SOUTHEAST ASIA ENCEPHALITIS PROJECT NEWSLETTER

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OVERVIEW INFORMATION

Project context

In Asia, acute encephalitis is among the most frequent and severe causes of pediatric hospitalization. Moreover encephalitis etiologies remain unknown in more than 60% of patients. Because the epidemiological situation in developing Southeast Asian countries is particularly appropriate to reveal the circulation of emerging infectious agents, the surveillance and investigation of acute encephalitis syndrome is of utmost public health importance, both locally and globally.

Since the project inception in Phnom Penh

The workshop on infectious encephalitis in Southeast Asia held in Phnom Penh, Cambodia, from 12th to 15th February, 2012, was attended by around 40 participants representing French stakeholders from life and health sciences, and scientists from France and Southeast Asia. This ambitious event initiated by AVIESAN Sud (the French National Alliance for Life and Health), has been funded and organized by members of AVIESAN Sud including the Institut Thématique Multi-Organismes de Microbiologie et de Maladies Infectieuses (IMMI), the Agence Inter-Etablissements de Recherche pour le Développement (AIRD), the Institut Pasteur and the Institut Pasteur in Cambodia, the Institut de Recherche pour le développement (IRD), the Fondation Mérieux and the Centre de Coopération Internationale en Recherche Agronomique pour le Développement (CIRAD).

> The SEAe project aims in reducing the morbidity and mortality associated to infectious encephalitis in Southeast Asia by improving diagnosis and medical care for patients.

The meeting was successful, with scientists from various disciplines sharing information, expertise and viewpoints on encephalitis in a friendly atmosphere. The outcome of this initiative was very positive: a new inter-organizational and multidisciplinary initiative was launched involving a consorti-

Meeting in Bangkok on 16th-17th September, 2012

The meeting for the launch of the preparatory phase will be held on 16th and 17th September, 2012 in Bangkok, Thailand.

The objective of the meeting will be to define and adopt a framework to operationalize the validated working program within the three first sites in which the study will be launched: Cambodia, Laos and Vietnam.

This meeting will attend the Principal Investigator Committee, Workpackage Leaders, National Focal Points and Representatives, Project Manager and Representatives of the founder institutions of the encephalitis consortium.

um of five Southeast Asian countries (*i.e.* Cambodia, Indonesia, Laos, Thailand, and Vietnam) and France. These key players have decided to join their efforts to address some of the most important issues currently raised by infectious encephalitis in Southeast Asia.

Overall, this research consortium has been created to fill in the biomedical knowledge gaps regarding acute encephalitis syndrome, strengthen laboratories capacities, identify unknown pathogens responsible for encephalitis cases, and ultimately enhance health by improving diagnosis and care for patients, providing information to clinicians and public health stakeholders

PROJECT STRUCTURE

Implementation plan

This new initiative is called the SEAe project, for *SouthEast Asia encephalitis*.

The implementation will first start with three selected pilot areas in Cambodia, Laos and Vietnam. The project could, subsequently, be expanded to other sites. This issue will be addressed by mid-2013 on the occasion of the SEAe project kick-off meeting involving all partners.

The project has been structured around the following four interlinked workpackages (WP) to address the project's aims using an integrated approach:

WP1, focused on clinical and epidemiological studies, will be responsible for the pre-qualification of study sites, the inclusion of infectious encephalitis cases, rigorous case identification and data collection to inform microbiological diagnosis. Training of medical personnel in clinical sites selected for the study will be an important aspect of the WP1 mission. Identification of clusters of cases will trigger field investigations. Prospective follow-up of survivors one year after discharge will document sequelae. The incidence of encephalitis caused by the etiological agents identified in WP2 will be estimated.

WP2, dedicated to laboratory diagnosis, will improve the microbiological diagnosis of known pathogens by strengthening capacities in selected clinical sites and national collaborative centers, in order to the clinicians with state-of-the-art and timely laboratory diagnosis for the microorganisms accessible to treatment. This workpackage will also include the discovery of new pathogens in encephalitis cases of unknown etiology.

WP3 will document and analyze collective and environmental risk factors related to cases, in order to improve the understanding of human infectious encephalitis epidemiology in Southeast Asia, integrating potential ecological, epidemiological and sociological factors, and provide adapted surveillance, control and outbreak investigation methodologies.

WP4 will be in responsible for the transversal management activities and scientific coordination of the project in order to meet the objectives.

The overall project is being finalized. Additional development work is needed to support the different workpackage proposals which came out of from the Phnom Penh meeting.

Timetable

This project is expected to face several challenges, especially in terms of training medical and laboratory personnel and building new capacities or extending the existent ones in prequalified clinical sites and laboratories. To carry out the different tasks in the most effective way, the project implementation framework has been structured in three main successive steps. A preparatory phase (9-12 months) will implement all preparatory stages necessary for the launch of the project's activities. This first step will be officially initiated during the forthcoming meeting to be held in September, 2012 in Bangkok. The feasibility on the basis of economic, organizational, and technical standpoints will be explored by a feasibility study (12 months) before beginning the full and complete study (36 months).

The project is expected to last approximately five years from September, 2012.

Management

The scientific management structure and the overall project management are both included and suitably integrated within the multidisciplinarity and the multi-institutional partnership of the SEAe consortium. This management approach ensures the production of high quality deliverables in the most efficient and systematic way and monitors the large number of activities. The effective and comprehensive project coordination and management is provided through many levels:

The *Principal Investigator Committee* consists of three members with no hierarchical link between them and representing at least one WP.

The information network within the country involved in the project consists of *National Focal Points*, and *Clinic*, *Laboratory*, and *Field Investigation Representatives.*

The *Workpackage Leaders* have been selected among the North and South partners to ensure the geographical representation of the project activities.

The *Project Manager* is responsible for the transversal management activities.

The *Steering Committee*, the highest level of decision-making within the project, represents the interest of all the partners. This Committee coordinates the scientific progress of the project, keeps the project focused, and works on achieving project goals.

A detailed *Consortium Agreement* will be established, identifying the governance structure, setting out clearly the role and responsibilities of each partner and stakeholder in the project implementation.

Fund raising

The provisional budget has been estimated for the overall project at 5 M€ and will have to be narrowed down after results of the preparatory phase's assessment. Depending on the existing capacities of the laboratories assessed in selected sites, installation of equipment and renovations will have to be considered.

The AVIESAN Sud Board members are convinced that the medical condition targeted by this project is of major concern to public health. Therefore, they pledged full support to the project objectives. Financial support of about 200 K€ has been obtained for the implementation of the preparatory phase. A *Partnership Agreement* between all relevant stakeholders is currently being finalized.

Applications for research grants required have begun to fund the different steps of the overall project (*i.e. AXA Research Fund* for 500 K€, *Total Foundation* for 600 K€). Requests for funding from other sources are ongoing.

The search for funding opportunities needs to be expanded at the regional and international levels. In addition, workpackage-based funding from grants, foundations, sponsorship and charitable donations are to be considered.

The consortium members will continue to work to finalize the project documents and use them to increase its visibility and secure new funding.

Considering the workpackage aims and the available financial support from AVIESAN Sud, the most efficient and cost-effective approach to getting an optimal preparatory phase is to proceed in two rounds: first in one selected clinical site in each country already involved in previous encephalitis projects; this will be subsequently extended to other selected sites, involving new partners from Southeast Asian region if eligible.

In this context, we are about to initiate the preparatory phase in Cambodia, Laos and Vietnam.

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For the encephalitis consortium