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Thursday 5 November

EU-India PARTNERING EVENT

PROFILE FORM

| Organisation Details | | | | | |
|--|--|--|-----------------------------------|---|--------------------------------|
| Organisation name | London School of Hygiene and Tropical Medicine | | | | |
| Street * | Keppel Street | | | | |
| ZIP * | WC1E 7HT | City * | London | Country * | UK |
| Phone * | +44 [0]207 927 2324 | | Fax | +44 [0]207 927 2839 | |
| Email * | Polly.Roy@lshtm.ac.uk | | Web | www.lshtm.ac.uk | |
| Employees | <input checked="" type="checkbox"/> 1-10 | <input type="checkbox"/> 11 - 50 | <input type="checkbox"/> 51 - 250 | <input checked="" type="checkbox"/> 250 + | |
| Organisation type | <input checked="" type="checkbox"/> University | <input type="checkbox"/> Research Center | <input type="checkbox"/> Industry | <input type="checkbox"/> SME | <input type="checkbox"/> Other |
| Department | Infectious and Tropical Diseases | | | | |
| Short description of your company/organization | <p>London School of Hygiene and Tropical Medicine is a well-equipped research centre focusing on the study of tropical diseases. It is dedicated to the improvement of health worldwide through the pursuit of excellence in research and advanced training in national and international public health and tropical medicine, and through informing policy and practice in these areas. The research centres at LSHTM include researchers into pathogens (including viruses, bacteria and parasites) as well as immunologists and a strong epidemiology team, who have strong ties with developing countries, and who monitor, produce and provide vaccines for important infectious diseases. Many members of the research centres at LSHTM are involved with various committees of WHO, Global Alliance for Vaccines and Immunization (GAVI) and other vaccine development initiatives, including the Gates Foundation and European commission.</p> | | | | |

| PARTICIPANT | |
|-------------|--|
| Gender | <input checked="" type="checkbox"/> Mr <input type="checkbox"/> Ms |



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| | |
|------------|-----------------------|
| First name | Polly |
| Last name | Roy |
| Position | Professor of Virology |

PARTNERSHIP PROPOSAL

EU-India partnering event session participation:

Sustainable production and management of biological resources from land, forest and aquatic environment

- Fork to farm: Food (including seafood), health and well being
- Life Sciences, biotechnology and biochemistry for sustainable
- Health

Areas of activity (*Free keywords* Diseases caused by Orbiviruses (African horse sickness, bluetongue and epizootic haemorrhagic disease): development of new generation vaccines and accompanying tests)

PROJECT DESCRIPTION

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| Title of your research project in one sentence | Development of multivalent vaccines for BTV, EHDV and AHS (ORBIVAC) |
| Short description of project | The vector-borne Bluetongue (BT) disease of ruminants, which is endemic in most tropical and subtropical countries (including India), has recently become widespread throughout European countries, having expanded from Northern and Western into Southern and Eastern Europe. This has resulted in the deaths of millions of animals and has caused massive economic losses to the agricultural economies of Europe. Two other genetically closely BTV related viruses, African Horse Sickness virus (AHSV) and Epizootic Hemorrhagic disease virus (EHDV), are also transmitted by same insect vectors, and all three viruses present current and potential future challenges to European agriculture. The overall aims of this FP7 project (in which Roy is the coordinator), are to develop novel, designer, multivalent vaccines for BTV, AHSV and EHDV as each has multiple serotypes; to understand the best vaccination strategy to elicit multi-serotype protection; and to develop new reagents and methods for rapid diagnosis and typing of orbivirus outbreaks and to distinguish infected and vaccinated animals. The project aims to use a coordinated multipartner approach and builds on specific expertise in Europe as well as also links out to other International efforts in USA and S. Africa. In addition to the immediate objectives of this project, the long term goal would be to promote cooperation between the Indian and European scientific communities. |
| Description of expertise offered | Professor Polly Roy is a Professor of Molecular Virology in the Department of Infectious and Tropical and Diseases. Professor Roy's group is one of the leading laboratories in the world in orbiviruses, particularly Bluetongue virus, and through a combination of virology, molecular and structural studies, she has been instrumental in paving the way to the complete understanding of orbiviruses as well as improved diagnostics and vaccines. Her contribution to virology, in particular to virus structure and assembly, has been recognized by her peers worldwide. Roy was first to demonstrate that simultaneous expression of several recombinant viral proteins leads to the assembly of virus-like particles (VLPs). This fundamental observation led to the development of technology to be applied to other viruses and VLP generation, such as SARS, HIV, Influenza, Rotavirus and Norwalk virus. Recently Roy pioneered the first reverse genetics system for orbiviruses (the synthesis of infectious virus solely from synthetic genes), a major achievement that will facilitate to generate designer live vaccines. Over the last 20 years, Professor Roy supervises routinely |



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SEVENTH FRAMEWORK
PROGRAMME

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| | a large group of postdoctoral scientists (12-15) and doctoral students including researchers from India and other developing countries. In addition to her extensive research background (total publications, 285), Professor Roy has a wide range of experience in teaching and research in developing countries. She has been involved in 12 EU funded research networks, 9 of which she has been the coordinator. |
| Description of requested partner expertise | The project will require expertise from India in order to develop vaccines for Indian strains and to disseminate the vaccines and diagnostic reagents in collaboration. |