

## TABLE OF CONTENTS

	<u>Page</u>
MESSAGE FROM THE DEAN	iii
INTRODUCTION AND ORGANIZATION	v.
<b>LABORATORY SAFETY &amp; CHEMICAL HYGIENE PLAN</b>	
Executive Summary.....	3
Introduction.....	7
Responsibilities.....	8
Medical Surveillance.....	12
General Safety Procedures.....	13
Laboratory Equipment.....	20
Procedures for Hazardous Substances.....	22
Laboratory Waste Disposal Policies.....	26
Chemical Spill Response.....	29
Personal Contamination Response Guidelines.....	32
Work Related Illness, Injury and Incident Reporting.....	34
Fire Safety and Emergency Response to Fires and Explosions.....	35
Training Requirements for Laboratory Personnel.....	39
Laboratory Surveys.....	40
Vacating Procedures and Discarding Equipment .....	40
Record Keeping.....	42
ATTACHMENTS: I – XIV.....	43-89
<b>BIOLOGICAL SAFETY</b>	
Introduction.....	93
Biohazards: Identification, Containment, Prior Approval.....	94
Biosafety Levels & Risk Assessment.....	96
Engineering Controls.....	98
Work Practices.....	103
Decontamination.....	107
Spill Procedures.....	110
Regulated Medical Waste.....	111
Tissue Cultures & Cell Lines.....	113
ATTACHMENTS: I – VII.....	115-169
<b>ENVIRONMENTAL SAFETY</b>	
Institutional Commitment to Effective Environmental Health.....	173
Environmental Health and Safety.....	173
Environmental Management.....	175
Waste Minimization.....	176

<b>FIRE SAFETY</b>	
Purpose and Objectives.....	185
Fire Response Team/Emergency Response Personnel.....	186
To Report a Fire.....	187
Fire Prevention.....	188
What to do when discovering a fire or smoke condition – RACE.....	204
What to do when hearing a fire alarm signal.....	205
Fire Alarm Codes.....	206
Portable Fire Extinguisher - PASS.....	221
Facilities/Building Areas/Heights/Building Site Plans.....	223-231
<b>RADIATION SAFETY</b>	
Memorandum to All Radiation Workers.....	235
Staff and Raison D’Etre.....	235
Definitions.....	236
Responsibility for Radiation Safety.....	237
Procurement of Radionuclides and Other Sources of Ionizing Radiation.....	238
Transportation of Radionuclides.....	240
Waste Disposal.....	240
Personnel Protection.....	242
Records and Reports.....	246
Compliance with Governmental Regulations.....	248
Display of Radiation Safety Regulations.....	248
Selected Sources of Information.....	248
ATTACHMENTS: I – IX .....	251-271
<b>EMERGENCY MANAGEMENT PLAN – EXECUTIVE SUMMARY 2003</b>	
Overview and Introduction.....	275
Emergency Operational Center.....	277
Checklist for Emergency Response Plan.....	283
Summary/Recovery Phase/Critique.....	285
Review of Plan.....	285
<b>HEALTH AND SAFETY PERSONNEL</b>	
Institutional Health & Safety Council.....	289
Environmental Health & Safety Office.....	291
Institutional Biosafety Committee.....	293
Laboratory Safety Committee.....	295
Radiation Safety Office.....	297
Emergency Management Team.....	299

Dear Health Sciences Division Staff:

I am pleased to provide you with this first edition of the Columbia University Health Sciences Health and Safety Manual. This manual outlines our commitment to provide a safe and healthy workplace and our commitment to protect our environment.

Goals of the Health and Safety Program at the Health Sciences include: a) setting an example for effective health and safety programs; b) minimizing risk of exposure to hazardous chemical, physical or biological agents; c) minimizing risk of work related injury and illness; d) minimizing risk to the environment; and e)attaining these goals with a minimum burden on patient care, education, and research activities.

The Institutional Health and Safety Council oversees activities of all health and safety programs at the Health Sciences. The Institutional Health and Safety Council, along with Environmental Health and Safety, the Radiation Safety Office, the Institute of Comparative Medicine, the Institutional Animal Care and Use Committee and the Emergency Management Task Force have worked hard to develop this Manual to ensure continued excellence in our Health and Safety programs.

Please do not hesitate to contact Environmental Health and Safety at 305-6780 if you have any questions about this manual or any aspect of health and safety at the Health Sciences Division.

Sincerely,

Gerald D. Fischbach, M.D.  
Executive Vice President  
Health and Biomedical Sciences  
Dean, Faculty of Medicine



## INTRODUCTION AND ORGANIZATION

Medical centers, hospitals, and research facilities can be hazardous workplaces. In fact, over the past several years, medical centers have undergone increased scrutiny of their occupational health risks. Radiological, biological and chemical agents have become targets of prevention programs in response to both scientific advancements and regulatory developments.

The Health Sciences maintains a comprehensive health and safety program to protect the health of employees and to protect the environment. The Institutional Health and Safety Council is responsible for overseeing health and safety programs on this campus. The Council includes the Chairs of each of the Safety Committees including the Institutional Animal Care and Use Committee, Laboratory Safety Committee, Biological Safety Committee, Fire Safety, and Radiation Safety.

The Council strives to assure safe and healthful working conditions, to minimize exposure to hazards, and to assure environmental stewardship encompassing pollution prevention, waste minimization, and recycling.

This is the first edition of a comprehensive health and safety manual. It is an effort to include as many components of our Health and Safety Program as possible in one convenient reference source. The Manual contains sections on: 1) Laboratory Safety; 2) Biological Safety; 3) Environmental Safety; 4) Fire Safety; 5) Radiation Safety, 6) Emergency Management Plan, and a section on Personnel involved in health and safety programs.

Since this is a work in progress, we welcome your input and your comments. We expect future editions will improve upon our first efforts. This Manual replaces previous editions of the Laboratory Safety and Chemical Hygiene Plan.

Sincerely,

Robert M. Lewy, M.D., M.P.H.  
Senior Associate Dean  
Faculty Affairs, Health and Safety and  
Chair, Institutional Health and Safety Council

