

Abstract

# G5 Sahel Biosafety Network: Successes and Challenges <sup>†</sup>

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**Abstract:** The Sahel region faces many complex and interconnected challenges including food crisis, poverty, and political instability as well as recurring epidemics. Recently, the region has been affected by outbreaks of Ebola (Mali), Rift Valley Fever (Mauritania/Niger), Dengue (Burkina Faso/Mali), and Hepatitis E (Chad/Niger). In addition, the region is threatened by terrorism, including the potential risk of bioterrorism. In order to mitigate natural and intentional biological threats in the region, the development of a G5 Sahel biosecurity network seemed essential. In 2014, as part of the response to the Ebola outbreak, Germany had provided a mobile laboratory and trained a local team in Mali. This mobile laboratory, hosted by the Charles Mérieux Infectiology Center (CICM), now belongs to the Malian Ministry of Health. Since mid-2016, Germany has extended its initiative to the other G5 Sahel (G5S) countries. In November 2017, a biosafety network was established between G5S public health institutions, which is currently chaired by CICM Mali. It aims to strengthen cooperation between the G5S countries in the area of biosafety and biosecurity by capacity building for the diagnosis of dangerous pathogens. **Methodology:** Network activities include: (i) workshops between heads of institutions; (ii) theoretical and practical training of biologists and use of the mobile laboratory; (iii) internships in Germany and (iv) mobile laboratory field exercises. **Results:** Up to now, more than ten biologists from all G5S countries participated in trainings and field exercises, including the identification of hemorrhagic fever viruses and other infectious viral and bacterial agents. An initial response capability for outbreaks of dangerous pathogens is now available within the Sahel region. **Conclusion:** Maintaining skills in the G5S Mobile Lab Network is critical and procedures for deploying and tools for its cross-border functionality need to be developed. The official recognition of the Network by the G5S Permanent Secretariat is expected.

**Keywords:** mobile laboratory; emerging pathogens; biosafety network; capacity building; Sub-Saharan Africa; G5 Sahel countries



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