

## Biological Hazards and Laboratory inflicted Infections in Sub-Saharan Africa

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**Abstract :** This research looks at an array of fields in Sub-Saharan Africa comprising agriculture, food enterprises, medicine, organisms genetically modified, microbiology, and nanotechnology that can be gained from biotechnological research and development. Findings into dangerous organisms, mainly bacterial germs, rickettsia, fungi, parasites, or organisms that are genetically engineered, have immensely posed questions attributed to the biological danger they bring forth to human beings and the environment because of their uncertainties. In addition, the recurrence of previously managed diseases or the inception of new diseases are connected to biosafety challenges, especially in rural set-ups in low and middle-income countries. Notably, biotechnology laboratories are required to adopt biosafety measures to protect their workforce, community, environment, and ecosystem from unforeseen materials and organisms. Sensitization and inclusion of educational frameworks for laboratory workers are essential to acquiring a solid knowledge of harmful biological agents. This is in addition to human pathogenicity, susceptibility, and epidemiology to the biological data used in research and development. This article reviews and analyzes research intending to identify the proper implementation of universally accepted practices in laboratory safety and biological hazards. This research identifies ideal microbiological methods, adequate containment equipment, sufficient resources, safety barriers, specific training, and education of the laboratory workforce to decrease and contain biological hazards. Subsequently, knowledge of standardized microbiological techniques and processes, in addition to the employment of containment facilities, protective barriers, and equipment, is far-reaching in preventing occupational infections. Similarly, reduction of risks and prevention may be attained by training, education, and research on biohazards, pathogenicity, and epidemiology of the relevant microorganisms. In this technique, medical professionals in rural setups may adopt the knowledge acquired from the past to project possible concerns in the future.

**Keywords :** sub-saharan africa, biotechnology, laboratory, infections, health

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