Biotechnology Entrepreneurship From Science To Solutions Start Up Company Formation And Organization Team Intellectual Property Financing Part

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Biotechnology - The Science and the Business Elsevier
Research and development of novel medicines for human therapy commonly takes over a decade before significant revenues from sales are forthcoming. How can biotechnology companies be founded and grow successfully in an industry with such extended innovation processes? The book investigates this problem and distinguishes three growth phases: From incorporation and start-up through collaborative R&D with large pharmaceutical firms to value creation from R&D pipelines to Public Offerings and product marketing. In this book a dynamic simulation model for testing different decision-making strategies is developed. For each phase the author identifies decision rules that provide for successful corporate growth.
Biology Is Technology Academic Press
This book is an effort to foster the entrepreneurial spirit in young minds. It reviews a wide range of product ideas, opportunities and challenges associated with start-ups. In addition, it discusses popular molecular targets for biotechnology research / the biotech industry such as attenuated microbes, gene sequences, biomarkers, and the latest advance in the sector, CRISPR. These molecular targets can be modified for the production of sufficient quantities of food and fuel. Very often, researchers limit their focus to the proof of concept, and fail to successfully convert it into a finished product. To help young entrepreneurs avoid this pitfall, the book addresses various aspects like intellectual property regulations, commerce and management. The book’s contributing authors hail from various specialized

sectors, and from around the globe. Taken together, the respective chapters are intended to overcome the borders between disciplines that otherwise rarely interact.

The Business of Healthcare Innovation Springer Nature

A biotech manager's handbook lays out - in a simple, straightforward manner - for the manager or would-be entrepreneur the basic principles of running a biotech company. Most managers in biotechnology companies are working in their first company or in their first managerial role. Their expertise and experience in the scientific part of the work can be taken as a given but there is a whole range of other skills to be learned and areas of expertise to come to terms with. Small companies do not have big budgets to hire people or time to become an expert in so many areas. The book starts by outlining the state of the biopharmaceutical industry and goes on to explain the importance of planning (no matter what the size of the company). Succeeding chapters deal with the basics of intellectual property, perspectives from a university technology transfer office and how to raise some initial funding from an investor and entrepreneur. - No other 'how to' manual exists for this sector - Written by a range of expert professionals in each area, all in one book - Is the only 'bench to bedside' book covering the whole spectrum of development

Biotechnology University of Chicago Press

Academia to Biotechnology deals with both the abstract and practical aspects of moving from a univerisity laboratory to a position in the biotech industry. Each chapter lists common and unique features to evaluate breaking down complex decisions into manageable elements. Several sections provide "how to" guides for the preparation of manuscripts, patents, grants, and internal company documents. - Written by an experienced academician and successful biotechnology entrepreneur - Reviews the basic tools taught in a traditional university - Identifies new ways these these tools will be used in the corporate world - Details the 'nuts and bolts' necessary to negotiate a successful position in the biotech industry

A Biotech Manager's Handbook University of Pennsylvania Press

Between 1973 and 2016, the ways to manipulate DNA to endow new characteristics in an organism (that is, biotechnology) have advanced, enabling the development of products that were not previously possible. What will the likely future products of biotechnology be over the next 5â€"10 years? What scientific capabilities, tools, and/or expertise may be needed by the regulatory agencies to ensure they make efficient and sound evaluations of the likely future products of biotechnology? Preparing for Future Products of Biotechnology analyzes the future landscape of biotechnology products and seeks to inform forthcoming policy making. This report identifies potential new risks and frameworks for risk assessment and areas in which the risks or lack of risks relating to the products of biotechnology are well understood.

Science and Technology in Society CRC Press

Why has the biotechnology industry failed to perform up to expectations? This book attempts to answer this question by providing a critique of the industry. It reveals the causes of biotech's problems and offers an analysis on how the industry works. It also provides prescriptions for companies, seeking ways to improve the industry's performance.

Private Science Newnes

Private Science is a contribution to that debate, focusing particularly on the relationships among corporations, universities, and national governments involved in biotechnological research.

Innovation and Entrepreneurship in Biotechnology, an International Perspective CSHL Press

Learn from the past. Understand the present. Explore the future. “ . . . Present Future is a fascinating, expert look at the history of the key technological advances affecting life today, and preparation for the exponential leaps yet to come. . . . ” —BILL MARIS, Founder and First CEO of Google Ventures, Founder of Calico, Founder of Section 32 “With the context of an economic historian and the on-the-ground insights of an active technology investor, Perelmuter’s Present Future brings readers to the bleeding edge of the science and technologies poised to revolutionize the 21st century. Comprehensive and yet enthralling, the book is a must-read for anyone who has an intellectual or commercial interest in what the future may hold.” —PETER HEBERT, Co-Founder and Managing Partner, Lux Capital “. . . Perelmuter draws upon his own experiences as a successful tech entrepreneur and investor, and the writings of dozens of other experts, to highlight the most important implications of multiple emerging technologies. Recommended!” —BEN CASNOCHA, Co-Author of the #1 New York Times best seller The Start-up of You “A comprehensive survey of action across the entire frontier of advanced technologies is daunting in concept and even more so in execution. Guy Perelmuter has pulled it off, providing an accessible yet historically informed review from the world of algorithms to the world of genomic analysis by way of just about every field of science in between. Most important: He avoids the hype-ridden cheerleading that all too often accompanies accounts of breakthrough innovation. . . ” —BILL JANEWAY, Venture Capitalist, Economist, Author of Doing Capitalism in The Innovation Economy: Reconfiguring the Three-Player Game Between Markets, Speculators and the State

Biotechnology Entrepreneurship Springer Science & Business Media

This inside account of Vertex, a start-up pharmaceutical company, conveys the exciting drama being played out in the pioneering and enormously profitable field of drug research. Vertex is dedicated to designing--atom by atom--a new life-saving immunosuppressant drug that has major implications for HIV research.

Career Development in Bioengineering and Biotechnology Simon and Schuster

In the fall of 1980, Genentech, Inc., a little-known California genetic engineering company, became the overnight darling of Wall Street, raising over $38 million in its initial public stock offering. Lacking marketed products or substantial profit, the firm nonetheless saw its share price escalate from $35 to $89 in the first few minutes of trading, at that point the largest gain in stock market history. Coming at a time of economic recession and declining technological competitiveness in the United States, the event provoked banner headlines and ignited a period of speculative frenzy over biotechnology as a revolutionary means for creating new and better kinds of pharmaceuticals, untold profit, and a possible solution to national economic malaise. Drawing from an unparalleled collection of interviews with early biotech players, Sally Smith Hughes offers the first book-length history of this pioneering company, depicting Genentech’s improbable creation, precarious youth, and ascent to immense prosperity. Hughes provides intimate portraits of the people significant to Genentech’s science and business, including cofounders Herbert Boyer and Robert Swanson, and in doing so sheds new light on how personality affects the growth of science. By placing Genentech’s founders, followers, opponents, victims, and beneficiaries in context, Hughes also demonstrates how

science interacts with commercial and legal interests and university research, and with government regulation, venture capital, and commercial profits. Integrating the scientific, the corporate, the contextual, and the personal, Genentech tells the story of biotechnology as it is not often told, as a risky and improbable entrepreneurial venture that had to overcome a number of powerful forces working against it.

Agrobacterium: From Biology to Biotechnology Elsevier

I belie ve that the book would provide an overview of the recent developments in the domain of yeast research with some new ideas, which could serve as an inspiration and challenge for researchers in this field. Ne w Delhi Prof. Asis Datta Dec. 24, 2007 F ormer Vice-chancellor, JNU Director, NCPGR (New Delhi) Pr eface Yeasts are eukaryotic unicellular microfungi that are widely distributed in the natural environments. Although yeasts are not as ubiquitous as bacteria in the na- ral environments, they have been isolated from terrestrial, aquatic and atmospheric environments. Yeast communities have been found in association with plants, a- mals and insects. Several species of yeasts have also been isolated from specialized or extreme environments like those with low water potential (e. g. high sugar/salt concentrations), low temperature (e. g. yeasts isolated from Antarctica), and low oxygen availability (e. g. intestinal tracts of animals). Around 1500 species of yeasts belonging to over 100 genera have been described so far. It is estimated that only 1% of the extant yeasts on earth have been described till date. Therefore, global efforts are underway to recover new yeast species from a variety of normal and extreme environments. Yeasts play an important role in food chains, and carbon, nitrogen and sulphur cycles. Yeasts can be genetically manipulated by hybridization, mutation, rare m- ing, cytoduction, spheroplast fusion, single chromosomal transfer and transfor- tion using recombinant technology. Yeasts (e. g.

Managing Biotechnology CRC Press

My journey into this fascinating field of biotechnology started about 26 years ago at a small biotechnology company in South San Francisco called Genentech. I was very fortunate to work for the company that begat the biotech industry during its formative years. This experience established a solid foundation from which I could grow in both the science and business of biotechnology. After my fourth year of working on Oyster Point Boulevard, a close friend and colleague left Genentech to join a start-up biotechnology company. Later, he approached me to leave and join him in of all places – Oklahoma. He persisted for at least a year before I seriously considered his proposal. After listening to their plans, the opportunity suddenly became more and more intriguing. Finally, I took the plunge and joined this ent- preneurial team in cofounding and growing a start-up biotechnology company. Making that fateful decision to leave the security of a larger company was extremely difficult, but it turned out to be the beginning of an entrepreneurial career that forever changed how I viewed the biotechnology industry. Since that time, I have been fortunate to have cofounded two other biotechnology com- nies and even participated in taking one of them public. During my career in these start-ups, I held a variety of positions, from directing the science, operations, regulatory, and marketing components, to subsequently becoming CEO.

Biotechnology Entrepreneurship Cambridge University Press

Appropriate for a wide range of disciplines, from biology to non-biology, law and nursing majors, DNA and Biotechnology uses a straightforward and comprehensive writing style that gives the educated layperson a survey of DNA by presenting a brief history of genetics, a clear outline of techniques that are in use, and highlights of breakthroughs in hot topic scientific discoveries. Engaging and straightforward scientific writing style Comprehensive forensics chapter Parallel Pedagogic material designed to help both readers and teachers Highlights in the latest scientific discoveries Outstanding full-color illustration that walk reader through complex concepts

Applications of Biotechnology in Neurology University of Chicago Press

How global biotechnology is redefining "life itself." In the age of global biotechnology, DNA can exist as biological material in a test tube, as a sequence in a computer database, and as economically valuable information in a patent. In The Global Genome, Eugene Thacker asks us to consider the relationship of these three entities and argues that—by their existence and their interrelationships—they are fundamentally redefining the notion of biological life itself. Biological science and the biotech industry are increasingly organized at a global level, in large part because of the use of the Internet in exchanging biological data. International genome sequencing efforts, genomic databases, the development of World Intellectual Property policies, and the "borderless" business of biotech are all evidence of the global intersections of biology and informatics—of genetic codes and computer codes. Thacker points out the internal tension in the very concept of biotechnology: the products are more "tech" than "bio," but the technology itself is fully biological, composed of the biomaterial labor of genes, proteins, cells, and tissues. Is biotechnology a technology at all, he asks, or is it a notion of "life itself" that is inseparable from its use in the biotech industry? The three sections of the book cover the three primary activities of biotechnology today: the encoding of biological materials into digital form—as in bioinformatics and genomics; its recoding in various ways—including the "biocolonialism" of mapping genetically isolated ethnic populations and the newly pervasive concern over "biological security"; and its decoding back into biological materiality—as in tissue engineering and regenerative medicine. Thacker moves easily from science to philosophy to political economics, enlivening his account with ideas from such thinkers as Georges Bataille, Georges Canguilhem, Michel Foucault, Antonio Negri, and Paul Virilio. The "global genome," says Thacker, makes it impossible to consider biotechnology without the context of globalism.

Biotechnology from Idea to Market Thinkbiotech

Biotechnology has not stood still since 1991 when the first edition of Biotechnology - The Science and the Business was published. It was the first book to treat the science and business of technology as an integrated subject and was well received by both students and business professionals. All chapters in this second edition have been updated and revised and some new chapters have been introduced, including one on the use of molecular genetic techniques in forensic science. Experts in the field discuss a range of biotechnologies, including pesticides, the flavor and fragrance industry, oil production, fermentation and protein engineering. On the business side, subjects include managing, financing, and regulation of biotechnology. Some knowledge of the science behind the technologies is assumed, as well as a layperson's view of buying and selling. As with the first edition, it is expected that this book will be of interest to biotechnology undergraduates, postgraduates and those working in the industry, along with students of business, economics, intellectual property law and communications.

Genentech Greenleaf Book Group
As an authoritative guide to biotechnology enterprise and entrepreneurship, Biotechnology Entrepreneurship and Management supports the international community in training the biotechnology leaders of tomorrow. Outlining fundamental concepts vital to graduate students and practitioners entering the biotech industry in management or in any entrepreneurial capacity, Biotechnology Entrepreneurship and Management provides tested strategies and hard-won lessons from a leading board of educators and practitioners. It provides a 'how-to' for individuals training at any level for the biotech industry, from macro to micro. Coverage ranges from the initial challenge of translating a technology idea into a working business case, through securing angel investment, and in managing all aspects of the result: business valuation, business development, partnering, biological manufacturing, FDA approvals and regulatory requirements. An engaging and user-friendly style is complemented by diverse diagrams, graphics and business flow charts with decision trees to support effective management and decision making. - Provides tested strategies and lessons in an engaging and user-friendly style supplemented by tailored pedagogy, training tips and overview sidebars - Case studies are interspersed throughout each chapter to support key concepts and best practices. - Enhanced by use of numerous detailed graphics, tables and flow charts
Bioentrepreneurship and Transferring Technology Into Product Development Springer Science & Business Media
Culling together excerpts from a wide range of writings by Dr. Kewal K. Jain on biotechnology topics as they relate to disorders of the nervous system, Applications of Biotechnology in Neurology covers a variety of applications for those working in life sciences and the pharmaceutical sciences, particularly those developing diagnostics and therapeutics for the nervous system. This detailed volume delves into areas such as neurobiotechnology, like neurogenomics and neuroproteomics, molecular diagnostics, various methods of improving systemic administration of drugs for targeted delivery to the nervous system, including the use of nanobiotechnology, biotechnology-based strategies and products for neuroprotection, as well as chapters on neurosurgery and personalized neurology. Thorough, cutting-edge, and thoughtfully organized, Applications of Biotechnology in Neurology serves as an ideal guide, supplemented by 75 tables and 16 figures as well as numerous references from recent literature on this topic, which are appended to each chapter.
Science Business Springer
The tremendous progress in biology over the last half century - from Watson and Crick's elucidation of the structure of DNA to today's astonishing, rapid progress in the field of synthetic biology - has positioned us for significant innovation in chemical production. New bio-based chemicals, improved public health through improved drugs and diagnostics, and biofuels that reduce our dependency on oil are all results of research and innovation in the biological sciences. In the past decade, we have witnessed major advances made possible by biotechnology in areas such as rapid, low-cost DNA sequencing, metabolic engineering, and high-throughput screening. The manufacturing of chemicals using biological synthesis and engineering could expand even faster. A proactive strategy - implemented through the development of a technical roadmap similar to those that enabled sustained growth in the semiconductor industry and our explorations of space - is needed if we are to realize the widespread benefits of accelerating the industrialization of biology. Industrialization of Biology presents such a roadmap to achieve key technical milestones for chemical manufacturing through biological routes. This report examines the technical, economic, and societal factors that limit the adoption of bioprocessing in the chemical industry today and which, if surmounted, would markedly accelerate the advanced manufacturing of chemicals via industrial biotechnology. Working at the interface of synthetic chemistry, metabolic engineering, molecular biology, and synthetic biology, Industrialization of Biology identifies key technical goals for next-generation chemical manufacturing, then identifies the gaps in knowledge, tools, techniques, and systems required to meet those goals, and targets and timelines for achieving them. This report also considers the skills necessary to accomplish the roadmap goals, and what training opportunities are required to produce the cadre of skilled scientists and engineers needed.
Handbook on Sourdough Biotechnology Biotechnology Entrepreneurship
Building Biotechnology helps readers start and manage biotechnology companies and understand the business of biotechnology. This acclaimed book describes the convergence of scientific, political, regulatory, and commercial factors that drive the biotechnology industry: * Cultivate a career in biotechnology, with or without an MBA or Ph.D. * Fund and assemble a company * Manage research and development, alliances, and funding * Understand the diverse factors defining the biotechnology industry * Invest intelligently in biotechnology This second edition significantly expands upon the foundation laid by the first, updating recent developments and adding significantly more case studies, informative figures and tables.
The Global Genome Springer
The first wide-ranging analysis of business trends in the manufacturing segment of the health care industry.