









MEDICAL DEVICES

PHARMACEUTICALS

CHEMICALS

FOOD & BEVERAGE

ELECTRONICS

Table of Contents and List of Tables

Copyright 2012 VENTURE PLANNING GROUP This material is confidential for use by our clients only and may not be reprinted or reproduced.

VPG Publications, Consulting, Clients www.VPGcorp.com

VPG Market Research Reports www.VPGMarketResearch.com

VPG Partner Reports www.Research-Store.com/VPG

VENTURE PLANNING GROUP 545 Eighth Avenue, Suite 401 New York, NY 10018 Phone + 1 212 564 2838 Fax + 1 212 564 8133 *info@vpgcorp.com*

Table of Contents

Worldwide Technology and Market Overview

A. Major Blood Typing, Grouping and Infectious Disease Screening Tests

1. Blood Typing and Grouping Tests

- a. ABO
- b. Antibody Panels
- c. Antibody Screening
- d. Antigen Typing
- e. Antiglobulin Test
- f. Crossmatch
- g. HLA Typing
- h. Rh
- i. Other Blood Groups

2. Infectious Disease Screening Tests

- a. AIDS
 - Structure and Composition
 - Classification
 - Origin of AIDS
 - Animal Lentivirus Systems
 - Virus Receptors
 - HIV Infections in Humans
 - -Pathogenesis & Pathology
 - -Overview of Course of HIV Infection
 - CD4T Lymphocytes and Memory Cells
 - Monocytes and Macrophages
 - Lymphoid Organs
 - Neural Cells
 - Viral Coinfections -Clinical Findings
 - Plasma Viral Load
 - Pediactric AIDS
 - -Neurologic Disease
 - -Opportunistic Infections
 - -Protozoa
 - -Fungi
 - -Bacteria

- Viruses
- Cancer
- Immunity
- Laboratory Diagnosis
 - -Virus Isolation
 - -Serology
 - -Detection of Viral Nucleic Acid or Antigens
- Epidemiology
 - -Worldwide Spread of AIDS
 - -United States
 - -Routes of Transmission
- Prevention, Treatment, And Control
 - -Antiviral Drugs
 - -Vaccines Against HIV
- Transmission of HIV in Blood Products
- HIV Transmission in Transplant and Artificial Insemination Recipients
- Diagnostic Tests
 - Enzyme Immunoassay Interpretation
 - Specificity, Sensitivity, and Predictive Value of Enzyme Immunoassay
- Competition Assays
- Western Blot Technique
- Immuno-Fluorescence Assay (IFA)
- Radioimmunoprecipitation
- HIV-1/HIV-2 Combination Testing
- Methods of HIV-Antigen Detection
- Antigen Assays and Blood Screening
- Urine Tests
- DNA Probes
 - Overview
 - Quantitative Polymerase Chain Reaction
 - In Situ PCR
 - Needed Improvements
- Viral Load/Drug Resistance Testing
- Genotype and Phenotype Testing
- Blood Banking Considerations
- b. Hepatitis
 - Hepatitis A
 - Hepatitis B
 - -Structure and Composition
 - -Replication of Hepatitis B Virus

- Hepatitis C
- Hepatitis D (Delta Hepatitis)
- Hepatitis E
- Hepatitis G
- Hepatitis Virus Infections In Humans -Pathology
- Clinical Findings
- Laboratory Features
 - Hepatitis A
 - -Hepatitis B
 - -Hepatitis C
 - -Hepatitis D
 - -Hepatitis E
- Virus-Host Immune Reactions
- Epidemiology
 - -Hepatitis A
 - -Hepatitis B
 - -Hepatitis C
 - -Hepatitis D (Delta Agent)
- Vaccines and Drugs
- c. Cytomegalovirus
 - Background
 - Chorioretinitis
 - Gastrointestinal
 - Central Nervous System Disease
 - Diagnostic Tests
 - Vaccines and Drugs
- d. Syphilis
 - Background
 - Diagnostic Tests
 - Vaccines and Drugs
- e. West Nile Virus
 - Background
 - Clinical Syndromes
 - Diagnostic Tests
 - Vaccines and Drugs
- f. Parvovirus B19
 - Microbiology
 - Epidemiology
 - Clinical Syndromes
 - -Erythema Infectiosum Slapped (cheek)
 - -Adult Polyarthropathy

- Transient Aplastic Crisis
- Transient Pancytopenia
- Red Cell Aplasia in the Immunocompromised
- Perinatal Infections
- Diagnosis
- Treatment
- g. Creutzfeldt-Jakob's Disease
 - Background
 - Transmission
 - Diagnostic Tests
 - Major Commercial and Academic Players
 - -Bayer
 - -Disease Sciences/BioTec Global
 - -Imperial College School of Medicine
 - -Ortho-Clinical Diagnostics
 - -Pall
 - -ProMetic Life Sciences
 - -Proteome Sciences/Idexx
 - -Q-One Biotech
 - -Serono
 - -U.S. Agricultural Research Service
 - Drugs
 - Vaccines
- h. Malaria
- i. Chagas Disease
- j. Babesiosis
- 3. Pathogen Reduction
- 4. Leukocyte Reduction
 - Background
 - Methods
- B. Instrumentation Review: Operating Characteristics, Features and Selling Prices of Leading Automated and Semiautomated Analyzers Manufactured by:
 - Abbott
 - Beckman Coulter/Danaher
 - Bio-Rad
 - BioMerieux
 - Gen-Probe
 - Grifols

- Immucor
- Nanosphere
- Ortho-Clinical Diagnostics
- Roche
- Sarstedt
- Siemens
- Tecan

C. Major in Vitro Diagnostic Technologies And Their Potential Applications

- 1. Molecular Diagnostics
 - a. Overview
 - b. NAT

2. Monoclonal and Polyclonal Antibodies

3. Immunoassays

- a. Technological Principle
- b. Chemiluminescence
- c. Enzyme Immunoassays (EIA)
 - Overview
 - ELISA
 - EMIT
 - Electrochemical
- d. Radioimmunoassays (RIA)
- e. Immunoprecipitation
- f. Affinity Chromatography
- 4. Microtitration Plates
- 5. IT and Automation
- 6. Lasers
- 7. Robotics
- 8. Synthetic Red Cell Substitutes
- 9. Genetically Engineered Blood Components
 - a. Albumin
 - b. Factor VIII
 - c. Alpha-2 Antiplasmin
 - d. Antithrombin III
 - e. Factor IX
 - f. Von Willebrand's Factor
 - g. Fibrinogen
 - h. t-PA

10. Blood Preservation

11. Autologous Blood Transfusion/Freezing

<u>ltaly</u>

- A. Executive Summary
- B. Business Environment
- C. Market Structure
- D. Market Size, Growth and Major Suppliers' Sales and Market Shares for Blood Typing, Grouping and Infectious Disease Screening Tests

Major Product Development Opportunities

- A. Blood Typing and Grouping
- **B.** Infectious Disease Screening
- C. Auxiliary

Alternative Market Penetration Strategies

- A. Internal Development
- B. Collaborative Arrangements
- C. University Contracts

Potential Market Entry Barriers and Risks

- A. Market Maturity
- B. Cost Containment
- C. Competition
- D. Technological Edge and Limitations
- E. Patent Protection

Competitive Assessments

- Abbott
- Beckman Coulter/Danaher
- Becton Dickinson
- Biokit
- BioMerieux
- Bio-Rad
- Diagast
- DiaSorin

- Fujirebio
- Gen-Probe
- Grifols
- Immucor
- InnogeneticsOrtho-Clinical Diagnostics
- Orchid CellMark
- Novartis Diagnostics
- Proteome Sciences
- Roche
- Siemens
- Tecan

List of Tables

Major Companies Developing or Marketing Blood Typing and Grouping Tests

Major Companies Developing or Marketing HLA Typing Tests

Major Companies Developing or Marketing AIDS Tests

Major Companies Developing or Marketing Hepatitis Tests

Major Companies Developing or Marketing CMV Tests

Major Companies Developing or Marketing Syphilis Tests

Major Companies Developing or Marketing Blood Bank Analyzers

Executive Summary Table: Italy, Total Blood Bank Test Volume and Reagent Sales Forecast by Test Category

Italy, Facilities Performing Blood Bank Tests by Market Segment

Italy, Hospital Laboratories Performing Blood Bank Tests by Bed Size

Italy, Commercial/Private Laboratories Performing Blood Bank Tests by Annual Test Volume

Italy, All Market Segments Blood Typing And Grouping Test Volume by Market Segment

Italy, All Market Segments Blood Typing And Grouping Test Volume Forecast

List of Tables (continued)

Italy, Hospital Laboratories Blood Typing and Grouping Test Volume Forecast

Italy, Blood Banks Blood Typing And Grouping Test Volume Forecast

Italy, Commercial/Private Laboratories Blood Typing and Grouping Test Volume Forecast

Italy, All Market Segments Infectious Disease Screening Test Volume Forecast by Market Segment

Italy, All Market Segments Infectious Disease Screening Test Volume Forecast

Italy, Blood Banks Infectious Disease Screening Test Volume Forecast

Italy, Commercial/Private Laboratories Infectious Disease Screening Test Volume Forecast

Italy, Hospital Laboratories Infectious Disease Screening Test Volume Forecast

Italy, All Market Segments Blood Typing and Grouping Reagent Market Forecast by Market Segment

Italy, All Market Segments Blood Typing And Grouping Reagent Market Forecast by Major Test

Italy, Hospital Laboratories Blood Typing and Grouping Reagent Market Forecast By Major Test

List of Tables (continued)

Italy, Blood Banks Blood Typing and Grouping Reagent Market Forecast by Major Test

Italy, Commercial/Private Laboratories Blood Typing and Grouping Reagent Market Forecast By Major Test

Italy, All Market Segments Infectious Disease Screening Reagent Market Forecast by Market Segment

Italy, All Market Segments Infectious Disease Screening Reagent Market Forecast by Test

Italy, Blood Banks Infectious Disease Screening Reagent Market Forecast by Test

Italy, Commercial/Private Laboratories Infectious Disease Screening Reagent Market Forecast by Test

Italy, Hospital Laboratories Infectious Disease Screening Reagent Market Forecast By Test

Italy, Major Suppliers of Blood Typing And Grouping Reagents Estimated Sales And Market Shares

Italy, AIDS/Hepatitis Blood Screening Market, Reagent Sales by Major Supplier

Italy, HIV/Hepatitis NAT Market, Reagent Sales by Major Supplier

Italy, CMV Blood Screening Market, Reagent Sales By Major Supplier