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Buruli Ulcer

Diagnosis of *Mycobacterium ulcerans* disease

A MANUAL FOR HEALTH CARE PROVIDERS

World Health Organization

This manual was published thanks to financial support from:

The Association Française Raoul Follereau (AFRF), France is an NGO dedicated to leprosy control in 31 countries worldwide. It also supports six research projects on leprosy, including the genome sequencing of *Mycobacterium leprae*. Long before the first International Conference on Buruli Ulcer Control and Research, Yamoussoukro, Côte d'Ivoire, 1998, AFRF had taken up the new challenge of the health and social problems caused by Buruli ulcer, working in Benin and Côte d'Ivoire since 1996. The Association also provides financial assistance to research activities on the genome sequencing of *Mycobacterium ulcerans* and on the drug treatment of the disease. It is now considering supporting other countries, starting with Ghana. AFRF is committed to mobilizing the international support needed to meet the challenges posed by Buruli ulcer.
For more information, visit the AFRF website: http://www.raoul-follereau.org

ANESVAD, Spain is an NGO that has been working against leprosy and implementing health, social and educational projects in 28 of the poorest developing countries for over 30 years. Currently it counts on the support of over 135 000 partners and collaborators in Spain. It has recently begun work on Buruli ulcer in Côte d'Ivoire, carrying out programmes to detect the disease at an early stage and undertaking prevention, surgical treatment, training of specialized medical staff and social awareness campaigns, with the aim of limiting the impact of Buruli ulcer.
For more information, visit the ANESVAD website: http://www.anesvad.org

Médecins Sans Frontières (MSF) is an international humanitarian aid organization that provides emergency medical assistance to populations in danger in more than 80 countries. MSF Luxembourg has been involved in Buruli ulcer control activities in Benin since 1997. MSF has upgraded the Lalo Health Centre with surgical and laboratory facilities to improve the care of patients. Apart from surgical activities, other key activities include health education in affected communities, case-finding and training of health care providers, teachers and traditional healers. In terms of Buruli ulcer research, MSF is collaborating with the Institute of Tropical Medicine, Antwerp, Belgium.
For more information, visit the MSF Luxembourg's website at: http://www.msf.lu

The Nippon Foundation, Japan is a private grant-making foundation whose activities cover social welfare, public health, volunteer support and overseas assistance. Since 1975 it has been working through the Sasakawa Memorial Health Foundation to aid WHO in its fight to eliminate leprosy. Starting in 1998, The Nippon Foundation also began providing financial support to the WHO Global Buruli Ulcer Initiative. The Foundation, in tandem with WHO and several academic institutions, is currently exploring options for improved surgical management of the disease. Finally, it is also collaborating with WHO, AFRF and other partners to find a drug treatment for Buruli ulcer.
For more information, visit The Nippon Foundation's website at: http://www.nippon-foundation.or.jp

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Preface

This manual is to assist health care providers and laboratory scientists to diagnose *Mycobacterium ulcerans* disease (Buruli ulcer). The manual aims to achieve a better understanding of the clinical presentation and its diagnosis. The methods described are tailored to various levels of care and available resources to improve the diagnosis and surveillance of the disease.

Please note: This manual is not intended to serve as a standard of laboratory methods. It is not a replacement for textbooks on laboratory work. Adherence to it will not ensure a successful outcome in every case, nor should it be construed as including all proper methods of laboratory diagnosis or excluding other acceptable methods aimed at the same results. Ultimate judgement regarding a particular method must be made by the health care provider or laboratory scientist in the light of the clinical findings in the patient and the available options for diagnosis.

Illustrations