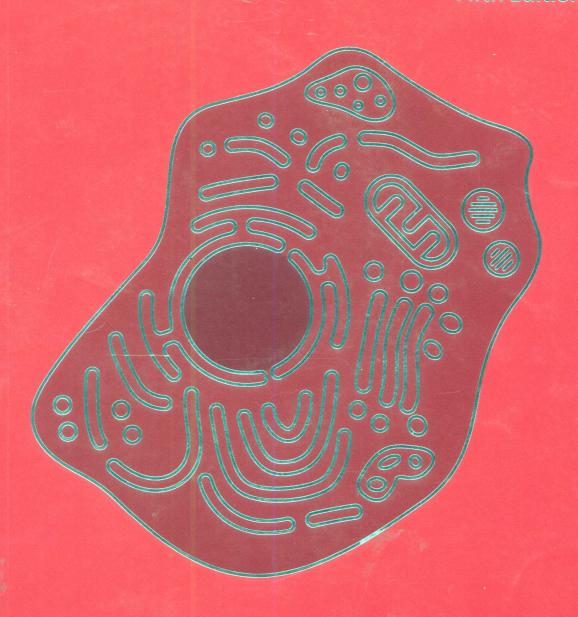
574.2

Fifth Edition



ALBERTS

JOHNSON

LEWIS

RAFF

ROBERTS

WALTER

Molecular Biology of THE CELL Fifth Edition

Bruce Alberts
Alexander Johnson
Julian Lewis
Martin Raff
Keith Roberts
Peter Walter

With problems by

John Wilson

Tim Hunt

754983

Universitatea de Stat de Medicină și Farmacie «Nicolae Testemițanu»

athliotera Stilntifică Medical

SLL



Contents

Special Fed		viii
Detailed Contents		ix
Acknowledgments A Note to the Reader		xxvi
A Note to t	ne Reader	xxxi
PART I	INTRODUCTION TO THE CELL	
1.	Cells and Genomes	1
2.	Cell Chemistry and Biosynthesis	45
3.	Proteins	125
PART II	BASIC GENETIC MECHANISMS	
4.	DNA, Chromosomes, and Genomes	195
5.	DNA Replication, Repair, and Recombination	263
6.	How Cells Read the Genome: From DNA to Protein	329
7.	Control of Gene Expression	411
PART III	METHODS	
8.	Manipulating Proteins, DNA, and RNA	501
9.	Visualizing Cells	579
PART IV	INTERNAL ORGANIZATION OF THE CELL	
10.	Membrane Structure	617
11.	Membrane Transport of Small Molecules and the Electrical	of themself to
12.	Properties of Membranes Intracellular Compartments and Protein Sorting	651
13.	Intracellular Vesicular Traffic	695
14.	Energy Conversion: Mitochondria and Chloroplasts	749 813
15.	Mechanisms of Cell Communication	879
16.	The Cytoskeleton	965
17.	The Cell Cycle	1053
18.	Apoptosis	1115
PART V	CELLS IN THEIR SOCIAL CONTEXT	
19.	Cell Junctions, Cell Adhesion, and the Extracellular Matrix	1131
20.	Cancer Canada Ca	1205
	Chapters 21–25 available on Media DVD-ROM	
21.	Sexual Reproduction: Meiosis, Germ Cells, and Fertilization	1269
22.	Development of Multicellular Organisms	1305
23.	Specialized Tissues, Stem Cells, and Tissue Renewal	1417
24.	Pathogens, Infection, and Innate Immunity	1485
25.	The Adaptive Immune System	1539
Glossary		G-1
Index	The Constitute of the Assistance Assistance of the Constitute of t	<i>I–1</i>
Tables	The Genetic Code, Amino Acids	T-1