

# METHODS FOR GENOTOXICITY DETECTION AND EVALUATION

## “A Field Detector for Genotoxicity from CBRN and Explosive Devices”



NATO SPS MYP G5266  
12th – 16th May 2019  
Stip, Republic of North Macedonia



Training Course Programme

The Training course will consist of two parts: Lectures and Laboratory training. The lectures will take place at the premises of the Faculty of Educational Sciences and the Faculty of Law, University “Goce Delcev”, Stip, Republic of North Macedonia. The laboratory training will take place at the Laboratory of Biochemistry, Faculty of Medical Sciences, University “Goce Delcev”, Stip, Republic of North Macedonia.

12 <sup>th</sup> May 2019	Arrival of the participants
13 <sup>th</sup> May 2019	At the premises of the Faculty of Educational Sciences
9:00–9:15	Registration and welcome addresses
9:15–9:30	Registration of the participants <b>Welcome address by Prof. Tatjana Ruskovska</b> , NATO SPS MYP G5266 PPD, Faculty of Medical Sciences, University “Goce Delcev”, Stip, Republic of North Macedonia
9:30 –9:45	<b>Welcome address by Prof. George Miloshev</b> , NATO SPS MYP G5266 NPD, Head of Laboratory of Yeast Molecular Genetics, Institute of Molecular Biology (IBM), Bulgarian Academy of Sciences (BAS), Sofia, Bulgaria
9:45 –10:00	Brief introduction of the participants
10:00 –11:00	Lectures <b>Prof. George Miloshev</b> , NATO SPS MYP G5266 NPD, Head of Laboratory of Yeast Molecular Genetics, IBM-BAS, Sofia, Bulgaria <b>Title:</b> <i>Development of hand-held detector for genotoxicity testing – current status and future perspectives.</i>
11:00 –11:30	Coffee break
11:30 –12:00	<b>Prof. Tatjana Ruskovska</b> , NATO SPS MYP G5266 PPD, Faculty of Medical Sciences, University “Goce Delcev”, Stip, Republic of North Macedonia <b>Title:</b> <i>Implementation and optimization of the Comet assay</i>
12:00 –12:30	<b>Prof. Nevenka Velickova</b> , Faculty of Medical Sciences, University “Goce Delcev”, Stip, Republic of North Macedonia <b>Title:</b> <i>Micronucleus assay - useful tool for screening genome instability in human biomonitoring studies (Principles, applications and recommendations)</i>
12:30 – 13:00	Meeting with the Rector of University “Goce Delcev”, Prof. Blazo Boev
13:00 – 14:00	Visit to the St. Mary’s Church and City Museum with wax figures, Novo Selo
14:00 –15:30	Lunch

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*This project  
is supported by:*

The NATO Science for Peace  
and Security Programme

Laboratory training  
15.30 - 18.30

**Misko Milev**, NATO SPS MYP G5266 Project participant, Faculty of Medical Sciences, University "Goce Delcev", Stip, Republic of Republic of North Macedonia and **Prof. Nevenka Velickova**, Faculty of Medical Sciences, University "Goce Delcev", Stip, Republic of North Macedonia

**Micronucleus assay**

- Procedure, Principles, Collection and cultivation of the cells, Slide preparation, Staining
- Hands-on experience
- Questions and answers

Tuesday, 14<sup>th</sup> May 2019

At the Laboratory of Biochemistry, Faculty of Medical Sciences

Laboratory training  
9:00 - 11:30

**Misko Milev**, NATO SPS MYP G5266 Project participant, Faculty of Medical Sciences, University "Goce Delcev", Stip, Republic of Republic of North Macedonia, **Prof. Nevenka Velickova**, Faculty of Medical Sciences, University "Goce Delcev", Stip, Republic of North Macedonia

**Micronucleus assay**

- Slide analysis
- Assessment of the results
- Observation of evaluation criteria
- Questions and answers

11:30 - 12:00

Coffee break

12:00 - 13:00

Visit the National museum , Stip

13:00 - 14:30

Lunch

14:30 - 18:00

Parallel sessions

**A. YOUNG SCIENTISTS' SESSION**

**B. MEETING OF CO-DIRECTORS**

A. Young scientists' session - Open session

At the premises of the Faculty of Educational Sciences

14:30 - 14:50

**Moderators: Viktorija Maksimova and Serkan Sen**

**Bela Vasileva**, NATO SPS MYP G5266 Project participant, IBM-BAS, Sofia, Bulgaria

**Title:** *Genotoxic stress induces premature ageing phenotypes.*

14:50 - 15:10

**Serkan Sen**, NATO SPS MYP G5266 Project participant, Ataturk Vocational School of Health Services, Afyonkarahisar Health Science University, Turkey

**Title:** *Does antiplatelet therapy show hypoglycemic effect?*

15:10 - 15:30

**Viktorija Maksimova**, NATO SPS MYP G5266 Project participant, Faculty of Medical Sciences, University "Goce Delcev", Stip, Republic of North Macedonia

**Title:** *Medicinal plants and their effects against free radical induced changes in the cell.*

15:30 - 15:50

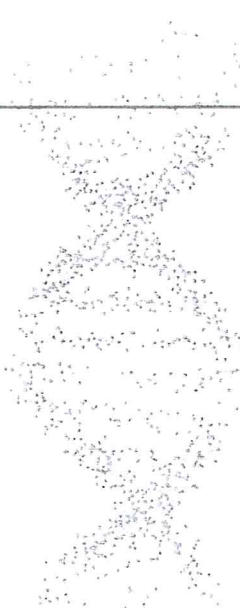
**Michael Adejokun**, NATO SPS MYP G5266 Project participant, College of Staten Island, New York, USA

**Title:** *Alcohol metabolism in probiotic bacteria.*

15:50 - 16:10

**Diana Laterman**, NATO SPS MYP G5266 Project participant, College of Staten Island, New York, USA

**Title:** *Post-translational modification of yeast chromatin remodeler Ino80p.*



16:10 – 16:30 **Milkica Janeva**, NATO SPS MYP G5266 Project participant, Faculty of Medical Sciences, University "Goce Delcev", Stip, Republic of North Macedonia  
**Title:** *Voltammetry as a tool in drug analysis.*

16:30 – 18:00 Round table discussion  
B. Meeting of co-directors  
At the premises of the Faculty of Law

Wednesday, 15<sup>th</sup> May 2019  
At the premises of the Faculty of Law

Lectures – Open session

9:00 – 10:00 **Prof. Chang-Hui Shen**, NATO SPS MYP G5266 Project Co-Director, College of Staten Island, New York, USA  
**Title:** *The molecular mechanism of cellular response to environmental genotoxins.*

10:00 – 10:30 **Dr. Rodney Rosalia**, Scientific Officer and Quality Assurance Officer, Zan Mitrev Klinik, Skopje, Republic of North Macedonia  
**Title:** *Cardiovascular Procedures in North Macedonia - "The analysis of Demographic, Clinical and Genetic Risk factors for adverse outcome".*

10:30 – 11:00 Coffee break

11:00 – 11:30 **Prof. Jadranka Blazevska Gilev**, Co-director of the NATO Project "Graphene/Polymer Based sensor", SPS G5244, Faculty of Technology and Metallurgy, Ss. Cyril and Methodius University, Skopje, Republic of North Macedonia  
**Title:** *Laser ablation of polymer/reduced graphene oxide nanocomposites.*

11:30 – 12:00 **Prof. Valentin Mirceski**, Co-director of the NATO Project "Gas Sensors for Preventing Terrorist Attacks" SPS G5550, Institute of Chemistry, Faculty of Natural Sciences and Mathematics, Ss. Cyril and Methodius University, Skopje, Republic of North Macedonia  
**Title:** *Advanced electrochemical techniques for sensor development.*

12:30 – 14:00 Lunch

At the Laboratory of Biochemistry, Faculty of Medical Sciences

Laboratory training

14:30 – 18:00 **Ass. Prof. Viktorija Maksimova**, NATO SPS MYP G5266 Project participant, Faculty of Medical Sciences, University "Goce Delcev", Stip, Republic of North Macedonia, and **Milkica Janeva**, NATO SPS MYP G5266 Project participant, Faculty of Medical Sciences, University "Goce Delcev", Stip, Republic of North Macedonia

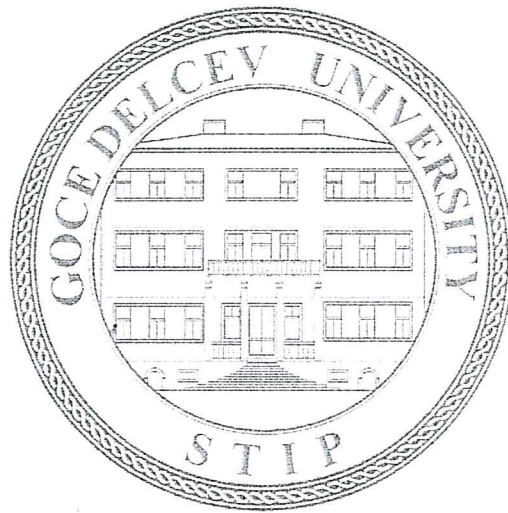
**Electrochemistry methods**

- Introduction to the practical aspects of the method
- Studying of the protocol
- Preparation of reagents and samples
- Hands-on experience
- Assessment of the results
- Questions and answers

19:00 **Get-together dinner**

Thursday, 16<sup>th</sup> May 2019  
Departure of the participants

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## GOCE DELCEV UNIVERSITY STIP

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