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**Title:** Molecular diagnosis of the epidemic of post-conflict eruptive fevers in the city of Goma, in the Democratic Republic of Congo

**Abstract:**

**Context:** The east of the Democratic Republic of Congo is ravaged by armed conflicts and repeated wars and this leads to the displacement of the population towards safer areas, as a result of which they find themselves homeless and confined in refugee camps. or they are exposed to several emerging and re-emerging diseases

**Goals:** Detect the viral pathogens involved in the occurrence of eruptive fevers in the post-conflict period in the city of Goma through molecular analyses.

**Material and Methods:** We conducted a prospective study from March to June 2023 of cases of eruptive fevers as part of the surveillance of epidemic and epidemic-potential diseases at the Kyeshero General Reference Hospital, in the city of Goma, North Kivu, Republic. Democratic Congo. We collected oropharyngeal and blood samples from all suspected cases of rash fever. These samples were analyzed at the Rodolphe Mérieux Laboratory of INRB-Goma by Reverse-Transcriptase Polymerase Chain Reaction on the Biorad® CFX96 C1000 Touch platform using the Measles and Rubella virus (MeV/RV) RNA Diagnostic Kit (PCR. -Fluorescence Probing) (Sansure Biotech®, Changsha Shi, China) in search of Measles and Rubella viruses. We considered Cycle Threshold (Ct values) below 40 to be positive.

**Results:** We analyzed 159 samples belonging to 79 children aged 2 months to 2 years. Our study population consisted of 37 (46.8%) boys and 40 (50.6%) girls. Among, the samples collected there were 79 (50%) oropharyngeal secretions and 79 (50%) blood specimens. Regarding the blood samples analyzed, we found 21 (26.5%) positive, including 14 (%) for Measles virus and 7 (%) for Rubella virus. The Ct values of the analyzed samples ranged from 21.1 to 40.1 with a mean at 0.005 standard deviation. In the oropharyngeal secretions analyzed, a total of 35 (%) were positive, including 32 (%) for Measles virus and 3 for Rubella virus. The average Ct value for the oropharyngeal secretion samples was 0.004 SD, with a range of 21.1 to 40.1. We noted co-infection of Measles and Rubella viruses in 5 (%) oropharyngeal samples and 1 (%) blood sample.

**Conclusion:** In this study, we detected a significant proportion of Measles and Rubella Viruses in cases of eruptive fever in a post-conflict situation in the city of Goma, following a massive displacement of refugees who fled the fighting. in the Health Zones surrounding the city of Goma. It is therefore important to ensure systematic and frequent screening of people in the various refugee camps surrounding the city of Goma, in order to prevent the introduction of different pathogens into the urban environment.

## Biography

Dr Ntwali Kabundula Herve has completed his Bachelor at the age of 28 years from Official University of Bukavu and now is a master student from Kinshasa University School of Medicine. I'm a researcher, I'm in charge of taking samples and reporting results at the Rodolphe Merieux Laboratory National Biomedical Research Institute in Goma. I participated in the response against Ebola and Covid 19, I am project manager of the clinical research center and I participate in several study projects on plague, monkeypox, Anthrax and Human papilloma virus.