

CURRICULUM VITAE EUROPEAN FORMAT



PERSONAL INFORMATION

Name
Address
Telephone
E-mail
Nationality
Date of birth

TSVETELINA GEORGIEVA BATSALOVA

+35932 261508

tsvetelina@uni-plovdiv.bg

Bulgarian

PROFESIONAL EXPERIENCE

- Dates (from-to)
- Name and location of employer

- Occupation or position held
 - Major activities and responsibilities

JANUARY 2013- PRESENT

Department of Developmental biology, University of Plovdiv, 24 "Tsar Assen" Str., Plovdiv-4000, Bulgaria

Chief Assistant Professor

Teaching: lecture courses in Cell biology, Animal cell cultures, Stem cells and regeneration, practical courses in Cell biology, Animal cell cultures, Stem cells and regeneration

Planning, writing and implementation of research projects

Supervision of students working on bachelor's thesis and master's thesis

Supervision of PhD students

- Dates (from-to)
- Name and location of employer

- Occupation or position held
 - Major activities and responsibilities

SEPTEMBER 2011- DECEMBER 2012

Department of Developmental biology, University of Plovdiv, 24 "Tsar Assen" Str., Plovdiv-4000, Bulgaria

Assistant Professor

Teaching: practical courses in Cell biology

Planning and implementation of research projects

Supervision of students working on bachelor's thesis

- Dates (from-to)
- Name and location of employer

- Occupation or position held
 - Major activities and responsibilities

MARCH 2009-SEPTEMBER 2011

Department of Developmental biology, University of Plovdiv, 24 "Tsar Assen" Str., Plovdiv-4000, Bulgaria

PhD student

Performing experiments

Writing research papers and dissertation

Preparing for and passing exams (disciplines: Protein posttranslational modifications, Molecular and cellular mechanisms associated with autoimmune diseases, English language)

Teaching: practical courses in Cell biology

- Dates (from-to)
- Name and location of employer

DECEMBER 2008-AUGUST 2009

Division of Medical Inflammation Research, Karolinska institute, 171 76 Stockholm,

- Occupation or position held
 - Major activities and responsibilities

- Dates (from-to)
- Name and location of employer

- Occupation or position held
 - Major activities and responsibilities

- Dates (from-to)
- Name and location of employer
- Occupation or position held
 - Major activities and responsibilities

EDUCATION AND TRAINING

- Dates (from-to)
- Title of qualification awarded
- Name and type of organization providing education and training
 - Thesis title

- Dates (from-to)
 - Course
- Name and type of organization providing education and training

- Dates (from-to)
 - Course
- Name and type of organization providing education and training

- Dates (from-to)
- Title of qualification awarded
- Name and type of organization providing education and training

- Dates (from-to)
- Title of qualification awarded
- Name and type of organization

Sweden

Guest researcher/Guest PhD student

Planning and implementation of *in vivo* and *in vitro* experiments
Presentation of results at group meetings and workshops

MAY 2007-DECEMBER 2008

Lund University, Division of Medical Inflammation Research, BMC I11, 221 84 Lund, Sweden

Guest researcher

Planning and implementation of *in vivo* and *in vitro* experiments
Presentation of results at group meetings and workshops

SEPTEMBER 2005-SEPTEMBER 2006

Department of Developmental biology, University of Plovdiv, 24 "Tsar Assen" Str., Plovdiv-4000, Bulgaria

Lab technician

Cell culturing

Preparation of buffers, cell culture media; sterilization of reagents and labware; maintaining cell cultures. Preparation of materials needed for practical classes in Cell biology.

MARCH 2009-JANUARY 2012

PhD degree in Cell biology

University of Plovdiv, Bulgaria, <http://www.uni-plovdiv.bg>

Role of MHC II and posttranslational modifications of collagen type II for cell communication in rheumatoid arthritis

AUGUST 2010-SEPTEMBER 2010

FEBS (Federation of European Biochemical Societies) advanced practical course "Techniques in free radical biology"

University of Debrecen, Hungary

SEPTEMBER 2007

Baltic Summer School 2007

Theoretical course "Inflammation: a key to common complex diseases"

Lund University, Sweden

OCTOBER 2005-JUNE 2006

Master of Science in Cell biology

Plovdiv University, Bulgaria, <http://www.uni-plovdiv.bg>

OCTOBER 2001-JULY 2005

Bachelor of Science in Molecular biology

Plovdiv University, Bulgaria, <http://www.uni-plovdiv.bg>

providing education and training

- Dates (from-to)
- Name and type of organization providing education and training
- Principal subjects

SEPTEMBER 1998-JUNE 2001

“Yane Sandanski” High School, Gotse Delchev-2900, Bulgaria

Main principle subjects: Biology, Chemistry

PERSONAL SKILLS AND COMPETENCES

MOTHER TONGUE

Bulgarian

OTHER LANGUAGES

English

- Reading
- Writing
- Verbal

Very good
Very good
Very good

SOCIAL, ORGANIZATIONAL SKILLS AND COMPETENCES

Ability for team-work, presentation of results and achievements
Thorough implementation of assigned tasks
Ability to prioritize own work in response to deadlines
Honesty, correctness and responsibility
Able to plan research and organize tasks effectively
Ability to resolve problems independently
Teaching and supervision of students

TECHNICAL SKILLS AND COMPETENCES

Computer work

Software operating systems – Windows, Mac OS, Linux
Specific applications – StatView, EndNote, Canvas, FlowJo

EXPERIMENTAL METHODS AND ASSAYS

Cell culturing, Generation of T cell and B cell hybridoma lines
T cell hybridoma assays
In vitro T cell restimulation assays
In vitro cytotoxicity assays
Gel electrophoresis (SDS-PAGE, N-PAGE, agarose gel electrophoresis)
Western blot, ELISA, ELISPOT, MACS, PCR
Flow cytometry
HPLC (affinity chromatography, ion-exchange chromatography, gel-filtration)
Transfection techniques
Induction and evaluation of recombinant protein expression
Purification of mouse monoclonal antibodies, recombinant MHC II proteins and T-cell receptors
Generation and purification of MHC II-peptide complexes
MHC II-peptide binding assays
Work with experimental animals (different mouse strains):
➤ Breeding and screening of transgenic mice;
➤ Intradermal, intravenous and intraperitoneal injection;
➤ Blood and lymphoid organs collection;

DRIVING LICENCE

- Induction and evaluation of collagen-induced arthritis
 - Induction and evaluation of experimental autoimmune encephalomyelitis
- Adhesion assays (evaluation of adhesion properties of bacteria to human intestinal epithelial cell lines)

Category B

ADDITIONAL INFORMATION

- Membership in professional and scientific organizations

Member of USB (Union of Scientists in Bulgaria)

Member of EFIS (European Federation of Immunological Societies)

Member of FEBS (Federation of European Biochemical Societies)

- Professional fields and scientific interests

Cell biology, Immunology

Autoimmunity, Allergy, Immunological tolerance and immune-specific vaccination, Antigen-specific immune responses, Protein posttranslational modifications, *In vitro* cytotoxicity, Anticancer activity, Biofunctionalization of nanoparticles

SCIENTIFIC PUBLICATIONS AND BOOKS

1. **Batsalova T.**, Dzhabazov B., Merky P., Bäcklund A., Bäcklund J. 2010. Breaking T cell tolerance against self-type II collagen in HLA-DR4 transgenic mice and development of autoimmune arthritis. - *Arthritis Rheum.*, 62(7): 1911-1920. DOI: 10.1002/art.27460.
2. **Batsalova T.**, Dzhabazov B., Klaczewska D., Holmdahl R. 2010. Mice producing less reactive oxygen species are relatively resistant to collagen glycopeptide vaccination against arthritis. - *J. Immunol.*, 185(5): 2701-2709. DOI: 10.4049/jimmunol.1000385
3. **Batsalova T.**, Vestberg M., Holmdahl R., Dzhabazov B. 2010. MOG79-90 peptide in complex with recombinant MHC class II molecules ameliorates experimental autoimmune encephalomyelitis. *Biotechnology & Biotechnological Equipment*. 24(2SE): 107-112. DOI: 10.1080/13102818.2010.10817822.
4. Andersson I.E., **Batsalova T.**, Dzhabazov B., Edvinsson L., Holmdahl R., Kihlberg J., Linusson A. 2010. Oxazole-modified glycopeptides that target arthritis-associated class II MHC A(q) and DR4 proteins. - *Org. Biomol. Chem.*, 8(13): 2931-2940. DOI: 10.1039/c003640d.
5. Merky P., **Batsalova T.**, Bockermann R., Dzhabazov B., Sehnert B., Burkhardt H., Backlund J. 2010. Visualization and phenotyping of pro-inflammatory antigen-specific T cells during collagen induced arthritis in a mouse with a fixed collagen type II specific transgenic TCR beta chain. - *Arthritis Res. Ther.*, 12(4):R155. DOI: 10.1186/ar3108.
6. Ivanova A., Mikhova B., **Batsalova T.**, Dzhabazov B., Kostova I. 2011. New furostanol saponins from *Smilax aspera* L. and their *in vitro* cytotoxicity. - *Fitoterapia*, 82(2): 282-287. DOI: 10.1016/j.fitote.2010.10.012.
7. Andersson I.E., Andersson C.D., **Batsalova T.**, Dzhabazov B., Holmdahl R., Kihlberg J., Linusson A. 2011. Design of glycopeptides used to investigate class II MHC binding and T-cell responses associated with autoimmune arthritis. *PLoS ONE*, 6(3):e17881. DOI: 10.1371/journal.pone.0017881.
8. Andersson I.E., **Batsalova T.**, Haag S., Dzhabazov B., Holmdahl R., Kihlberg J., Linusson A. 2011. (E)-Alkene and Ethylene Isosteres Substantially Alter the Hydrogen-Bonding Network in Class II MHC Aq/Glycopeptide Complexes and Affect T-Cell Recognition. *J. Am. Chem. Soc.*, 133(36):14368-78. DOI: 10.1021/ja2038722.
9. **Batsalova T.**, Lindh I., Backlund J., Dzhabazov B., Holmdahl R. 2012. Comparative analysis of collagen type II-specific immune responses during development of collagen-induced arthritis in two B10 mouse strains. *Arthritis Res. Ther.* 14(6):R237. DOI: 10.1186/ar4080.
10. Kostova Zh., **Batsalova T.**, Moten D., Teneva I., Dzhabazov B. 2015. Characteristics of T-cell and B-cell immune responses to pollen allergens in Bulgarian patients with pollinosis. *Journal of BioScience and Biotechnology*. 4(3): 271-283.
11. Teneva I., Klaczewska D., **Batsalova T.**, Kostova Z., Dzhabazov B. 2015. Influence of captopril on the cellular uptake and toxic potential of microcystin-LR in non-hepatic adhesive cell lines. *Toxicon*, 111. DOI: 10.1016/j.toxicon.2015.12.006.
12. Kostova Zh., **Batsalova T.**, Moten D., Teneva I., Dzhabazov B. 2015. Ragweed-allergic subjects have decreased serum levels of chemokines CCL2, CCL3, CCL4 and CCL5 out of the pollen season. *Cent Eur J immunol*, 40(4):442-446.
13. **Batsalova T.**, Ivanova P., Antova P., Dzhabazov. 2016. Humoral autoimmune response against specific collagen type II epitopes in Bulgarian patients with rheumatoid arthritis. *J BioSci Biotechnol*. 5(1):45-52.
14. Zhelev I., **Batsalova T.**, Georgieva L., Dzhabazov B., Stoyanova A., Dimitrova-Dyugerova I. 2016. Chemical composition, cytotoxicity and antioxidant activity of essential oil from *Vitex agnus-castus* fruits, growing in Bulgaria. *Oxidation Communications* 39, 1-I: 145-156.

15. **Batsalova T.**, Moten D., Basheva D., Teneva I., Dzhabazov B. 2016. *In vitro* cytotoxicity and antioxidative potential of *Nostoc microscopium* (Nostocales, Cyanobacteria). *Toxicol Forensic Med Open J.*; 1(1): 9-17. doi: 10.17140/TFMOJ-1-102.
16. **Batsalova T.**, Kostova Z., Moten D., Teneva I., Dzhabazov B. 2017. Serum levels of certain CC and CXC chemokines in birch pollen allergic individuals out of the pollen season. *Advances in Biology & Earth Sciences*, Vol.2, No.1, p. 22-33.
17. **Batsalova, T.**, Bardarov, K., Bardarov, V., Moten, D., Dzhabazov, B. 2017. Cytotoxic properties of *Clinopodium vulgare* L. Extracts on selected human cell lines. *Comptes Rendus de L'Academie Bulgare des Sciences*, 70 (5): 645-650.
18. Moten D., **Batsalova T.**, Basheva D., Mladenov R., Dzhabazov B., Teneva I. 2018. Outer membrane efflux protein (OMEP) is a suitable molecular marker for resolving the phylogeny and taxonomic status of closely related cyanobacteria. *Phycological research* 66 (1): 31-36. DOI: 10.1111/pre.12203
19. Sredkova P., Iliev I., Dzhabazov B., **Batsalova T.** 2017. Prebiotic Treatment Influence the Adhesion Properties of Three *Lactobacillus* strains. *Int.J.Curr.Microbiol.App.Sci.*, 6(9): 2914-2924. DOI: 10.20546/ijcmas.2017.609.358
20. **Batsalova T.**, Teneva I., Belkinova D., Stoyanov P., Videva S., Dzhabazov B. 2017. Assessment of Cadmium, Nickel and Lead Toxicity by Using Green Algae *Scenedesmus Incrassatulus* and Human Cell Lines: Potential *In Vitro* Test-Systems for Monitoring of Heavy Metal Pollution. *Toxicol Forensic Med Open J.*; 2 (2): 63-73. doi:10.17140/TFMOJ-2-121.
21. Georgiev Y. N., Paulsen B. S., Kiyohara H., Ciz M., Ognyanov M. H., Vasicek O., Rise F., Denev P. N., Lojek A., **Batsalova T. G.**, Dzhabazov B. M., Yamada H., Lund R., Barsett H., Krastanov A. I., Yanakieva I. Z., Kratchanova M. G. 2017. *Tilia tomentosa* pectins exhibit dual mode of action on phagocytes as β -glucuronic acid monomers are abundant in their rhamnogalacturonans I. *Carbohydr Polym.*, Nov 1;175:178-191. doi: 10.1016/j.carbpol.2017.07.073.
22. Georgiev Y. N., Ognyanov M. H., Kiyohara H., **Batsalova T. G.**, Dzhabazov B. M., Ciz M., Denev P. N., Yamada H., Paulsen B. S., Vasicek O., Lojek A., Barsett H., Antonova D., Kratchanova M. G. 2017. Acidic polysaccharide complexes from purslane, silver linden and lavender stimulate Peyer's patch immune cells through innate and adaptive mechanisms. *Int J Biol Macromol.* 2017 Dec;105 (Pt 1):730-740. doi: 10.1016/j.ijbiomac.2017.07.095.
23. **Batsalova T.**, Moten D., Mateev B., Dzhabazov B. 2018. Effects of iron oxide (II, III) nanoparticles exposure: *in vitro* evaluation using algal and human cells. 18th International multidisciplinary scientific geoconference SGEM 2018, Conference proceedings, vol. 18, issue 6.1, pp. 177-183. DOI: 10.5593/sgem2018/6.1/S24.024.
24. **Batsalova T.**, Moten D., Mateev B., Dzhabazov B. 2018. Biofunctionalized nanoparticles as diagnostic tools for autoimmune diseases. 18th International multidisciplinary scientific geoconference SGEM 2018, July 2-8, 2018. Conference proceedings, vol. 18, issue 6.1, pp. 83-89. DOI: 10.5593/sgem2018/6.1/S24.012.
25. **Batsalova T.**, Kolchakova D., Dzhabazov B. 2018. *In vitro* cytotoxicity of cyanuric acid and selected derivatives. *Toxicol Forensic Med Open J.* 2018; 3(1): 14-21. doi: 10.17140/TFMOJ-3-125.
26. **Batsalova T.**, Basheva D., Bardarov K., Bardarov V., Dzhabazov B., Teneva I. Assessment of the cytotoxicity, antioxidant activity and chemical composition of extracts from the cyanobacterium *Fischerella major* Gomont. *Chemosphere*, 2018. DOI: 10.1016/j.chemosphere.2018.11.097 (in press).

**PUBLISHED ABSTRACTS OF
PRESENTATIONS AT
SCIENTIFIC CONGRESSES**

28. Dzhambazov B., **Batsalova T.** 2010. Practicals in Cell Biology. *University Press "Paisii Hilendarski"*, 80 p. (In Bulgarian) ISBN 978-954-423-643-4.
29. Dzhambazov B., **Batsalova T.** 2014. Practicals in Cell Biology. *University Press "Paisii Hilendarski"*, 98 p. (In Bulgarian), second edition, ISBN 978-954-423-969-5.
1. **Batsalova T.**, Dzhambazov B., Klaczowska D., Holmdahl R. 2010. Reduced reactive oxygen species influence the effectiveness of type II collagen glycopeptide vaccination against arthritis. - 14th International Congress of Immunology, Kobe, Japan, August 22-27, 2010.
2. Andersson D.C., Andersson I.E., **Batsalova T.**, Dzhambazov B., Holmdahl R., Kihlberg J., Linusson A. 2010. An investigation of proteins involved in autoimmune arthritis by design and biological evaluation of chemical probes. 18th European Symposium on QSAR. "Discovery Informatics & Drug Design.", Rhodes, Greece, September 19-24, 2010.
3. Sredkova P., **Batsalova T.**, Moten D., Zheleva P., Iliev I., Dzhambazov B. 2014. Adhesion properties of *Lactobacillus* strains treated with oligosaccharides and beta-glucane. Third Balkan Scientific Conference on Biology, Plovdiv, Bulgaria, May 30 – June 1, 2014.
4. **Batsalova T.**, Moten D., Sredkova P., Georgieva E. 2014. Development of a kit for rapid diagnosis of autoimmune diseases. IFCC WorldLab Congres, Istanbul, Turkey, June 22-26, 2014.
5. Georgiev Y., Ognyanov M., **Batsalova T.**, Kussovski V., Kiyohara H., Yamada H., Denev P., Ambrozova G., Lojek A., Dzhambazov B., Kratchanova M. 2014. Chemical characterization and immunomodulating activity of selected crude herb polysaccharide extracts. First National Conference on Biotechnology "30 years Biotechnology in Bulgaria", Sofia, Bulgaria, October 17-18, 2014.
6. **Batsalova T.**, Kostova Z., Moten D., Teneva I., Dzhambazov B. 2015. Birch pollen-allergic patients have increased serum levels of the chemokines CCL11, CCL17, CCL22, CXCL9, CXCL10 and decreased serum levels of CXCL1 out of the pollen season. 4th European Congress of Immunology, Vienna, Austria, September 6-9, 2015.
7. Georgiev Y., Ognyanov M., Kussovski V., **Batsalova T.**, Dimitrova R., Denev P., Dzhambazov B., Antonova D., Kiyohara H., Číž M., Lojek A., Krastanov A., Yamada H., Kratchanova M. 2015. *In vitro* evaluation of the immunomodulatory potential of polysaccharide-containing complex from Bulgarian lavender and its active constituents. 4th EPNOE International Polysaccharide Conference, Warsaw, Poland, October 19-22, 2015.
8. **Batsalova T.**, Kostova Zh., Moten D., Teneva I., Dzhambazov B. 2015. Birch pollen-allergic patients have increased serum levels of the chemokines CCL11, CCL17, CCL22, CXCL9, CXCL1 out of the pollen season. 4th European Congress of Immunology, Vienna, Austria, September 6-9, 2015.
9. Chaushev T., Staykov V., **Batsalova T.**, Stamenov G., Dzhambazov B. 2015. Association between follicular fluid levels of chemokines with implantation potential of the human embryo in natural cycle in vitro fertilization. 4th European Congress of Immunology, Vienna, Austria, September 6-9, 2015.
10. **Batsalova T.**, Moten D., Mateev B., Dzhambazov B. 2016. Comparative immunophenotypic analysis in pregnant and non-pregnant women. Jubilee Scientific Conference „10 years Bulgarian Association of Clinical Immunology”, Sofia, Bulgaria, October 28-29, 2016.
11. **Batsalova T.**, Moten D., Mateev B., Dzhambazov B. 2018. *In vitro* cytotoxicity of surface functionalized iron oxide (II, III) nanoparticles. 43rd FEBS Congress, Prague, Czech Republic, July 7-12, 2018. FEBS Open Bio 8 (Suppl. S1) (2018) 107–496 DOI: 10.1002/2211-5463.12453
12. **Batsalova T.**, Moten D., Mateev B., Dzhambazov B. Biofunctionalized nanoparticles: potential application in diagnostic assays for autoimmune diseases and participation in autoantigen-specific immune reactions. 5th national congress of immunology "Immunology for all", Plovdiv, Bulgaria, October 25-28, 2018.