech Republic.
34. Sredovska A, Genov K, Daskalovska V, Ivanov I, **Mironova R**. Advanced glycation end products in interferon-beta based therapeutics are a source of immunogenicity. **Poster**. 8th Balkan Meeting on Human Genetics, May 14-17, 2009. Cavtat-Dubrovnik, Croatia.
35. Popova E, Odjakova M, **Mironova R**. Detection of amadoriase activity in Dactylis glomerata L. **Oral presentation**. 11th Anniversary scientific conference with international attendance. Sofia University "St. Kliment Ohridski", Faculty of Biology, May 27-29, 2009, Sofia, Buglaria.
36. Sredovska A, Velinova D, Boyanova M, Ivanov I, Genov K, Daskalovska V, **Mironova R.** Glycation of Betaferon® and antibodies against glycation products in sera of patients suffering from multiple sclerosis treated with Betaferon®. **Oral presentation**. International scientific conference, June 5-6, 2008, Stara Zagora, Bulgaria.
37. Atanasova A, Handzhiyski Y, Sredovska A, Voynova M, **Mironova R.** Substrate specificity and physiological role of the *Escherichia coli* FrlB amadoriase. **Poster**. International scientific conference, June 5-6, 2008, Stara Zagora, Bulgaria.
38. Popova E, **Mironova R**, Odjakova M. Isolation of monospecific monoclonal antibodies against glycated poly-L lysine. **Poster**. International scientific conference, June 5-6, 2008, Stara Zagora, Bulgaria.
39. Tsekovska R, Boyanova M, **Mironova R**, Ivanov I. The effect of arginine on stability of recombinant human interferon-gamma. **Poster.** Scientific Session on Molecular Biology in Memoriam to Acad. Roumen Tsanev, October 6-7, 2008, Sofia, Bulgaria.

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42. **Mironova R,** Velinova D, Boyanova M, Niwa T, Ivanov I. Maillard Reaction Products in Escherichia coli-derived therapeutic proteins. **Oral presentation**. 9th International Symposium on the Maillard Reaction, September 1-5, 2007, Munich, Germany.
43. **Mironova R,** Ivanov I. Stambolieva N, Ivanov IG, Niwa T. Anti-glycation activity of vitamin B6: 3-deoxyglucosone trapping by pyridoxal-5'-phosphate. **Poster**. The First Varna Nutrigenomics Meeting, October 18-19, 2007, Varna, Bulgaria.
44. Handzhiyski Y, **Mironova R**, Rusev D, Ivanov I. Effect of Pyridoxal-5'-phosphate on glycation and mutability of *Escherichia coli*. **Oral presentation**. First Student Scientific Conference with International Attendance, November 10-12, 2006, Stara Zagora, Bulgaria.
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46. **Mironova R,** Niwa T, Boyanova M Ivanov I. Glycation can compromise the quality of protein therapeutics. **Oral presentation**. 31st FEBS Congress, June 24-29, 2006, Istambul, Turkey.
47. **Mironova R.** Efficacy and Safety of Protein Drugs: Evidence for Non-enzymatic Glycosylation of Recombinant Human Interferon-Gamma. **Poster**. Gene Signatures Symposia '05. April 05, 2005, Paris, France.
48. **Mironova R**, Niwa T. LC/MS analysis of glycation and post-translational processing of human interferon-gamma expressed in Escherichia coli. **Oral presentation (Invited lecture)**. The 18th Tokai Branch Meeting of the Japanese Society for Biomedical Mass Spectrometry, July 16, 2004, Nagoya, Japan.
49. **Mironova R**, Niwa T. Glycation and post-translational alterations of human recombinant interferon-gamma as demonstrated by LC/ESI-MS. **Oral presentation**. The 29th Annual Meeting of the Japanese Society for Biomedical Mass Spectrometry, September 9–10, 2004, Shimane, Japan.
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51. Dimitrova R, **Mironova R**, Ivanov I. Formation of 3-Deoxyglucosone in Escherichia coli. **Oral presentation**. National conference with international participation, June 3-4, 2004, Stara Zagora, Bulgaria.
52. **Mironova R**, Niwa T, Dimitrova R, Boyanova M, Ivanov I. Non-enzymatic glycosylation of recombinant human interferon-gamma. **Oral presentation**. 13th Balkan Biochemical Biophysical Days, October 12-15, 2003, Kusadasi, Turkey.
53. **Mironova R**, Dimitrova R, Boyanova M, Ivanov I. Non-enzymatic glycosylation of human interferon-gamma in Escherichia coli. **Oral presentation**. National conference with international participation, June 5-6, 2003, Stara Zagora, Bulgaria.
54. Stefanova V, Handzhiyski Y, **Mironova R**, Ivanov I. Non-enzymatic glycosylation of DNA in Escherichia coli. **Oral presentation**. National conference with international participation, June 5-6, 2003, Stara Zagora, Bulgaria.
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56. **Mironova R**, Niwa T, Hayashi H, Dimitrova R, Ivanov I. Evidence for glycation in bacteria. **Poster.** 11th International Congress on Nutrition and Metabolism in Renal Disease, March 29-31, 2002, Nagoya, Japan.
57. **Mironova R**, Niwa T, Hayashi H, Dimitrova R, Ivanov I. Non-enzymatic glycosylation in Escherichia coli. **Poster**. 12th Balkan Biochemical Biophysical Days, May 10-13, 2001, Bucharest, Romania.
58. **Mironova R**, Niwa T, Hayashi H, Dimitrova R, Ivanov I. Non-enzymatic glycosylation of proteins in Escherichia coli. **Oral presentation**. 5th National Congress on Biochemistry, Biophysics and Molecular Biology, March 29-31, 2001, Sofia, Bulgaria.
59. **Mironova R**, Hayashi H, Niwa T. LC/ESI-MS elucidation of posttranslational alterations in recombinant human interferon-gamma. **Oral presentation (Invited lecture)**. 24th Annual Meeting of the Japanese Society for Biomedical Mass Spectrometry, September 23-25, 1999, Osaka, Japan.

60. Nacheva G, Todorova K, **Mironova R,** Handjyiski Y, Kyurkchiev S, Ivanov I. Recombinant interferon-gamma: C-terminal deletions and preparation of monoclonal antibodies. **Poster.** The First International Biosciences Days, April 20-24, 1999, Antaliya, Turkey.
61. Todorova K, Nacheva G, **Mironova R**, Hanjjyski J, Kyurkchiev, Ivanov I. Monoclonal antibodies against recombinant interferon gamma: preparation and characterization by C-terminal truncated protein. **Oral presentation**. Workshop within the framework of Tempus project S_JEP – 11281-96, May 17-20, Lesidren, Bulgaria.
62. Kolev V, **Mironova R**, Ivanov I. Epsilon sequence as an alternative initiation of translation in E. coli. **Oral presentation.** Workshop within the framework of Tempus project S_JEP–11281-96, May 17-20, Lesidren, Bulgaria.
63. **Mironova RS,** Lolov SR, Kehayov IR, Kyurkchiev SD. Amplification, cloning and sequencing of the V_H-D-J_H rearranged gene region of a monoclonal antidigoxin antibody. **Poster**. 11th Balkan Biochemical Biophysical Days, May 15-17, 1997, Thessaloniki, Greece.
64. Golomehova V, Golshani A, **Mironova R,** Abouhaidar M, Ivanov I. Is Shine-Dalgarno sequence necessary for the initiation of translation of mCAT mRNA in E. coli. **Poster.** 13th National Biochemistry Congress, March 26-30, 1996, Antalya, Turkey.

Invited talks by foreign partners

65. **Mironova R**. Maillard Reaction and immuniogenicity of protein therapeutics. Lecture presented in the research group of Fish Immunology and Vaccinology headed by Prof. Jorunn B. Jørgensen at the Arctic University of Norway, Faculty of Biosciences, Fisheries and Economics, July 15, 2016, Trømso, Norway.
66. **Mironova R**. Anticarbonyl Activity of Vitamin B6: 3-Deoxyglucosone trapping by pyridoxal 5'-phosphate in vitro and in vivo. Lecture presented in the Department of Advanced Medicine for Uremia headed by Prof. T Niwa, Nagoya University Graduate School of Medicine, October 1, 2012, Nagoya, Japan.
67. **Mironova R.** Glycation of Recombinant Proteins**.** Lecture presented in the group of Bioprocess Engineering headed by Prof. U. Reichl, MPI for Dynamics of Complex Technical Systems, May 31, 2006, Magdeburg, Germany.
68. **Mironova R.** Glycation of DNA in Escehrichia coli. Lecture presented in the Division of Nephrology at the Department of Clinical Preventive Medicine headed by Prof. T Niwa, Nagoya University Graduate School of Medicine, February 23, 2004, Nagoya, Japan.
69. **Mironova R.** Methionine Aminopeptidases in prokaryotes. Lecture presented in the Department of Genetics headed by Prof. M. Sugiura, Nagoya University, July 13, 1999, Nagoya, Japan.