facilities where specimens are collected, and are typically located in or near a building used by medical professionals.

We operate 24 hours a day, 365 days a year. We perform and report most routine tests within 24 hours. The majority of test results are delivered electronically.

# Esoteric Testing

Esoteric tests are those tests that require more sophisticated technology, equipment or materials, professional "hands-on" attention from highly skilled and technical personnel, and that may be performed less frequently than routine tests. Because it is not cost-effective for most hospital and clinical laboratories to perform low-volume esoteric testing in-house, they generally refer many of these tests to an esoteric clinical testing laboratory that specializes in performing these more complex tests. Due to their complexity, esoteric tests are generally reimbursed at higher levels than routine tests.

Our two esoteric testing laboratories, which conduct business as Quest Diagnostics Nichols Institute, are among the leading esoteric clinical testing laboratories in the world. In 1998, our esoteric testing laboratory in San Juan Capistrano, California, was the first clinical laboratory in North America to achieve International Organization for Standardization, or ISO, 9001 certification. Our esoteric testing laboratory in Chantilly, Virginia enables us to provide full esoteric testing services on the east coast. Our Focus Diagnostics laboratory, which is based in Cypress, California, is one of the leading providers of infectious and immunologic disease testing in the world. Our esoteric testing laboratories perform hundreds of esoteric tests that are not routinely performed by our regional laboratories. These esoteric tests are generally in the following fields:

- endocrinology and metabolism (the study of glands, their hormone secretions and their effects on body growth and metabolism);
- genetics (the study of chromosomes, genes and their protein products and effects);
- hematology (the study of blood and bone marrow cells) and coagulation (the process of blood clotting);
- immunogenetics and human leukocyte antigens (HLA) (solid organ and bone marrow transplantation; eligibility for vaccines and immunotherapy);
- immunology (the study of the immune system including antibodies, immune system cells and their effects and autoimmune diseases);
- microbiology and infectious diseases (the study of microscopic forms of life including parasites, bacteria, viruses, fungi and other infectious agents);
- oncology (the study of abnormal cell growth including benign tumors and cancer);
- serology (a science dealing with body fluids and their analysis, including antibodies, proteins and other characteristics); and
- toxicology (the study of chemicals and drugs and their effects on the body's metabolism).

#### New Test Introductions

We intend to build upon our reputation as a leading innovator in the clinical laboratory industry by continuing to introduce new diagnostic tests. As the industry leader with the largest and broadest laboratory network and the leading provider of esoteric testing, we believe that we are the best partner for developers of new technology and tests to introduce their products to the marketplace.

We continue to be a leading innovator in the industry, through tests that we developed at Quest Diagnostics Nichols Institute, the largest provider of molecular diagnostic testing in the United States, and Focus Diagnostics, a leading provider of infectious and immunologic disease testing, as well as through relationships with technology developers. We believe that we are one of the leaders in transferring technical innovations to the market through our relationships with the academic community and pharmaceutical and biotechnology firms, as well as through collaborations with emerging medical technology companies that develop and commercialize novel diagnostics, pharmaceutical and device technologies.

We focus our resources on key disease states and technologies that will help doctors care for their patients through better screening, diagnosis, prognosis, treatment choice and monitoring. With these priorities in mind, during 2006, we introduced over 80 new and improved assays and services, principally in the following areas:

• Oncology–Blood Cancers (Leukemia and Lymphoma). We introduced ten additional tests for leukemia and lymphoma in our growing family of new plasma-based molecular tests called Leumeta<sup>TM</sup>. We believe that

these tests will first supplement and, in the future, might reduce or replace the need for painful bone marrow biopsies.

- Oncology Solid Tumors:
  - We introduced a breast Cancer Gene Expression Index to help physicians predict the risk of disease recurrence in women with estrogen receptor (ER)-positive, lymph node-negative breast cancer.
  - Carcinomas of Unknown Primary (CUP) are expensive and time consuming to diagnose, losing precious time for the patient in determining the most effective treatment. As the first laboratory in the United States to develop a test for genomic characterization of tumor cells, we were also the first laboratory to offer this important test to hospitals, oncologists and pathologists.
- <u>Methicillin-Resistant Staphylococcus aureus (MRSA)</u>. We introduced GeneOhm's PCR-based testing for rapid and accurate diagnosis of Methicillin-Resistant *Staphylococcus aureus* (MRSA), a virulent hospital-based infection, to determine how and when to quarantine and treat potentially affected patients.
- <u>Multiple Sclerosis</u>. Our Focus Diagnostics subsidiary developed and introduced a test to determine if multiple sclerosis patients have developed antibodies to the drug Tysabri, thus differentiating patients who may or may not benefit from the drug. Two companion tests for interferon beta antibodies were also developed.
- Transplant Care and Therapeutic Drug Monitoring. We have introduced:
  - 14 tests that provide a comprehensive menu of infectious disease testing for pre and post transplant care of patients. We also offer the companion therapeutic drug monitoring (TDM) tests to monitor anti-rejection (immune suppression) drugs, and were the first national laboratory to offer an immune cell function test that helps the physician determine the status of a transplant patient's immune system as the physician works to maintain the delicate balance between rejection from a strong immune system and infection from a weakened immune system.
  - 11 tests and three panels that complete our state of the art Human Leukocyte Antigen (HLA) typing capability for hematopoietic stem cell/bone marrow transplantation, tumor vaccination, and immunotherapy.
  - A nine-test menu and testing capability in an FDA registered laboratory for Human Cell, Tissues and Cellular and Tissue-Based Products (HCT/P) Donor Testing through which donors (such as those involved in in-vitro fertilization (IVF), sperm donations, or cellular or tissue implants) are tested for communicable diseases.
- <u>Assays Based on New Technology.</u> We are a leader in improving the techniques and utilization of liquid chromatography-tandem mass spectrometry (LC-MS/MS) so it can be used in a high-volume routine testing environment for improved testing, monitoring and treatment of patients with steroidal and hormonal conditions.

Using this platform, we developed and introduced a more accurate and sensitive 25-OH Vitamin D assay as well as a testosterone test for hypogonadal males, women and children, because in these patient populations, fluctuations in minute amounts of testosterone can have important health and treatment implications. We intend to continue to apply this technology to more of our tests.

• <u>Interpretive Services</u>. Our Focus Diagnostics subsidiary developed and introduced GenomEx<sup>TM</sup>, a proprietary service for interpretation of cystic fibrosis testing. This service utilizes our expertise in genetic testing and interpretation to assist hospitals that have chosen to internalize cystic fibrosis testing, but do not have a certified geneticist on staff.

We are working on the automation of a genetic test to determine whether parents are carriers of the genetic mutation that causes Fragile X syndrome, the most common form of inherited mental retardation. This automation, which is expected to be ready by mid-2007, will enable broad-based population screening for Fragile X.

We proactively search for new opportunities in screening, diagnosis, prognosis, treatment choice and treatment monitoring. We believe that the unveiling of the human genome, and its extension into proteomics and epigenetics, will continue to result in ever more complex and thorough predictive and diagnostic testing. We believe that we are well positioned to benefit from these advances.

As testing methods become more complex, we believe that it is also important to provide sound medical and scientific consultation to ensure the correct application and interpretation of the test results. Our medical and scientific directors are always available for consultation to our customers. In 2006, we further enhanced our

consultation programs, with our enhanced reporting initiatives, particularly in the complex areas of hematopathology and coagulation. We believe consultation services will provide greater support and will help spur the adoption of the new tests we develop and lead to improved client satisfaction and improved patient outcomes.

## Anatomic Pathology

We are one of the leading providers of anatomic pathology services in the United States. We have traditionally been strongest in cytology, specifically in the analysis of Pap tests to detect cervical cancer. We led the industry in converting Pap testing to the use of liquid-based technology, a more effective means of screening for cervical cancer. We have also introduced computerized Pap screening which improves the accuracy of the cervical cytology report by decreasing the number of false negative and false positive results when compared to manual screening of a liquid based Pap test alone. We are among those leading the industry in educating physicians about human papilloma virus ("HPV") molecular testing. The American College of Obstetricians and Gynecologists and the American Cancer Society recommend that women over 30 should be screened for HPV in addition to a Pap test. Anatomic pathology services and cytology services generated approximately 10% of our net revenues during 2006.

### **Risk Assessment Services**

We believe that we are the largest provider of risk assessment services to the life insurance industry in the United States. Our risk assessment services comprise underwriting support services to the life insurance industry including teleunderwriting, specimen collection and paramedical examinations, laboratory testing, medical record retrieval, motor vehicle reports, telephone inspections and credit checks. The laboratory tests performed and data gathered by us are specifically designed to assist an insurance company in objectively evaluating the mortality and morbidity risks posed by policy applicants. The majority of the testing is performed on specimens of individual life insurance policy applicants, but also includes specimens of individuals applying for medical and disability policies. We also provide risk assessment services in Canada. We operate approximately 65 locations in the United States and Canada where we provide paramedical examinations. We also contract with third parties for these services at 160 locations across the United States.

## **Clinical Trials Testing**

We believe that we are the world's second largest provider of clinical laboratory testing performed in connection with clinical research trials on new drugs. Through our Focus Diagnostics subsidiary, we believe that we are the leading provider of clinical laboratory testing performed in connection with clinical research trials on vaccines. Clinical research trials are required by the FDA and other international regulatory authorities to assess the safety and efficacy of new drugs and vaccines. We have clinical trials testing centers in the United States and in the United Kingdom. We also provide clinical trials testing in Australia, China, Singapore and South Africa through arrangements with third parties. Clinical trials involving new drugs are increasingly being performed both inside and outside the United States. Approximately 53% of our net revenues from clinical trials testing in 2006 represented testing for GlaxoSmithKline plc, or GSK. We are the primary provider of testing to support GSK's clinical trials testing requirements worldwide.

### **Other Services and Products**

Our MedPlus subsidiary is a developer and integrator of clinical connectivity and data management solutions for healthcare organizations, physicians and clinicians primarily through its ChartMaxx® electronic medical record system for hospitals and our Care360 suite of products. The Care360 Physician Portal was developed by MedPlus and enables physicians to order diagnostic tests and review laboratory results from Quest Diagnostics online. In addition, the Care360 Physician Portal enables physicians to electronically prescribe medications, view clinical and administrative information from multiple sources, file certain documents into a patient-centric health record maintained in our repository and share confidential patient information with medical colleagues in a manner that is consistent with HIPAA privacy and security requirements.

See "Recent Acquisitions" for information concerning our recent acquisitions of HemoCue, Focus Diagnostics and Enterix.

During the third quarter of 2006 we discontinued the operations of Nichols Institute Diagnostics, which manufactured and marketed diagnostic test kits and systems primarily for esoteric testing.