

# Leaders in their respective fields

An update from **Publishing Partners** on their activities in Africa.

This is the page for our **Publishing Partners** to have their say. Their support throughout the year is crucial as an enabling factor in our provision of the journal, so this page is made available to them to communicate with our readership. In this issue the spotlight falls on Inverness medical Innovations Inc and Partec GmbH.

Inverness Medical Innovations, Inc. is at the forefront of the convergence between medical diagnostic testing and health management. Its latest areas of focus in diagnostics are the application of patented technologies to its consumer and professional diagnostics products, principally to the fields of infectious disease, cardiology, oncology, drugs of abuse and women's health. Its health management programmes provide interventions designed to cover the entire lifespan from pre-cradle (maternity programmes) to end-of-life care (complex care programmes).

One major area of focus related to infectious disease and blood borne pathogens is HIV infection. HIV remains an important public health issue that continues to demand constant evolution of testing technologies and testing algorithms, as well as sustained funding and involvement of laboratories.

The need for practical, cost effective solutions is particularly desired in resource poor markets. At present, our focus is on rapid, cost effective point-of-care (POC) diagnosis of HIV infection and CD4 cell count in the African region, where HIV infection is at epidemic level and there is an urgent need for action.

Identifying HIV infected individuals is critical for two reasons: undiagnosed individuals miss the opportunity to receive timely, highly active antiretroviral therapy and undiagnosed individuals are disproportionately responsible for new infections. The benefits of expanded HIV screening are crucial in countries where the high rates of prevalence are significant. However, resource poor environments have limited access to new and recent technologies such as NAAT to detect early infections in a POC in a cost effective manner.

Combined HIV antigen and antibody tests (4th generation) enable earlier detection of HIV infection than that afforded by antibody-only-tests (3rd generation). Rapid 4th generation screening tests designed for use at the point of care, have not been commercialised until now.

A novel immunochromatographic rapid test, Determine HIV 1/2 Ag/Ab Combo, enables simultaneous differential detection of the HIV-1 p24 antigen, as well as antibodies to HIV-1 and HIV-2 in human serum, plasma or whole blood. The performance of the Determine HIV 1/2 Ag/Ab Combo test has been evaluated at nine clinical sites in Africa, Asia, Europe and Latin America.

Compared to 3rd generation assays, Determine HIV 1/2 Ag/Ab Combo improves upon the detection of HIV

infection by detecting the presence of the viral antigen before the appearance of antibodies. Due to separate signals for HIV-1 p24 antigen and HIV antibodies, the test enables rapid detection of acute infection cases. Moreover, Determine is engineered in a robust and easy-to-use format for performance anywhere in the world, making it suitable for use in the developing world where well equipped laboratory infrastructures are limited.

Routine monitoring of the CD4 count of HIV positive patients has been proven to be a useful tool for determining when Antiretroviral (ARV) Therapy should be initiated. The HIV virus infects the CD4 T lymphocyte immune cells causing the infected patient's immune system to fail in the later stages of infection.

On the occasion of World Malaria Day on April 25th, German biotechnology company **Partec** donated 55 fluorescence microscopes and 11 000 patient tests for malaria diagnosis to different countries in sub-Saharan Africa, including Kenya, Nigeria and Malawi.

Malaria is endemic in 107 countries with 3 billion people affected. Over 300 million people are infected by malaria with far more than 1 million deaths annually – including one child every 30 seconds. New reliable diagnostic tools for point-of-care testing therefore play the key role for improving targeted patient support.

The diagnostic solution donated by Partec provides a uniquely easy-to-use, affordable and ultrarapid method for highly sensitive malaria testing by combining a unique class of mobile and battery-operated fluorescence microscopes with ready-to-use test slides which already carry ready prepared dried-in reagents on the slide surface, eliminating any need for cold chain and cold storage as usually required for conventional malaria tests.

"The World Malaria Day is a day of unified commemoration of the global effort to provide effective control of malaria", says Partec's Chief Executive Officer Roland Göhde.

"In this context, the new diagnostic technology for the first time opens the opportunity to bring most reliable malaria testing to almost every patient, especially in remote areas and those regions suffering from a low level of laboratory infrastructure, limited or missing electricity supply and a shortage of skilled laboratory personnel."

The CyScope fluorescence microscopy technology of Partec has been developed and is being produced entirely in Germany, renowned for the long tradition in manufacturing high quality precision optics and microscopes.

Since 2002, Partec has been active in 100 countries worldwide, providing and implementing complete packages of diagnostic solutions for tuberculosis, Malaria and HIV/AIDS, with products researched and designed to specifically meet the requirements of developing, emerging and resource-constrained countries with limited infrastructure.