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Disciplina	615.372
Soggetti	Immunology Medical microbiology Medicine - Research Biology - Research Diseases - Causes and theories of causation Medical Microbiology Translational Research Pathogenesis
Lingua di pubblicazione	Inglese
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Nota di contenuto	A brief history of human challenge studies (1900-2021) emphasising the virology, regulatory and ethical requirements, raison d'être, ethnography, selection of volunteers and unit design -- Regulatory aspects of human challenge studies.-Controlled Human Infection challenge studies with RSV -- Human challenge studies with coronaviruses old and new -- Experimental urethral infection with Neisseria gonorrhoeae -- Helicobacter pylori.-Controlled human infection with Bordetella pertussis Human challenge studies for cholera -- The Controlled Human Infection Model for Enterotoxigenic Escherichia coli -- Challenges in developing a controlled human tuberculosis challenge model -- Shigella Controlled Human Infection Models: Current and Future Perspectives -- The background, role and outline approach for development of a Controlled Human Infection

Model for Nontyphoidal Salmonella -- Controlled Human Malaria Infection studies in Africa - past, present, and future -- Controlled infection of humans with the hookworm parasite *Necator americanus* to accelerate vaccine development.

Sommario/riassunto

This volume offers insights into human challenge studies, where adult volunteers are deliberately infected with a pathogen of interest. These studies can broaden our knowledge on infections that have a rather low natural infection rate, but still bear a great threat to global health. The authors also present instances, where no suitable animal model is available to help understand human immune responses to a specific pathogen. The recent SARS-CoV-2 pandemic is another example, where studies that are directly conducted in humans, could save valuable time. Human challenge studies can provide immunogenicity and early efficacy data for vaccine development. However, similar models could be used for studying a wide variety of medical treatments such as monoclonal antibodies, antibiotics, antivirals and bacteriophages. The chapters in this volume cover several pathogens, including viruses, bacteria and parasites, scientific and technical aspects as well as descriptions of regulatory, ethical and manufacturing requirements. The book serves as a valuable resource for scientists and clinicians working on human pathogens.
