Record Nr. UNINA9910746297203321 Autore Mukhopadhyay Chandra Sekhar Titolo Biotechnological Interventions Augmenting Livestock Health and Production / / edited by Chandra Sekhar Mukhopadhyay, Ratan Kumar Choudhary, Harsh Panwar, Yashpal Singh Malik Singapore:,: Springer Nature Singapore:,: Imprint: Springer., 2023 Pubbl/distr/stampa **ISBN** 981-9922-09-7 Edizione [1st ed. 2023.] Descrizione fisica 1 online resource (463 pages) Collana Livestock Diseases and Management, , 2662-4354 Altri autori (Persone) ChoudharyRatan Kumar PanwarHarsh MalikYashpal Singh Disciplina 636.089 Soggetti Veterinary medicine Genetics Biotechnology Veterinary Science **Genetics and Genomics** Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Nota di contenuto Module 1 Functional Genomics and Proteomics -- Module 2 Microbial Genomics and Novel Biotechnological approaches to enhance animal health -- Module 3_Bioinformatics, Big Data, and Integrated Omics. Sommario/riassunto This book comprehensively discusses the applications of molecular genetics, functional and structural genomics, and proteomics vis-a-vis bioinformatics, artificial intelligence, and robotics in livestock healthfulness and productivity. It reviews the biotechnological approaches in veterinary sciences for increasing productivity and resistance to disease. The book emphasizes the approaches based on artificial intelligence to analyze the data collected on animals, pathogens, and their environment. It underscores artificial intelligence

applications in disease diagnosis, epidemiological studies, and

detecting biological phenomena, including heat-detection, pregnancy, docility, and infections. Further, the book examines the genomics and proteomics approaches for understanding the gut microbiota and the role of pathogen-host interactions in animal health and disease. Lastly,

it explores both pathogenic and non-pathogenic microbial transfer between humans, animals, and the environment across one health spectrum.