COOPERATION AGREEMENT

Between:

Medical University Vienna

Spitalgasse 23, 1090 Vienna, Austria

Executing Department: Center for Pathophysiology, Infectiology and Immunology

hereinafter referred to as „MedUni Vienna"

and

Slovak Academy of Sciences

Institute of Zoology

Dúbravská cesta 9, 845 06 Bratislava, Slovakia

hereinafter referred to as „Partner"

The Partner and the MedUni Vienna shall be jointly referred to as the "Parties" and individually also as the "Party".

Definitions

Background IP shall mean any materials, software, models, methods know-how, copyrights, inventions, whether patentable or not, and other registered or granted property rights of the Parties existing prior to the Effective Date or developed outside of the scope of the Project which one Party agrees to make available to the other in the course of the Project.

Confidential Information shall mean all confidential information disclosed to the other Party in any form in connection with the Project, including trade and business secrets, as well as other know-how, data, processes, methods, information relating to materials, as well as all information that is

to be classified as confidential according to its content, regardless of the form of communication (written, oral, electronic or in the form of images, representations, data, design, samples, etc.) and regardless of whether it is marked as confidential or not.

Effective Date shall mean the date of the last signature of this Agreement.

Project shall mean the research project entitled "Assessing an artificial tick feeding system as a tool in the study of borrelia-tick interactions".

Project Plan shall mean the description of the research work performed by the Parties under this Agreement, as specified in Annex 1.

Project Results shall mean all results and any materials, software, models, methods know-how, works, inventions, whether patentable or subject to copyright protection or not, including the reports and documents generated by the Parties in the conduct of the Project excluding personal data of Project participants, medical records and source documents.

Research Materials shall mean those experimental materials such as e.g. compounds, cells, antibodies or data one Party may provide to the other in performance of the Project relating to the Project Plan.

1. Purpose

1.1. The subject of this cooperation agreement ("Agreement") is the joint implementation and conduct of the Project, for which funding was granted by the OeAD ("Funding Body").

1.2. MedUni Vienna and Partner desire to perform certain research work and shall carry out the Project in accordance with the Project Plan attached as Annex 1 and the terms and conditions of the Funding Body.

1.3. Each Party will carry out the Project in accordance with laws and regulations applicable to its performance of the Project, this Agreement and the Annexes.

1.4. Any Research Materials provided may only be used as stated in the Project Plan. Unless the Parties agree otherwise, Research Materials are to be considered as Confidential Information of the Party providing them. The Parties will use Research Materials in compliance with all applicable statutes

and regulations. The Research Materials are to be used only at the receiving Party´s organization and will not be disclosed or delivered to any third party. The providing Party retains ownership of the Research Materials. The Research Materials are understood to be experimental in nature, thus may have hazardous properties, and therefore are provided without any warranty of merchantability or fitness for a particular purpose, or that the use of the Research Materials will not infringe any patent, copyright, trademark or proprietary rights of third parties, or any other warranties, express or implied. After the performance of the Project, the receiving Party shall return the Research Materials to the providing Party, if possible, or destroy the Research Materials if instructed to do so by the providing Party upon termination of the Project.

1.5. The Parties agree that Mgr. Vanda Klöcklerová, PhD. will take part as Visiting Scientist from the 4th of March 2024 to 28th February 2025 in the conduct of the Project at the MedUni Vienna.

1.6 Partner confirms that the Visiting Scientist will be employed by Partner during the period of its stay at MedUni Vienna and guarantees to pay the salary of Visiting Scientist. The cooperation does not constitute any kind of employment at the MedUni Vienna, nor does it result in any remuneration demands or duty of MedUni Vienna to reimburse costs of accommodation, meals or other expenses. MedUni Vienna will not reimburse the Partner or Visiting Scientist for any travel expenses. Visiting Scientist is required to adhere to any policies, procedures or safety statements of MedUni Vienna.

1.7. The Partner confirms that the Visiting Scientist's state of health is adequate for their work at MedUni Vienna, and that he/she does not suffer from any infectious diseases. Partner confirms that the Visiting Scientist is immune to or immunized against the following diseases: Diphtheria, Poliomyelitis, Tetanus, Pertussis, Measles, Mumps, Rubella, Varicella, and Hepatitis A/B and Covid-19. A Meningococcal vaccine ACWY/B will be obligatory for an involvement at the Pediatric, Neonatology or Infectious Ward / Intensive Care Unit / Microbiological Laboratory. The Visiting Scientist is aware that he/she may have to undergo a medical examination after arrival in Vienna to ensure patient safety. The Visiting Scientist is responsible for obtaining his/her own visa and other necessary travel documents, immunizations and other requirements as stipulated by the government of Austria and the MedUni Vienna.

2. Contact Persons and Coordination

2.1. MedUni Vienna names Ing. Michiel Wijnveld, PhD as its project leader and contact person (hereinafter referred to as "Project Leader").

Partner names Mgr. Vanda Klöcklerová, PhD., Institute of Zoology, Slovak Academy of Sciences, Dúbravská cesta 9, 845 06 Bratislava, Slovakia, vanda.klocklerova@savba.sk, +421908069619, as its project manager and contact person.

The Parties will notify each other promptly in case there is a change to the above contact persons.

2.2. The Project Leader is an employee of MedUni Vienna. For the avoidance of doubt, the Project Leader signs to have read and acknowledged this Agreement, but is not a party to the Agreement. Whenever this Agreement addresses obligations of the Project Leader, those shall be obligations of MedUni Vienna, to assure adherence by the Project Leader as his/her employer.

2.3. The Parties will inform each other regularly in an appropriate form about the progress of the work performed under the Project Plan.

3. Data Protection

In case personal data as defined under the GDPR is processed within the project, the respective Parties will conclude a separate written agreement.

4. Compensation

4.1. Each Party shall bear its own costs incurred by the performance of the Project and the implementation of this Agreement.

4.2. The funding of the Project is carried out in accordance with the terms and condition of the grant of the Funding Body.

4.3. The Parties undertake to enable the Funding Body to verify the Project costs in accordance with the funding terms and conditions.

5. Intellectual Property Rights

5.1. Background IP

Nothing in this Agreement shall affect the ownership of Background IP. If one Party makes any of its Background IP available to the other Party in the course of the Project, the Party receiving such Background IP shall treat it as Confidential Information disclosed under clause 7 of this Agreement. Each Party hereby agrees to make any Background IP which is relevant to the Project available to the other solely for the purpose of undertaking the Project.

5.2. Project Results

The Parties will timely inform each other of all Project Results. The Parties mutually grant each other an irrevocable, royalty-free, non-exclusive, non-transferable right to use all Project Results, whether patentable or not, for purposes of non-commercial research, education and patient care.

All Project Results shall be the property of the generating Party. Each Party is entitled to register an industrial property right for its own Project Results.

5.3. Joint Results

Project Results generated jointly by the Parties shall be held in joint ownership by the contributing Parties according to their contribution. If a Party wishes to use joint Project Results for commercial purposes, a joint ownership or license agreement shall be negotiated between the Parties in good faith. Project Results brought up or developed by the Visiting Scientist in the conduct of the Project shall be deemed joint Project Results/joint Inventions.

5.4. Inventions

The Parties shall inform each other within reasonable time of the creation of inventions and also of registrations of industrial property rights. They mutually undertake to keep confidential all invention reports and registrations of property rights of the other Party.

In case both parties contributed to an invention the invention shall be held in joint ownership and the Parties shall conclude a separate written agreement (including terms of decision making concerning patent strategy, maintenance, defense, bearing of costs and use of joint inventions). Unless the Parties agree in writing otherwise, the filing, prosecution, defense and maintenance of all Patents for joint inventions will be conducted jointly in the name of both parties and controlled

by them jointly, acting reasonably and in good faith. Joint inventions shall only be licensed jointly. Deviations from this provision require a separate written agreement between the Parties. Each Party shall be responsible for the remuneration of its inventors.

6. Publication

6.1. Subject to the following provisions of this section, the Parties shall jointly publish the Project Results of the Project in accordance with international scientific standards of publication such as the ICMJE.

If no joint publication is submitted within 12 months, each Party shall be free to publish its own Project Results referencing in an appropriate form the Project and the Parties. Each Party shall submit copies of the intended publications to the other Party for review no later than 30 (thirty) calendar days before submission.

If within these 30 (thirty) calendar days period – starting from receipt of the publication manuscript – no notification and no request for deletion of Confidential Information (not including Project Results) is made, the disclosing Party shall be entitled to publish without limitation.

6.2. Within this period of 30 (thirty) calendar days, the receiving Party shall be entitled to demand the postponement of the intended publication for another 90 (ninety) calendar days in order to protect its rights pursuant to Section 5. of this Agreement.

7. Non-Disclosure of Confidential Information

7.1. Subject to the provisions in Section 5. and Section 6. of this Agreement, the Parties shall be obliged to keep Confidential Information secret.

The Confidential Information may only be disclosed to third parties with the prior written consent of the other Party. The disclosure of Confidential Information shall only be permitted to those employees who require the Confidential Information for the performance of the Project and who are subject to confidentiality duties or obligations that are no less restrictive than the terms and conditions of confidentiality under this Agreement and shall be limited to the necessary extent.

7.2. The obligation of confidentiality above shall not apply to:

a) any information which at the time of receipt by the receiving Party is in the public domain; or

b) any information which after its receipt by the receiving Party is made public by a third party acting to the best of receiving Party`s knowledge without obligation of confidentiality towards the disclosing Party to the best of receiving Parties knowledge; or

c) any information which the receiving Party can prove was in its possession before receipt from the disclosing Party and was or thereafter is developed independently or acquired directly or indirectly from a source independent of the disclosing Party; or

d) any information that is required to be disclosed by any law, competent jurisdiction or court or government regulation, act or order.

7.3. The obligation to keep Confidential Information confidential shall not apply insofar as an obligation to disclose arises from the applicable laws or on the basis of an official decision of a competent authority.

7.4. The obligation to maintain confidentiality pursuant to this section shall continue to apply after termination of this Agreement as long as the Confidential Information does not become public or generally known, however, no longer than until the expiration of 7 (seven) years after termination of this Agreement.

7.5. The Parties shall take the necessary steps to ensure compliance by their employees with the provisions of this Section.

8. Liability, Warranty

8.1. The Parties will carry out the Project in an appropriate manner and according to the current state of science however they are aware of the risk of success or failure associated with scientific research. The Parties make no warranties, express or implied, regarding the achievement of any particular Project Results. There are no warranties of merchantability or fitness for a particular purpose for any of the Project Results or that the use of the Project Results will not infringe any patent rights of a third party.

8.2. The Parties shall not be liable towards each other for slight negligence, except for personal injury.

8.3. The Parties shall not be liable for indirect damage and financial loss, such as consequential damage and loss of profit, except in the case of willful misconduct.

8.4. If public funding is used for the joint research, it must be used in accordance with the Funding Agreement and the funding conditions and all other relevant provisions must also be complied with. If a Party violates the terms and conditions of the Funding Agreement and this leads to reductions, discontinuation, repayment or suspension of funds, this Party is solely liable for the repayment or a loss of the funds.

8.5. The Partner shall maintain adequate health and accident insurance coverage for the Visiting Scientist during his/her period of work at MedUni Vienna The Partner confirms that the Visiting Scientist is aware of his/her obligations and Partner is liable for the acts and omissions of the Visiting Scientist as its employer as if for its own acts and omissions. It is not allowed for Visiting Scientist to take any data, clinical sample or material out of MedUni Vienna without prior written approval of MedUni Vienna.

9. Use of Name

Each Party is prohibited from using the name of the other Party in publications or in advertising material of any kind (advertisements, commercials, other oral or written presentations, etc.) without the other Party's written consent. This shall also apply to the use of other marks (including the logo).

10. Anti Corruption

10.1. This Project is in the interest of medical, scientific research. The performance of the project is not bound to further conditions that serve the procurement outside of the Project.

10.2. In the performance of the Project, the Parties shall observe the legal regulations on anti-corruption applicable to them in each case. No Party shall offer or grant payments or benefits of any value to any public official or employee, politician, candidate for political office or any other third party that would violate anti-corruption laws.

11. Term

11.1. This Agreement enters into force with the Effective Date and expires upon completion of the Project. Those provisions of this Agreement which are intended to continue to apply according to their content shall also survive termination/expiration.

12. Termination

12.1. Each Party may terminate this Agreement upon thirty (30) days written notice to the other Party.

12.2. MedUni Vienna and the Partner shall be entitled to terminate this Agreement in writing at any time without observing a period of notice for good cause.

12.3. Good cause shall be deemed to exist in particular if

a) A Party violates provisions of this Agreement and does not cease and/or reverse this violation, if curable, within 30 (thirty) calendar days after written request by the other Party; or

b) Continuation of the Project is not medically or scientifically justifiable; or

c) the Project Leader's employment relationship with MedUni Vienna ends prior to completion of the Project or the Project Leader is no longer able to fulfill his/her duties as project leader for any other reason and no equally qualified replacement person can be found within a reasonable period of time.

12.4. In case of early termination, the Parties shall forward all Project Results to each other in accordance with Section 5 and return or destroy any Research Materials according to Section 1.4

13. Applicable Law, Jurisdiction

13.1. This Agreement shall be governed by the laws of Austria without reference to its conflict of laws principles and the CISG.

13.2. The Parties agree that for all disputes between the Parties arising from or in connection with this Agreement, including its valid conclusion, the competent court for the 1st district of Vienna shall have exclusive jurisdiction

14. Miscellaneous

14.1. If a provision of this Agreement is or becomes illegal under any applicable law or regulation, invalid or otherwise unenforceable, such illegality, invalidity or unenforceability shall not affect the validity or enforceability of any other term or provision of this Agreement. Instead, such illegal, invalid or otherwise unenforceable provision shall be retroactively replaced by a valid and enforceable provision that closest reflects the Parties' intent when concluding this Agreement.

14.2. This Agreement constitutes the entire understanding between the Parties; there are no side-agreements. Any amendment has to be in writing and duly signed by authorized representatives.

14.3. The following appendices constitute an integral part of this Agreement and shall apply in the following order of precedence in the event of conflicting provisions:

- Annex 1: Project Plan
- Annex 2: Data processors

14.4. If the provisions of the Annexes conflict with this Agreement, the provisions of this Agreement shall prevail.

14.5. Neither Party may assign its rights and/or obligations under this Agreement to any third party without the written consent of the other Party.

14.6. Each Party may sign identical counterparts of this Agreement with the same effect as if both Parties had signed the same document. The Parties agree that signatures, electronic or wet ink, to this Agreement transmitted by facsimile, by email in "portable document format" ("PDF"), or by any other electronic means intended to preserve the original appearance of this Agreement shall have the same effect as physical delivery of the paper document bearing an original wet ink signature and shall be sufficient to comply with the agreed written form requirement.

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Partner	MedUni Vienna
Date:	12 MAY 2021
Signatu	
Name: I	idt
Title: D	Title: Head of executing Department
Ústa	
	Title: Project Leader

Annex 1

Project Plan

Work plan

In the initial experiment (phase A), we plan to work with different blood sources to test the possible inactivating activity of the sera on borrelia spirochetes. The spirochete viability will be tested by serum sensitivity assay [12, 13]. For the proposed time plan, see Table 1.

In the second experimental phase (phase B) We will feed *I. ricinus* nymphs in artificial tick feeding units on blood supplemented with Borrelia spirochetes. ATF units will be prepared as described previously [5]. In this project we will work with two laboratory strains of *B. burgdorferi* sensu lato, one of which will express mCherry - a constitutively expressed red fluorescent marker. This will allow us to directly visualize viable spirochetes. *I. ricinus* nymphs will feed on blood for 3 days or until repletion. Replete nymphs infected with fluorescent bacteria will be tested as follows:

1. Spirochete uptake - part of the fed nymphs will be directly tested for spirochete uptake by dark-field microscopy by detecting ectopic expression of mCherry.

2. Spirochete viability - for further confirmation of spirochete viability, we will dissect replete nymphs and cultivate their organs in medium.

3. Spirochete persistence - part of the fed nymphs will be reared in 95% humidity chambers until molting. Mature ticks will be tested for the persistence of borreliae as in sections 1 and 2.

Replete nymphs infected with non-fluorescent bacteria will be tested as follows:

1. Spirochete uptake - part of the fed nymphs will be homogenized, used for DNA extraction, and subsequent verification of the spirochete presence by PCR.

3. Spirochete viability and persistence - part of the fed nymphs will be reared in 95% humidity chambers until molting. Mature ticks will be tested for the presence of borreliae, as in section 1.

In the final phase of the project (phase C), part of the mature ticks from phase B will undergo additional ATF. The blood in this feeding will not be supplemented with spirochetes. We will test the blood regularly for the presence of spirochetes transmitted from adult females.

Table 1: Proposed time plan.

	Project month	1	2	3	4	5	6	7	8	9	10	11	12
	Year	2024	2024	2024	2024	2024	2024	2024	2024	2024	2024	2025	2025
Activity (work package)	Calender Month	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB
Activity 1 - phase A - serum sensitivity assay		1											
Activity 2 - phase B - infection nymphs		2	2		2	2		2	2				
Activity 3 - phase C - infection adults				3	3		3	3		3	3		
Activity 4 - Repeating unsuccessfull experiments if needed									4	4	4	4	
Activity 5 - Data analysis											5	5	5

Annex 2

Data processors

Full name of the company	Not Applicable
Company address (incl. country)	Not Applicable
Contact person at the data processor	Not Applicable
Data processing in which the data processor is involved.	Not Applicable
Categories of personal data processed by the data processor.	Not Applicable

Transfer of personal data to third countries

Does the data processor process personal data in a third country?	Not Applicable
If yes, specify the third countries	Not Applicable
If yes, specify the legal bases for the transfer in accordance with Chapter V of the GDPR	Not Applicable