LEPROSY RESEARCH INITIATIVE

Leprosy Research Initiative policy for support to scientific research

Revision history

Version	Policy period	Date	Author
1	2013-2015	25-08-2015	Nicole Dinnissen
2	2020-2025	14-11-2019	Nienke Veldhuijzen

1. Introduction

The Leprosy Research Initiative (LRI) was founded in 2013 with the preamble to establish a joint fund to support leprosy research and to establish a mechanism to access external funding. The founding partners are the Dutch NLR, American Leprosy Missions (ALM), the German Leprosy and Tuberculosis Relief Association (GLRA) and Effect:hope (The Leprosy Mission Canada). The Leprosy Mission International (TLMI) joined in 2015 and Damian Foundation joined in 2020.

The joint fund is reserved for research that has a focus on leprosy. Additional resources will be sought through collaboration or joint calls with other funding agencies that focus on other NTDs, TB and diabetes for example, or on global health in a broader context (such as the European and Developing Countries Clinical Trial Partnership (EDCTP)).

The LRI receives co-funding from the Turing Foundation for projects focusing on early diagnosis and transmission of leprosy, nerve damage and leprosy reactions. Additional co-funding will be sought from other organisations with an interest in LRI research priorities.

2. Research agenda

The LRI is of the opinion that for research to have impact on leprosy control and on the lives of persons affected by leprosy, it is important that these beneficiaries (staff of leprosy control programmes and persons affected by leprosy) are involved in studies and can develop a sense of ownership. Consequently, it is the intention to further develop the involvement of organisations of people affected by leprosy in determining topics for research through active consultation, and, if possible, through involvement in planning and implementation of research, and dissemination and application of results.

2.1. Calls for proposals

To arrive at a balanced research portfolio across the priority areas, the LRI may issue calls for proposals for particular research topics, asking initially for a letter of intent outlining the envisaged approach and an indication of budget and time. In dialogue between the LRI, the field partners, the concerned institutes and potential users of the results, more detailed proposals can then be developed.

2.2. Research priorities

In 2018, the LRI conducted a stakeholder's consultation to evaluate the existing LRI research priorities. The findings were published in the Leprosy Review (Leprosy Review Volume 90, Issue 1, 3-30). Also in 2018, the Global Partnership for Zero Leprosy (GPZL) was launched and the LRI is closely collaborating with the GPZL on research activities. The GPZL has defined a research agenda to zero leprosy. On the basis of the LRI stakeholder's consultation and aligning with the GPZL research agenda, the following research areas were identified as main priorities for the period of 2021-2026:

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1. **Diagnostic tests**
   Early detection is important to reduce transmission, but also because it reduces the risk of permanent impairments. LRI will support studies which aim to develop and test new assays for diagnosis of disease and infection. This includes point-of-care test and *M. leprae* viability assays.

2. **Disability**
   Disability is not only about physical dysfunction but has a broader scope, including stigma, discrimination, and social participation restrictions. Stigma, discrimination, mental wellbeing and certain aspects of inclusion are addressed in Research Priority Area #4. Important underlying causes of physical dysfunction include neural and ocular impairments. The LRI will therefore support studies addressing the following topics: (1) identify new treatment options for NFI and reactions and test efficacy; (2) study risk factors and pathophysiological/ immunological mechanisms required to improve the detection and management of reactions, nerve function impairment (NFI) and neuropathic pain; (3) evaluate interventions for prevention of disability (POD) and inclusion (e.g. self-care groups and family support) together with other disabling diseases (e.g. NTDs), especially regarding feasibility, cost effectiveness and integration into in national leprosy policies and programmes or into general wound and limb care programmes (and vice versa); (4) (prevalence) surveys of persons with disabilities related to leprosy - other NTDs may be included alongside leprosy.

3. **Operational research**
   Operational research and mapping are required to improve the efficiency, effectiveness, or reach of available tools, in order to improve health programs and health outcomes. Therefore the LRI will support research: (1) on the use of spatial statistical tools for the efficient detection of local “hot spots” of leprosy; (2) studies that determine the feasibility, effectiveness, costs and performance of different case-finding methods in various settings and levels of endemicity. This will include health systems approaches to promote community awareness, appropriate health-seeking behaviour of patients and access to services; and approaches to strengthen workforce capacity; (3) on developing, evaluating and strengthening electronic data collection, monitoring and surveillance tools and health information systems; (4) on the development of improved detection methods and clinical sampling procedures to monitor frequency of drug resistance.

4. **Stigma and discrimination**
   Stigma is a barrier to zero leprosy in terms of prevention of leprosy, treatment, case management, chemoprophylaxis, and prevention of disabilities. In addition, it has a severe impact on the mental wellbeing of persons affected and their families. The LRI will therefore support studies addressing the following topics: (1) test effectiveness of stigma reduction interventions, including the feasibility, acceptability and impact of community involvement and participation of persons affected; (2) mental wellbeing of leprosy affected persons, the associations between mental health, health care seeking behaviour and accessibility of services and (effectiveness of) interventions to improve mental wellbeing; (3) promote the inclusion and participation of persons affected by leprosy in any aspect of society; (4) study the implementation and impact of UN Principles and Guidelines for the elimination of

discrimination against persons affected by leprosy; (5) study perceptions of the disease and explanatory models of disease and experiences with the disease as a basis for developing optimal communication and behaviour change approaches.

5. **Transmission**

Preventive interventions, such as chemo- or immunoprophylaxis have proven to be effective means of interruption of transmission for other diseases. Post-exposure chemoprophylaxis for contacts of leprosy patients in programmes that can adequately identify and manage these contacts, was included in the 2018 WHO Guidelines on Treatment and Prevention of Leprosy. Immunoprophylaxis has only recently reached the phase of human trials. Priority areas for further research on chemo- and immunoprophylaxis are as follows:

a. Post-exposure prophylaxis (PEP)

LRI will support implementation research of PEP aimed at: (1) introducing or scaling up effective contact management and chemoprophylaxis interventions especially among high-risk contacts (e.g. household members); (2) reducing or removing barriers to the effective use of contact-based interventions; (3) testing of additional contact examination interventions, chemoprophylaxis regimen or other prophylaxis approaches, such as immune-prophylaxis, or combined approaches; (4) assessing the distribution of leprosy cases (clustering) and how to optimise PEP protocols for different populations at risk.

b. Vaccines

The primary interest in vaccines is as (pre- or post-exposure) immuno-prophylaxis providing long-lasting protection against infection and/or disease. Secondary interest involves the role of vaccines for treatment purposes. The LRI therefore supports studies which test leprosy vaccines (prophylactic or therapeutic) – which have reached the stage of human trials. In general, the LRI will only be able to provide partial funding for such trials.

While LRI focuses its funding on research projects that are directly applicable to leprosy services or to the wellbeing of persons affected, the following basic research topics are also eligible for funding: (1) study the role of host genetic risk factors in susceptibility and resistance to *M. leprae* infection, clinical progression of leprosy; (2) non-human reservoirs of viable *M. Leprae* and the associated transmission potential to humans. (3) study genetic epidemiology of *M. leprae*.

3. Grant Application Procedures

3.1. For new project proposals

A Letter of Interest may be submitted via the online LRI Grant Management System following a call for proposals. These will be screened by the LRI Steering Committee (SC). Research groups that have submitted potentially eligible proposals will be invited to develop a full proposal. For large multi-year studies, the SC may require that this be done through a multi-stakeholder workshop during which a project proposal is developed in collaboration with other partners, such as field projects, organisations of persons affected by leprosy and users of the intended results of the research. In

such instances the LRI may be available to coordinate or facilitate such a multi-stakeholder workshop.
Full research proposals should also be submitted via the online LRI Grant Management System and are assessed by at least two external reviewers. Their assessment is sent to the applicants who are invited to submit a rebuttal.
The Scientific Review Committee (SRC) will assess the proposal, the external assessments and rebuttal (when applicable) and advise the Executive Group (EG) whether or not to fund the proposal. The SC will review the proposals approved and recommended for funding by the SRC and provide additional advice regarding the priority and operational relevance of proposals to the EG. The EG will make the final decision on which proposals to fund.

The laymen's summary of the protocol will be used to publish the project information on the LRI website.

3.2. For ongoing projects

A progress report, including an updated plan of activities and budget should be submitted via the online LRI Grant Management System on a bi-annual basis (in February and August). This includes a budget request stating the originally requested budget for the coming calendar year and an updated version. Any differences should be indicated and justified. Lead applicants should submit a final summary report via the online LRI Grant Management system within 3 months of completion of the project. The progress reports and final report will be assessed by the SRC. The SRC assesses submitted project proposals and advises the EG regarding the progress of the ongoing projects. The SC will receive the final reports for information and in order to report back to the partner organisation/board.

The laymen's summary in the progress and final reports will be used to update the project information on the LRI website.

3.3. Selection criteria for proposals

The following criteria will be used to determine the eligibility of research project applications:
- The main topic of the study must fall within one of the agreed priority areas;
- The research must be deemed relevant and of sufficient quality;
- Research results must in the short to medium term be applicable to leprosy services or to the wellbeing of persons affected by leprosy;
- Preference will be given to proposals from or in close collaboration with institutions or organisations in endemic countries;
- Proposals must clearly state how the beneficiaries will be involved in the various stages and levels of the project planning, execution and management;
- Project duration should not exceed four years (48 months).

3.4. Open access publication

Open access publication of research results is encouraged. Papers based on publicly funded research should be free for anyone to read. Therefore, articles based on LRI-funded research should be published in a scientific, peer-reviewed open access journal.

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4. The Scientific Review Committee

The Scientific Review Committee (SRC) is an independent committee, comprised of at least six independent members, with expertise in different relevant fields of research. The composition of the Committee should reflect the portfolio of projects that is supported. When a member's terms finishes, it will be carefully reflected which expertise is required in his/her successor to ensure a balance in expertise but also gender and origin. The SRC's mandate is to assess the quality, relevance and feasibility of submitted research proposals and to make recommendations to the LRI EG concerning funding. The SRC also monitors the progress of the ongoing projects. The Committee meets face-to-face at least twice yearly.

Independent reviews (audits) of the quality and relevance of its research will be commissioned every five years.

5. Capacity Building

5.1. Workshops

On regular basis workshops will be organised by the LRI, such as a Workshop Operational Research. The goal of the Operational Research workshop is to train and establish mentoring of small teams in operational research methods. Applicants (teams) can apply through the LRI secretariat and the SC will review and select applications. Following the workshop, the teams may submit a Letter of Intent. The Letter of Intent will follow the same procedures as other Letter of Intents.
Mentoring will be maintained throughout the period from the workshop until a full proposal is accepted (or rejected).

5.2. Spring Meeting

Annual meetings are organized by the LRI, with the aim to present research updates to the LRI Scientific Review Committee (SRC), the LRI Steering Committee (SC) and representatives from all funded research groups. The meeting also creates an opportunity to meet with and learn from fellow researchers and to share ideas between researchers, funders and other stakeholders.

6. General procedures

- Each LRI partner will commit an annual contribution to the joint LRI research fund. This commitment is made for at least 3 years, so that continuity of project funding can be guaranteed.
- Annually, the EG will decide on a budget allocated to new proposals.

7. Related documents

- Composition of the Scientific Research Committee
- Composition of the Steering Committee