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1992 Medical and health annual 1991

The Tangled Field Nathaniel C. Comfort 2001 In 1946 Barbara McClintock studies "controlling elements" (mobile genetic elements) as she observes chromosomal behavior with microscopes, but due to her own unorthodox nature and scientific bias, she doesn't win the Nobel Prize for this work until 1983.

The Life of a Virus Angela N. H. Creager 2002 We normally think of viruses in terms of the devastating diseases they cause, from smallpox to AIDS. But in The Life of a Virus, Angela N. H. Creager introduces us to a plant virus that has taught us much of what we know about all viruses, including the lethal ones, and that also played a crucial role in the development of molecular biology. Focusing on the tobacco mosaic virus (TMV) research conducted in Nobel laureate Wendell Stanley's lab, Creager argues that TMV served as a model system for virology and molecular biology, much as the fruit fly and laboratory mouse have for genetics and cancer research. She examines how the experimental techniques and instruments Stanley and his colleagues developed for studying TMV were generalized not just to other labs working on TMV, but also to research on other diseases such as poliomyelitis and influenza and to studies of genes and cell organelles. The great success of research on TMV also helped justify increased spending on biomedical research in the postwar years (partly through the National Foundation for Infantile Paralysis's March of Dimes)—a funding priority that has continued to this day.

Molecular Biology of the Cell Bruce Alberts 2004

National Strategy for the COVID-19 Response and Pandemic Preparedness Joseph R. Biden, Jr. 2021-05-18 The ultimate guide for anyone wondering how President Joe Biden will respond to the COVID-19 pandemic—all his plans, goals, and executive orders in response to the coronavirus crisis. Shortly after being inaugurated as the 46th President of the United States, Joe Biden and his administration released this 200 page guide detailing his plans to respond to the coronavirus pandemic. The National Strategy for the COVID-19 Response and Pandemic Preparedness breaks down seven crucial goals of President Joe Biden's administration with regards to the coronavirus pandemic: 1. Restore trust with the American people. 2. Mount a safe, effective, and comprehensive vaccination campaign. 3. Mitigate spread through expanding masking, testing, data, treatments, health care workforce, and clear public health standards. 4. Immediately expand emergency relief and exercise the Defense Production Act. 5. Safely reopen schools, businesses, and travel while protecting workers. 6. Protect those most at risk and advance equity, including across racial, ethnic and rural/urban lines. 7. Restore U.S. leadership globally and build better preparedness for future threats. Each of these goals are explained and detailed

in the book, with evidence about the current circumstances and how we got here, as well as plans and concrete steps to achieve each goal. Also included is the full text of the many Executive Orders that will be issued by President Biden to achieve each of these goals. The National Strategy for the COVID-19 Response and Pandemic Preparedness is required reading for anyone interested in or concerned about the COVID-19 pandemic and its effects on American society.

Essentials of Health Information Management: Principles and Practices Mary Jo Bowie 2015-01-27 Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

A Short Course in Bacterial Genetics University Jeffrey H Miller 1992 University of California, Los Angeles. Introduction to bacterial genetics, including laboratory methods, for advanced students and beginning researchers. Handbook with plastic spiral-bound laboratory manual.

Pawsitive selection Mia Persson 2020-01-21 Through domestication and recent selection, dogs have evolved a unique set of communicative skills to attract and redirect human attention. These social skills have not been seen to the same extent in socialised wolves and are therefore believed to have a significant genetic basis. The process of domestication and breed formation has also had effects on the structure of the dog genome that are favourable for genetic mapping. With a high amount of linkage and long haplotype blocks, fewer genetic markers are needed to find gene-trait associations in dogs than in humans. Dogs serve as an important research model for us since humans and dogs share several diseases, psychiatric disorders and behavioural traits. In Paper I, I recorded human-directed social behaviours during a two-minute unsolvable problem task in 500 laboratory beagles. The dogs were living at a breeding facility and had been bred, kept and handled under standardised conditions. Behaviours related to task solving and human-directed contact seeking were separated in a principal component analysis, indicating that the behavioural test can be used to study dog-human interaction. Narrowsense heritability (h2) of the largest principal component related to contact seeking behaviours was estimated to 0.23. This study found a significant genetic basis to the variation seen in human-directed contact seeking behaviours recorded in this population. Next, in Paper II, we collected and genotyped the DNA of 190 of the previously tested beagles with an HD Canine SNP-chip. To find genes associated with human-directed contact seeking I performed a genome-wide association study (GWAS), showing one significant and two suggestive single nucleotide polymorphism (SNP) markers on chromosome 26. The significant SNP is located within a gene named SEZ6L, previously associated with autism in human studies. Two adjacent SNPs with suggestive association were found within a gene called ARVCF, which has been associated with schizophrenia. To our knowledge, this was the first genome-wide study to present regions within the dog genome associated with inter-species communication in dogs. However, these results could have been unique to this beagle population, so Paper III aimed to verify our previous findings in additional dog breeds. We tested 100 Labrador retrievers and 61 golden retrievers with the same unsolvable problem-task used in Paper I. Their DNA was collected and each individual was genotyped by pyrosequencing on two of the previously identified SNPs. To study the effects of recent selection, the Labrador retrievers were divided into two types. The common type is mainly bred and used for dog shows and as a pet, while the field type is mainly bred and used for hunting purposes. In this study, we found that both markers varied in both dog breeds and was significantly associated with human-directed contact-seeking behaviours. Allele frequencies differed significantly between Labrador retriever types, suggesting that these loci have been affected by recent selection. In conclusion, Paper III verifies the results found in Paper II. Finally, in Paper IV we investigated the association between dogs' human-directed social skills and previously known SNP markers in the oxytocin receptor (OXTR) region. The oxytocin system plays an important role in the formation of social bonds and may therefore also be

important in the bond between dogs and humans. Here, we hypothesized that dogs receiving intranasal oxytocin respond differently to the hormone, depending on the receptor type. To investigate this, 60 golden retrievers were genotyped for SNP markers in the OXTR region and tested with the unsolvable problem task used in Paper I and III. An association was found between genotype and social behaviour in response to oxytocin administration. Dogs responded differently to oxytocin treatment, depending on OXTR genotype. In summary, this thesis contributes to the knowledge on genetic influence of interspecies communication in dogs.

The Genetic Lottery Kathryn Paige Harden 2021-09-21 A provocative and timely case for how the science of genetics can help create a more just and equal society In recent years, scientists like Kathryn Paige Harden have shown that DNA makes us different, in our personalities and in our health—and in ways that matter for educational and economic success in our current society. In The Genetic Lottery, Harden introduces readers to the latest genetic science, dismantling dangerous ideas about racial superiority and challenging us to grapple with what equality really means in a world where people are born different. Weaving together personal stories with scientific evidence, Harden shows why our refusal to recognize the power of DNA perpetuates the myth of meritocracy, and argues that we must acknowledge the role of genetic luck if we are ever to create a fair society. Reclaiming genetic science from the legacy of eugenics, this groundbreaking book offers a bold new vision of society where everyone thrives, regardless of how one fares in the genetic lottery.

Energy Research Abstracts 1994-12

Use of Laboratory Animals in Biomedical and Behavioral Research National Research Council 1988-02-01 Scientific experiments using animals have contributed significantly to the improvement of human health. Animal experiments were crucial to the conquest of polio, for example, and they will undoubtedly be one of the keystones in AIDS research. However, some persons believe that the cost to the animals is often high. Authored by a committee of experts from various fields, this book discusses the benefits that have resulted from animal research, the scope of animal research today, the concerns of advocates of animal welfare, and the prospects for finding alternatives to animal use. The authors conclude with specific recommendations for more consistent government action.

Beyond Biotechnology Craig Holdrege 2008 "Authors Craig Holdrege and Steve Talbott evaluate the current state of genetic science and examine its potential applications, particularly in agriculture and medicine, as well as the possible dangers."-inside jacket.

Annual Report 1980

Microbiology Laboratory Guidebook United States. Food Safety and Inspection Service. Microbiology Division 1998

The Gene Doctors Yvonne Baskin 1984

By abbreviation Leland G. Alkire 1988

Next Steps for Functional Genomics National Academies of Sciences, Engineering, and Medicine 2020-12-18 One of the holy grails in biology is the ability to predict functional characteristics from an organism's genetic sequence. Despite decades of research since the first sequencing of an organism in 1995, scientists still do not understand exactly how the information in genes is converted into an

organism's phenotype, its physical characteristics. Functional genomics attempts to make use of the vast wealth of data from "-omics" screens and projects to describe gene and protein functions and interactions. A February 2020 workshop was held to determine research needs to advance the field of functional genomics over the next 10-20 years. Speakers and participants discussed goals, strategies, and technical needs to allow functional genomics to contribute to the advancement of basic knowledge and its applications that would benefit society. This publication summarizes the presentations and discussions from the workshop.

Guide for the Care and Use of Laboratory Animals National Research Council 2011-01-27 A respected resource for decades, the Guide for the Care and Use of Laboratory Animals has been updated by a committee of experts, taking into consideration input from the scientific and laboratory animal communities and the public at large. The Guide incorporates new scientific information on common laboratory animals, including aquatic species, and includes extensive references. It is organized around major components of animal use: Key concepts of animal care and use. The Guide sets the framework for the humane care and use of laboratory animals. Animal care and use program. The Guide discusses the concept of a broad Program of Animal Care and Use, including roles and responsibilities of the Institutional Official, Attending Veterinarian and the Institutional Animal Care and Use Committee. Animal environment, husbandry, and management. A chapter on this topic is now divided into sections on terrestrial and aquatic animals and provides recommendations for housing and environment, husbandry, behavioral and population management, and more. Veterinary care. The Guide discusses veterinary care and the responsibilities of the Attending Veterinarian. It includes recommendations on animal procurement and transportation, preventive medicine (including animal biosecurity), and clinical care and management. The Guide addresses distress and pain recognition and relief, and issues surrounding euthanasia. Physical plant. The Guide identifies design issues, providing construction guidelines for functional areas; considerations such as drainage, vibration and noise control, and environmental monitoring; and specialized facilities for animal housing and research needs. The Guide for the Care and Use of Laboratory Animals provides a framework for the judgments required in the management of animal facilities. This updated and expanded resource of proven value will be important to scientists and researchers, veterinarians, animal care personnel, facilities managers, institutional administrators, policy makers involved in research issues, and animal welfare advocates.

Strengthening Forensic Science in the United States National Research Council 2009-07-29 Scores of talented and dedicated people serve the forensic science community, performing vitally important work. However, they are often constrained by lack of adequate resources, sound policies, and national support. It is clear that change and advancements, both systematic and scientific, are needed in a number of forensic science disciplines to ensure the reliability of work, establish enforceable standards, and promote best practices with consistent application. Strengthening Forensic Science in the United States: A Path Forward provides a detailed plan for addressing these needs and suggests the creation of a new government entity, the National Institute of Forensic Science, to establish and enforce standards within the forensic science community. The benefits of improving and regulating the forensic science disciplines are clear: assisting law enforcement officials, enhancing homeland security, and reducing the risk of wrongful conviction and exoneration. Strengthening Forensic Science in the United States gives a full account of what is needed to advance the forensic science disciplines, including upgrading of systems and organizational structures, better training, widespread adoption of uniform and enforceable best practices, and mandatory certification and accreditation programs. While this book provides an essential call-to-action for congress and policy makers, it also serves as a vital tool for law enforcement agencies, criminal prosecutors and attorneys, and forensic science educators.

Molecular Biology of Plants Russell Malmberg 1985

National Institutes of Health Annual Report of International Activities John E. Fogarty International Center for Advanced Study in the Health Sciences

Cells and Heredity Michael J. Padilla 2002

Scientific and Medical Aspects of Human Reproductive Cloning National Research Council 2002-06-17 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.

Master Control Genes in Development and Evolution Walter J. Gehring 1998-01-01 In this fascinating book, one of the world's most eminent developmental biologists discusses some of the exciting new insights into how genes control development. Walter Gehring describes in vivid detail his essential contributions to the landmark discovery of the homeobox, a characteristic DNA segment found in the genes of all higher organisms from the fruitfly to humans, and he explains how this has provided the key to our modern understanding of development and evolution. The book thus becomes not only a lucid discussion of genetics but also an engaging description of the art of scientific investigation. Gehring begins his story by looking at the work of the many researchers who laid the foundation for the fields of molecular, cellular, and developmental biology, providing insightful vignettes of past and present investigators. He then describes his laboratory's hunt for the gene that caused odd mutations in the fruitfly--in which, for example, antennae on the head were transformed into legs. He explains that researchers eventually found that the same master control genes that dictate the body plan in flies also pattern human bodies, limbs, hands, heart, and brain. And he illustrates the universality of the genetic control of development by describing the development of the eye; eyes as different as those of humans, squids, and flies, he shows, develop under the same master control gene.

In the Light of Evolution National Academy of Sciences 2017-01-01 Biodiversity-the genetic variety of life-is an exuberant product of the evolutionary past, a vast human-supportive resource (aesthetic, intellectual, and material) of the present, and a rich legacy to cherish and preserve for the future. Two urgent challenges, and opportunities, for 21st-century science are to gain deeper insights into the evolutionary processes that foster biotic diversity, and to translate that understanding into workable solutions for the regional and global crises that biodiversity currently faces. A grasp of evolutionary principles and processes is important in other societal arenas as well, such as education, medicine, sociology, and other applied fields including agriculture, pharmacology, and biotechnology. The ramifications of evolutionary thought also extend into learned realms traditionally reserved for philosophy and religion. The central goal of the In the Light of Evolution (ILE) series is to promote the evolutionary sciences through state-of-the-art colloquia-in the series of Arthur M. Sackler colloquia sponsored by the National Academy of Sciences-and their published proceedings. Each installment explores evolutionary perspectives on a particular biological topic that is scientifically intriguing but also has special relevance to contemporary societal issues or challenges. This tenth and final edition of the In

the Light of Evolution series focuses on recent developments in phylogeographic research and their relevance to past accomplishments and future research directions.

The Biology of the Laboratory Rabbit Steven H. Weisbroth 2013-10-02 The Biology of the Laboratory Rabbit is a compendium of papers that discusses the use of the rabbit as an experimental substrate in the scientific process. The collection describes normative biology, research utilization, and rabbit disease. These papers emphasize naturally occurring diseases which affect the value of the rabbit as a research tool. Some papers describe these effects and their impact for investigators engaged in laboratory experimental work on animal medicine. Other papers tackle the value of certain rabbit diseases as models of considerable interest in comparative medicine. Several papers discuss bacterial diseases, viral diseases, protozoal diseases, arthropod parasites, helminth parasites, neoplastic diseases, inherited diseases, nutritional diseases, metabolic, traumatic, mycotic, and miscellaneous diseases of the rabbit. One paper describes a number of diseases that man can acquire from domestic and laboratory rabbits. These include tularemia (which is endemic in wild rabbits and hares), plague (transmitted by fleas), listeriosis (rare in laboratory rabbit colonies), salmonellosis (from rabbit feces), and Pasteurella multocida (common in laboratory and domestic rabbits). The paper notes that laboratory and domestic rabbits are not a major health hazard. The compendium can benefit veterinarians, the medically-oriented investigator, the biologist, the medical and chemical researcher, and others whose work involve laboratory animal care.

Insect Molecular Genetics Marjorie A. Hoy 2003-03-17 A valuable addition to the personal libraries of entomologists, geneticists, and molecular biologists.

Nutrient Requirements of Dogs and Cats National Research Council 2006-07-01 Updating recommendations last made by the National Research Council in the mid-1980s, this report provides nutrient recommendations based on physical activity and stage in life, major factors that influence nutrient needs. It looks at how nutrients are metabolized in the bodies of dogs and cats, indications of nutrient deficiency, and diseases related to poor nutrition. The report provides a valuable resource for industry professionals formulating diets, scientists setting research agendas, government officials developing regulations for pet food labeling, and as a university textbook for dog and cat nutrition. It can also guide pet owners feeding decisions for their pets with information on specific nutrient needs, characteristics of different types of pet foods, and factors to consider when feeding cats and dogs.

Safety of Genetically Engineered Foods National Research Council 2004-07-08 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.

Experiments in Molecular Genetics Jeffrey H. Miller 1972

FDA Approved Animal Drug Products 1997

The Heredity Factor William L. Nyhan 1976

Bad Blood John Carreyrou 2018-05-21 NATIONAL BESTSELLER • The gripping story of Elizabeth Holmes and Theranos—one of the biggest corporate frauds in history—a tale of ambition and hubris set amid the bold promises of Silicon Valley, rigorously reported by the prize-winning journalist. With a new Afterword. “Chilling ... Reads like a thriller ... Carreyrou tells [the Theranos story] virtually to perfection.” —The New York Times Book Review In 2014, Theranos founder and CEO Elizabeth Holmes was widely seen as the next Steve Jobs: a brilliant Stanford dropout whose startup “unicorn” promised to revolutionize the medical industry with its breakthrough device, which performed the whole range of laboratory tests from a single drop of blood. Backed by investors such as Larry Ellison and Tim Draper, Theranos sold shares in a fundraising round that valued the company at more than $9 billion, putting Holmes’s worth at an estimated $4.5 billion. There was just one problem: The technology didn’t work. Erroneous results put patients in danger, leading to misdiagnoses and unnecessary treatments. All the while, Holmes and her partner, Sunny Balwani, worked to silence anyone who voiced misgivings—from journalists to their own employees.

Egg and Ego J.M.W. Slack 1999 "Egg and Ego" is a lighthearted look at the nature of academic science and provides both a personal account of the author's own life in science (specifically developmental biology) and an entertaining description and discussion of what it is like to be a professional biologist. This book is intended for anyone interested in biology, particularly biology students who want to find out what is in store for them in the future. 14 line drawings.

In the Name of Eugenics Daniel J. Kevles 1995 Daniel Kevles traces the study and practice of eugenics--the science of "improving" the human species by exploiting theories of heredity--from its inception in the late nineteenth century to its most recent manifestation within the field of genetic engineering. It is rich in narrative, anecdote, attention to human detail, and stories of competition among scientists who have dominated the field.

A Family Looks Like Love Kaitlyn Wells 2022-05-31 A heartening picture book about a young pup who looks different from her siblings and ultimately learns that love, rather than how you look, is what makes a family. Sutton Button has always looked different from her family. While her siblings had short, stout legs, Sutton's legs were long like noodles. And while her siblings had scruffy, yellow fur, Sutton was a tricolor puppy with soft fur. But when others don't believe that Sutton and her siblings are actually related, Sutton starts to wonder if she really belongs in her family at all--until she realizes that her and her family are the same in all the most important ways and that love, rather than what you look like, is what makes a family. With heartwarming text and adorable illustrations, A Family Looks Like Love is a story about the enduring power of love and teaches readers that family comes in all shapes and sizes.

Publications, Reports, and Papers for 1961- from Oak Ridge National Laboratory Oak Ridge National Laboratory 1964

Mouse Behavioral Testing Douglas Wahlsten 2010-11-25 Mouse Behavioral Testing: How to Use Mice in Behavioral Neuroscience provides detailed explanations of how to conduct an experiment on mouse behavior from the initial planning of the research design through every step of the process until the data analysis phase. The book discusses the practical matters that need to be considered carefully when working with any species of animal, such as how many animals need to be tested. It describes the tests and techniques devised specifically for work with mice. Every step of the research process is illustrated with real situations encountered in previous studies. All examples are based on real experiments, and extensive details of several published experiments are provided. The essential features of a behavioral test protocol are outlined, and several complete protocols are provided. Methods to balance the order of

tests and determine throughput are described, then a completely balanced order of tests in a complex experiment is presented. The book will be useful for those already familiar with the general principles of research but are new to the realm of behavioral testing of live mice. It will also serve as a text for a formal course, most likely at the graduate level. A guide to running a behavioral testing lab, including the many aspects of mouse research beyond the confines of the specific test Diagrams and photographs are shown for many kinds of apparatus and test situations with sufficient details such as dimensions to enable building of replicas Provides step-by-step instructions on planning and executing behavioral experiments in order to run them successfully

World Wildlife Crime Report 2020 United Nations Publications 2021-03-31 The report presents the latest assessment of global trends in wildlife crime. It includes discussions on illicit rosewood, ivory, rhino horn, pangolin scales, live reptiles, tigers and other big cats, and European eel. The COVID-19 (coronavirus) pandemic has highlighted that wildlife crime is a threat not only to the environment and biodiversity, but also to human health, economic development and security. Zoonotic diseases - those caused by pathogens that spread from animals to humans - represent up to 75% of all emerging infectious diseases. Trafficked wild species and the resulting products offered for human consumption, by definition, escape any hygiene or sanitary control, and therefore pose even greater risks of infection.

Making Mice Karen Ann Rader 2004 Making Mice blends scientific biography, institutional history, and cultural history to show how genetically standardized mice came to play a central role in contemporary American biomedical research. Karen Rader introduces us to mouse "fanciers" who bred mice for different characteristics, to scientific entrepreneurs like geneticist C. C. Little, and to the emerging structures of modern biomedical research centered around the National Institutes of Health. Throughout Making Mice, Rader explains how the story of mouse research illuminates our understanding of key issues in the history of science such as the role of model organisms in furthering scientific thought. Ultimately, genetically standardized mice became icons of standardization in biomedicine by successfully negotiating the tension between the natural and the man-made in experimental practice. This book will become a landmark work for its understanding of the cultural and institutional origins of modern biomedical research. It will appeal not only to historians of science but also to biologists and medical researchers.