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Editorial

ARMAUER HANSEN RESEARCH INSTITUTE 1970–1990

The Armauer Hansen Research Institute (AHRI) is 20 years old. Thus what was clearly a bold experiment in 1970 has reached maturity and goes from strength to strength.

Its conception was extremely farsighted. There had always been a strong tradition of a link with leprosy in Scandinavia, particularly in Norway because of Hansen's work in Bergen. The Scandinavians were strong in immunology at a stage when it was less well recognized as a major research subject, and an interest in leprosy would broaden their experience. They therefore searched for a venue for the Institute, and came to the conclusion that Addis Ababa was ideal because of the development of ALERT (All Africa Rehabilitation and Training Centre) as the leprosy teaching hospital for Africa. More farsightedness was demonstrated when they offered positions for up and coming immunologists at AHRI for 2–3 years. The first Director was Professor Morten Harboe, already a well recognized figure in the immunology world.

With medical research funds becoming less available around the world, the relevance of particular research projects to actual important diseases is increasingly being questioned as grant funding bodies seek optimal value for money. This means that the resources tend to be channelled to specific goal-oriented projects in countries where the infrastructure is well established beforehand and very little left for research in countries where the disease in question is prevalent. This is certainly true for leprosy and though research workers in their ivory towers in the USA and Europe are of course performing excellent work, the relevance of this is not always immediately clear: this is where the Armauer Hansen Research Institute (AHRI) comes into its own. With a sophisticated immunological laboratory in a leprosy hospital in the centre of a country where the disease is an exceedingly important problem, this provides the ideal formula for close collaborative work at the interface of clinical and basic research. Basic funding to secure the infrastructure of the institute comes from the governmental development aid organizations of Sweden and Norway: the Institute can thus more easily attract goal-oriented funding for specific projects.

We believe that much of the success of AHRI has been the fact that it has been based at a teaching hospital for leprosy (ALERT) which has had a constant flow of distinguished leprologists and other specialists (dermatologists, ophthalmologists, plastic and orthopaedic surgeons, neurologists, epidemiologists, and histopathologists) who have provided the expertise required to collaborate in good research. Thus, for example, when there has been a need to perform research on leprosy reactions, nerve damage and anergy

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in leprosy, there has been a plethora of well prepared cases in the hospital. Fundamental to this effort has been the high quality of histopathological classification of patients being researched: this function has been ensured by collaboration between ALERT and AHRI. One of the most pleasing aspects of this collaborative research has been the readiness of patients to take part: it is always striking how exceedingly grateful they are that anyone is interested in their disease and their future.

A number of single observations from the work at AHRI stand out in the world of basic immunology. Probably more important in the long run is the slow process of initiating changes in attitudes in the field of practical leprosy work. The latter would not have been possible without the intimate interplay between the clinicians of an active hospital and leprosy control programme on one side and a sophisticated laboratory on the other. Early work on dapsone resistance was performed by ALERT clinicians on AHRI premises and formed the foundations for multidrug therapy (MDT). Collaborative work on reversal reactions, nerve damage, and on leprosy during pregnancy and lactation led to a world-wide alertness to the dangers of leprosy neuritis and thus to improved management. Studies of anergy in lepromatous leprosy formed a scientific basis for an active 'care after cure' in these patients. Many more examples could be listed.

During the development of AHRI, the research space has become much enlarged, with new buildings and increased staff. The research interests have also increased beyond leprosy to related diseases such as tuberculosis and cutaneous leishmaniasis (where there are a number of parallels with leprosy). During this time an increasing number of Ethiopians have been co-authors on the papers emanating from AHRI, and this expertise gained has been very much part of the spin off from having such a laboratory in Addis Ababa. It is also encouraging that there has been one Ethiopian Director (Dr Ayele Belehu), and more and more key positions being filled by Ethiopians.

Has this formula worked? We believe that it has, and that it has been a great success. To date 160 publications have been produced by the Institute, the majority of them in international journals of high repute. These have included two publications in *Nature* and two in the *Journal of Experimental Medicine*. The Institute has expanded vastly and now employs approximately 50 workers with some Ethiopians who have been there since its inception. This says a lot when one remembers that the last 20 years have been turbulent and difficult times in Ethiopia, particularly in the late 1970s, immediately post-revolution.

What about the future? Since 1984 applied computer technology and gene technology has been developed at the Institute. Both are prerequisites for front line research in the years to come. While most leprosy-endemic countries struggle hard to implement MDT, the Institute is now eager to face the challenge of 'the post-MDT-era'. Countering the anergy in lepromatous leprosy, identification of incompletely treated patients, and mass screening techniques for preclinical diagnosis of leprosy are growth areas of considerable importance, and which AHRI hopes to address successfully within the next few years.

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