



Responsible life sciences research for global health security

**A GUIDANCE
DOCUMENT**



**World Health
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Acronyms

BSL	Biosafety level
BWC	Biological and Toxin Weapons Convention
BBSRC	Biotechnology and Biological Sciences Research Council (United Kingdom)
CDC	Centers for Disease Control and Prevention of the Department of Health and Human Services (United States of America)
CSE	Council of Science Editors
EC	European Commission of the European Union
GMO	Genetically modified organism
IAP	InterAcademy Panel
ICLS	International Council for the Life Sciences
ICSU	International Council for Science
IHR	International Health Regulations
IUBMB	International Union of Biochemistry and Molecular Biology
IUMS	International Union of Microbiological Societies
HRS	Health research systems
MRC	Medical Research Council (United Kingdom)
NGO	Nongovernmental organization
NIH	National Institutes of Health of the Department of Health and Human Services (United States of America)
NRC	National Research Council of the National Academies (United States of America)
NSABB	National Science Advisory Board for Biosecurity (United States of America)
PHEIC	Public Health Emergencies of International Concern
rDNA	Recombinant DNA
RS	Royal Society of the United Kingdom
VBM	Valuable biological materials
WAME	World Association of Medical Editors
WHA	World Health Assembly of the World Health Organization
WHO	World Health Organization

Definitions

The following terms are defined in the context in which they are used in this document.

Bioethics The study of the ethical and moral implications of biological discoveries, biomedical advances and their applications, as in the fields of genetic engineering and drug research (1).¹

Biological laboratory A facility within which biological agents, their components or their derivatives, and toxins are collected, handled and/or stored. Biological laboratories include clinical laboratories, diagnostic facilities, regional and national reference centres, public health laboratories, research centres (academic, pharmaceutical, environmental, etc.) and production facilities (the manufacturing of vaccines, pharmaceuticals, large-scale genetically modified organisms, etc.) for human, veterinary and agricultural purposes (1).

Biorisk The risk (risk is a function of likelihood and consequences) that a particular biological event (in the context of this document: naturally occurring diseases, accidents, unexpected discovery, or deliberate misuse of biological agents and toxins), which may affect adversely the health of human populations, may occur (1, 2).

Laboratory biosafety The containment principles, technologies and practices that are implemented to prevent unintentional exposure to biological agents and toxins, or their accidental release (3, 4).

Laboratory biosecurity The protection, control and accountability for valuable biological materials² within laboratories, in order to prevent their unauthorized access, loss, theft, misuse, diversion or intentional release (1).

Dual-use life sciences research Knowledge and technologies generated by legitimate life sciences research that may be appropriated for illegitimate intentions and applications (2, 5).

Life sciences All sciences that deal with organisms, including humans, animals and plants, and including but not limited to biology, biotechnology, genomics, proteomics, bioinformatics, pharmaceutical and biomedical research and techniques.

Global health security The activities required, both proactive and reactive, to minimize vulnerability to acute public health events that endanger the collective health of populations living

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