WHO Immunological Basis for Immunization Series

Module 7: Measles
Update 2020

Immunization, Vaccines and Biologicals

World Health Organization

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Contents

Abbreviations and acronyms

ADEM	Acute demyelinating encephalomyelitis
BCG	Bacillus Calmette–Guérin vaccine
CD	Cluster of differentiation
DTH	Delayed-type hypersensitivity
EIA	Enzyme immunoassay
ELISA	Enzyme linked immunosorbent assay
EPI	Expanded Programme on Immunization
FAO	Food and Agriculture Organization of the United Nations
FI-RSV	Formalin-inactivated respiratory syncytial virus vaccine
F protein	Fusion protein
H protein	Haemagglutinin protein
HAART	Highly active antiretroviral therapy
HI	Hemagglutination inhibition
HIV	Human immunodeficiency virus
HLA	Human leukocyte antigen
IFN	Interferon
Ig	Immunoglobulin
IL	Interleukin
IQR	Interquartile range
MCV	Measles-containing vaccine
MIBE	Measles inclusion body encephalitis
MMR	Measles, mumps and rubella
MR	Measles and rubella
MV	Measles virus

N	Nucleoprotein
NIBSC	National Institute for Biological Standards and Control
NK cells	Natural killer cells
PFU	Plaque-forming units
R^0	Basic reproductive number
RNA	Ribonucleic acid
SNPs	Single-nucleotide polymorphisms
SSPE	Subacute sclerosing panencephalitis
TCID	Tissue culture infective dose
WHO	World Health Organization

Preface

This module is part of the World Health Organization (WHO) series *The immunological basis for immunization*, which was initially developed in 1993 as a set of eight modules, comprising one module on general immunology and seven modules each devoted to one of the vaccines recommended for the Expanded Programme on Immunization – i.e. vaccines against diphtheria, measles, pertussis, polio, tetanus, tuberculosis and yellow fever. Since then, this series has been updated and extended to include other vaccines of international importance. The main purpose of the modules is to provide national immunization managers and vaccination professionals with an overview of the scientific basis of vaccination against a range of important infectious diseases. The modules developed since 1993 continue to be vaccine-specific, reflecting the biological differences in immune responses to the individual pathogens and the differing strategies employed to create the best possible level of protection that can be provided by vaccination. The modules also serve as a record of the immunological basis for the WHO recommendations on vaccine use, as published in the WHO vaccine position papers.[1]