Animal Cloning The Science Of Nuclear Transfer

A Reference Handbook
Cloning Pets
Frankenstein's Cat
Cloning Wild Life
Inside of a Dog
Cloning After Dolly
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The Promise and Perils of Human Cloning
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Ethical Aspects of Animal Cloning for Food Supply
How a Collection of Visionaries, Rebels, Eccentrics, and Their Pets Launched the Commercial Dog Cloning Industry
The Cloning Sourcebook
Cloning
The Science and Ethics of Cloning
Who's Still Afraid?
Science and Society
A Clone of Your Own?
Dolly
A Clone of Your Own?

Films from the Future
Scientific Frontiers in Developmental Toxicology and Risk Assessment
Human Cloning
Four Fallacies and Their Legal Consequences
Animal Cloning

WALLS HINES

A Reference Handbook Heinemann-Raintree Library
From this collection, readers will gain a clearer picture of the history of cloning in agriculture and animal science, the various biological procedures that are encompassed by the term "cloning," the philosophical arguments in support of and opposed to cloning humans, and the considerations that should inform discussions about public policy matters related to cloning research and to human cloning itself.
Cloning Pets Academic Press
Examines the scientific, legal, and ethical issues surrounding animal cloning technology.
Frankenstein's Cat Mango Media Inc.
Designed to be a concise, balanced introduction to this dynamic subject, covering key issues and current techniques currently used in animal transgenesis and cloning.

Provides the essentials of the subject, from the molecular basis of gene structure and function to therapeutic gene cloning in humans. Social and ethical implications of this important area of research are also considered.

Cloning Wild Life

University of Pittsburgh Press

Since Scottish biologist Ian Wilmut's 1997 cloning of Dolly the sheep, mice, cattle, goats, pigs, cats, mules, horses, and most recently, rats have joined the list of cloned animals, pushing the possibilities for scientific manipulation of life to new extremes. The first book to present Wilmut's own thoughts on the troubling ramifications of this technology, this new edition also contains discussions about the advantages and disadvantages of cloning, stem cell research, and a survey of religious perspectives.

Inside of a Dog Capstone Classroom

Winner of 2014 AAAS/Subaru SB&F Prize for Best Young Adult Science Book Longlisted for the PEN/E.O. Wilson Literary Science Writing Award One of Nature's Summer Book Picks One of Publishers Weekly's Top Ten Spring 2013 Science Books For centuries, we've toyed with our creature companions, breeding dogs that herd and hunt, housecats that look like tigers, and teacup pigs that fit snugly in our handbags. But what happens when we take animal alteration a step further, engineering a cat that glows green under ultraviolet light or cloning

the beloved family Labrador? Science has given us a whole new toolbox for tinkering with life. How are we using it? In Frankenstein's Cat, the journalist Emily Anthes takes us from petri dish to pet store as she explores how biotechnology is shaping the future of our furry and feathered friends. As she ventures from bucolic barnyards to a "frozen zoo" where scientists are storing DNA from the planet's most exotic creatures, she discovers how we can use cloning to protect endangered species, craft prosthetics to save injured animals, and employ genetic engineering to supply farms with disease-resistant livestock. Along the way, we meet some of the animals that are ushering in this astonishing age of enhancement, including sensor-wearing seals, cyborg beetles, a bionic bulldog, and the world's first cloned cat. Through her encounters with scientists, conservationists, ethicists, and entrepreneurs, Anthes reveals that while some of our interventions may be trivial (behold: the GloFish), others could improve the lives of many species-including our own. So what does biotechnology really mean for the world's wild things? And what do our brave new beasts tell us about ourselves? With keen insight and her trademark spunk, Anthes highlights both the peril and the promise of our scientific superpowers, taking us on an adventure into a world where our grandest science fiction fantasies are fast

becoming reality.

Cloning After Dolly Cambridge University Press

Discusses the differences between therapeutic and reproductive cloning, the science and issues of stem cell research, and the legal and ethical sides of the debate.

Safety of Genetically Engineered Foods Oxford University Press

To many, cloning is the stuff of science fiction. However, for decades it has been an important piece of scientific development. This guidebook starts by looking at the foundational scientific theories that led to the exact replication of molecules, cells, and even organisms. Drawing on primary sources, this book gives biographical information on key players in the field of cloning and traces how their work built upon that of their predecessors, culminating in the successful cloning of a sheep. It looks at how cloning technology has advanced and is used today. Students will hone their critical thinking skills by exploring the ethical debate behind the use of cloning technology.

The Promise and Perils of Human Cloning CRC Press

Hard Science Fiction Films that Predict the Future "As the breakneck advance of technology takes us into a world that is both exciting and menacing, sci-fi films give us an inkling of what is to come, and what we should avoid." —Seth Shostak, senior astronomer at the SETI Institute, and host of Big

Picture Science #1 Best Seller in Nanotechnology and Computers & Technology Dr. Andrew Maynard, physicist and leading expert on socially responsible development of emerging and converging technologies, examines science fiction movies and brings them to life. Advances in science and technology are radically changing our world.Films from the Future is an essential guide to navigating a future dominated by complex and powerful new technologies. The jump from room-filling processors to pocket-size super computers is just the beginning. Artificial intelligence, gene manipulation, cloning, and inter-planet travel are all ideas that seemed like fairy tales but a few years ago. And now their possibility is very much here. But are we ready to handle these advances? As Maynard explains, “Viewed in the right way?and with a good dose of critical thinking?science fiction movies can help us think about and prepare for the social consequences of technologies we don’t yet have, but that are coming faster than we imagine.” Films from the Future looks at twelve movies that take readers on a journey through the worlds of biological and genetic manipulation, human enhancement, cyber technologies, and nanotechnology. Gain a broader understanding of the complex relationship between science and society. The movies include old and new, and the familiar and unfamiliar, to provide a

unique, entertaining, and ultimately transformative take on the power and responsibilities of emerging technologies. If you have read books such as The Book of Why, The Science of Interstellar, or The Future of Humanity, you will love Films from the Future.

The Science of De-Extinction ABC-CLIO

An insider's view on bringing extinct species back to life Could extinct species, like mammoths and passenger pigeons, be brought back to life? In How to Clone a Mammoth, Beth Shapiro, an evolutionary biologist and pioneer in ancient DNA research, addresses this intriguing question by walking readers through the astonishing and controversial process of de-extinction. From deciding which species should be restored to anticipating how revived populations might be overseen in the wild, Shapiro vividly explores the extraordinary cutting-edge science that is being used to resurrect the past. Considering de-extinction's practical benefits and ethical challenges, Shapiro argues that the overarching goal should be the revitalization and stabilization of contemporary ecosystems. Looking at the very real and compelling science behind an idea once seen as science fiction, How to Clone a Mammoth demonstrates how de-extinction will redefine conservation's future.

Science-Based Concerns Rowman & Littlefield

Principles of Cloning, Second Edition is the fully

revised edition of the authoritative book on the science of cloning. The book presents the basic biological mechanisms of how cloning works and progresses to discuss current and potential applications in basic biology, agriculture, biotechnology, and medicine. Beginning with the history and theory behind cloning, the book goes on to examine methods of micromanipulation, nuclear transfer, genetic modification, and pregnancy and neonatal care of cloned animals. The cloning of various species—including mice, sheep, cattle, and non-mammals—is considered as well. The Editors have been involved in a number of breakthroughs using cloning technique, including the first demonstration that cloning works in differentiated cells done by the Recipient of the 2012 Nobel Prize for Physiology or Medicine – Dr John Gurdon; the cloning of the first mammal from a somatic cell – Drs Keith Campbell and Ian Wilmut; the demonstration that cloning can reset the biological clock - Drs Michael West and Robert Lanza; the demonstration that a terminally differentiated cell can give rise to a whole new individual – Dr Rudolf Jaenisch and the cloning of the first transgenic bovine from a differentiated cell – Dr Jose Cibelli. The majority of the contributing authors are the principal investigators on each of the animal species cloned to date and are expertly

qualified to present the state-of-the-art information in their respective areas. First and most comprehensive book on animal cloning, 100% revised Describes an in-depth analysis of current limitations of the technology and research areas to explore Offers cloning applications on basic biology, agriculture, biotechnology, and medicine

Animal Cloning ABDO Animal cloning has developed quickly since the birth of Dolly the sheep. Yet many of the first questions to be raised still need to be answered. What do Dolly and her fellow mouse, cow, pig, goat and monkey clones mean for science? And for society? Why do so many people respond so fearfully to cloning? What are the ethical issues raised by cloning animals, and in the future, humans? How are the makers of public policy coping with the stunning fact that an entire animal can be reconstructed from a single adult cell? And that humans might well be next? The Cloning Source Book addresses all of these questions in a way that is unique in the cloning literature, by grounding what is effectively an interdisciplinary conversation in solid science. In the first section of the book, the key scientists responsible for the early and crucial developments in cloning speak to us directly, and other scientists evaluate and comment on these developments. The second section explores the context of cloning and

includes sociological, mythological, and historical perspectives on science, ethics, and policy. The authors also examine the media's treatment of the Dolly story and its aftermath, both in the United States and in Britain. The third section, on ethics, contains a broad range of papers written by some of the major commentators in the field. The fourth section addresses legal and policy issues. It features individual and collective contributions by those who have actually shaped public policy on reproductive cloning, therapeutic cloning, and similarly contentious bioethical issues in the United States, Britain, and the European Union. Animal cloning continues for agricultural and medicinal purposes, the latter in combination with transgenics. Human cloning for therapeutic purposes has recently been made legal in Britain. The goal is to produce an early embryo and then derive stem cells that are immunologically matched to the donor. Two human reproductive cloning projects have been announced, and there are almost certainly others about which we know nothing. Sooner or later a cloned human will be born. Many lessons can be learned from the cloning experience. Most importantly, there needs to be a public conversation about the permissible uses of new and morally murky technologies. Scientists, journalists, ethicists and policy makers all have roles to play, but cutting-edge science is

everybody's business. The Cloning Sourcebook provides the tools required for us to participate in shaping our own futures.

Human Cloning and Human Dignity

Princeton University Press

What Stiff did for the dead and Fast Food Nation did for the burger, Dog, Inc. does for the stranger-than-fiction world of commercial dog cloning. It all began with a pit bull named Booger. Former Miss Wyoming Bernann McKinney was so distraught over the death of her dog, whom she regarded as her guardian and savior, that she paid $50,000 to RNL Bio for the chance to bring her beloved companion back to life. The result were five new Boogers-the first successful commercial cloning of a canine-delivered in 2008, along with a slew of compelling questions about the boundaries of science, commerce, and ethics. Blending shocking investigative reporting with colorful anecdotes, Pulitzer Prize-winning John Woestendiek takes readers behind the scenes of this emerging industry. But Dog, Inc. isn't just a book about pets. Nor is it just a book about science. Rather it's a fascinating look at how our emotional needs are bending the reaches of science and technology, as well as a study of this uncharted territory. With our pet obsession climbing to new heights and our scientific abilities even more so, this combination raises a serious concern: Are we crossing the boundary of controlling science in the name of science, in the

name of love, in the name of merchandising-or a blend of all three?

Cloning Blackbirch Press, Incorporated

"Fathers" of the famous cloned sheep explain their work at Edinburgh University-affiliated Roslin Institute and its controversial scientific and ethical ramifications.

Cuddling Up to Biotech's Brave New Beasts National Academies Press

Tells all about the designing and building of the Three Gorges Dam, as well as the controversies surrounding this massive project.

Approaches to Assessing Unintended Health Effects Cavendish Square Publishing, LLC

Few avenues of scientific inquiry raise more thorny ethical questions than the cloning of human beings, a radical way to control our DNA. In August 2001, in conjunction with his decision to permit limited federal funding for stem-cell research, President George W. Bush created the President's Council on Bioethics to address the ethical ramifications of biomedical innovation. Over the past year the Council, whose members comprise an all-star team of leading scientists, doctors, ethicists, lawyers, humanists, and theologians, has discussed and debated the pros and cons of cloning, whether to produce children or to aid in scientific research. This book is its insightful and thought-provoking report. The questions the Council members confronted do not have easy answers, and they did not seek to hide their differences behind an artificial

consensus. Rather, the Council decided to allow each side to make its own best case, so that the American people can think about and debate these questions, which go to the heart of what it means to be a human being. Just as the dawn of the atomic age created ethical dilemmas for the United States, cloning presents us with similar quandaries that we are sure to wrestle with for decades to come.

The Birth of Cloning and the Biological Revolution Infobase Publishing

As a genre, science fiction has the unique ability to inspire curiosity and deepen the understanding of issues that are facing STEM fields. One of those issues is the possibility of human cloning. This book examines how human cloning has been depicted in science fiction, the development of existing cloning technology, how scientists have used these techniques in the past, and their potential application for the future. Fascinated readers will explore topics such as somatic cell nuclear transfer (SCNT), animal cloning, and the ethical considerations surrounding therapeutic and reproductive cloning in humans.

Human Cloning Scientific American / Farrar, Straus and Giroux

In nature clones occur naturally in plants, but not in animals. According to the National Human Genome Research Institute, animals must be scientifically manipulated through different processes to create an identical copy of the

genetic material, known as cloning. This thought-provoking volume explores the history of cloning, the ethical issues it raises, where research may lead it in the future, and cloning's role in curing diseases, creating custom organs, improving food, and saving animals.

Epigenetic Risks of Cloning University of Illinois Press

Human reproductive cloning is an assisted reproductive technology that would be carried out with the goal of creating a newborn genetically identical to another human being. It is currently the subject of much debate around the world, involving a variety of ethical, religious, societal, scientific, and medical issues. Scientific and Medical Aspects of Human Reproductive Cloning considers the scientific and medical sides of this issue, plus ethical issues that pertain to human-subjects research. Based on experience with reproductive cloning in animals, the report concludes that human reproductive cloning would be dangerous for the woman, fetus, and newborn, and is likely to fail. The study panel did not address the issue of whether human reproductive cloning, even if it were found to be medically safe, would beâ€"or would not beâ€"acceptable to individuals or society.

The 1st Cloned Sheep Cambridge University Press

Assists policymakers in evaluating the appropriate scientific methods for detecting

unintended changes in food and assessing the potential for adverse health effects from genetically modified products. In this book, the committee recommended that greater scrutiny should be given to foods containing new compounds or unusual amounts of naturally occurring substances, regardless of the method used to create them. The book offers a framework to guide federal agencies in selecting the route of safety assessment. It identifies and recommends several pre- and post-market approaches to guide the assessment of unintended compositional changes that could result from genetically modified foods and research avenues to fill the knowledge gaps.

What Dogs See, Smell, and Know Gem Publications

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