

# MATERIAL TRANSFER AGREEMENT

Slovak Academy of Sciences, Dr. Veronika Rusňáková Tarageľová/Dr. Eva Špitalská

AND

BAVARIAN HEALTH AND FOOD SAFETY AUTHORITY

This agreement is between

**Institute of Zoology, Slovak Academy of Sciences**, Dúbravská cesta 9, Bratislava, Slovak republic (hereinafter "Dr. Veronika Rusňáková Tarageľová"). Research activities of the Institute of Zoology SAS comprise the basic and applied research in zoology, physiology, hydrobiology, ecology and related biological disciplines

and

**Bavarian Health and Food Safety Authority** (hereinafter "LGL"), inferior authority of the Bavarian Ministry for Environment and Consumer Protection (StMUV) and Bavarian Ministry of Health and Care (StMGP), Eggenreuther Weg 43, 91058 Erlangen, Germany

LGL has agreed to provide to Dr. Veronika Rusňáková Tarageľová certain material as described below.

The Material will be shipped by LGL. It will be made available to Dr. Veronika Rusňáková Tarageľová, subject to the following terms:

"MATERIAL" shall mean nine tubes of *Borrelia burgdorferi* species and strain, their progeny, and any unmodified derivatives.

"Replicate" means any biological or chemical material that represents a substantially unmodified copy of the MATERIAL, such as material produced by growth of cells or microorganisms or amplification of MATERIAL. "Derivative" means material created from the MATERIAL that is substantially modified to have new properties, such as recombinant DNA clones made using a vector purchased from LGL.

## Scope of Use

Dr. Veronika Rusňáková Tarageľová MAY MAKE AND USE THE MATERIAL PROVIDED BY LGL AND ALL REPLICATES AND DERIVATIVES FOR THE FOLLOWING RESEARCH PURPOSES IN LABORATORY OF Dr. Veronika Rusňáková Tarageľová **ONLY**:

Strains of *Borrelia burgdorferi* will be used in experimental **in vitro** studies to investigate the effect of photodynamic inactivation with carbon quantum dots (CQDs) activated by appropriate light on tick-borne infections caused by *Borrelia* species. The first-choice treatment for tick-borne infections is doxycycline. Since the skin of the host serves as the entry point for tick-borne pathogens, there is an opportunity to explore alternative treatment strategies at an early stage of infection, shortly after tick attachment, to prevent dissemination of the infection and reduce the need for antibiotics. Moreover, in the case of erythema migrans, borreliae can persist in the skin for several weeks, suggesting that local therapy could be more suitable than systemic antibiotic treatment. CQDs are a relatively new carbon allotrope. Their antibacterial effect is based on noninvasive photodynamic

therapy (PDT). As the effects of PDT using CQDs have not yet been extensively evaluated in the context of tick-borne infections, we aim to test their potential against borrelial infections.

THE MATERIAL IS NOT INTENDED FOR USE IN HUMANS. Dr. Veronika Rusňáková Taragel'ová AGREES THAT MATERIAL DESIGNATED AS BIOSAFETY LEVEL 2 OR 3 CONSTITUTES KNOWN PATHOGENS AND THAT OTHER MATERIAL NOT SO DESIGNATED AND REPLICATES OR DERIVATIVES MAY BE PATHOGENIC UNDER CERTAIN CONDITIONS. Dr. Veronika Rusňáková Taragel'ová ASSUMES ALL RISK AND RESPONSIBILITY IN CONNECTION WITH THE RECEIPT, HANDLING, STORAGE, DISPOSAL, TRANSFER AND USE OF THE MATERIAL INCLUDING WITHOUT LIMITATION TAKING ALL APPROPRIATE SAFETY AND HANDLING PRECAUTIONS TO MINIMIZE HEALTH OR ENVIRONMENTAL RISK. Dr. Veronika Rusňáková Taragel'ová AGREES THAT ANY ACTIVITY UNDERTAKEN WITH THE MATERIAL AND REPLICATES OR DERIVATIVES WILL BE CONDUCTED IN COMPLIANCE WITH ALL APPLICABLE GUIDELINES, LAWS AND REGULATIONS

Dr. Veronika Rusňáková Taragel'ová shall not distribute, sell, lend or otherwise transfer the MATERIAL or Replicates for any reason. Any commercial use of the MATERIAL, Replicates, and Derivatives is prohibited without LGL's prior written authorization.

Nothing in this Agreement shall be construed to prohibit LGL from selling or sharing MATERIAL with other commercial or academic researcher institutions or researchers. Nothing in this Agreement shall be construed to bind LGL with respect to entering into subsequent Agreements to provide MATERIAL. Should forces beyond the control of LGL, including but not limited to, inability of Investigators to complete delivery of the MATERIAL, LGL will have the right to terminate this Agreement. Further, LGL and affiliated institutions, shall not be liable for any loss of profits, loss of business, loss of anticipated savings or other financial or economic loss incurred by Dr. Veronika Rusňáková Taragel'ová as a result of conditions described in this paragraph or any indirect or consequential loss whatsoever, arising from or in connection with this Agreement.

#### **Warranty**

EXCEPT AS EXPRESSLY PROVIDED, THE MATERIAL AND ANY TECHNICAL INFORMATION AND ASSISTANCE PROVIDED BY LGL ARE PROVIDED AS-IS, WITHOUT WARRANTIES OF ANY KIND, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TYPICALITY, SAFETY, ACCURACY AND NON-INFRINGEMENT.

#### **Limitation of Liability**

All Parties acknowledge that MATERIAL are made available as a resource for research and are understood to be experimental in nature, having possible hazardous properties. No indemnification for any loss, claim, damage or any liabilities asserted by third parties arising from the use of the RESEARCH data and result, is intended or provided by any Party under this Agreement. To the extent permitted by law, each Party shall be liable for any loss, claim damage, or liability that said Party incurs as a result of its activities under this Agreement, unless due to the gross negligence or willful misconduct of another Party.

#### **Intellectual Property; Identification**

LGL shall retain ownership of all right, title and interest in the MATERIAL and Replicates. The MATERIAL, Replicates and Derivatives are subject to the restrictions noted in the "Scope of Use" section above. Dr. Veronika Rusňáková Taragel'ová agrees to acknowledge LGL as the source of the MATERIAL in all publications and patent applications that reference the MATERIAL.

#### **Publication**





## Attachment I

### Description of Materials:

Samples of the following *Borrelia* strains will be provided to Recipient:

| Strain | <i>Borrelia</i>            |
|--------|----------------------------|
| PKAll  | <i>B. burgdorferi</i> s.s. |
| PAbe   | <i>B. burgdorferi</i> s.s. |
| PBec   | <i>B. afzelii</i>          |
| PKo    | <i>B. afzelii</i>          |
| PBr    | <i>B. garinii</i>          |
| PBi    | <i>B. bavariensis</i>      |
| PHEi   | <i>B. garinii</i>          |
| PNov   | <i>B. garinii</i>          |
| PRef   | <i>B. garinii</i>          |