**Preparation and implementation of training services consisting in the implementation of classes within the frameworks of International Summer School in Białystok for PhD students, as part of the project entitled: "Interdisciplinary, international doctoral studies in medical biology and pharmaceutical sciences at the Medical University of Bialystok" co-financed by the European Social Fund as part of the Operational Programme Knowledge Education Development 2014-2020.**

**Case No:**

**AWM/NCBR/16/2021/TM**

**Date of issue:**

2021-04-07

**Request for Proposal:**

for the selection of a Contractor for a procurement whose subject matter is social services and other specific services listed in Appendix no. 14 to Directive 2014/24/EU and Appendix no. 17 to Directive 2014/25/EU (hereinafter referred to as social services), implemented pursuant to Article 2.1.1 of the Act dated 11 September 2019. Public Procurement Law (Journal of Laws dated 2019, item 2019 as amended); -

1. **Subject matter of the procurement:**
2. **Type of procurement**

Social services

1. **Description of the subject matter of the procurement:**
2. The procurement refers to the project entitled "Interdisciplinary, international doctoral studies in medical biology and pharmaceutical sciences at the Medical University of Bialystok", co-financed by the European Social Fund as part of the Operational Programme Knowledge Education Development 2014-2020.
3. The subject matter of the procurement is to prepare and conduct a training service consisting of the delivery of lectures and workshops/laboratories in English within the framework of the international summer school in Białystok entitled "The role of scientific discourse and modern research technologies in achieving successful scientific results" in an on-line conference format via one of the available Internet platforms with the participation of 12 doctoral students of the International Doctoral Studies in Medical Sciences and Pharmaceutical Sciences.
4. Information regarding the summer school in Białystok:

In total, the summer school in Białystok will last 5 days.Planned number of class hours per day:

Day I: 8 didactic hours of lectures;

Day II: 8 didactic hours of doctoral student presentations and discussions;

Day III-V: 24 didactic hours of workshops/laboratories x 6 groups, where 1 didactic hour = 45 minutes. Workshop activities are planned to be executed parallel to one another.

The schedule of the summer school, indicating the specific day and time of each activity, shall be agreed upon in cooperation between the Contracting Authority and the Contractors no later than 30 days before the commencement of the summer school. The classes are scheduled to take place between 8:00 am and 6:00 pm local time (Bialystok, Poland). The Contractor will be required to attend all parts of the summer school.

A representative of the Contracting Authority will act as the coordinator of the summer school in Białystok. The Medical University of Bialystok will also appoint a person(s) to coordinate the administration of the summer school in Bialystok.

The framework summer school program includes:

* lectures given by lecturers from abroad and discussion regarding them;
* presentations given by doctoral students and discussion regarding them;
* individual practical scientific laboratory and methodological workshops on research techniques that were not discussed in the framework of research methodology at doctoral studies and that most doctoral students did not use in their scientific work

The Contracting Authority will appoint six employees of the Medical University of Bialystok who will be responsible for co-leading workshops, supervision and support in the laboratories of the Medical University of Bialystok.

The Contracting Authority will provide reagents and small consumable equipment necessary for the summer school practical classes. Reagents and small consumable equipment will be delivered to the summer school location.

The Contracting Authority will provide at least the following reagents and small consumable equipment for the classes, including but not limited to:

Merck’s 1 liter Suprapur Spectrally Pure Nitric Acid, Pipette tips up to 200 ul, Pipette tips up to 1000 ul, 1.5 ml eppendorf tubes, Nitrile gloves, Latex gloves, Elisa kit for testing: human p53 alpha ELISA- abcam SimpleStep ELISA kit, EpellPlusTM tips up to 200 microL, Fintip 300 tips, a multi-channel pipette liquid collection container, a Luminex MILLIPLEX® MAP Human Neurological Disorders Magnetic Bead Panel 3 kit containing the following proteins: AGT, Kallikrein-6, Osteopontin, SOD1 SOD2, a Luminex MILLIPLEX® MAP Human Neuroscience Magnetic Bead Panel 1 kit containing the following proteins: α-Synuclein, DJ1/PARK7, Glial fibrillary acidic protein (GFAP), Neuron specific enolase (NSE), Transglutaminase 2 (TGM2), and Ubiquitin carboxyl-terminal esterase L1 (UCHL1/PARK5).

1. Topics and number of class hours:

The total number of didactic hours within each part of the subject matter of the procurement: 40, including:

* 8 didactic hours of lectures;
* 8 didactic hours of presentations by Participants of the International Doctoral Studies and discussions;
* 24 didactic hours of workshops/lab classes.

The subject matter of the agreement is to conduct the following classes:

**Part 1:**

* Attendance during lectures by lecturers from abroad (8 didactic hours) in which the Contractor will present the topic: Michael acceptors as tools in drug design. Pro and contra (lecture - 1 didactic hour + 15 min discussion)
* Immunoenzymatic assessment of antitumor activity of newly synthesized triazine derivatives (workshops/lab classes - 24 didactic hours)
* Participation in presentations given by the Participants of the International Doctoral Studies and in discussions - 8 didactic hours;
* The total number of didactic hours under Part I is: 40.

**Part 2:**

* Attendance during lectures by lecturers from abroad (8 didactic hours) in which the Contractor will present the topic: Osteogenesis Imperfecta a paradigmatic disorder family associated to collagen type I (lecture - 1 didactic hour + 15 min discussion)
* Biochemical and molecular tools to study heritable disorders: use of in vitro and in vivo models. Materials for preparation of construct for CRISPR/Cas9 transfection in cells (workshops/lab classes - 24 didactic hours)
* Participation in presentations given by the Participants of the International Doctoral Studies and in discussions - 8 didactic hours;
* The total number of didactic hours under Part II is: 40

**Part 3:**

* Attendance during lectures by lecturers from abroad (8 didactic hours) in which the Contractor will present the topic: Mitochondrial functions in hypoxic/ischemic injury (lecture - 1 hour + 15 min discussion)
* Evaluation of mitochondrial function (activity of complex I of the respiratory chain, H2O2 generation) (workshops/lab classes - 24 didactic hours)
* Participation in presentations given by the Participants of the International Doctoral Studies and in discussions - 8 didactic hours;
* The total number of didactic hours under Part III is: 40.

**Part 4:**

* Attendance during lectures by lecturers from abroad (8 didactic hours) in which the Contractor will present the topic: The Secrets of Success in Science (lecture - 1 didactic hour + 15 min discussion)
* Application of inductively coupled plasma mass spectrometry for determination of mineral components in food (workshops/lab classes- 24 didactic hours)
* Participation in presentations given by the Participants of the International Doctoral Studies and in discussions - 8 didactic hours;
* The total number of didactic hours under Part IV is: 40.

**Part 5:**

* Attendance during lectures by lecturers from abroad (8 didactic hours) in which the Contractor will present the topic: CosmoGreen - modern eco-friendly methods for the extraction of plant material (lecture - 1 didactic hour + 15 min discussion)
* Modern omics-based approaches for analysis of natural products - new strategies for drug analysis (workshops/lab classes - 24 didactic hours)
* Participation in presentations given by the Participants of the International Doctoral Studies and in discussions - 8 didactic hours;
* The total number of didactic hours under Part V is: 40.

24 teaching hours (for 6 groups) within the summer school will be practical classes (workshops/laboratories), while 8 teaching hours within the total number of classes will be of a lecture nature. Additionally, on the second day of the summer school8 didactic hours will be devoted to doctoral student presentations and discussion.

A Contractor may submit an offer concerning one part of the procurement.

The thematic scope in relation to particular classes is included in the appendix to the detailed description of the subject matter of the procurement.

1. Form of class delivery:

* All workshop classes will be conducted in a closed formula, dedicated to doctoral students of international doctoral studies in medical and pharmaceutical sciences at the MUB;
* The Contractor for each topic will verify what the participants' needs are for the specific workshop topic prior to the start of the summer school by sending a brief survey to the Contracting Authority at least 30 days in advance of the workshop;
* The Contractor for each topic will present a curriculum of the classes for the Contracting Authority's approval.
* the lectures will be delivered to the whole target group, i.e. 12 Participants of the International Doctoral Studies and to persons indicated or invited by the Contracting Authority;
* work in groups of 2 in the case of workshops/lab classes;
* Workshops/lab classes will be conducted in the form activating participants, with personal support of scientists from the Medical University of Bialystok in lab classes.

1. The purpose of realization of the summer school:

* to mobilize doctoral students to prepare the essential substantive element of their dissertation;
* to enable the results and conclusions to be presented to a group of eminent biomedical and pharmaceutical experts for discussion;
* to enhance the substantive knowledge of doctoral students through participation in lectures delivered by foreign experts;
* to acquire skills of effective transferring as well as acquiring knowledge, which will facilitate further scientific development of doctoral students, but also will be useful in their future didactic work.

1. The target group:

The participants of the summer school are 12 doctoral students of international doctoral studies in medical sciences and pharmaceutical sciences, with an open doctoral dissertation process or in the period before the opening of the doctoral dissertation process. All participants of the classes have a very good command of English.

1. Planned date and place of the execution of the service:

Lectures, PhD presentations and workshops/lab classes as part of the summer school in Bialystok will be conducted during the period between: 28.06-02.07.2021 r. In justified situations, the summer school may take place at another date, no later than on 30.09.2021. Classes will be delivered by lecturers from abroad in an on-line format via one of the available on-line platforms.

Place of service: on-line, from the Contractor's country of residence.

1. Organizational issues related to the execution of the subject matter of the procurement:

* verifying the training needs of participants prior to the start of classes;
* preparation of questions for the test of knowledge and competence by the Contractor in the scope of classes conducted by him, aimed at proving the acquisition of knowledge and increase of competence of participants as a result of their participation in the classes. The test questions will be provided to the Contracting Authority no later than 14 days before the date of the summer school;
* preparation of training materials in electronic form (outline of laboratory classes, bibliography, case studies, etc.) containing appropriate logotypes and information about co-financing the project from the European Social Fund. The content of information and logotype templates will be provided by the Contracting Authority after signing the contract;
* all classes will be conducted in English;
* the final report and certificates of participation in the summer school will be prepared by the Contracting Authority, but its preparation will require substantive input from each Contractor, including a description of the competencies acquired by the summer school participants.

The Contractor shall ensure adequate accessibility of the service being the subject matter of the procurement to all participants of the classes, in accordance with the standards constituting an appendix to the Guidelines on the implementation of the principle of equal opportunities and non-discrimination, including accessibility for persons with disabilities and the principle of equal opportunities for women and men under the EU funds for the years 2014-2020, and compliance with the policy of equal opportunities during the implementation of the classes, in particular the use of equality language.

The Contracting Authority will provide logistical and administrative support, including: moderation of the conference part on the first and second day of the summer school, rooms and laboratories for the participants taking part in the classes, technical support of the Internet platform, necessary equipment for the participants of the summer school (projector, laptop, etc.), delivery of the necessary reagents and small equipment to the location of the classes, organizational support, solving current issues and problems.

1. Requirements for Contractors conducting classes (common to all parts):

* holding at least a doctoral degree;
* having at least 10 years of professional experience in the subject matter of the conducted classes;
* having scientific achievements connected with the subject of conducted classes, for example having publications in journals indexed in the Scopus and Web of Science databases;
* the lecturer should be a recognized authority in the field of biomedical, bio-pharmaceutical sciences on a global scale;
* very good command of English;
* availability for the duration of the planned service execution;
* access to the Internet, equipment necessary to log on to the Internet platform indicated by the Contracting Authority.

1. **Evaluation Criteria:**

Bids will be evaluated by the Contracting Authority separately for all parts of the procurement based on the following criterion:

Bid price - maximum number - 100 points

Evaluation rules for the criterion "Bid price":

* In the bid form, the Contractor shall indicate the gross price for the execution of the procurement in a given part. The assessment for this criterion will be made using the following formula:

Number of points = (lowest price offered / price of the evaluated offer) x 100

* The most advantageous offer will be awarded 100 points for this criterion.

1. **Term or period of performance of the procurement**

The procurement will be executed between 28.06.2021 and 02.07.2021.

The hours of service, falling within the time frame of June 28 - July 2, 2021, will be determined in a working manner between the Contracting Authority and the Contractor, after the procurement is signed, at least 30 days before the scheduled start date of the summer school in Białystok. There is a possibility that the Contracting Authority may postpone the summer school, but no later than September 30, 2021.

1. **Submission of bids**
2. For details, please contact:

The Medical University of Bialystok, ul. J. Kilińskiego 1, 15-089 Białystok, International Cooperation Department, room no. 205, Right Wing of the Branicki Palace.

1. **Contact person for the Contractors:**

Joanna Zadykowicz, MA

**Contact telephone number, e-mail:**

+ 48 85 686 51 78, [joanna.zadykowicz@umb.edu.pl](mailto:joanna.zadykowicz@umb.edu.pl)

1. **The following must be attached to the completed bid form (attachment to the inquiry):**
2. Statement of no personal or capital relations with the Contracting Authority,
3. Copy of supporting documents relating to your professional experience (e.g. curriculum vitae, list of scientific publications, copies of diplomas and other documents, etc.).
4. **Deadline for submission of bids (date and time):**

2021-04-26, 3:00 PM

**NEW DEADLINE: 2021-05-09, 3:00 PM**

Location: Medical University of Bialystok

1. The bid should be submitted by e-mail by sending scans of signed documents, to the e-mail address: [tomasz.maliszewski@umb.edu.pl](mailto:tomasz.maliszewski@umb.edu.pl). Bids submitted or received after the above mentioned deadline will not be considered. Bids should be submitted in English.
2. **The Medical University of Bialystok reserves the right:**

- to leave without consideration bids received after the deadline;

- to cancel the procedure without giving any reason;

- to change the scope of the proceedings.

**Information clause regarding the processing of data related to the execution of an procurement outside the Public Procurement Law Act, with a value below PLN 130 000**

In accordance with Article 13 of Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation), hereinafter "GDPR", the Medical University of Bialystok informs that:

1. the administrator of the personal data is the Medical University of Bialystok, ul. Jana Kilińskiego 1, 15-089 Białystok, NIP 542-021-17-17, REGON 000288604, represented by the Rector,
2. The Medical University of Bialystok has appointed a Data Protection Officer who can be contacted regarding the personal data matters by sending information to the e-mail address: iod@umb.edu.pl or through other contact details provided on the University's website,
3. personal data will be processed for the purpose related to the execution of a procurement outside the Public Procurement Law Act, with a value below PLN 130 000, on the basis of

- article 6(1)(b) of the GDPR processing is necessary to take steps to possibly enter into a contract with a natural person,

- article 6(1)(c) of the GDPR processing is a legal obligation incumbent on the University which is the obligation to make public expenditures, settlements in an expedient and economical manner in accordance with the Public Finance Act, the Accounting Act,

1. the recipients of personal data can be contractors, persons applying for access to public information, other entities entitled on the basis of legal regulations and entities on the basis of entrustment agreements concluded with the Contracting Authority, in particular those providing and supporting IT systems,
2. personal data will be stored for a period resulting from archiving regulations, i.e. 5 years from the completion of a procurement or agreement,
3. providing personal data is not an obligation, however, failure to provide such data may prevent the Contracting Authority from evaluating the bid, which will result in a rejection of the bid or exclusion from the procedure,
4. each person whose data is processed has the right to access their data and the right to rectify, erase, restrict processing, and the right to data portability - in the cases, on the terms and in the manner laid down in the GDPR. The exercise of the right of rectification may not lead to a change in the outcome of the procedure or the provisions of the contract, and may not affect the integrity of the minutes and appendices.

To exercise your rights, please contact the Data Protection Officer,

1. each person has the right to lodge a complaint to the President of the Office for Personal Data Protection, ul. Stawki 2, 00-193 Warsaw, if it considers that the processing of personal data violates the provisions of the GDPR,
2. the Administrator will not make any automated decisions based on the personal data, including decisions resulting from profiling within the meaning of the GDPR.

**Appendices:**

1. Course framework for Parts 1 - 5;
2. Bid Form;
3. Statement of no personal or capital relations with the Contracting Authority;
4. Agreement template

**Appendix no. 1 – The scope of classes in parts 1-5.**

**Part 1**

**Lecture:**

**„Michael acceptors as tools in drug design. Pro and contra”**

The lecture will present the possibilities of using Michael acceptors in drug design, taking into account the advantages and disadvantages.

**Workshops:**

**“Immunoenzymatic evaluation of the anticancer activity of newly synthesized triazine derivatives”**

The aim of this course is theoretical and practical knowledge about immunoenzymatic technique ELISA. Students will expand knowledge about Elisa test types including direct, indirect, sandwich and competitive tests as well as the application of the test in science and diagnosis. The characteristics and role of the p53 protein in the treatment of cancer will be presented.

During the practice works students will measure p53 concentration in cell lysates after 24 hour exposition to various concentrations of newly synthesized triazine derivatives.

**Part 2**

**Lecture:**

**„****Osteogenesis Imperfecta a paradigmatic disorder family associated to collagen type I”**

Osteogenesis Imperfecta (OI) - a group of genetically determined diseases consisting in disorders in the proper structure of collagen - the main component of connective tissue. During the lecture disturbances in collagen type I synthesis underlie the pathogenesis of OI will be presented.

**Workshops:**

**„Biochemical and molecular tools to prepare gene-modified cell lines”**

Biochemical and molecular tools to study heritable disorders: use of in vitro and in vivo models. Materials for preparation of construct for CRISPR/Cas9 transfection in cells. Preparation CRISPR-modified cell lines

The aim of the course is to present basic tools for editing genomes. CRISPR/Cas9 technology allows to easily alter DNA sequences and modify gene function. The protein Cas9 (or "CRISPR-associated") is an enzyme that acts like a pair of molecular scissors, capable of cutting strands of DNA and in this place incorporate antisense that makes knock-out of the gene. This practical course could provide basic knowledge of possibilities of gene modification as well as present modern technics of gene expression manipulation. During practice, students will participate in each required step to obtain modified cell line. Firstly, the tools of design CRISPR molecule will be depicted. Then, students will get acquainted with bacterial transformation, general technics of plasmid (containing CRISPR technology) isolation and cell transfection. The methods, presented in comprehensive way could facilitate further studies on CRISPR-modified cell lines.

**Part 3**

**Lecture:**

**„Mitochondrial functions in hypoxic/ischemic injury”**

The course will introduce the role of cellular energy metabolism in the apoptotic and necrotic processes during various pathologies mainly neurodegenerative and ischemia/reperfusion pathologies. The mechanisms of cell death during neurodegenerative and ischemia/reperfusion pathologies will be discussed during the lecture.

**Workshops:**

**„Evaluation of mitochondrial function (activity of complex I of the respiratory chain, H2O2 generation)”**

Explanation of the principles of the measurement methods of oxygen consumption in cells, the introduction of methods to investigate mitochondrial functions. As a model will be used isolated mitochondria. The students will evaluate its selected function:

- measurement of complex I of the mitochondrial respiratory chain activity,

- measurement of mitochondrial H2O2 generation.

**Part 4**

**Lecture:**

**„The Secrets of Success in Science”**

The aim of the lecture is to theoretically present the possibilities of using new complexes of minerals, on the example of a selected mineral component, in terms of their bioavailability, in supporting the treatment of various diseases.

**Workshops:**

**„Application of inductively coupled plasma mass spectrometry for determination of mineral components in food”**

The aim of the workshop is to introduce participants to modern methods of sample preparation and modern methods of trace element determination. A microwave technique in a closed system will be used to eliminate the organic matrix. In the prepared samples, the arsenic content will be determined by the method of inductively coupled plasma mass spectrometry (ICP-MS) technique using kinetic energy discrimination (KED) chamber.

Participants will learn the technical aspects related to the application of the ICP-MS technique. Analytical problems during the determination of elements in food and the possible elimination of interferences will be also presented.

**Part 5**

**Lecture:**

**„CosmoGreen - modern eco-friendly methods for the extraction of plant material”**

The lecture will give insight into modern extraction solvents and techniques used in the analysis of plant material and preparation of bioactive natural extracts. As a consequence of growing concern for the future of our planet, the design of green and sustainable methods for the extraction of bioactive natural products is one of the emerging research areas. Besides the high yield of the desired natural product, the ideal extraction procedure should have low energy consumption and employ eco-friendly solvents. Such solvents should be biodegradable, non-toxic, non-flammable and easily obtained from renewable sources. The lecture will cover the most common green solvents including water and its mixture with glycerol or cyclodextrins, as well as natural deep eutectic solvents. In addition, various extraction methods based on aqueous medium such as enzyme-assisted extraction, aqueous biphasic systems or cloud-point extraction will be presented. When properly combined either with classic extraction techniques, such as maceration or decoction, or modern extraction techniques such as ultrasound-assisted, pressurized solvent or microwave extraction, such methods are time- and cost-effective, have lower environmental impact, shorter extraction time and better selectivity.

**Workshops:**

**„Modern omics-based approaches for analysis of natural products – new strategies for drug analysis”**

A workshop will cover the qualitative and quantitative analysis of secondary metabolites from selected plant materials. Throughout the workshop both practical and theoretical aspects of the outlined topics and application case studies will be presented. A workshop aims to use high-performance thin-layer chromatography (HPTLC) and liquid chromatography coupled with mass spectrometer (LC-MS/TOF) in the qualitative and quantitative assessment of secondary metabolites from selected species from genus Bidens L. (Asteraceae). PhD students will learn the rules of plant sample preparation/extraction, analysis by using modern techniques such thin-layer and liquid chromatography, and will learn about the advantages and disadvantages of both techniques. The analyses LC-MS/TOF will be carried out on the Infinity 1260 liquid chromatography with the Agilent 6230 TOF/MS mass spectrometer and also on the HPTLC system, which includes the Linomat 5 semi-automatic applicator, ADC 2 automatic chromatography chamber and TLC Scanner 4 densitometer with a TLC Visualizer recorder. Therefore, some practical introduction of the function and capabilities of these two analytical/chromatographical methods will be provided.