



Thank you for being a part of the 27<sup>th</sup> International Workshop on HIV Drug Resistance and Treatment Strategies hosted in Johannesburg, South Africa from 22 to 24 October 2018.

Two full days of invited plenary presentations and abstract-driven oral and poster sessions were followed by a comprehensive resistance training workshop entitled ‘Integrated adherence and virological monitoring; insights from the ITREMA trial’.

We are pleased to announce that the majority of these presentations are now available on the Workshop website. To view the presentations please visit <http://www.hivresistance2018.co.za/programme/>.

#### **What was presented:**

##### *CLINICAL IMPLICATIONS OF RESISTANCE*

*The issue of pre-treatment HIV drug resistance was highlighted by various speakers during this session and emphasis was placed on the importance of the close monitoring of patients with virological failure and access to affordable genotype drug resistance testing to advance early switching from a failing ART regimen to the next line of antiretroviral therapy.*

##### *THE DOLUTEGRAVIR DILEMMA; REVIEW OF CASES WITH DTG RESISTANCE*

*There are about 1 million people receiving DTG worldwide. The global rollout of Dolutegravir has created numerous opportunities for improved clinical outcomes, but it has also presented challenges. A message of caution was conveyed regarding the potential development of DTG resistance with the rollout.*

*At the very centre of DTG rollout is the activism around granting licensing for the development of generic formulations in low to middle income countries (LMICs). The huge disparities in access to healthcare between developed countries in Europe and low to middle income countries (South Africa, Brazil and Botswana) was highlighted in this session as speakers shared their different experiences. Most encouraging data came from the Botswana experience (The Tsepamo study). DTG, with its many benefits, has allowed for an opportunity to rethink first-line treatment in HIV, and the use of DTG as a first-line drug has already started in many well resource countries. The emergence of the neural tube defect (NTD) signal has resulted in DTG being contraindicated in women in some developing countries, especially where access to effective contraception is limited or absent. In response to this, women across Africa mobilized to discuss the issues affecting them after the risk of NTD risk was made known globally. Their message was to demand access to DTG as they felt that the benefits outweighed the potential risks and they further demanded involvement in discussions and clinical trials.*

##### *CHILDREN AND ADOLESCENTS*

*The focal point of discussion by various speakers was on the escalating problem of paediatric*

*drug resistance and the multiplicity of factors which are attributable to this important public health issue. Paediatric drug resistance in newborns is clinically very critical as it can compromise child's response to first-line ART in the context of limited therapeutic paediatric options and a prospect of life-long therapy.*

#### **NEW AND LONG-ACTING DRUGS**

*Suboptimal or lack of adherence has warranted a need to consider treatment options that are more favourable for patients to comply with recommendation of >95% adherence. Furthermore, we need long-acting ART that would require less frequent dosing such as weekly oral dosing or weekly injectable as this would further advance improvement in adherence and VL suppression. The following long-acting drugs were discussed:*

- *MK-8591 (EFdA)*
- *PRO 140*
- *Monthly / bi-monthly injectables*
- *Pros and cons of Long-acting injectables*
- *Potential advantages of broadly neutralizing antibodies (bNAbs) for PrEP/ART*
- *PrEP*
- *Disadvantages of broadly neutralizing antibodies*
- *Implantable ART (MK-8591)*

#### **SPECIAL POPULATIONS and COSTING / MODELLING**

##### *NEXT GENERATION SEQUENCING (NGS)-Ready for primetime yet?*

*The sensitivity of NGS can be compromised by various factors such as PCR bias, nucleotide misincorporations, recombination and sequencing errors when detecting and quantifying drug resistant mutants.*

#### **EDUCATIONAL WORKSHOP**

*An educational workshop was organized in collaboration with the ITREMA project ([www.itrema.org](http://www.itrema.org)) and the Southern African HIV Clinicians Society.*

*An introduction into the basic principles of HIV drug resistance and resistance testing was given. Furthermore the impact of HIV drug resistance in Sub-Saharan Africa and barriers and facilitators of adherence to HIV treatment, an important driver of HIV drug resistance were discussed.*

*The second part of the workshop featured an overview of the ITREMA project, which aims to improve the effectiveness of HIV treatment and prevent the development and transmission of drug-resistant HIV by means of implementation of an intensified strategy for HIV treatment monitoring. Three key messages from ITREMA were actively disseminated: 1) low level viremia does not equal treatment success, 2) delayed response to viral rebound puts individuals and society at risk, 3) use tools to gain insight in virological failure.*

*The workshop ended with overviews of the future of antiretroviral treatment on the continent, particularly in light of the impending roll-out of the integrase inhibitor dolutegravir in first-line treatment.*

**We look forward to seeing you all again next year for the 28<sup>th</sup> International Workshop on HIV Drug Resistance and Treatment Strategies! Please keep an eye out for our emails announcing the 2019 dates and further information.**

Yours sincerely,  
Organising Committee