

Comprehensive portfolios

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

In this regular page, we review news from our Publishing Partners and their activities within the African marketplace. In this issue the spotlight falls on **Beckman Coulter, Inc.** and **Partec GmbH**, two companies with diverse ranges of laboratory instrumentation, but a specialty in the all important arena of HIV CD4 counting.

Beckman Coulter, Inc. is the product of Beckman Instruments purchase of the Coulter Corporation in 1997. It offers one of the most comprehensive portfolios of laboratory instruments and supplies from bioresearch to clinical diagnostics and cellular analysis. In the patient care testing market, **Beckman Coulter** customers are hospital laboratories, commercial laboratories, physicians' offices, and group practices. These customer groups are supported with laboratory automation systems, clinical chemistry systems, blood cell analysis systems, immunochemistry systems, centrifuges, rapid-test kits, reagents, and quality control chemistries.

In the R&D (research and development) testing and translational solutions markets, customers include biotechnology firms, pharmaceutical companies, research institutions, and universities. Both Beckman and Coulter have rich traditions of inventive genius. Beckman's founder, Dr Arnold O Beckman, was driven by a desire to speed analytical processes in the laboratory. His invention, the acidimeter, known today as the pH meter, made pH measurement fast and accurate and spurred the formation of Beckman Instruments, Inc. Dr Beckman was a strong advocate for the advancement of science. Similarly, Wallace Coulter discovered the Coulter Principle, an electronic, automatic way of counting and measuring the size of microscopic particles. This led Wallace and his brother, Joseph, to develop the COULTER COUNTER®, the first commercial blood cell counter, and the instrument that marked the beginning of the field of haematology.

Beckman Coulter employs more than 11 000 people throughout the world and has more than 200 000 instrument systems in place in 130 countries on 5 continents. Annual sales totaled US\$3.26 billion in 2009.

The South African subsidiary was established in Cape Town in 1963 and through this operation the focus from **Beckman Coulter** on Africa and its challenges increased.

The South African business has had double-digit growth for the last 15 years and also manages established dealers in all the English-speaking countries in sub-Saharan Africa. The focus on HIV and CD4 testing has greatly increased since 2003 when BCSA, in conjunction with the NHLS in South Africa, released an 'affordable CD4' test which decreased the cost of CD4 testing significantly. Due to this decrease in price, more people could be tested and the result was that more than 5 million tests were

collectively done in South Africa, Namibia, Botswana, Swaziland, Zambia, Malawi, and Mozambique in the last 12 months on **Beckman Coulter** analysers.

According to the World Health Organization (WHO), as recently as in 2002, there were no more than 280 000 HIV/AIDS patients worldwide receiving controlled antiretroviral therapy (ART). While the scale-up has been exponential, and ARVs have become significantly more affordable, the fundamental lack of access to reliable and cost-efficient diagnosis – especially in resource-limited and remote settings – has been a major obstacle to further growth. The key technology developed by **Partec GmbH**, fluorescence-based flow cytometry, was first developed in 1968 by researchers of the University of Münster, Germany initially for applications in cancer research, pathology, and DNA analysis. It is still regarded as a gold standard for accurate CD4 counting. In 2002, the average annual CD4 test cost was around US\$ 160 for four tests per year via technology geared more for the Northern Hemisphere than Africa. Although pro rata pricing for the tests has reduced, the equipment remains complex and requires significant after-sales service needs.

Partec made it its mission to develop an innovative, easy-to-use, robust and highly affordable testing system which could meet the urgent requirements in the HIV/AIDS patient programmes in sub-Saharan Africa. CyFlow® was the result and to date over 1400 Partec CD4 instruments have been sold in the HIV-monitoring field in more than 100 countries to governmental hospital NGO treatment programmes as well as in the private clinic sector. In the years 2008 and 2009, already 5 million CD4 tests (IVD approved and CE labelled) have been supplied from **Partec** at an internationally standardised net cost of not more than EUR 1.75 per patient test. Over 30 international scientific studies and clinical validations from independent research groups, including Stanford University, Boston Harvard School, CDC, and others, have proved the CyFlow as being highly accurate, precise, reliable, and cost-efficient flow cytometric technology for affordable CD4 absolute counting and CD4% testing for adult and paediatric patients.

In 2009, **Partec** introduced unique 'dry' CD4 reagent kits eliminating any needs for cold chain and cold storage as required for conventional CD4 tests. The dry CD4 tests from **Partec** have a shelf life of 12 months even at high room temperatures. At the 12th Annual International Meeting of the Institute of Human Virology (IHV) in Tropea/Italy, 4–8 October 2010, **Partec** will release a new mobile and ultracompact point-of-care instrument for CD4 counting which has been specifically designed to also bring easy-to-use and highly cost-efficient CD4 testing to primary health centres and PMTCT sites.