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LIFE; IN THE LEGACY OF GALILEO; INSPIRATION FROM THE GENETIC CODE; ENTER EVOLUTION; THE EXPERIMENTS; THE ARKIES' DEBUT, IN PRINT; MAKING THE CASE; DETAILS EMERGE; ARKIES AFFECT BIOLOGICAL CLASSIFICATION; HISTORY OF BIOLOGICAL CLASSIFICATION  
DOMAINS ARRIVE-FOR SOME IT'S A SMALL WORLD AFTER ALL; A FINAL NOTE ON PERSPECTIVE; CHAPTER 4: IN PURSUIT OF PRIONS; EARLY CLUES: SCRAPIE, RIDA, AND CREUTZFELDT-JAKOB DISEASE; OF KURU AND CANNIBALS; INTO THE LAB TO ISOLATE THE AGENT; IATROGENIC CREUTZFELDT-JAKOB DISEASE ARISES; HUMAN GROWTH HORMONE FROM CADAVERS CAUSES A PRION DISEASE; PRUSINER AND PRIONS; THE BRITISH BEEF SCARE; 1985 TO 1987: 420 NEW BSE CASES; 1988: 3072 NEW BSE CASES; 1989: 7627 NEW BSE CASES; 1990: 14,371 NEW BSE CASES; 1991 TO 1992: THE NUMBERS OF NEW BSE CASES PEAK AT 25,644 AND 36,924  
1993: THE NUMBER OF NEW BSE CASES BEGINS TO FALL (33,574)1994; 1995; 1996; 1997; 1998; 1999; FATAL INSOMNIA; VISUALIZING PRIONS; THE YEAST CONNECTION; WHAT'S NEXT?; CHAPTER 5: THE TALE OF TELOMERES; DISCOVERING STICKY ENDS; THE HAYFLICK LIMIT; THE END REPLICATION PROBLEM; THE HAYFLICK LIMIT MEETS THE END REPLICATION PROBLEM; CLUES FROM CILIATES; PROBING HUMAN TELOMERES; THE PUZZLE PIECES ASSEMBLE; TRACKING TELOMERASE IN DIFFERENT CELL TYPES; MANIPULATING TELOMERASE; SHUTTING TELOMERASE OFF; TURNING TELOMERASE ON; THE FUTURE: TELOMERE MEDICINE?  
CHAPTER 6: STEM CELLS: THE SCIENCE OF SELF-RENEWAL FROM BONE MARROW TO BRAIN MARROW; A CELL'S POTENTIAL GONE HAYWIRE: TERATOMAS; STRAIN 129 LEADS TO IDENTIFYING STEM CELLS; TRACING THE ORIGIN OF A TERATOMA; A SURPRISE ANNOUNCEMENT CATALYZES CELL CULTURE; KNOCKOUTS BEGIN WITH EMBRYONIC STEM CELLS; ENTER EMBRYONIC GERM CELLS; BEYOND THE MOUSE; FINALLY-HUMAN EMBRYONIC STEM CELLS; ENTER ETHICS AND POLITICS; ADULT STEM CELLS: BONE MARROW TO BRAIN, LIVER, MUSCLE, AND BEYOND; BRAIN MARROW REVISITED; MORE QUESTIONS THAN ANSWERS; CHAPTER 7: THE ROOTS OF CLONING; THE AMPHIBIAN YEARS; THE MOUSE, TAKE 1 OF BOVINES AND OVINES-COWS AND SHEEP

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### Sommario/riassunto

The goal of Discovery: Science as a Window to the World is to relay the excitement of science by exploring selected topics in biology and medicine in a way that reveals the process of discovery. Each chapter will focus on the curiosity and creativity that drives scientists to wonder, observe, question and experiment. One impetus for this project is the recognition of a growing demand among instructors for a book that departs from fact-stuffed textbooks and instead engages students in the discovery process at a personal level. Emphasizes the process of discovery through

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