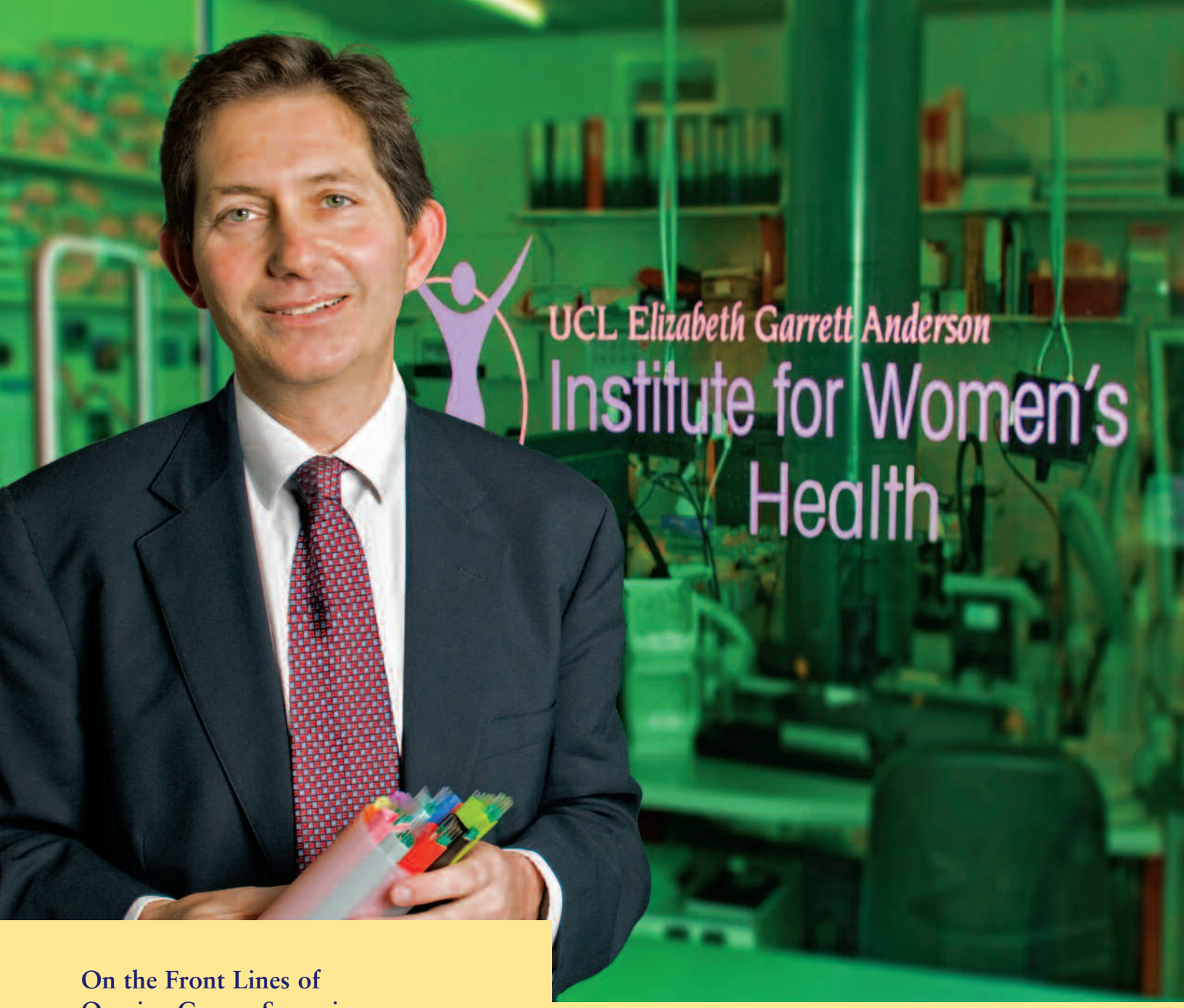

On the Front Lines of Ovarian Cancer Screening

Nearly 200,000 women worldwide are diagnosed with ovarian cancer each year; most will die from the disease. Detecting ovarian cancer has been difficult because affected women often have no symptoms or vague symptoms and seek medical care only after the disease has reached an advanced stage.

For more than 20 years, the Ovarian Cancer Screening Centre, part of the Institute for Women's Health, University College London, has conducted research to improve outcomes, including the development of new biomarkers for early detection, diagnosis and identification of inherited genetic alterations that can predict which women are at risk.

"We have an exciting opportunity to evaluate biomarker assays developed by BD to advance early detection, using our sample banks and clinical research facilities," says Professor Ian Jacobs, who directs the Institute and the Centre. "This collaboration has great potential to speed up the translation of research ideas into clinical practice, which is a key goal of our work."

Dr. Jacobs expects that within 10 years, ovarian cancer screenings will be standard care, like breast and cervical cancer screenings today. "I think we'll use a panel of circulating biomarkers of the type that we're working on with BD, along with ultrasound and other new sophisticated imaging techniques."

Diagnosis –

Enhancing care through improved detection and management of disease

Early and accurate diagnosis of disease is essential to high-quality, cost-effective patient care. As a pioneer and leader in sample collection, microbiology and flow cytometry, BD has long provided innovative technologies and solutions to help clinicians detect, diagnose and monitor a host of infections and infectious diseases, such as HIV/AIDS, tuberculosis (TB) and sexually transmitted diseases. Through internal development, strategic acquisitions and collaborations, BD has increased its value to clinical laboratories worldwide by providing new technologies to improve the detection of cancer and molecular assays that rapidly detect potentially lethal "superbugs," such as methicillin-resistant *Staphylococcus aureus* (MRSA).

The *BD FACSCount* System provides clinicians in the developing world with a workhorse flow cytometer capable of performing both absolute and percentage CD4 counts to monitor the immune status and disease progression of HIV-infected patients.

Safe sample collection

Achieving an accurate diagnosis first depends on safe and stable specimen collection. Since launching the first evacuated blood collection tube in 1949, BD has developed a full portfolio of sample collection products that includes the *BD Vacutainer* Push Button Blood Collection Set. This innovative product not only makes blood collection easier, it also helps reduce healthcare worker exposure to needlesticks.

Reducing the spread of infection

Leveraging the Company's expertise in microbiology and molecular diagnostics, BD has built and acquired capabilities to address the growing problem of healthcare-associated infections (HAIs) caused by increasingly drug-resistant bacteria. These infections pose a serious threat to patients in the very places they go for medical care. BD now offers a growing portfolio of diagnostic technologies that help infection control specialists prevent and manage the spread of HAIs. These products range from *BD BBL CHROMagar* MRSA Plated Media to molecular tests that provide results in less than two hours, such as the *BD GeneOhm* MRSA Assay.

In 2008, the Company expanded its menu of *BD GeneOhm* assays to test for HAI-causing organisms. BD achieved CE marking in Europe this year for a rapid molecular assay to detect toxigenic *Clostridium difficile*, a dangerous bacterium that can infect the colon.

The *BD Viper* Molecular Testing System utilizes state-of-the-art robotic automation to help clinical laboratories detect *Chlamydia trachomatis* and *Neisseria gonorrhoeae* in patient samples more rapidly.

A definitive diagnosis of this potentially life-threatening infection enables clinicians to prescribe appropriate treatment to patients and reduce the risk of spreading the infection to others.

Improving global health

Infectious diseases take a staggering human and economic toll, especially in the developing world. With diagnostics and medical treatment difficult to come by, millions of people with HIV/AIDS and TB are not receiving the care they need when they need it. BD is applying its expertise and innovative technologies to address this crisis in many regions around the globe, including Africa, China, India, Eastern Europe and Latin America.

The World Health Organization (WHO) estimates that 9 million new cases of active TB and approximately 2 million TB deaths occur annually. The *BD BACTEC MGIT* 960 System is the test of choice in many developing countries because it is the only automated liquid culture system for high-volume mycobacterial growth and detection as well as drug susceptibility testing. It provides faster results that may help improve patient care. In fact, the WHO recently endorsed the use of liquid culture systems for TB diagnosis in high-burden countries.

Enhancing cancer detection and diagnosis

Results in the fight against cancer have been mixed. On the one hand, expensive new therapies often prove to prolong survival by months, not years. On the other, five-year survival rates improve dramatically for most cancers detected in Stages I and II. This reality places an even greater importance on developing new assays that detect and diagnose cancer earlier. Hence, BD is actively expanding its offerings and capabilities in these areas for detecting and diagnosing solid tumors as well as leukemias and lymphomas.

Cervical cancer claims the lives of more than 300,000 women globally every year, and more than 470,000 women are diagnosed annually. BD earned U.S. FDA approval in 2008 for the new *BD FocalPoint* GS Imaging System, which offers significant improvements in both disease detection and lab productivity to locate abnormal, often precancerous, cervical cells quickly.

BD is also developing proprietary biomarkers to enhance the early detection of cervical, ovarian and breast cancers. The Company aims to provide advanced oncology products that will enable biomarker-guided diagnoses to drive better clinical decisions that could enable better patient outcomes.

The *BD BACTEC* FX Blood Culture Instrument, launched in 2008, helps detect bloodstream infections and enhances clinical decision-making and laboratory workflow by markedly improving blood culturing practices with real-time, 24/7, remotely accessible, actionable results that can enhance patient care.

The *BD Vacutainer* Push Button Blood Collection Set is the latest in safety-engineered wingsets that offer healthcare workers in-vein activation and split-second protection at the push of a button.