



Ministry of Health
National Center of Public health and Analyses

National reference laboratory for genetically modified organisms celebrates 10 years of existence

Based on (EC) № 882/2004, № 1829/2004 and № 120/2014

Accredited according EN ISO 17025:2006

Member of „European Network of GMO Laboratories“

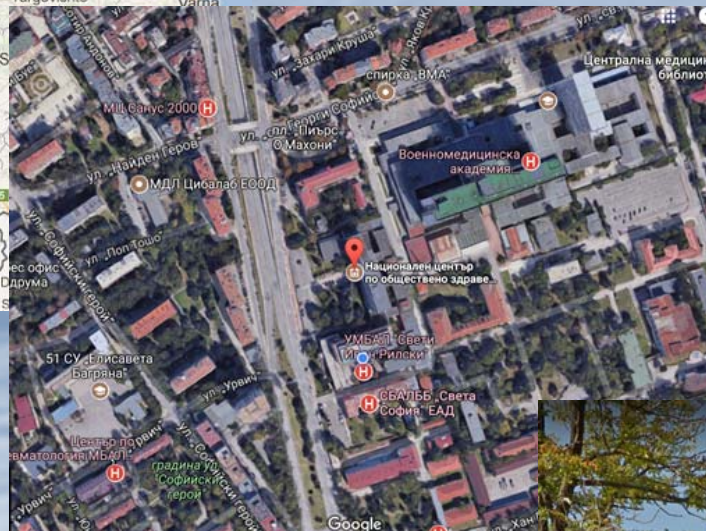
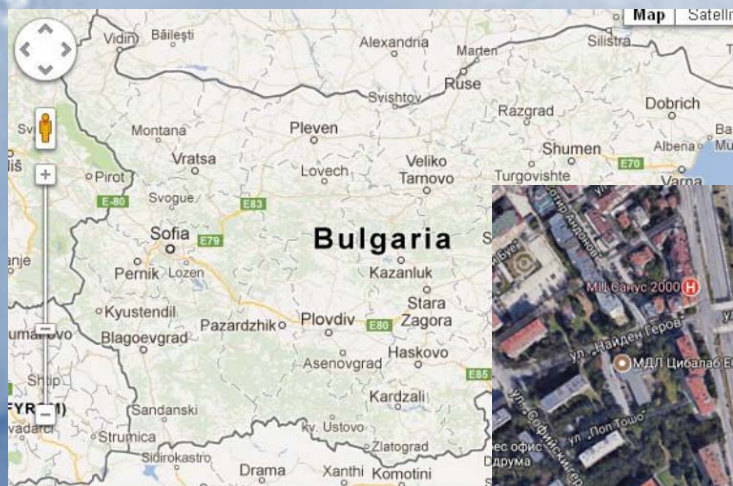


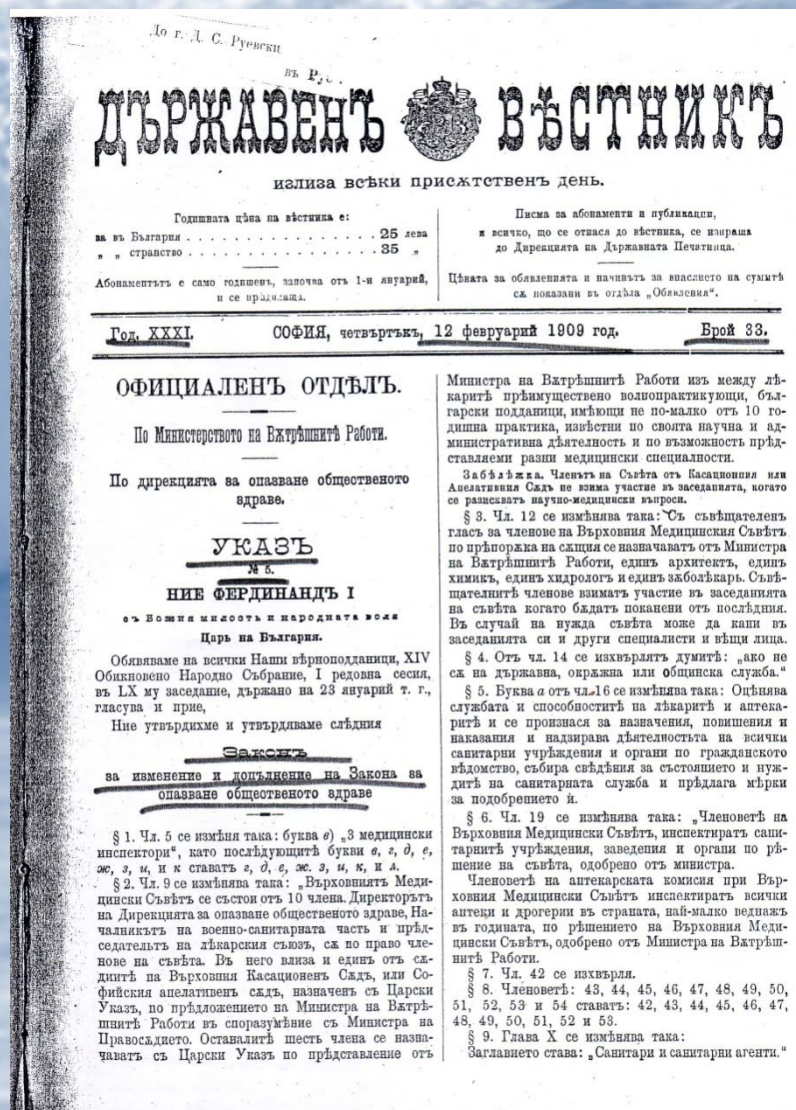
Assoc Prof Tzveta Georgieva, sen.ass. Vidka Nikolova

“10 years of food science in service of consumers”, 31.10 – 2.11. 2017, Sofia

Where we are?

National Center of Public Health and Analyses





The establishment of the first Hygiene institute was done with an amendment to the Public Health Act, which was adopted in 1903 following the Sanitary Law promulgated in the “State Gazette” of 12 February 1909, approved by Decree No. 5 of Ferdinand I, the King of Bulgaria



Ministry of Health National Center of Public Health and Analyses

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About us

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Health statistics

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Main activities

[Activity reports](#)[Scientific activities](#)[National Plans and Programmes](#)[International Activities](#)

Commissions

[Committee on Rare Diseases](#)[Committee on Health
Technology Assessment](#)

Printed and electronic publications

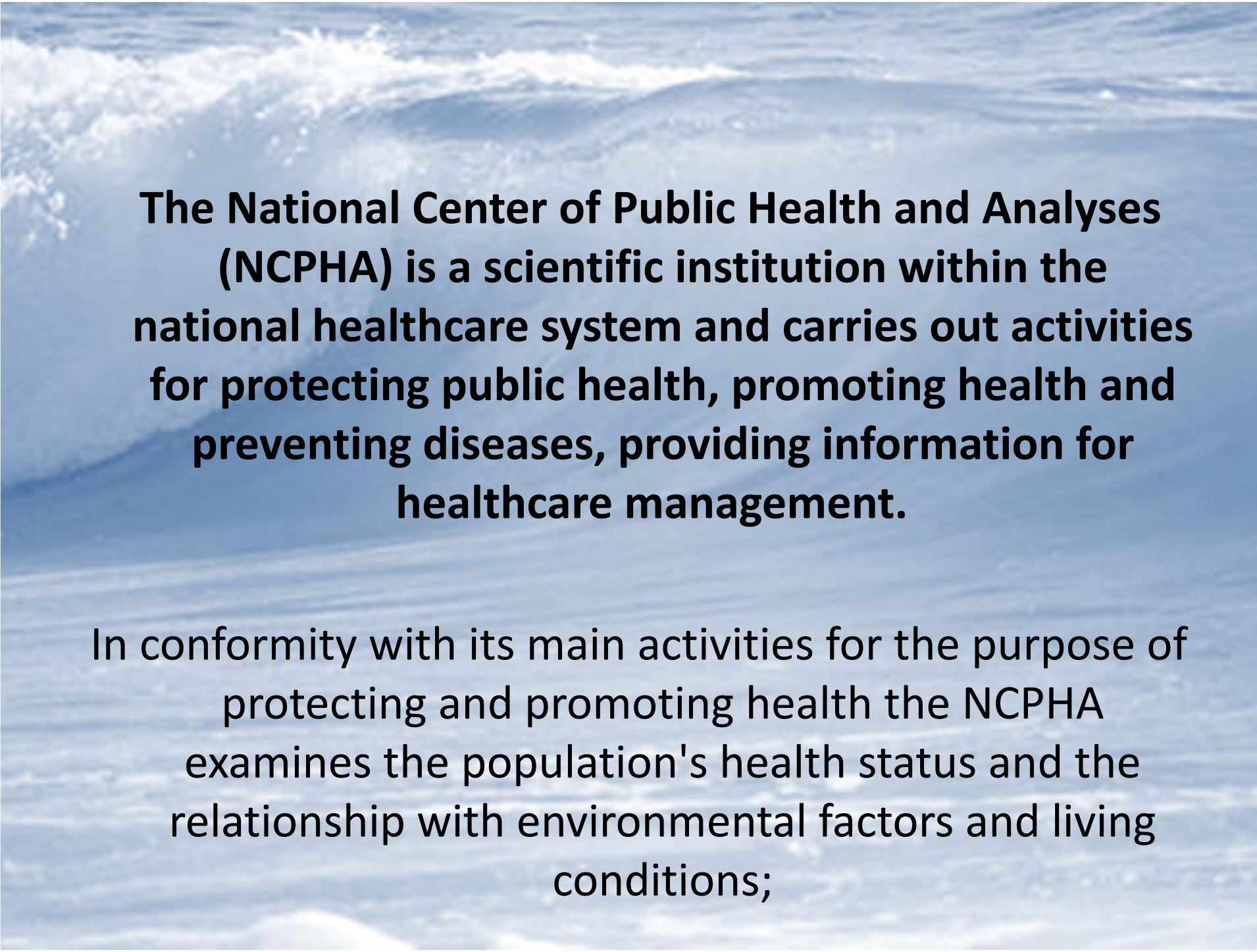
[Editions of NCPHA](#)

The National Center of Public Health and Analyses (NCPHA) is a structure within the national healthcare system and carries out activities for protecting public health, promoting health and preventing diseases, providing information for healthcare management.

In conformity with its main activities for the purpose of protecting and promoting health the NCPHA examines the population's health status and the relationship with environmental factors and living conditions; conducts epidemiological surveys and evaluates risk factors for chronic non-communicable diseases; participates in the development, coordination and performance of national programmes and action plans as well as in international research programmes oriented to strengthening public health (including mental, reproductive and sexual); carries out intervention activities, training workshops and publishes information and methodical materials; assesses exposure and health risk for the population from the impact of biological, chemical and physical hazards on the ambient and working environment as appropriate recommendations have been prepared; conducts monitoring on nutrition and nutritional status of the population and develops Manuals for nutrition of target population groups.

The NCPHA leads, controls, monitors and coordinates information activities in the healthcare, develops and unifies the medical and statistical documentation for the population health status and for the resources and activities of hospitals; develops mathematic models and prognoses for the

[Register of sources of
electromagnetic fields](#)[Online training
„Early detection of
anxiety
and depression in
primary care“](#)[Site for mental health](#)



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In conformity with its main activities for the purpose of protecting and promoting health the NCPHA examines the population's health status and the relationship with environmental factors and living conditions;

Activities

- participates in the development, coordination and performance of national programmes and action plans as well as in international research programmes oriented to strengthening public health (including mental, reproductive and sexual);
- conducts monitoring on nutrition and nutritional status of the population and develops Manuals for nutrition of target population groups carries out
- conducts epidemiological surveys and evaluates risk factors for chronic non-communicable diseases;
- assesses exposure and health risk for the population from the environment and workplace;
- intervention activities, training workshops and publishes information and methodical materials;

Our Mission

- To integrate diverse activities into achieving good health benefits for the population. All the efforts of employees in the NCPHA - specialists with academic ranks and degrees, experts and technical personnel - are oriented to applying modern technologies in the field of public health and occupying a leading place in the national healthcare.

Bulgarian EFSA focal point

- In 2007 Bulgaria EFSA focal point was established in NCPHA - coordinator Assoc. Prof. Tery Vrabceva, MD, PhD



The screenshot shows the website of the Bulgarian EFSA Focal Point. The header features the EFSA logo and the text 'БЪЛГАРСКИ КОНТАКТЕН ЦЕНТЪР НА ЕВРОПЕЙСКИ ОРГАН ПО БЕЗОПАСНОСТ НА ХРАНИТЕ'. A search bar is present with the placeholder text 'Въведете дума за търсене'. The main content area has a headline 'Създаден е Български фокален център към EFSA' followed by two paragraphs of text. The left sidebar contains a menu with links like 'За нас', 'Научни организации', 'Новини', 'Обяви на ЕФСА', 'Събития', and 'Библиотека'. The right sidebar lists 'EFSA' related items such as 'EFSA Newsletters high', 'EFSA email alerts', 'Актуални консултации', 'Актуални покани за д', 'Предложения', and 'Свободни места'. A map of Europe is visible in the bottom right corner.

EFSA ФОКАЛЕН ЦЕНТЪР
БЪЛГАРИЯ

За нас
Научни организации
Новини
Обяви на ЕФСА
Събития
Библиотека

Контакти

Регистрирайте се като е

БЪЛГАРСКИ КОНТАКТЕН ЦЕНТЪР
НА ЕВРОПЕЙСКИ ОРГАН ПО БЕЗОПАСНОСТ НА ХРАНИТЕ

Въведете дума за търсене

Създаден е Български фокален център към EFSA

Понастоящем EFSA изгражда нови структури в държавите – членки, т. нар. Фокални точки (Focal Point), чиято основна цел е да подпомага дейността на члена на Консултативния съвет

Фокалната точка работи в тясно сътрудничество с члена на Консултативния съвет и подпомага неговата дейност.

За Фокална точка на EFSA по оценката на риска за България е определен Центъра за координация и подкрепа на обучението по контрола върху безопасността на храните, функционална структура в рамките на НЦООЗ с лице за контакт доцент д-р Тери Врабчева като ръководител на този Център.

[повече информация](#)

EFSA

EFSA Newsletters high

EFSA email alerts **нов**

Актуални консултации

Актуални покани за д

Предложения

Свободни места

BG / EN

Laboratory for GMO analyses

- Twinning PHARE Project BG/2004/IB/EC/01 between Bulgarian Ministry of Health and Ha Austrian Environmental Agency
"Strengthening of health control on chemical substances, preparations and products, novel foods and new food ingredients, GM foods and GM food ingredients, irradiated foods and food components" 2005 - 2007

The Beginning



Our Duties and Responsivities

- The risk assessment and control of *GMOs* is a matter of shared responsibility of three ministries and their structures - the Ministry of Agriculture and Food and the Bulgarian Food Safety Agency, the Ministry of Health and the National Center of Public Health and Analyses, the Ministry of Environment and Waters and the Executive Environmental Agency .
- Based of National and European legislation

NRL in accordance with Regulation (EC) No 882/2004 of the European Parliament and of the Council on official controls performed to verify the feed and food law, animal health and animal welfare requirements

Tasks , according Articles 32 and 33

- (a) collaborate with the Community reference laboratory in their area of competence;
- (b) coordinate, for their area of competence, the activities of official laboratories responsible for the analysis of samples in accordance with Article 11;
- (c) where appropriate, organise comparative tests between the official national laboratories and ensure an appropriate follow-up of such comparative testing;
- (d) ensure the dissemination to the competent authority and official national laboratories of information that the Community reference laboratory supplies;
- (e) provide scientific and technical assistance to the competent authority for the implementation of coordinated control plans adopted in accordance with Article 53;
- (f) be responsible for carrying out other specific duties provided for in accordance with the procedure referred to in Article 62(3), without prejudice to existing additional national duties.

NRL in accordance with Regulation (EC) No 1829/2003 on genetically modified food and feed

- **Validation of official methods**
- Article 23.2. For the purposes of Regulation (EC) No 1829/2003, the Joint Research Center of the European Commission shall be assisted by a consortium of national reference laboratories, which shall be defined as the "European Network of GMO Laboratories "
- Activities are coordinated and funded by the European Reference Laboratory for GMOs (EURL-GMFF) and include the national reference laboratories of all Member States. Laboratories must meet the criteria set out in Regulation (EC) No 1981/2006 laying down detailed rules for the implementation of Article 2 of Regulation (EC) No 1829/2003 of the European Parliament relating to the European Reference Laboratory and the EC Regulation) No 120/2014, which supplements Regulation No 1981/2006



European Network of GMO Laboratories

- The European Network of GMO Laboratories (ENGL) plays an eminent role in the development, harmonisation and standardisation of means and methods for sampling, detection, identification and quantification of Genetically Modified Organisms (GMOs) in a wide variety of products, ranging from seeds, grains, to food and feed stuff.
- The network was inaugurated in Brussels on December 4th 2002 and it currently consists of 95 national enforcement laboratories, from all 28 EU Member States plus Norway, Switzerland and Turkey.

Primary purpose

- The primary purpose of the ENGL is to help solve the large number of challenges that enforcement laboratories face in the field of detection, identification and quantification of GMOs
- The ENGL consortium agreement foresees a number of ways for achieving this purpose:
 - The organization of plenary meetings for the exchange of experience;
 - The organization of working groups on topical issues of general interest;
 - Co-operative research, exchange of scientists, training;
 - Technology transfer between ENGL members;
 - The exchange of scientific literature..

ENGL members from Bulgaria



- AGROBIONINSTITUTE - since establishment of ENGL in 2002
- NCPHA - since 2007
- Bulgarian Executive Environmental Agency since 2010

Activities of NCPHA in ENGL

- Steering Committee member
- Plenary meeting and Working groups
- Preparation of guidance documents
- Validation of new methods
- Capacity Building - Training "Quality Management - ISO EN/ IEC17025 accreditation" - participants from 12 laboratories from 10 ENGL member states, 2 laboratories from Serbia and Malaysia, as well as representatives from EA Bulgarian Accreditation Service
- Participation in scientific projects



Risk assessment activities

- Advisory Committee on GMOs to the Minister of Environment and Water - Environmental Risk Assessment; medicinal products for human and veterinary use, registration of premises for contained use of GMOs
- Working together with EFSA's Bulgarian Focal Point and the Risk Assessment Center on the Food Chain
- EFSA Scientific Network for Risk Assessment of GMOs - since 2010 - Molecular Characteristics, Food and Feed

Validation of new methods - part of the process of registration of new GMOs in the EC

- Event-specific Method for the Quantification of Soybean FG72 Validation Report" EURLVL04/10VR <http://gmo-crl.jrc.ec.europa.eu/summaries/EURL-VL-04%2010%20VR.pdf>
- EU-RL VL-04/12 Real-time PCR метод за определяне на ГМ соева линия SYHT0H2 <http://gmo-crl.jrc.ec.europa.eu/summaries/EURL-VL-04-12-VR.pdf>
- EU-RL VL-02/14 Ring trial for EURL GMFF validation study VL-02/14 concerning an event-specific method for the detection, identification and quantification of GM-Maize DP-004114-3"

The NRL implements emergency measures in the case of unauthorized GMOs on the European market

- Commission Decision 2011/884 / EU on emergency measures in relation to unauthorized GM rice and rice products imported from China.
- Commission Decision 2013/287 / EU, supplementing Commission Decision 2011/884 / EU
- The NCPHA analyzes samples of Bulgarian imports from customs in Thessaloniki and Athens

New challenges

- GM animals - GM salmon
- GM petunia, GM ornamental fish - notification dated 25 April 2017
- New gene editing techniques to create new cultures:
 - RNAi - RNA interference
 - CRISPAR /CAS - change of the transcription by regulation change
- Synthetic biology

Scientific Projects

- EURL Project "Pre spotted Plate" for the simultaneous determination of multiple gene modifications by application of RealTime PCR analyses
- CoSYS Project - SYBERGreen PCR screening system in collaboration with Public Health Institute , Belgium
GMOVal - Qualitative PCR method for detection of T35S pCAMBIA sequences; 2016 Qualitative PCR method for detection of tE9 terminator
- Decathlon - Detection of tobacco and tobacco derived products; DNA isolation, Real-Time PCR and LAMP

Scientific Projects

- Study of genotype (single nucleotide polymorphisms in FADS1 genes) and lipid metabolism to modify diet (funded by the program of Pleven University for Research Projects (No 3/2016))
- Species identification and detection by RealTime PCR of toxic microalgae NCPHA, Faculty of Pharmacy, Medical University Sofia
- Deployment for the detection of Escherichia coli producing Shiga toxin (STEC) belonging to O157, O111, O26, O103 and O145 serogroups by PCR in food and sediments, NCPHA



www.molreg.com

← → ↻ molreg.com ☆ ⌵ ⌵ ⋮



MOLECULAR REGISTER

Language - [EN](#) [BG](#)

Проектът се изпълнява с финансовата подкрепа на Оперативна програма „Развитие на конкурентоспособността на българската икономика“ 2007-2013, съфинансирана от Европейския съюз чрез Европейски фонд за регионално развитие и от националния бюджет на Република България



ИНВЕСТИРАМЕ
ВЪВ ВАШЕТО
БЪДЕЩЕ

ЕВРОПЕЙСКИ СЪЮЗ
ЕВРОПЕЙСКИ ФОНД ЗА РЕГИОНАЛНО РАЗВИТИЕ

Управляващ орган на
ОПЕРАТИВНА ПРОГРАМА
„Развитие на конкурентоспособността
на българската икономика“ 2007-2013



Проект **„УЕБ-БАЗИРАНО ПРИЛОЖЕНИЕ НА МОЛЕКУЛЯРЕН РЕГИСТЪР В ИНОВАТИВНА МРЕЖА“**
с договор № BG161PO003-1.1.05-0197-C0001 с бенефициент ЕТЕРА СИСТЕМС ООД



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Sector 1. Guide to Web-based
Innovative Network on
Bioinformatics, Biotechnology
Marketing



GMO
Expertise

Sector 2. Expertise on Genetically-
Modified Organisms (GMO)



Sector 3. Structural-Functional
Register of micro-RNAs



Sector 4. Sequencing Analysis of
Protein-Markers

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Web-based application of a molecular register in an innovative network -
BG161PO003-1.1.05-0197-C0001 OP "Competitiveness Development of
the Bulgarian Economy" 2007-2013

PhD Theses

- Ruzha Babekova, PhD - "DETECTION OF UNAUTHORIZED GM INSECT RESISTANCE RICE" in collaboration with Bavarian Health and Food Safety Authority, Germany and Munich Technical University
- Dipl. Eng. Petja Stefanova, PhD - "PCR METHODS FOR THE SCREENING AND QUANTIFICATION OF GM SOY IN MEAT PRODUCTS» - in Collaboration with University of Food Technology, Plovdiv



2017

Two PhD thesis are developed

- Elena Kuzova-"GENETIC MARKERS FOR THE ASSESSMENT OF NUTRIENT ABSORPTION"
- Victroia Ilieva- "SAFETY ASSESSMENT OF TOXINS FROM NATURAL SOURCES BY APPLYING DIFFERENT *IN VITRO* METHODS

GMO trainings and workshops

- Postgraduate trainings - annually since 2008
- Training and support of other GMO laboratories in Bulgaria - annually workshops
- From 2013 to 2015, Master's Degree Program "Food Safety", University of Food Technologies, Plovdiv
- Diplomatic - Faculty of Pharmacy, New Bulgarian University
- Student Practices
- Training of PhD students

The Team



- Vidka Nikolova
- Marian Najdenova
- Milena Dimitrova
- Emiliq Hristova
- Irean Petkova
- Neli Manolova
- Diana Hristakieva
- Petko Petkov
- Alexandra Pironeva
- Elena Kuzova
- Stanimira Arsova
- Donka Dimbareva
- Viktoria Ilieva



Thank you for your attention !

NCPHA, Test Center Zdrave”

Tel. 359 (2) 8056 239; GSM: 0884642433

e-mail: tzv.georgieva@ncpha.government.bg

<http://www.ncpha.government.bg/>