GloPID-R report on Chikungunya, O’nyong-nyong and Mayaro virus, part I: biological diagnostics

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The GloPID-R (Global Research Collaboration for Infectious Disease Preparedness, <https://www.glopid-r.org/>) Chikungunya (CHIKV), O’nyong-nyong (ONNV) and Mayaro virus (MAYV) Working Group is investigating the natural history, epidemiology and medical management of infection by these viruses, to identify knowledge gaps and to propose recommendations for direct future investigations and rectification measures. This first report is dedicated to diagnostic aspects of CHIKV, ONNV and MAYV.

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| Kit | Company | Method | Published evaluation | Analytical reactivity |
| abTES™ CHIKU qPCR I Kit | AIT Biotech | Monoplex real time RT-PCR | NA | NA |
| abTES™ DEN 5 qPCR I Kit | Multiplex real time RT-PCR (DENV1-4, CHIKV) | NA | NA |
| RealStar® Chikungunya RT-PCR kit | Altona Diagnostics | Monoplex real time RT-PCR | (1) | ECSA |
| VIASURE Chikungunya Virus Real Time PCR Detection Kit | CerTest Biotec | Monoplex real time RT-PCR | NA | ECSA |
| VIASURE multiplex ZIKV, DENV and CHIKV | Multiplex real-time RT-PCR (ZIK, DENV, CHIKV) | NA | ECSA |
| Chikungunya Real time PCR Test | CTK Biotech | Monoplex real time RT-PCR | NA | ECSA |
| ZIKV, DENV, CHIKV Real time PCR Test | Multiplex real-time RT-PCR (ZIK, DENV, CHIKV) | NA | ECSA |
| EurobioPlex CHIKV | Eurobio | Monoplex real time RT-PCR | NA | NA |
| EurobioPlex CHIKV/DENV | Multiplex real-time RT-PCR (CHIKV, DENV) | NA | NA |
| FTD Tropical Fever core (DENV/CHIKV/WNV/*Plasmodium/Rickettsia/Salmonella/Leptospira*) real time PCR kit | Fast Track Diagnostics | Multiplex real time RT-PCR (DENV/CHIKV/WNV/*Plasmodium/Rickettsia/Salmonella/Leptospira)* | (2) | NA |
| FTD DENV/CHIKV real time PCR kit | Multiplex real-time RT-PCR (CHIKV, DENV) | (3) | NA |
| CHIKV real time PCR kit | Genekam Biotechnology | Monoplex real time RT-PCR | NA | NA |
| ZIKV & CHIKV real time PCR kit | Multiplex real time RT-PCR (ZIKV, CHIKV) | NA | NA |
| ZIKV, DENV & CHIKV real time PCR kit | Multiplex real time RT-PCR (ZIKV, DENV, CHIKV) | NA | NA |
| ZIKV, YFV & CHIKV real time PCR kit | Multiplex real time RT-PCR (ZIKV, YFV, CHIKV) | NA | NA |
| USUV/CHIKV real time PCR kit | Multiplex real time RT-PCR (USUV, CHIKV) | NA | NA |
| USUV, CHIKV & DENV real time PCR kit | Multiplex real time RT-PCR (USUV, CHIKV, DENV) | NA | NA |
| DENV, ZIKV and CHIKV Multiplex kit | Genesig | Multiplex real time RT-PCR (DENV, ZIKV, CHIKV) | NA | NA |
| CHIKV real time PCR kit | Monoplex real time RT-PCR | NA | ECSA |
| CHIKV TC-TMA\* | Hologic Inc / Grifols | TC-TMA | (4,5) | NA |
| CHIKV real time PCR kit | Liferiver | Monoplex real time RT-PCR | NA | NA |
| DENV/CHIKV real time PCR kit | Multiplex real time RT-PCR (DENV, CHIKV) | NA | NA |
| Amplisure CHIKV real time qualitative PCR Kit | RAS Life Sciences | Monoplex real time RT-PCR | NA | NA |
| TaqMan Zika Virus Triplex Kit (ZIKV/DENV/CHIKV) | Thermo Fisher | Multiplex real time RT-PCR | NA | NA |
| CHIKV real time PCR kit | TIB-mol biol | Monoplex real time RT-PCR | NA | NA |
| Sentosa SA CHIKV RT-PCR Test | Vela Diagnostics | Monoplex real time RT-PCR | NA | ECSA |

Supplementary data-Table 1. Commercial tests for molecular detection of CHIKV. Analytical reactivity refers to which lineage is claimed to be detected according to the datasheet of the product, or to which lineage belongs the strain used to test kit reactivity. NA: information not available. \*CHIKV TC-TMA kit by Hologic Inc / Grifols is currently non commercialized.

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