PA-020 FOSMIDOMYCIN-PIPERAQUINE AS NON-ARTEMISININ-BASED COMBINATION FOR ACUTE UNCOMPLICATED *PLASMODIUM FALCIPARUM* MALARIA

Ghyslain Mombo-Ngoma,[1] Jonathan Remppis,[1] Moritz Sievers,[1] Rella Zoleko Manego,[1] Lilian Endamne,[1] Bertrand Lell,[1] David Hutchinson,[2] Peter Kremsner[3]. [1]*CERMEL, Gabon;* [2]*Jomaa Pharma GmbH, Germany;* [3]*ITM Tübingen, Germany*

10.1136/bmjgh-2016-000260.57

Background As investment in research related to artemisinin resistance is a key objective of the Global Plan for Artemisinin Resistance Containment (GPARC), fosmidomycin and piperaquine are being developed to address the delay in parasite clearance following treatment with Artemisinin-based Combination Therapy (ACT). Though artemisinin resistance occurs principally in the Greater Mekong Region, there are concerns that it will emerge in sub-Saharan Africa.

Methods A proof-of-concept study has been conducted in Gabon to determine the efficacy, tolerance and safety of fosmidomycin and piperaquine when administered orally for three days. A total of 100 subjects, including 10 adults, 40 children aged 5–14 years and 50 children aged 1–5 years fulfilling the inclusion criteria of mono-infection with *Plasmodium falciparum* and initial parasite counts between 1,000 and 150,000/μL were enrolled and followed up for 63 days. The primary efficacy endpoint was per protocol, the PCR-corrected cure rate on Day 28. Safety endpoints included the incidence, severity, drug-relatedness and seriousness of adverse events and laboratory abnormalities. ClinicalTrials.gov Identifier: NCT02198807

Results The PCR-corrected 28-day cure rate in the older children was 100% (n=31). It was also 100% (n=38) in the younger children, a group deemed to be more therapeutically challenging on account of their lower immune status. Tolerance was excellent and there were no drug-related safety issues. Full results will be presented.

Conclusions Fulfilling the WHO criteria for combination therapy, fosmidomycin as a rapidly acting blood schizonticide and piperaquine with its prolonged post-treatment prophylactic effect have been shown to be highly efficacious for the treatment of acute uncomplicated falciparum malaria in an area of intense malaria transmission. Dose optimisation studies with the dual aim of achieving a reduction in the dose of fosmidomycin within a therapeutic regimen of once daily dosing are planned.