

CURRICULUM VITAE

Name: Milena Georgieva Kirilova

Date and place of birth: 12 May 1977, Kyustendil

Citizenship: Bulgarian

Language proficiency: Bulgarian - mother tongue

English - fluent

Spanish - fluent

Russian – good

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Blog: www.epigenetics4u.blogspot.com

Education and current job:

2016 – now – Associate professor in Molecular Biology, IMB - BAS

2010 – 2016 – Assistant professor at the Institute of Molecular Biology, BAS

2009 – 2010 - Research assistant at the Institute of Molecular Biology, BAS, Sofia.

2009, July – PhD in Molecular Biology.

Thesis title: “Structural and functional significance of linker histone Hho1p for *Saccharomyces cerevisiae* chromatin”.

2004 – 2009 - PhD student - Institute of Molecular Biology, BAS.

2001- 2004 - Research assistant at the Institute of Molecular Biology, BAS

2001, May - MSc in Pedagogy (teacher in Biology).

1999 – 2001 – MSc. student in Biology Pedagogics.

2001, October - MSc. in Cellular and Developmental Biology.

Diploma thesis: “Antitumor activities of isoquinoline alkaloids”

1996 - 2001 – MSc student in Cellular and Developmental Biology, Faculty of Biology, Sofia University, Bulgaria.

1991 -1996 – Secondary English Language School “Dr. P. Beron” Kyustendil, Bulgaria

Project leadership and participation:

Project leadership:

1. **2010 – 2013** - Research Project at the Bulgarian Science Fund - **A detailed study of the role of yeast linker histone Hho1p in the processes of chromatin remodeling;**

Grant number: DMU 02/8, “Young Researchers Competition”, Section Biology.

Project participation:

1. **2017 – 2019** - Research project at the Bulgarian Science Fund

“Molecular mechanisms of immune tolerance - importance for endocrine function of regulatory T-cells.”

2. **2010 - 2015** – Research Project at the Bulgarian Science Fund;

“Study of the effect of environmental pollution on the ionome of natural populations of dandelion for monitoring purposes”.

3. **2010 - 2013** – Research Project at the Bulgarian Science Fund;

“Study of mechanisms by which Fragile X mental retardation protein 1 regulates neurodevelopment in *Drosophila*”.

4. **2009 - 2012** –Joint-research project with the Forestry University Sofia;

“Analysis of DNA damage in indicator plant species from threatened with pollution regions”;

5. **2009 – 2011** – European Commission, European Social Fund, Human Recourses Development

“Young Scientists’ support for career development”

6. **2005 – 2006** – Research project at the Bulgarian Science Fund;

Optimization of a novel test for detection of DNA damaging agents in food;

“Young Scientists’ Call”, Section Biology.

7. **2004 – 2006** – Research project at the Bulgarian Science Fund

Molecular markers in plant taxonomy – application of the RAPD method in the taxonomic study of *Galanthus L.* in Bulgaria;

Section Biology.

Teaching experience:

2013 – until now - supervisor of an undergraduate student on her Master degree thesis preparation: “Epigenetic significance of the yeast linker histone Hho1p in the processes of chronological ageing.”

2004 – until now - assistant supervisor in practical exercises of BSc and MSc degree Molecular Biology students in the summer semester courses “Regulation of Gene Activity” and “Apoptosis” at the Faculty of Biology, Sofia University.

2008 – until now - an invited lecturer at the summer semester course “Regulation of Gene Activity”, Faculty of Biology, SU;

Lectures’ titles: “Posttranslational modifications of histone proteins”, “Cross-talk of posttranslational histone modifications” and “Processes of chromatin remodeling”;

2007 – 2009 - scientific advisor of an undergraduate student on his Master degree thesis preparation: “Epigenetic significance of histone H1 zero in the development of human gliomas”.

Professional membership:

2004 – present: Union of Scientists in Bulgaria.

2003 – present: FEBS constituent society

Awards and scholarships:

- 1. 2011** - Best Young Investigator in the field of Biomedicine; The Union of Bulgarian Scientists, June, 2011.
- 2. 2010 – 2011** – National Scholarship Programme at the World Federation of Scientists.
- 3. 2010** – Best Young Investigator; The Union of Bulgarian Scientists, Sofia, Bulgaria.
- 4. 2007** – Best Young Investigator; The Union of Bulgarian Scientists; Stara Zagora, International Scientific Conference July, 2007.
- 5. 2006** – Best Young Investigator; The Union of Bulgarian Scientists, June, 2006.
- 6. 1996** - Masters study in Cellular and Developmental Biology – full scholarship.

Original articles:

Book Chapters:

2016

1. **Georgieva, M.**, Staneva, D., & Miloshev, G. (2016). Epigenetic significance of chromatin organization during cellular ageing and organismal lifespan. In D. Hollar & D. Vasudevan (Eds.), *Epigenetics, the environment and children's health across lifespans*. New York: Springer; pp. 21-66. ISBN (print) 978-3-319-25323-7.
2. Miloshev G. and **Georgieva M.**, 2012. The linker histone and chromatin of yeast *Saccharomyces cerevisiae*. In: *Histones: Class, Structure and Function* (Chang-Hui Shen, ed.), Nova Science Publishers, NY, USA (2012) pp. 59 - 75, ISBN: 978-1-62100-274-1.

Articles in peer-reviewed scientific journals

2016

1. Vasileva, B., **Georgieva, M.**, Staneva, D., Zagorchev, P. and Miloshev, G. (2016). Chromatin modulates cellular response to UV light during the process of chronological ageing, *Comptes rendus de l'Academie bulgare des Sciences* (69), No 12: 1595-1602 <http://www.proceedings.bas.bg/>.
2. Staneva, D., **Georgieva, M.** and Miloshev, G. (2016). *Kluyveromyces lactis* genome harbors a functional linker histone encoding gene, *FEMS Yeast Res* (2016) 16 (4): fow034 DOI: <http://dx.doi.org/10.1093/femsyr/fow034>.

2015

3. Miloshev, G. and **Georgieva, M.** 2015. Complex molecular networks promote longevity, *Journal of Investigative Genomics* 2(5): 00036; <http://dx.doi.org/10.15406/jig.2015.02.00036>.
4. **Georgieva, M.**, Zagorchev, P. and Miloshev, G. 2015. Random, double- and single-strand DNA breaks can be differentiated in the method of Comet assay by the shape of the comet image, *Electrophoresis* 36 (20): 2553 – 2560.
5. **Georgieva, M.**, Moyankova, D., Djilianov, D., Uzunova, K. and Miloshev, G. 2015. Methanol extracts from the resurrection plant *Haberlea rhodopensis* ameliorate cellular vitality in chronologically ageing *Saccharomyces cerevisiae* cells. *Biogerontology* 03/2015; 461-472; DOI:10.1007/s10522-015-9566-z. ISSN: 1389-5729
6. **Georgieva, M.**, Staneva, D., Uzunova, K., Efremov, T., Balashev, K., Harata, M., Miloshev, G. 2015. The linker histone in *Saccharomyces cerevisiae* interacts with

actin-related protein 4 and both regulate chromatin structure and cellular morphology. *International Journal of Biochemistry and Cell Biology* (59): 182-192.

7. Milcheva, J., Serkedjiev, M., Zagorchev, P., **Georgieva, M.** and Miloshev, G. 2015. Yeast chromatin remodeling mutants show features of accelerated ageing. *Comptes rendus de l'Academie bulgare des Sciences*, 68 (7): 877 – 882.

8. Dyakova, L., Culita, D.C., Zhivkova, T., **Georgieva, M.**, Kalfin, R., Miloshev, G., Alexandrov, M., Marinescu, G., Patron, L. and Alexandroca, R. 2015. 3d metal complexes with meloxicam as therapeutic agents in the fight against human *glioblastoma multiforme* and cervical carcinoma. *Biotechnology & Biotechnological Equipment* 29 (6).

2013

9. Uzunova, D., **Georgieva, M.**, Miloshev, G. 2013. *Saccharomyces cerevisiae* Linker Histone—Hho1p Maintains Chromatin Loop Organization during Ageing. *Oxidative Medicine and Cellular Longevity*, Volume 2013 (2013), Article ID 437146.

10. Gabrovsky, N., **Georgieva, M.**, Laleva, M., Uzunov, K. and Miloshev, G. 2013. Histone H1.0—a potential molecular marker with prognostic value for patients with malignant gliomas. *Acta Neurochirurgica*, 155 (8): 1437 – 1442.

11. Staneva, D., Peycheva, E., **Georgieva, M.**, Efremov, T. and Miloshev, G. 2013. Application of comet assay for the assessment of DNA damage caused by chemical genotoxins in the dairy yeast *Kluyveromyces lactis*. *Antonie van Leeuwenhoek* 103: 143 – 152.

2012

12. Alexandrova, R.I., Zhivkova, T., Alexandrov, M., Miloshev, G., **Georgieva, M.**, Pantcheva I., Mitewa, M. 2012. Cytostatic and cytotoxic properties of Monensic acid and its biometal(II) complexes against human tumor / non-tumor cell lines. *Central European Journal of Chemistry* 10 (5): 1464 – 1474, ISSN: 1895-1066.

13. Peycheva, E., Tashev, A., Vasileva, Y., Staneva, D., **Georgieva, M.**, Miloshev, G. 2012. Genome rearrangements in the common dandelion *Taraxacum officinale* web. Collected from sites polluted with heavy metals. *Comptes Rendus de l'Academie Bulgare, des Sciences*, 65 (6): 807 – 814, ISSN: 1310-1331.

14. **Georgieva M.**, Staneva D., Uzunova K. and Miloshev G. 2012. The deletion of the gene for the linker histone in arp 4 mutant yeast cells is not deleterious. *Biotechnology and Biotechnological Equipment*, 26 134 – 139, ISSN: 0003-6072

15. **Georgieva M.**, Roguev A., Balashev K., Zlatanova J., Miloshev G. 2012. Hho1p, the linker histone of *Saccharomyces cerevisiae*, is important for the proper chromatin organization *in vivo*. *BBA Gen Reg Mechanisms*, 1819 (5): 366-374, ISSN: 1874-9399.

2009

16. Miteva, R., **Georgieva, M.**, Peycheva, E., Efremov, T., Miloshev, G. 2009. Development of conditions for comet assay application in forensic investigation of rape and other sexual assaults. *Biotechnology and Biotechnological Equipment* 23 (1), pp. 1093-1094.

17. Peycheva, E., **Georgieva, M.**, Miloshev, G. 2009. Comparison between alkaline and neutral variants of yeast comet assay. *Biotechnology and Biotechnological Equipment* 23 (1), pp. 1090-1092.

18. **Georgieva, M.**, Efremov, T., Alexandrova, R. and Miloshev, G. 2009. Comet Assay discriminates levels of chromatin compaction, *Comptes Rendus de L'Academie Bulgare des Sciences* 62 (4), pp. 479-484.

2008

19. **Georgieva, M.**, Harata, M. and Miloshev, G. The nuclear actin-related protein Act3p/Arp4 influences yeast cell shape and bulk chromatin organization, *J Cellular Biochem*, 2008 May 1;104(1): 59-67.

20. Draganova-Filipova, M., **Georgieva, M.**, Peycheva, E., Miloshev, M., Sarafian, V. and Peychev, P. 2008. Effects of propolis and CAPE on proliferation and apoptosis of McCoy-Plovdiv cell line. *Folia Medica* 1: 53-59.

2007

21. Alexandrova, R., Vacheva, A., **Georgieva, M.**, Miloshev, G., Mosoarca, E.M., Tudose, R. and Costisor, O. 2007. Investigations on cytotoxic and antiproliferative effects in vitro of a newly synthesized mixed ligand copper (II) complex, *Acta morphologica et anthropologica*, 12: 72-78;

22. **Georgieva, M.**, Miloshev, G. 2007. Chromatin dictates embryonic stem cells fate, *Embryology* 2 (2): 11-15 (review).

2006

23. Kolev, N., **Georgieva, M.**, Gabrovsky, N., Uzunov, K. and Miloshev, G. 2006 Assessment of histone H1^o levels in *Glioblastoma multiforme*, *Comptes Rendus de L'Academie Bulgare des Sciences* 59 (1): 89-98;

24. Ignatova, P., **Georgieva, M.** & Miloshev, G. 2006. Optimization of the RAPD technique for taxonomic studies of *Galanthus (Amaryllidaceae)*. — *Comptes Rendus de l'Academie Bulgare des Sciences* 59 (9): 949 – 954.

2005

25. **Kirilova, M.** Ivanov, R. and Miloshev, G. 2005. A novel parameter in Comet Assay Measurements, *Acta Biologica Yugoslavica, Genetica*, 93-101.

Articles in national or international scientific journals without peer-review

2012

1. Miloshev M, Peycheva E, **Georgieva M.** 2012. A sensitive method detects DNA damages caused by food additives. *Journal of the Bulgarian Academy of Sciences*, 1, 10-14. ISSN: 0007-3989.

2004

2. **Georgieva M,** Miloshev G. 2004. Apoptosis, hydrogen peroxide and micrococcal nuclease cut DNA differently, which could be demonstrated by Comet assay. *Ann. Univ. Sofia, Fac. Biology*, 96, (4), 369-373;

3. Kolev, N., **Georgieva, M.,** Uzunov, K., Gabrovski, N. and Miloshev, G. 2004 Is there H1^o in *Glioblastoma multiforme*. *Emergency medicine*, IV, 74-77;

Articles in science-popular journals:

2016

1. Miloshev, G. and **Georgieva, M.** Game of genes, BBC Knowledge (Bulgaria), 62 (January, 2016); 60-65.

2. Georgieva, M. Food for fertility, OSEM (10), 2016: 26-29

2015

3. **Georgieva, M.** and Miloshev, G. The date of your birthday and disease predisposing, OSEM (11), 2015; 54 – 58

4. Miloshev, G. and **Georgieva, M.** The Neanderthals' genome, BBC Knowledge (Bulgaria); July, 53 – 59.

2014

5. **Georgieva. M.** and Miloshev, G. A new look to evolution, BBC Knowledge (Bulgaria); 2014; 36-37

6. **Georgieva, M.** and Miloshev, G. Epigenetics – heredity in action, BBC Knowledge (Bulgaria), 2014, December, 61 – 67.

2011

7. **Georgieva, M.** and Miloshev, G. 2011. To age like a cathedral. *Article in the popular science magazine – “Eight”* 4, April; pp: 70-75; ISSN 1313-650X.

2009

8. Miloshev, G., Staneva, D. and **Georgieva, M.** 2009. Epigenetics: we are the way we live. *Article in the popular science magazine – “Eight”* 11, Nov. pp: 66-73; ISSN 1313-650X.

Attended courses:

Courses@CRG – Applied Super-resolution Light Microscopy – 30th Sept – 2nd Oct., 2013, CRG, Barcelona, Spain.

CBM Summer School 2011 on the topics of Active and Healthy Aging - 11th - 13th July, 2011, Trieste, Italy.

CEEPUS international summer school: Bioanalysis, Blagoevgrad, Bulgaria, 6 – 12 Sept., 2009.

FEBS advanced course: “Microspectroscopy: Monitoring molecular interactions in living cells”, Wageningen, the Netherlands, 21-27 September, 2008.

ECDO training courses: Concepts and methods in programmed cell death, Portoroz, Slovenia, 26-27 October, 2007.

Marie Curie advanced course: Third Course on Epigenetics, Paris, France, 17-25 Oct, 2006.

EBSA course:– Sofia School of Protein Sciences, Sofia, Bulgaria, 20-28 Sept, 2006.

FEBS course: Basic Methods in Yeast Genetics and Molecular Biology, Strasbourg, France, 7-20 July, 2002.

Attended conferences:

2016

First Antiageing Symposium – 19 – 20 Nov., 2016, Sofia, Bulgaria

Invited talk: ▪ Epigenetic Antiageing Perspectives

Advanced Research Workshop NATO SPS - Benchmarking Telemedicine: Improving Health Security in the Balkans – 15 – 17 Nov., 2016, Skopje, FYRM

Invited talk: ▪ TeleGenetics – bringing Telemedicine closer to the new era of Personalized Medicine

European Youth Parliament – 23 – 24 Jan., 2016, Sofia, Bulgaria

Talk: ▪ The Future of Human – Augmented human, optimizing the human

Interdisciplinary PhD forum – 6-7th April, 2016, Sofia, Bulgaria

Talk: ▪ Chromatin organization and sperm quality

Talk: ▪ Role of chromatin remodeling for cellular resistance against UV irradiation

Seventh Workshop on Experimental Models and Methods in Biomedical Research – 15th – 17th May, 2016, Sofia, Bulgaria

Talk: ▪ Sperm chromatin organization governs sperm quality

Talk: ▪ Chromatin modulates cellular resistance to ultraviolet light

XXVIth International Scientific Conference, Union of Scientists, Stara Zagora – 2 -3rd June, 2016, Stara Zagora, Bulgaria

Talk: ▪ Chromatin organization of human sperm is a marker for male fertility

Talk: ▪ The interaction between the linker histone H1 and chromatin-remodelling complexes is essential for cellular response to stress

EPICONCEPT Epigenetics and Periconception Environment COST Action FA1201 - Workshop 2016

“Cross-species Epigenetics, Gametogenesis and Embryogenesis”, 17 – 19 May, 2016, Velingrad, Bulgaria

Talk ▪ Impact of human sperm chromatin organization on sperm quality

Sofia Science Festival – 14th May, 2016, Sofia, Bulgaria

Talk: ▪ Game of Genes and Geniuses

European Scientists’ night – 30th Sept., 2016, Ruse, Bulgaria

Talk: ▪ To prepare an EpiGenial recipe

2015

The 10th Workshop on Biological Activity of Metals, Synthetic Compounds and Natural products – 17 – 19 November, Sofia, Bulgaria

Talk: ▪ *Haberlea rhodopensis* methanol extracts revitalize yeast cells

55th Anniversary Conference IMB – BAS, 5th – 6th Oct., 2015 – Sofia, Bulgaria

Talk: ▪ Epigenetic significance of linker histones in ageing and stress resilience

XXVth International Scientific Conference dedicated to 50 Anniversary of the Union of Scientists in Stara Zagora – 4th – 5th June, 2015, Stara Zagora

Talk: ▪ *Saccharomyces cerevisiae* chromatin mutants exhibit premature ageing phenotypes

Poster: ▪ Epigenetic significance of chromatin structure in cellular ageing

14th International Symposium on Immunology of Reproduction, 22nd – 24th May, 2015, Varna, Bulgaria

Poster: ▪ Advantages of human sperm DNA damage detection by the method of Comet Assay

Sixth Workshop on Experimental Models and Methods in Biomedical Research – 12th – 14th May, 2015, Sofia, Bulgaria

Talk: ▪ *Saccharomyces cerevisiae* – a brilliant model for studying ageing

Talk: ▪ Chromatin - the main player in the ageing process

Mini symposium “Epigenetics and Chromatin structure”, 31st March, 2015, LIMES,
under the initiative “Women in Science”

Invited Talk: ▪ Epigenetic Significance of higher-order chromatin structures for cellular stress resistance and longevity

13th International Congress on Targeted Anticancer Therapies (TAT 2015), Paris, France, 2-4 March 2015

Poster▪ INFLUENCE OF DEOXYCHOLIC ACID AND ITS METAL COMPLEXES ON VIABILITY AND PROLIFERATION OF HUMAN TUMOR CELL LINES

L. Dyakova, T. Zhivkova, A. Abudalleh, D.-C. Culita, G. Marinescu, L. Patron,

M. Georgieva, G. Miloshev, R. Kalfin, R. Alexandrova

Poster▪ METAL COMPLEXES OF MELOXICAM AND ISOXICAM DECREASE VIABILITY AND PROLIFERATION OF VIRUS-TRANSFORMED CANCER CELLS

T. Zhivkova, R. Alexandrova, L. Dyakova, **M. Georgieva**, G. Miloshev, D.-C. Culita, G. Marinescu, L. Patron, M. Alexandrov

2014

2nd Academy on Reproductive Medicine – Vienna In Vitro Center, Tokuda hospital, Sofia, Bulgaria, 4th October, 2104

Invited talk: ▪ Epigenetics – This is Our future.

X IMYA – Xth International Meeting on Yeast Apoptosis – 14 – 18th May, Gotebourg, Sweden.

Talk: ▪ Chromatin remodeling as a modulator of ageing.

2013

TEDxAUBG – Shake up your mind – 13th April, 2013, Blagoevgrad, Bulgaria

Invited talk: ▪ Shaping our lives through genetics, epigenetics and the environment.

<http://www.youtube.com/watch?v=gfDIkwoAbPk&feature=youtube>

Experimental methods and models in biomedical research – 27 – 29th May, 2013, Sofia, Bulgaria.

Talk: ▪ Changes in chromatin structure revealed by Chromatin Comet Assay (ChCA) in *Drosophila melanogaster* model of Fragile X chromosome syndrome

Talk: ▪ Chromatin Comet Assay – a powerful tool for monitoring chromatin organization during ageing

FEBS workshop – Translating Epigenomes into Function: A Next-generation Challenge for Human Disease – 13 – 16 October, 2013 Capri, Italy

Poster: ▪ The interaction between *S. cerevisiae* linker histone and Arp4p retains normal cellular phenotypes

Poster: ▪ *Saccharomyces cerevisiae* linker histone – Hho1p as an epigenetic player in cellular longevity

XXIII International scientific conference - 6th -7th June 2013. Stara Zagora, Bulgaria

Talk: ▪ Staneva D., Georgieva M., Peycheva E. and Miloshev G. Histone H1 is requisite for the cellular morphology and growth of yeast *Kluyveromyces lactis*.

Talk: ▪ Changes in the expression patterns of a multiple set of genes in *Drosophila* mutant cells overexpression *dFMR1*.

2012

Experimental Models and Methods in Biomedical Research – 23rd -25th April 2012, Sofia, Bulgaria

Talk: ▪ Does the budding yeast linker histone hho1p influence survival and morphology of chronologically aging cells?

International Scientific Conference Stara Zagora, 7th – 8th June, 2012, Stara Zagora, Bulgaria

Talk: ▪ The linker histone of *Saccharomyces cerevisiae* influences yeast chronological aging.

EMBO Conference “Gene Transcription in Yeast - From Mechanisms to Gene Regulatory Networks” - 16 – 21 st June, 2012, Girona, Spain

Poster: ▪ The interaction between *S. cerevisiae* linker histone Hho1p and Arp4p affects chromatin remodeling.

Poster: ▪ The linker histone Hho1p is crucial for the proper organization of *S. cerevisiae* higher-order chromatin structure.

32nd Congress of European Peptide Society - 2 – 7 Sept., 2012, Athens, Greece

Poster: ▪ *In vitro* assessment of the cytotoxic effects of novel RGD – mimetics.

FEBS Sofia School of Protein Science – 9 – 14th, Sept., 2012, Sofia, Bulgaria

Poster: ▪ The extraordinary features of *Saccharomyces cerevisiae* linker histone.

9th International Meeting on Yeast Apoptosis – 16 – 20th, Sept., 2012, Rome - Italy

Poster: ▪ Higher – order chromatin structure as an epigenetic regulator of the processes of cellular aging.

Poster: ▪ Chromatin structure is decisive for chronological aging of *Saccharomyces cerevisiae*.

2011

2nd IMPPC Conference “Signaling to Chromatin”, Barcelona, Spain, 31st March - 1st April, 2011.

Poster: ▪ Hho1p, the linker histone of *Saccharomyces cerevisiae* - can yeast cells manage without it?

Poster: ▪ Yeast *Kluyveromyces lactis* - a model for studying human linker histone H1 zero.

Experimental models and methods in Biomedicine, 16 - 18th May, 2011, Sofia, Bulgaria.

Talk: ▪ *Drosophila* as an experimental model to study the fragile X chromosome syndrome.

Talk: ▪ Studying aging of the genome in the model system *Saccharomyces cerevisiae*.

21st International Scientific Conference, Stara Zagora, Bulgaria, 2 - 3rd June, 2011.

Talk: ▪ How important are the higher-order chromatin structures for the proper gene expression?

Talk: ▪ Environmental pollution with heavy metals and its influence on the ionome of *Taraxacum officinale*.

Poster: ▪ Is there a linker histone in the yeast *Kluyveromyces lactis*?

4th International Congress of Molecular Medicine - Istanbul, Turkey, 28th - 30th June, 2011.

Talk: ▪ *In vivo* interactions of *S. cerevisiae* linker histone with chromatin remodeling complexes.

Poster: ▪ *Saccharomyces cerevisiae* - a promising tool for studying human brain tumors.

Poster: ▪ Study of the higher-order chromatin structure in fragile X mental retardation gene (*FMR1*) knock-out *Drosophila* mutants.

22nd American Peptide Symposium – Harbor Island, San Diego, USA, 25 – 30 June, 2011.

Talk: *In vitro* assessment of the cytotoxic effects of novel RGD-Mimetics.

EMBO Conference Series “Nuclear Structure and Dynamics” - L’Isle Sur la Sorgue, France, 28 Sept. – 2 October, 2011.

Poster: ▪ The linker histone of *Saccharomyces cerevisiae*, Hho1p, is a moderator of chromatin organization *in vivo*.

Poster: ▪ *In vivo* interactions of *Saccharomyces cerevisiae* linker histone with chromatin remodeling complexes.

Anniversary Molecular Biology Conference – 50 Years Institute of Molecular Biology, 6-7th October, 2011, Sofia, Bulgaria.

Talk: ▪ The influence of the remodeling complex INO80 on the higher-order chromatin structures of yeast *Saccharomyces cerevisiae*.

7th Balkan Congress of Microbiology, 25-29th October, 2011, Belgrade, Serbia.

Poster: ▪ Dessislava Staneva, E. Peycheva, M. Georgieva, B. Boteva and G. Miloshev. 2011. Sensitivity of the yeasts *Kluyveromyces lactis* and *Saccharomyces cerevisiae* to genotoxic agents studied by Comet Assay – a comparative study.

6th Workshop on Biological activities of metals, synthetic compounds and natural products -Sofia, Bulgaria, 28 – 30 November, 2011

Talk: ▪ Our first steps in tissue engineering?

2010

International workshop on Experimental Models and Methods for Biomedical Research, Sofia, Bulgaria 17-17 March, 2010.

Talk: ▪ *Saccharomyces cerevisiae* - model organism for study of human diseases.

20 th Anniversary International Scientific Conference. Stara Zagora 3rd – 4th June, 2010.

Talk: ▪ The yeast *Saccharomyces cerevisiae* and their potentials for studying of human gliomas.

Yeast, an evergreen model, Sapienza Uni, Rome, 22 – 25th Sept. 2010

Poster: ▪ Deletion of the linker histone Hho1p suppresses *arp4* mutant phenotype in *Saccharomyces cerevisiae*.

Talk: ▪ *Saccharomyces cerevisiae*, a model for linker histone and higher-order chromatin structure studies.

3rd SFB TR5 Symposium on Chromatin – Assembly and Inheritance of Functional States, Munich, Germany, 6th – 8th October, 2010.

Poster: ▪ Hho1p – the linker histone of *Saccharomyces cerevisiae* plays an important role in chromatin organization.

2009

International Scientific Conference: Stara Zagora, Bulgaria, 4-5 June, 2009;

Talk: ▪ Effect of the transcription factor Sub1 on *S. cerevisiae* chromatin organization.

Talk: ▪ Hho1p and its role in the processes of chromatin remodeling.

Bulgarian–Japanese Symposium “Genomics and Proteomics in Personalized Medicine”, Sofia, Bulgaria 19-20 March, 2009.

Poster: ▪ Development of a molecular marker for personalized diagnostics of human glioma tumors.

CEEPUS International Symposium and Summer School on Bioanalysis. Blagoevgrad, Bulgaria 6-12 September, 2009.

Talk: ▪ The method of Comet Assay in Bioanalysis

Poster: ▪ Genotoxic sensitivity of *Kluyveromyces lactis* assessed by Comet Assay

2008

MC-GARD Conference: Interplay among genetics, epigenetics and small RNAs, Madrid, Spain, 4-7th May, 2008;

Poster: ▪ Epigenetic significance of Histone H1⁰ in development of human gliomas;

EMBO Workshop: Gene transcription in yeast: Sant Feliu de Gauxols,(Costa Brava), Spain, 21-26 June, 2008;

Poster : ▪ Act3p/Arp4 interacts with linker histone Hho1p in *S. cerevisiae* nuclei *in vivo* and thus both maintain higher-order chromatin structure in concert

Poster: ▪ Chromatin loop organization in *HMG1 KO* mutant

Scientific Session of the Institute of Molecular Biology, BAS IN MEMORIUM to Acad.

Roumen Tsanev : 6 – 7 October, 2008;

Talk: ▪ Linker histones, higher-order chromatin structures and their epigenetic significance.

Poster: ▪ *In vivo* interaction between *S. cerevisiae* linker histone Hho1p and a component of several chromatin remodeling complexes – Act3p/Arp4 influences higher-order chromatin structure.

2007

Scientific Conference for PhD students and young scientists: Plovdiv, Bulgaria, 24 March, 2007;

Talk: ▪ Molecular and cell- biological methods for detection of the effects of Bulgarian propolis;

International Scientific Conference: Stara Zagora, Bulgaria, 7-8 June, 2007;

Talk: ▪ Chromatin remodeling complexes and their roles in higher-ordered structuring of chromatin;

15th Conference on Apoptosis: Portoroz, Slovenia, 26-31 October 2007;

Poster: ▪ Cellular death in *Glioblastoma multiforme*

20th International meeting on “The Biology of *Kluyveromyces lactis*”: Orsay, France, 7-9 Sept., 2007;

Poster: ▪ Single-Cell Gel Electrophoresis (SCGE) on *Kluyveromyces lactis*;

2006

ESF Research Conference: Gene transcription in yeast; Sant Feliu de Gauxols, (Costa Brava), Spain, 24-29 June, 2006;

Poster : ▪ Higher-order chromatin structure in Arp4/Hho1p *S. cerevisiae* double mutants;

Workshop on Biological Activity of Metals and Metal Compounds – Sofia, Bulgaria, 2-3 November, 2006;

Talk: ▪ New dimensions in Comet assay applications;

Poster: ▪ Cytotoxic and antiproliferative activities of Cu(II), Co(II) and Fe(II,III) mixed ligand complexes on tumor cell lines.

2005

International Conference on Targeted Anticancer Therapies: Amsterdam, The Netherlands, 3-5 March, 2005;

Poster: ▪ Investigations on cytotoxic and antiproliferative activities of Zn(II), Cu(II), Co(II) and La(II) complexes with cholic acid on tumor cells;

Scientific Symposium: Romanian Academy of Sciences, 26- 27 May, 2005, Timishoara, Romania

Poster: ▪ Investigations on antitumor and antimicrobial activities in vitro of Zn(II), Cu(II), Co(II) and La(III) complexes with cholic acid;

XXII International Conference on Yeast Genetics and Molecular Biology, Bratislava, Slovak Republic, 7–12 August, 2005;

Poster: ▪ Chromatin structure of yeast *S. cerevisiae* could be revealed by a new technique – Chromatin Yeast Comet Assay (ChYCA);

Vth International Symposium on trace elements in human: Perspectives, Athens, Greece, 13-15 October, 2005;

Poster: ▪ Study on antitumor and antimicrobial effects of Zn(II), Cu(II), Co(II) and La(III) complexes with cholic acid in vitro

2004

ESF Research Conference: Gene Transcription in Yeast, San Feliu de Guixols, Spain, 29 May–3 June, 2004;

Poster: ▪ Single Cell Gel Electrophoresis as a tool for yeast chromatin studies;

2003

XXI International Conference on Yeast Genetics and Molecular Biology, Gotebourg, Sweden, 7–12 July, 2003;

Posters: ▪ Linker Histone H1 does have a role in *S. cerevisiae* chromatin structure

▪ Development of a more sensitive test system for detecting of genotoxins

Xth Scientific Session of the Faculty of Biology, SU “St. Kl. Ohridski, Sofia, Bulgaria, 20-21 Nov, 2003;

Posters: ▪ Apoptosis, hydrogen peroxide and micrococcal cut DNA differently which could be demonstrated by Comet assay

Proceedings of attended conferences:

2015

1. Proceedings of the VIth Workshop on Experimental Methods and Models in Biomedical Research – Sofia, Bulgaria, 12 – 14th May, 2015

Dzhuliya Milcheva, Milena Georgieva, Dessislava Staneva and George Miloshev. 2015. Epigenetic significance of chromatin structure in cellular ageing . Proceedings of the VIth Workshop on Experimental Methods and Models in Biomedical Research, 2015

2. Proceedings of the VIth Workshop on Experimental Methods and Models in Biomedical Research – Sofia, Bulgaria, 12 – 14th May, 2015

Serkedjiev, M., Staneva, D., Georgieva, M. and Miloshev, G. 2015. Saccharomyces cerevisiae – a brilliant model for studying ageing. Proceedings of the VIth Workshop on Experimental Methods and Models in Biomedical Research, 2015.

3. Proceedings of the XXVth Scientific Conference Union of Scientists Stara Zagora – 4-5th June, 2015

Milcheva, D., Serkedjiev, M., Staneva, D., Zagorchev, P., Georgieva, M. and Miloshev, G. 2015. Epigenetic significance of chromatin structure in cellular ageing. Science and Technology, Vol. 5 (1), Section Medicine: 13 - 17

2013

1. Proceedings of the Fourth Workshop on Experimental Models and Methods in Biomedical Research, 27th – 29th May, 2013, Sofia, Bulgaria

K. Uzunova, M. Georgieva and G. Miloshev., CHROMATIN COMET ASSAY – A POWERFFUL TOOL FOR MONITORING CHROMATIN ORGANIZATION DURING AGEING. 2013, Proceedings of the Fourth Workshop on Experimental Models and Methods in Biomedical Research: 137 – 141.

2012

1. Proceedings of the 22nd American peptide Symposium:

Kaloyan Georgiev, Anelia Balacheva, Ekaterina Peycheva, **Milena Georgieva**, Tatyana Dzimbova, Lyubomir Georgiev, Ivan Iliev, Roumyana Detcheva, George Miloshev and Tamara Pajpanova. 2012 *In vitro* Assessment of the Cytotoxic Effects of Novel RGD-mimetics. J. Peptide Sci. (in press) (IF=1.799).

2011

International conference of the Union of Scientists in Bulgaria, Stara Zagora, 2011.

2. **Georgieva, M.**, Peycheva, E., Tashev, A., Djingova, R. and Miloshev, G. 2011. Study of the effect of heavy metal pollution on the genome of plant species *Taraxacum officinale* WEB. (*Asteraceae*) – a preliminary report. Science and technology, Medicine 1(1): 45 – 48.

3. **Georgieva, M.**, Uzunova, K., Balashev, K., Genova, G. and Miloshev, G. 2011. How important are the higher-order chromatin structures for the proper gene expression? Science and technology, Medicine 1(1): 50 – 54.

4. Staneva, D., **Georgieva, M.**, Peycheva, E. and Miloshev, G. 2011. Is there a linker histone in the yeast *Kluyveromyces lactis*? Science and technology, Medicine 1(1): 14 – 19.

22nd American Peptide Symposium – Harbor Island, San Diego, USA, 25 – 30 June, 2011.

5. Pajpanova, T., Georgiev, K., Dzimbova, T., **Georgieva, M.**, Staneva, D and Miloshev, G. 2011. *In vitro* assessment of the cytotoxic effects of novel RGD-Mimetics. Proceedings of the 22nd American Peptide Symposium (Michal Lebl, ed.), American Peptide Society, Prompt Scientific Publishing, San Diego, USA (2011) pp. 190-1, ISBN 978-0-9839741-0-9.

2007:

Scientific Conference with International Participation, Stara Zagora, Bulgaria, 7-8 June, 2007:

6. **Georgieva, M.**, Nikolov, I. and Miloshev, G. 2007. The yeasts of the genus *Candida* as model organisms for testing drugs and their derivatives at a molecular level. Humanitary Medicine, part I, *Cellular and Molecular Biology and Microbiology*, 52-57.

7. **Georgieva, M.**, Harata, M. and Miloshev, G. 2007. Chromatin remodeling factors and their role in higher-order chromatin structures. *Humanitary Medicine, part I, Cellular and Molecular Biology and Microbiology*, 46-51.

New Trends and Strategies in the Chemistry of Advanced Materials with Relevance in Biological Systems, technique and Environmental Protection, Timisoara, Romania, 8-9 Nov., 2007:

8. Alexandrova, R., **Kirilova Georgieva, M.**, Todorova, I., Miloshev, G., Martinova, Y., Kalfin, R., Kulita, D., Patron, L. 2007. Study on cytotoxic and antiproliferative activities of metal complexes with lithocholic and dendrocholic acids. *Proceedings of the Rom. Acad. of Sci.*: 11-15.

2006:

Scientific Conference with International Participation, Stara Zagora, Bulgaria, 1-2 June, 2006:

9. Kolev, N., **Georgieva, M.**, Gabrovsky, N., Uzunov, K. and Miloshev, G. 2006. Histone H1 zero as a molecular marker for malignant gliomas, *Humanitary Medicine, part I, Cellular and Molecular Biology and Microbiology*: 38-41;

10. **Georgieva, M.**, Kolev, N., Gabrovsky, N., Uzunov, K. and Miloshev, G. 2006. Cell death in malignant gliomas, *Humanitary Medicine, part 1, Cellular and Molecular Biology and Microbiology*: 32-37;

Scientific Conference: Traditions and Contemporaneity in Veterinary Medicine, University of Forestry, Sofia, Bulgaria, 2006:

11. Alexandrova, R., Popova, T., Rashkova, G., Vancheva, A., Todorova, I., **Kirilova, M.**, Slavov, S., Miloshev, G. And Costinor, O., 2006. Newly synthesized copper (I, II) complexes – investigations on antimicrobial activity and effects on viability and proliferation of chicken tumor and non-tumor cells, *Veterinary medicine*: 87-93.

2005:

Scientific Conference with International Participation, Stara Zagora, Bulgaria, 2-3 June, 2005:

12. Kolev, N., **Kirilova, M.**, Gabrovsky, N., Uzunov, K. and Milsohev, M. 2005. Histone H1 zero in tumors *Glioblastoma multiforme* is less or completely missing, *Humanitary medicine*: 105-109;

5th International Symposium on Trace Elements in Human: New Perspectives, Athens, Greece, 13-15 Oct., 2005:

13. Alexandrova R., Popova T., Rashkova., Slavov S., Alexandrov M., **Kirilova M.**, Miloshev G., Martinova Y., Nikolova E., Culita D., Patron L.

Study on antitumor and antimicrobial effects of Zn(II), Cu(II), Co(II) and La(III) complexes with cholic acid in vitro. *Proceedings*: 233-241.

2004:

Scientific Conference with International Participation, Stara Zagora, Bulgaria, 3-4 June, 2004:

14. **Kirilova, M.** and Miloshev G. 2004. New dimensions in application of the method of Comet Assay for detection of apoptosis, *Humanitary Medicine*, part I, *Cellular and Molecular Biology and Microbiology*, 70-74;

Research Interests:

- Epigenetics: DNA methylation, histone post-translational modifications, higher-order chromatin structure, linker histones, linker histone sub-variants, chromatin remodeling;
- Cancer Epigenetics: epigenetic differences between cells in norm and pathology;
- Food Epigenetics: epigenetic changes in the genome induced by different food products;
- Neuroscience: Epigenetics of psychiatric disorders;
- Stem cells: Epigenetics and Molecular Biology. Chromatin structure and core histone bivalent post-translational modifications as determinants of stem cells' fate;
- Apoptosis, cell death;
- Ageing: the process of cellular and organismal ageing in norm and pathology;