

One Health Approach to Laboratory Biosecurity and Biosafety: Lessons from the SACIDS Foundation for One Health

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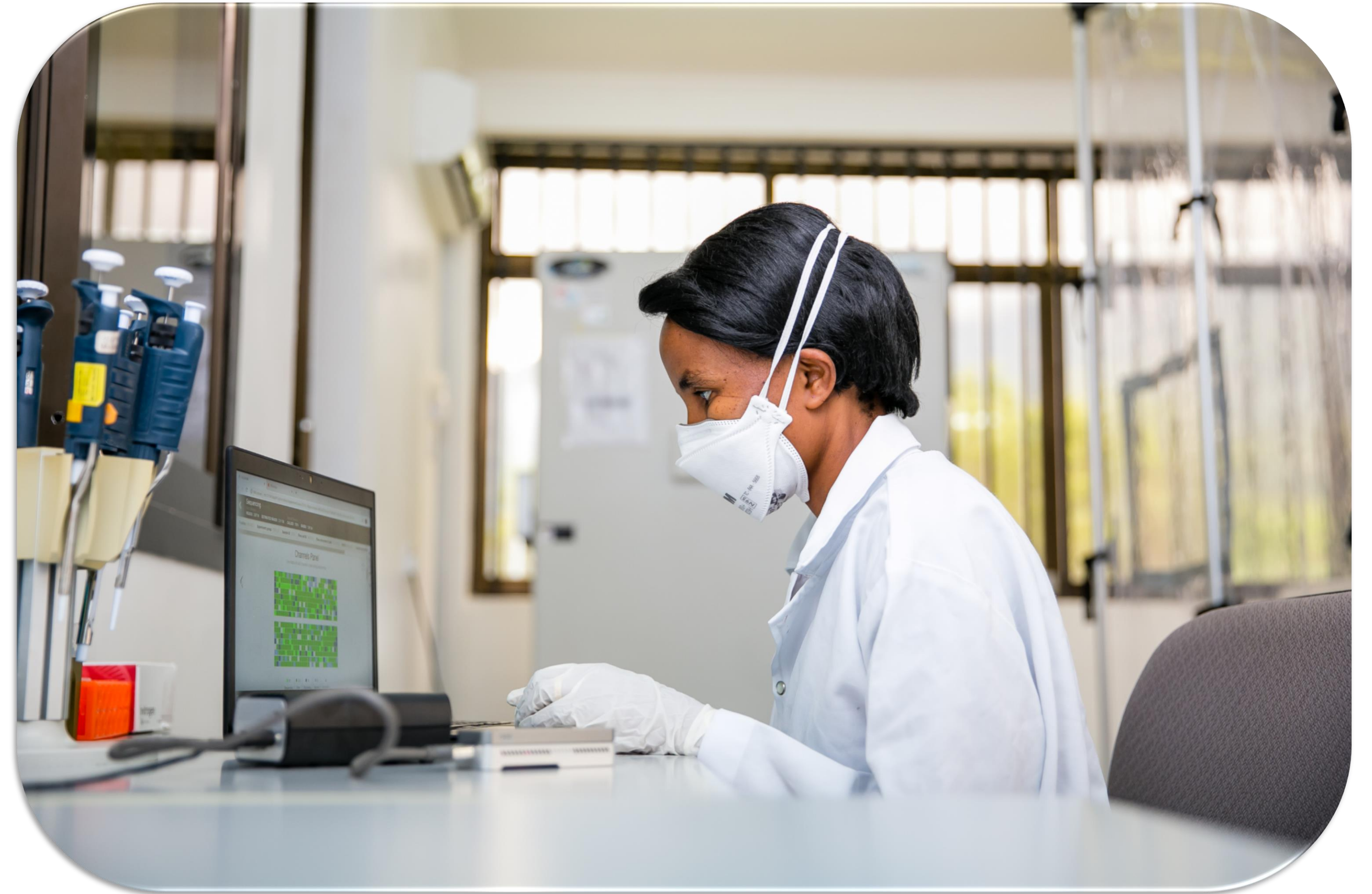
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Background

The SACIDS Foundation for One Health (SACIDS) is a One Health Institute that links academic and research institutions in Southern and Eastern Africa, which deal with infectious diseases of humans and animals within the African ecosystem. SACIDS operates through an innovative South-South-North smart partnership with world-renowned centers of research and training.

The mission of SACIDS is to undertake cutting-edge, transdisciplinary, and multisectoral research that is impact-oriented, prioritised, and system-based in Southern, Central, and Eastern Africa, and where appropriate, delivered through strategic partnerships with academia, research institutes, and international organisations.



Laboratory biosafety and biosecurity measures at the SACIDS laboratory

- Proper use of personal protective equipment (PPE)
- Use of biocontainment levels II and III (IsoArk Chamber)
- Proper and safe liquid and solid waste disposal
- Proper laboratory ventilation and design
- Monitoring access logs to keep track of personnel entering and leaving biosecurity-sensitive zones
- Utilizing secure, locked storage cabinets or freezers for storing biological agents, ensuring that only authorized personnel have access
- Implementing inventory management processes to track the quantity and location of stored biological materials



SACIDS Contributions and Innovations for implementing biosafety and biosecurity in resource-limited settings

- Developed expertise in diagnosing infectious diseases affecting livestock, wildlife, and humans, ensuring effective monitoring and response to outbreaks using the One Health approach
- Postgraduate (Master's and PhD) training of young Africans from across Africa to address the burden of infectious diseases
- Conducted training programs for scientists and healthcare workers, focusing on best practices in biosafety and biosecurity
- Pioneered the deployment of mobile genomic laboratories to reach remote areas, enhancing on-time detection of infectious disease outbreaks

Conclusions

We invite researchers, health professionals, policymakers, and community stakeholders to engage with SACIDS in our mission to promote biosafety and biosecurity. Together, we can strengthen health systems, enhance disease surveillance, and contribute to improved health outcomes across Africa.



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