

bill and melinda gates medical research institute

bill and melinda gates medical research institute is a pioneering organization dedicated to advancing global health through innovative medical research. Established with the mission to develop new tools and technologies to combat infectious diseases, the institute places a strong emphasis on diseases that disproportionately affect low-income populations. By focusing on diseases such as tuberculosis, malaria, and enteric infections, the Bill and Melinda Gates Medical Research Institute strives to bridge the gap in healthcare disparities worldwide. This article provides an in-depth exploration of the institute's origins, strategic priorities, key research initiatives, partnerships, and impact on global health. It also highlights the institute's commitment to scientific excellence and its role in accelerating the development of life-saving medical interventions.

- Overview and Mission of the Bill and Melinda Gates Medical Research Institute
- Research Focus Areas and Strategic Priorities
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Overview and Mission of the Bill and Melinda Gates Medical Research Institute

The Bill and Melinda Gates Medical Research Institute was established as a non-profit biotechnology organization aiming to transform medical research by addressing some of the world's most pressing health challenges. The institute is part of the broader Bill & Melinda Gates Foundation ecosystem but operates with a focused mandate on scientific innovation. Its core mission is to develop new vaccines, drugs, and diagnostics that are affordable and accessible to populations in need, particularly in low- and middle-income countries. By leveraging cutting-edge science and technology, the institute seeks to reduce the burden of infectious diseases and improve health outcomes globally. The organization emphasizes translational research, moving promising discoveries from the laboratory to real-world applications efficiently and effectively.

Founding and Organizational Structure

The Bill and Melinda Gates Medical Research Institute was founded to consolidate efforts in biomedical research under a single, mission-driven entity. It brings together expert

scientists, clinicians, and public health professionals who work collaboratively to accelerate the development of medical tools. The institute operates with a multidisciplinary approach, integrating expertise in microbiology, immunology, epidemiology, and clinical trials. Its governance structure includes a leadership team responsible for strategic direction, operational execution, and ensuring alignment with the foundation's overall goals. The institute's headquarters are located in Cambridge, Massachusetts, a hub for biotechnology innovation.

Mission-Driven Approach

The institute's mission is to develop accessible medical innovations that address diseases neglected by traditional pharmaceutical markets. This mission-driven approach prioritizes impact over profit, focusing on diseases that cause significant morbidity and mortality in underserved communities. Key guiding principles include scientific rigor, partnership-driven development, and a commitment to equity in global health. The Bill and Melinda Gates Medical Research Institute actively seeks to reduce barriers in drug development by employing novel methodologies and fostering open collaboration with global stakeholders.

Research Focus Areas and Strategic Priorities

The research agenda of the Bill and Melinda Gates Medical Research Institute centers on diseases that remain leading causes of death and disability in the developing world. By concentrating on infectious diseases such as tuberculosis (TB), malaria, and enteric and diarrheal diseases, the institute targets conditions that have historically received insufficient investment from the private sector. Their strategic priorities are informed by global health needs assessments and guided by the potential for scientific breakthroughs to transform disease control.

Tuberculosis Research

Tuberculosis remains one of the deadliest infectious diseases worldwide, particularly affecting low-income populations. The institute prioritizes the development of new TB vaccines, diagnostics, and treatment regimens. Its research efforts focus on improving the efficacy of vaccines to provide long-lasting protection and developing point-of-care diagnostics to enable earlier detection and treatment. Additionally, the institute works on shortening treatment courses to improve patient adherence and outcomes.

Malaria Innovation

Malaria continues to impose a heavy health burden, especially in sub-Saharan Africa. The Bill and Melinda Gates Medical Research Institute pursues novel approaches to malaria prevention and treatment, including the development of next-generation vaccines and innovative drug candidates. Research programs also explore vector control strategies and diagnostics to enhance malaria management. The goal is to support the global elimination efforts by providing more effective tools that can be deployed widely.

Enteric and Diarrheal Disease Initiatives

Enteric infections, which cause diarrheal diseases, are a leading cause of childhood mortality in resource-limited settings. The institute's research in this area aims to develop vaccines and therapeutics that target primary pathogens responsible for these illnesses. By addressing diarrhea and other enteric diseases, the institute contributes to improving child survival rates and reducing long-term health complications associated with repeated infections.

Key Research Programs and Innovations

The Bill and Melinda Gates Medical Research Institute advances a portfolio of research programs designed to accelerate the development of impactful medical interventions. These programs combine basic science, translational research, and clinical development to deliver new tools efficiently. Innovation is a hallmark of the institute's approach, as it embraces emerging technologies and novel methodologies.

Vaccine Development Programs

Vaccine research is a cornerstone of the institute's efforts to combat infectious diseases. The organization develops vaccines using cutting-edge platforms such as viral vectors, protein subunits, and mRNA technologies. Clinical trials conducted by the institute rigorously evaluate vaccine safety, immunogenicity, and efficacy in diverse populations. The goal is to create vaccines that are not only effective but also stable under varying storage conditions to facilitate distribution in resource-poor environments.

Drug Discovery and Development

The institute's drug discovery efforts focus on identifying new therapeutic candidates with improved safety profiles and mechanisms of action. Utilizing high-throughput screening, structure-based drug design, and medicinal chemistry, the team advances lead compounds through preclinical and clinical stages. Particular emphasis is placed on creating shorter, simpler treatment regimens for diseases like tuberculosis to enhance adherence and reduce resistance.

Diagnostic Innovation

Accurate and timely diagnosis is critical for disease management and control. The Bill and Melinda Gates Medical Research Institute develops novel diagnostic tools that are affordable, rapid, and easy to use in low-resource settings. Efforts include point-of-care tests that enable early detection of infections and monitoring of treatment responses. These diagnostics help bridge the gap between laboratory research and field application.

Global Partnerships and Collaborations

Collaboration is fundamental to the success of the Bill and Melinda Gates Medical Research Institute. The organization actively partners with academic institutions, governmental agencies, non-governmental organizations, and industry leaders to leverage complementary expertise and resources. These partnerships facilitate the translation of research findings into scalable health solutions.

Academic and Research Institutions

The institute collaborates with leading universities and research centers worldwide to advance scientific discovery and clinical evaluation. These partnerships enable access to specialized knowledge, advanced laboratory infrastructure, and diverse patient populations necessary for robust research. Joint projects often focus on basic science, epidemiology, and clinical trials.

Government and Public Health Agencies

Engagement with governmental bodies and global public health organizations ensures alignment with national and international health priorities. The institute works closely with agencies such as the World Health Organization and local ministries of health to facilitate regulatory approval, policy development, and implementation of new medical tools in endemic regions.

Industry Collaborations

Strategic partnerships with pharmaceutical and biotechnology companies accelerate the development and manufacturing of vaccines, drugs, and diagnostics. These collaborations combine the institute's scientific expertise with industry capabilities in production, distribution, and commercialization, ensuring that innovations reach the populations that need them most.

Impact and Contributions to Global Health

The Bill and Melinda Gates Medical Research Institute has made significant contributions to global health by advancing the development of new medical interventions for some of the world's deadliest diseases. Its efforts have accelerated timelines for vaccine candidates and improved treatment options, ultimately contributing to reductions in morbidity and mortality.

Advancements in Disease Control

Through its research programs, the institute has contributed to the development of promising vaccine candidates currently undergoing clinical trials. Innovations in

tuberculosis and malaria treatment regimens are poised to improve patient outcomes and reduce transmission. Diagnostic tools developed by the institute enhance disease surveillance and enable timely interventions.

Capacity Building and Knowledge Sharing

The institute supports capacity building in endemic countries by training local scientists and healthcare workers, fostering sustainable research environments. It also actively disseminates research findings through scientific publications and conferences, promoting knowledge exchange and collaboration within the global health community.

Future Directions

Looking ahead, the Bill and Melinda Gates Medical Research Institute continues to explore new scientific frontiers and expand its pipeline of medical innovations. Its commitment to equitable access and global health equity drives ongoing efforts to address emerging challenges and neglected diseases. The institute remains a critical player in the global endeavor to improve health outcomes for vulnerable populations worldwide.

- Focused research on infectious diseases disproportionately affecting low-income populations
- Development of affordable vaccines, drugs, and diagnostics
- Strong emphasis on partnerships and global collaboration
- Commitment to advancing translational research and accelerating product development
- Capacity building and knowledge dissemination in endemic regions

Frequently Asked Questions

What is the mission of the Bill and Melinda Gates Medical Research Institute?

The mission of the Bill and Melinda Gates Medical Research Institute is to develop innovative medicines and vaccines that address major global health challenges, particularly in low-income countries.

Which diseases does the Bill and Melinda Gates Medical Research Institute primarily focus on?

The institute primarily focuses on infectious diseases such as malaria, tuberculosis, and enteric diseases, aiming to develop new treatments and vaccines.

How is the Bill and Melinda Gates Medical Research Institute funded?

The institute is primarily funded by the Bill and Melinda Gates Foundation, leveraging philanthropic investments to accelerate medical research for global health.

What are some recent breakthroughs or initiatives by the Bill and Melinda Gates Medical Research Institute?

Recent initiatives include advancing clinical trials for new tuberculosis therapies and developing next-generation malaria vaccines to improve efficacy and accessibility.

Where is the Bill and Melinda Gates Medical Research Institute located?

The Bill and Melinda Gates Medical Research Institute is headquartered in Cambridge, Massachusetts, USA.

How does the Bill and Melinda Gates Medical Research Institute collaborate with other organizations?

The institute collaborates with academic institutions, biotech companies, and global health organizations to accelerate the development and distribution of medical innovations.

Additional Resources

- 1. Innovating Global Health: The Bill & Melinda Gates Medical Research Institute Story*
This book explores the founding and mission of the Bill & Melinda Gates Medical Research Institute, highlighting its role in advancing innovative solutions for global health challenges. It details key projects focused on infectious diseases and the development of new medicines. Readers gain insight into how the institute collaborates with global partners to accelerate medical breakthroughs.
- 2. Fighting Infectious Diseases: Breakthroughs from the Gates Medical Research Institute*
A comprehensive look at the institute's contributions to combating infectious diseases such as tuberculosis, malaria, and COVID-19. The book covers scientific advances, clinical trials, and the development of affordable treatments for low-income countries. It also discusses the institute's approach to bridging science and accessibility.
- 3. From Lab to Life: Translational Medicine at the Gates Medical Research Institute*

This title focuses on the translational medicine efforts led by the institute, detailing how laboratory discoveries are transformed into effective drugs and therapies. It explains the challenges of drug development for neglected diseases and how the institute's innovative strategies overcome these obstacles. The narrative includes case studies from various research programs.

4. Global Health Equity and the Gates Medical Research Institute

An exploration of the institute's commitment to health equity, emphasizing its strategy to develop treatments that are both effective and accessible worldwide. The book discusses policy, funding, and ethical considerations in global health innovation. It highlights stories of impact in underserved communities.

5. Accelerating Drug Development: The Gates Medical Research Institute Model

This book delves into the unique operational model of the institute, which integrates research, development, and regulatory expertise to speed up drug approval processes. It provides an insider's view of how the institute partners with pharmaceutical companies and governments. Readers learn about the innovations in clinical trial design and manufacturing.

6. Innovations in Tuberculosis Research: A Gates Medical Research Institute Perspective

Focused specifically on tuberculosis, this book outlines the institute's pioneering work in developing new diagnostics, vaccines, and treatments. It discusses the global burden of TB and the scientific hurdles that researchers face. The narrative also covers collaborative efforts to end the TB epidemic.

7. Malaria Eradication Efforts by the Gates Medical Research Institute

This title highlights the institute's strategic programs aimed at malaria control and eradication. It explains the science behind novel therapies and preventative measures being developed. The book also covers the impact of malaria on global health and the importance of sustained research investment.

8. Combating Antimicrobial Resistance: Insights from the Gates Medical Research Institute

A focused examination of how the institute addresses the growing threat of antimicrobial resistance (AMR). It covers research into new antibiotics and alternative therapies, alongside strategies to preserve existing treatments. The book discusses the global implications of AMR and the institute's role in global health security.

9. The Future of Global Health Innovation: Lessons from the Gates Medical Research Institute

This forward-looking book explores emerging trends in global health research inspired by the institute's work. It discusses the integration of technology, data science, and global collaboration in creating next-generation health solutions. The author offers perspectives on how the institute's approach can shape future medical breakthroughs.

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bill and melinda gates medical research institute: Technology and the Doctor-Patient Relationship D.C. Lozar, M.D., 2019-08-16 Medicine is an ancient profession that advances as each generation of practitioners passes it down. It remains a distinguished, flawed and rewarding vocation--but it may be coming to an end as we know it. Computer algorithms promise patients better access, safer therapies and more predictable outcomes. Technology reduces costs, helps design more effective and personalized treatments and diminishes fraud and waste. Balanced against these developments is the risk that medical professionals will forget that their primary responsibility is to their patients, not to a template of care. Written for anyone who has considered a career in health care--and for any patient who has had an office visit where a provider spent more time with data-entry than with them--this book weighs the benefits of emerging technologies against the limitations of traditional systems to envision a future where both doctors and patients are better-informed consumers of health care tools.

bill and melinda gates medical research institute: 2020 Antibacterial agents in clinical and preclinical development , 2021-04-15 This report is the World Health Organization's (WHO) fourth annual review of the clinical antibacterial pipeline, and the second review of the preclinical antibacterial pipeline. The WHO's annual antibacterial pipeline report reviews antibiotics that are in the clinical stages of development as well as those in early development to assess the progress and gaps in relation to urgent threat of drug-resistance. The report evaluates the potential of these antibacterial candidates in development to address the most threatening drug-resistant bacteria as outlined in the WHO Bacterial Priority Pathogens List (WHO PPL). This report covers direct-acting small molecules and biological agents that are in development worldwide. In this fourth edition, the report includes for the first time a comprehensive overview of non-traditional antibacterial medicines. This report is part of the WHO's efforts in global research and development (R&D) priority setting to contain antimicrobial resistance. All the data contained in this report can be downloaded from the WHO Global Observatory on Health R&D.

bill and melinda gates medical research institute: The Gates Foundation's Rise to Power Adam Moe Fejerskov, 2018-05-11 The Bill and Melinda Gates Foundation has established itself as one of the most powerful private forces in global politics, shaping the trajectories of international

policy-making. Driven by fierce confidence and immense expectations about its ability to change the world through its normative and material power, the foundation advances an agenda of social and economic change through technological innovation. And it does so while forming part of a movement that refocuses efforts towards private influence on, and delivery of, societal progress. The Gates Foundation's *Rise to Power* is an urgent exploration of one of the world's most influential but also notoriously sealed organizations. As the first book to take us inside the walls of the foundation, it tells a story of dramatic organizational change, of diverging interests and influences, and of choices with consequences beyond the expected. Based on extensive fieldwork inside and around the foundation, the book explores how the foundation has established itself as a major political power, how it exercises this power, but also how it has been deeply shaped by the strong norms, ideas, organizations, and expectations from the field of global development. The book will be of interest to scholars and students of global development, international relations, philanthropy and organizational theory.

bill and melinda gates medical research institute: *The Bill Gates Problem* Tim Schwab, 2023-11-14 New York Times Editors' Choice A powerful investigation of Bill Gates and the Gates Foundation, showing how he uses philanthropy to exercise enormous political power without accountability Through his vaunted philanthropy, Bill Gates transformed himself from a tech villain into one of the most admired people on the planet. Even as divorce proceedings and allegations of misconduct have recently tarnished his public image, the beneficence of the Gates Foundation, celebrated for spending billions to save lives around the globe, is taken as a given. But as Tim Schwab shows in this fearless investigation, Gates is still exactly who he was at Microsoft: a bully and monopolist, convinced of his own righteousness and intent on imposing his ideas, his solutions, and his leadership on everyone else. At the core, he is not a selfless philanthropist but a power broker, a clever engineer who has innovated a way to turn extreme wealth into immense political influence—and who has made us believe we should applaud his acquisition of power, not challenge it. Piercing the blinding halo that has for too long shielded the world's most powerful (and most secretive) charitable organization from public scrutiny, *The Bill Gates Problem* shows how Gates's billions have purchased a stunning level of control over public policy, private markets, scientific research, and the news media. Whether he is pushing new educational standards in America, health reforms in India, global vaccine policy during the pandemic, or Western industrialized agriculture throughout Africa, Gates's heady social experimentation has shown itself to be not only undemocratic, but also ineffective. In many places, Bill Gates is hurting the very people he intends to help. No less than dark-money campaign contributions or big-business political lobbying, Bill Gates's philanthropic empire needs to be seen as a problem of money in politics. It is a dangerous model of unconstrained power that threatens democracy and demands our attention.

bill and melinda gates medical research institute: *WHO meeting on preferred product characteristics for monoclonal antibodies for malaria prevention* World Health Organization, 2022-10-21 This report presents the findings of the World Health Organization's meetings held in November 2021, focusing on the development of monoclonal antibodies (mAbs) for malaria prevention. Key topics include the priority use cases for mAbs, targeting infants and children to reduce morbidity and mortality, and potential future applications in pregnant women. The importance of defining target efficacy, evaluating anti-drug antibodies, and considering vaccine interactions is highlighted. Discussions covered the manufacturing challenges to ensure scalability and affordability, particularly for low- and middle-income countries. The report emphasizes the need for standardized clinical trials and regulatory guidance for the development and implementation of malaria mAbs.

bill and melinda gates medical research institute: *Bacterial vaccines in clinical and preclinical development 2021* World Health Organization, 2022-07-12 This publication by the World Health Organization provides an extensive overview of bacterial vaccines currently in clinical and preclinical development. It emphasizes their role in combating antimicrobial resistance (AMR) by reducing the incidence of both resistant and susceptible infections, thereby decreasing antibiotic

consumption. The report categorizes vaccine candidates into various groups based on their development stage and feasibility, focusing on pathogens listed in the 2017 WHO Bacterial Priority Pathogens List. It highlights advancements in vaccine technology that enable the targeting of previously challenging pathogens and identifies 61 candidates in active clinical development and 94 in preclinical development. The book serves as a valuable resource for healthcare professionals, researchers, and policymakers interested in the development and implementation of vaccines to control AMR globally.

bill and melinda gates medical research institute: Emerging Paradigms in Delivery Systems for Antitubercular Therapy Rajeev Sharma, Neeraj Mishra, Laxmikant Gautam, S.P. Vyas, 2025-04-23 Emerging Paradigms in Delivery Systems for Antitubercular Therapy provides an up-to-date and thorough overview of the state-of-the-art of concepts, design, and recent advances in nanomedicines and nanobiotechnology-based strategies for the treatment of tuberculosis. The book enables researchers to prepare a variety of nanotechnology-based strategies, investigate their properties, and discover their uses and applications in antitubercular therapy, focusing on advanced nanomaterials that are utilized for encapsulation of nucleic acid, mRNA, DNA, and tuberculosis vaccination. This book covers all major topics that have shaped the development of nanomedicine and propelled it to its current place at the forefront of Nanotechnology based treatment innovation. It will be a welcomed resource for researchers and readers with more and more challenging therapy and biologicals with their possible modifications to be used for the effective therapy of tuberculosis.

- Focuses on advanced nanomaterials that are utilized for encapsulation of nucleic acid, mRNA, DNA, and tuberculosis vaccination
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bill and melinda gates medical research institute: Achieving the Sustainable Development Goals Simon Dalby, Susan Horton, Rianne Mahon, Diana Thomaz, 2019-04-11 This book draws on the expertise of faculty and colleagues at the Balsillie School of International Affairs to both locate the Sustainable Development Goals (SDGs) as a contribution to the development of global government and to examine the political-institutional and financial challenges posed by the SDGs. The contributors are experts in global governance issues in a broad variety of fields ranging from health, food systems, social policy, migration and climate change. An introductory chapter sets out the broad context of the governance challenges involved, and how individual chapters contribute to the analysis. The book begins by focusing on individual SDGs, examining briefly the background to the particular goal and evaluating the opportunities and challenges (particularly governance challenges) in achieving the goal, as well as discussing how this goal relates to other SDGs. The book goes on to address the broader issues of achieving the set of goals overall, examining the novel financing mechanisms required for an enterprise of this nature, the trade-offs involved (particularly between the urgent climate agenda and the social/economic goals), the institutional arrangements designed to enable the achievement of the goals and offering a critical perspective on the enterprise as a whole. Achieving the Sustainable Development Goals makes a distinctive contribution by covering a broad range of individual goals with contributions from experts on governance in the global climate, social and economic areas as well as providing assessments of the overall project – its financial feasibility, institutional requisites, and its failures to tackle certain problems at the core. This book will be of great interest to scholars and students of international affairs, development studies and sustainable development, as well as those engaged in policymaking nationally, internationally and those working in NGOs.

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impact of future pandemics. Each chapter is authored by leading global experts in the field and includes topics such as molecular biology, epidemiology, pathogenesis, immunology, diagnosis, and the latest prevention and treatment approaches. Edited by renowned educator and medical researcher Dr. William A. Haseltine, physician-researcher, and chronic fatigue syndrome expert Dr. Roberto Patarca, it includes detailed references in every chapter, allowing easy access to comprehensive primary data. • Offers a timely, reliable overview authored and edited by leading global experts in the multifaceted areas covered on SARS-CoV-2 and the COVID-19 pandemic. • Serves as an authoritative and comprehensive text to be utilized by physicians, medical professionals, researchers, students, public health professionals, and policymakers.

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bill and melinda gates medical research institute: Quantitative Pharmacology and Individualized Therapy Strategies in Development of Therapeutic Proteins for Immune-Mediated Inflammatory Diseases Honghui Zhou, Diane R. Mould, 2019-02-14 Thorough Overview Identifies and Addresses Critical Gaps in the Treatment of Several Chronic Diseases With increasing numbers of patients suffering from Immune-Mediated Inflammatory Diseases (IMIDs), and with the increasing reliance on biopharmaceuticals to treat them, it is imperative that researchers and medical practitioners have a thorough understanding of the absorption, distribution, metabolism and excretion (ADME) of therapeutic proteins as well as translational pharmacokinetic/pharmacodynamic (PK/PD) modeling for them. This comprehensive volume answers that need to be addressed. Featuring eighteen chapters from world-renowned experts and opinion leaders in pharmacology, translational medicine and immunology, editors Honghui Zhou and Diane Mould have curated a much-needed collection of research on the advanced applications of pharmacometrics and systems pharmacology to the development of biotherapeutics and individualized treatment strategies for the treatment of IMIDs. Authors discuss the pathophysiology of autoimmune diseases in addition to both theoretical and practical aspects of quantitative pharmacology for therapeutic proteins, current translational medicine research methodologies and novel thinking in treatment paradigm strategies for IMIDs. Other notable features include: • Contributions from well-known authors representing leading academic research centers, specialized contract research organizations and pharmaceutical industries whose pipelines include therapeutic proteins • Chapters on a wide range of topics (e.g., pathophysiology of autoimmune diseases, biomarkers in ulcerative colitis, model-based meta-analysis use in the development of therapeutic proteins) • Case studies of applying quantitative pharmacology approaches to guiding therapeutic protein drug development in IMIDs such as psoriasis, inflammatory bowel disease, multiple sclerosis and lupus Zhou and Mould's timely contribution to the critical study of biopharmaceuticals is a valuable resource for any academic and industry researcher working in pharmacokinetics, pharmacology, biochemistry, or biotechnology as well as the many clinicians seeking the safest and most effective treatments for patients dealing with chronic immune disorders.

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of biowarfare and eugenics converging with the emergence of COVID. They will learn about the gain-of-function bioweapons responsible for the pandemic and the parallel development of eugenic genetic vaccines. Fleming reveals the control wielded by the military-industrial complex and world leaders over your life, movement, property, and freedoms. This book is not just an exploration of the past or a revelation of how those in power are on the brink of realizing their ultimate control, it's a call to action. It doesn't just raise awareness—it empowers readers to understand, question, and take decisive action to halt the ominous path we're on. In a world where truth is elusive and power is coveted, this book is a beacon of knowledge, urging you to discover what you can do to stop the impending threats to our existence. The future hangs in the balance and *Are We the Next Endangered Species?* provides the roadmap to safeguard it.

bill and melinda gates medical research institute: *Optimal and early inclusion of pregnant and lactating women in tuberculosis research* World Health Organization, 2025-08-18 In 2024, the World Health Organization Global Programme on Tuberculosis & Lung Health (WHO/MTB) led a consensus building process to advance the earlier and optimal inclusion of pregnant women in TB research. The process is aligned with broader global developments to transform clinical trial practices, including addressing the needs of underrepresented populations. This consensus statement summarizes the consensus process, which included five thematic working groups (covering preclinical TB research, TB therapeutics research, TB vaccine research, maternal TB surveillance systems and advocacy), evidence reviews to address gaps in data and knowledge and a consensus meeting in February 2025. The approaches to earlier and optimal inclusion arising from the consensus process include crosscutting actions as well as approaches specific to each working group theme. An accompanying call to action specifies actions needed to ensure full implementation of the consensus statement.

bill and melinda gates medical research institute: **Strategy to respond to antimalarial drug resistance in Africa** World Health Organization, 2022-10-31 The Strategy to respond to antimalarial drug resistance in Africa is a technical and advocacy document, grounded in the best available evidence to date and aimed at minimizing the threat and impact of antimalarial drug resistance of *Plasmodium falciparum* parasites in Africa. Its objectives are to: i) improve the detection of resistance to ensure a timely response; ii) delay the emergence of resistance to artemisinin and artemisinin-based combination therapy (ACT) partner drugs; and iii) limit the selection and spread of resistant parasites where resistance has been confirmed.

bill and melinda gates medical research institute: Partnerships for Sustainability in Contemporary Global Governance Liliana B. Andonova, Moira V. Faul, Dario Piselli, 2022-05-30 *Partnerships for Sustainability in Contemporary Global Governance* investigates the goals, ideals, and realities of sustainability partnerships and offers a theoretical framework to help disentangle the multiple and interrelated pathways that shape their effectiveness. Partnerships are ubiquitous in research and policy discussions about sustainability and are important governance instruments for the provision of public goods. While partnerships promise a great deal, there is little clarity as to what they deliver. If partnerships are to break free from this paradox, more nuance and rigor are required for understanding and assessing their actual effects. This volume applies its original framework to diverse empirical cases in a way that could be extended to broader data sets and case studies of partnerships. The dual contribution of this volume, theoretical and empirical, holds promise for a more thorough and innovative understanding of the pathways to partnership effectiveness and the conditions that can shape their performance. The broad range of crosscutting analyses suggest important practical implications for the design of new partnerships and the updating of existing initiatives. This interdisciplinary book will be of great interest to researchers, students, and practitioners within international relations, political science, sociology, environmental studies and global studies, as well as the growing number of scholars in public policy, global health and organizational and business studies who are keen to gain a deeper understanding of the pathways and mechanisms that influence the outcomes and effectiveness of cross-sector collaboration and transnational governance more broadly. The Open Access version of this book,

available at www.taylorfrancis.com, has been made available under a Creative Commons Attribution-Non Commercial-No Derivatives 4.0 license.

bill and melinda gates medical research institute: Tuberculosis Vaccines Paulo J.G. Bettencourt, 2025-08-30 Tuberculosis (TB) is the leading cause of death by an infectious agent worldwide. The Bacillus Calmette-Guérin (BCG) is the only licensed vaccine against TB and the most widely used vaccine in history. Since 1921, billions of people have been vaccinated with BCG, resulting in a remarkable decline in infant mortality. However, although BCG's efficacy to prevent TB meningitis and disseminated disease in children is well established, its efficacy to prevent infection, disease or reactivation in adolescents and adults is variable. Therefore, novel TB vaccines are urgently needed. Recent clinical trials have shown promising results, offering hope for the introduction of a new generation of vaccines to replace or boost BCG. The book is structured into five sections, each providing sequential relevance to understanding the current landscape and future developments in TB vaccines. Section 1 introduces TB and the causative agent, Mycobacterium tuberculosis. Section 2 presents historical perspectives on BCG and TB vaccine candidates. Section 3 focuses on pre-clinical vaccines against TB. Section 4 examines vaccines against TB currently in clinical trials. Finally, section 5 discusses public health and societal challenges associated with the development of TB vaccines. This book is an essential tool for students, clinicians, and scientists working in the fields of mycobacteriology, vaccine immunology, vaccine development, and TB vaccines, and it is anticipated to stimulate future research in TB vaccine development.

bill and melinda gates medical research institute: XARELTO Drug Profile, 2023 DrugPatentWatch, 2023-08-15 <h2>XARELTO Drug Profile, 2023</h2> <p>This report focuses on XARELTO and covers the following critical aspects of this drug:</p> United States patents Expired United States patents FDA Paragraph IV patent challenges District Court patent litigation Patent Trial and Appeal Board (PTAB) patent cases European supplementary protection certificates (SPCs) Clinical trials Drug prices Annual sales revenues Finished product suppliers Raw active pharmaceutical ingredient (API) sources

bill and melinda gates medical research institute: WHO preferred product characteristics for invasive non-typhoidal Salmonella vaccines World Health Organization, 2025-05-30 Invasive non-typhoidal serovars of Salmonella enterica, S. Typhimurium and S. Enteritidis, (iNTS) were estimated to cause over 500 000 invasive disease illnesses associated with more than 79 000 deaths in the Institute for Health Metrics and Evaluation Global Burden of Disease Study in 2019 with a high case fatality ratio of 14.5%. Several iNTS vaccines are currently in development and could be an important new tool in the fight against invasive disease. WHO preferred product characteristics (PPCs) provide strategic guidance as to WHO's preferences for new vaccines in priority disease areas. PPCs are intended to encourage innovation and development of vaccines for use in settings most relevant to the global unmet public health need. iNTS vaccine PPCs describe global public health goals and use cases for iNTS vaccines designed prevent invasive disease, and they outline preferred vaccine parameters such as vaccine indications, target populations, safety and efficacy considerations, and immunization strategies.

bill and melinda gates medical research institute: Immunomodulatory Effects of Nanomaterials Mahmoud Elsabahy, 2022-06-02 Immunomodulatory Effects of Nanomaterials: Assessment and Analysis provides an overview of the modulatory impact of nanomaterials on the immune system, as well as evaluative and analytical methods for assessing effects. Sections cover a range of common nanomaterials for biomedical use and how different properties can elicit varied responses from the immune system. The immunomodulatory effects of these materials are then discussed, with coverage on adverse and/or toxic effects on the immune system, as well as desired modulatory effects to improve efficacy of applied therapeutics. Readers will also learn about the best evaluation methods for immunomodulatory effects of nanomaterials and associated risks. This book is a useful reference for academics and researchers with an interest in immunology, but it is also idea for those working in the fields of materials science, biomedical engineering, pharmaceutical

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