

Corporate Report

a report by

Roche

Basel, Switzerland

Roche, headquartered in Basel, Switzerland, is one of the world's leading research-intensive healthcare groups. Its core businesses are pharmaceuticals and diagnostics. As a supplier of innovative products and services for the prevention, diagnosis and treatment of disease, the group contributes on a broad range of fronts to improving people's health and quality of life. Roche is a global leader in diagnostics, the leading supplier of medicines for cancer and transplantation, and a market leader in virology. Roche employs roughly 70,000 people in 150 countries and has research and development (R&D) agreements and strategic alliances with numerous partners, including majority ownership interests in Genentech and Chugai.

Roche's Diagnostics Division, a world leader in diagnostics with a uniquely broad product portfolio, supplies a wide array of innovative testing products and services to researchers, physicians, patients, hospitals, and laboratories worldwide. Applied Science develops and markets components and reagents for the pharmaceuticals and diagnostics industries, new technologies for medical research, and innovative products for use in biotechnology. Molecular Diagnostics made polymerase chain reaction (PCR) the leading DNA probe technology in the world. This area is focused on developing and commercializing six unique PCRs, businesses—women's health, virology, blood screening, microbiology, oncology, and genomics. It is truly dedicated to innovations using this Nobel Prize-winning technology. Centralized Diagnostics is a leading supplier of integrated system solutions for laboratories. This clinical diagnostics area develops and supplies new technologies and integrated solutions that help clinical laboratories to operate efficiently and be cost-effective. Point of Care Diagnostics supplies products and systems for near patient diagnostic testing in hospitals and outpatient settings. Diabetes Care as the leading supplier of comprehensive diabetes management solutions, Diabetes Care is dedicated to developing technologies and services under the ACCU-CHEK® brand, which help make living with diabetes easier.

Worldwide, more than 19,000 people are engaged in research, development, marketing and sales of products, services, and integrated solutions of Roche Diagnostics. With affiliates in more than 50 countries, Roche Diagnostics continuously strives to serve its customers in a way to make them more efficient and generate value to customers, employees, shareholders, and the community.

Elecsys® System— Elegant Technology Driving Immunodiagnosics

Advances in diagnostic science allow an expanding range of parameters and disease markers to be identified. However, to enable laboratories to offer competitive services, a good diagnostic product must be cost-effective, as well as accurate. With over 50 years of innovation in clinical chemistry, immuno-diagnostics and automated diagnostic systems, Roche Diagnostics equips diagnostic laboratories around the world with instruments to measure hundreds of different parameters in blood, serum or urine, while minimizing costs. By creatively exploiting biochemical concepts, the Elecsys® System is helping Roche Diagnostics move the field of immuno-diagnostics forward, and develop better technologies and tests for its customers and their patients.

The Elecsys instrument line contains the fully automated Elecsys 2010 random access auto analyzer as a stand-alone instrument and, within modular analytics systems, a module (E170) to perform heterogeneous immuno-assay testing using the unique electro-chemiluminescence's (ECL) method.

Cardiac Marker for the Emergency Room

With N-terminal prohormone brain natriuretic peptide (NT-proBNP) and Troponin T, physicians can use these tests as an aid in the differential diagnosis of congestive heart failure (CHF) and acute myocardial infarction (MI). Including the Tina-Quant® D-Dimer test in the panel allows clinicians to gain information

regarding pulmonary embolism and deep vein thrombosis (DVT). In minutes, a laboratory can deliver the results of a full cardiac panel to the treatment team in the emergency room.

NT-proBNP

B-type natriuretic peptide OR Brain natriuretic peptide (BNP) is secreted primarily by the left ventricle (LV) when the heart is unable to pump blood efficiently. NT-proBNP provides objective diagnostic information, which helps distinguish CHF from other disease states with similar clinical symptoms, e.g. lung diseases. It has the potential to detect early stages of CHF in the absence of clinically obvious symptoms. In addition, it can be used for the assessment of prognosis for patients with CHF and acute coronary syndrome (ACS). It is also the first and only natriuretic peptide test to receive US Food and Drug Administration (FDA) clearance for the risk assessment of cardiac events in people with stable coronary artery disease (CAD). NT-proBNP is cleaved from the precursor peptide proBNP in quantities directly proportional to its biologically

active counterpart BNP and in close correlation with the severity of heart failure (HF). The measurement of NT-proBNP is not affected by therapy with Natrecor (nesiritide), a synthetic form of BNP used in the treatment of HF.

NT-proBNP is a proven cardiac marker for the risk stratification of patients at cardiovascular risk and in patients with ACS. A recent study¹ found NT-proBNP to be superior to BNP for the evaluation of patients with dyspnea and non-systolic CHF in patients with preserved LV function. Another recent study provides results, which may favor NT-proBNP compared with BNP for the diagnosis of acute HF in overweight and obese patients.²

NT-proBNP testing is cost-effective and could lead to important cost-savings. This was shown recently by U. Siebert,³ the Director of the Program on Cardiovascular Research at the Institute for Technology Assessment and Department of Radiology, Massachusetts General Hospital, Harvard Medical School, Boston. Roche Diagnostics' website is located at www.roche-diagnostics.us ■

1. O'Donoghue M, Chen A, Baggish A et al., Massachusetts General Hospital, Boston, Massachusetts. "NT-proBNP is superior to BNP for the evaluation of patients with dyspnea and non-systolic congestive heart failure: A proBNP investigation of dyspnea in the emergency department (PRIDE)" substudy; *JACC* (2005); Suppl A:45:3:Abstract No. 170.
2. Krauser DG, Lloyd-Jones DM, Chae CU et al., Boston, Massachusetts and Chicago Ill. "Effect of body mass index on natriuretic peptide levels in patients with acute congestive heart failure: A proBNP Investigation of Dyspnea in the Emergency Department (PRIDE)" substudy; *Am Heart J* (2005); 149:pp. 744-750.
3. Siebert U, Januzzi JL, Beinfeld MT et al., Institute For Technology Assessment, Massachusetts General Hosp, Harvard Med School, Boston, Massachusetts. *Circulation* (2004); 110:pp. 369 (Suppl III).