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REALIZING THE FULL CYCLE OF RESEARCH AND DEVELOPMENT: FROM BENCH TO COMMUNITY

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ABSTRACTS OF PLENARY PAPERS

METRICS FOR RESEARCH TRANSLATION

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Research is a crucial investment to foster innovation, knowledge advancement and social and economic development. However, there is also a general perception of the failure to translate research into useful and usable services in practice and policy. For some, research translation may also be viewed as a slow and a haphazard process.

This presentation is about research translation – its definition, the pathway towards impact, and planning and setting up research translation. As part of monitoring and evaluation of the research translation process, several frameworks, including a logical framework approach, will be discussed. In addition, a few recommendations to facilitate the use of evidence in public health policy-making will be presented.

REALIZING THE FULL CYCLE OF RESEARCH AND DEVELOPMENT FROM BENCH TO COMMUNITY: REVIEW ON LYMPHATIC FILARIASIS

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Lymphatic filariasis (LF) remains a major public-health problem as a cause of disfigurement and disability in endemic areas, leading to significant economic and psychosocial impact.

Brugia malayi infection is endemic in several Asian and African countries. Filarial parasites are known to induce a large range of immunoregulatory mechanisms, including regulatory T cells which promote the induction of the non-complement-fixing IgG4. Lymphatic filariasis is undergoing a process of elimination through a WHO initiated global programme; and is at various phases in different countries. The initial activity of the programme is the accurate mapping of the endemic areas, thus a sensitive diagnostic tool which obviates night blood sampling is needed to accomplish this task successfully. However, the monitoring system for eliminating LF had many limitations due to the unavailability of a sensitive diagnostic tool which can overcome the challenging nocturnal blood collection.

Brugia Rapid (BR) is a promising field tool for use for brugian filariasis. This test has been developed for the detection of IgG4 antibodies reactive to a recombinant *Brugia malayi* antigen. It has been reported to be 99% specific and 95% sensitive to establish a simple serological test for the identification and post-treatment monitoring of endemic areas. Development of simple, practical and safer interventions, such as BR test, is important as a target for translational research.

Neglected infectious diseases such as lymphatic filariasis are very important in terms of costing human lives and quality of life, but nevertheless they have not been prime targets for high-profile basic science. Therefore, translational research is needed and should focus on finding practical solutions for their prevention and treatment. The (BR) test has significantly contributed in the translational efforts of mass drug administration that aimed to eliminate lymphatic filariasis and thus improving human health worldwide. Implementing mass drug administration (MDA) for elimination of LF gives sustainable results in large endemic populations if the epidemiological and drug coverage fulfills the required criteria.