

# **Live Cell Imaging Market: Market Segments: By Product (Equipment, Consumable and Software); By Technology (Time-lapse Microscopy, Fluorescence recovery after photobleaching (FRAP), Fluorescence resonance energy transfer (FRET), High content screening (HCS) and Others); By Application (Cell Biology, Developmental Biology, Stem Cell & Drug Discovery and Others); and Region – Analysis of Market Size, Share & Trends for 2014 – 2019 and Forecasts to 2030**

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## **Abstracts**

### Product Overview

In an in-vivo environment, Live-Cell Imaging is a study that includes real-time observation and measurement of Live-Cells. These Live-Cells are observed under screening systems or microscopes. It offers an in-depth study of cells' biological functions and pathways. Live-cell imaging has allowed researchers and observers at the molecular level to image cellular activities. In various fields such as molecular biology, microbiology, immunology, neurology, developmental biology, stem cell biology, and others, the study is accepted by several researchers around the world. Live-cell imaging is the method of using images obtained from imaging systems such as high content screening systems and microscopes to study live cells.

### Market Highlights

Live Cell Imaging Market is expected to project a notable CAGR of 8.52% in 2030.

Live Cell Imaging Market to surpass USD 3.67 billion by 2030 from USD 1.7 billion in

2018 at a CAGR of 8.52% throughout the forecast period, i.e., 2019-30. Due to its advantage of providing a detailed study of the cells, live-cell imaging has gained significant attention in the market. Growing research activities around the world have prompted this strategy to be adopted. The market has been boosted by heavy research work to develop new drugs. The demand for live-cell imaging has also been fueled by increasing incidences of cancer patients and other chronic illnesses. Government funding for the discovery of new drugs has acted as one of the market drivers. Increasing chronic diseases related to age and lifestyle also drive healthcare demand and spending. Due to urbanization, sedentary lifestyles, changing diets, increasing levels of obesity, and widespread access to tobacco products, cancer, and heart diseases are becoming the main causes of death in developing markets.

#### Live Cell Imaging Market: Segments

Software segment to grow with the highest CAGR of 6.32% during 2019-30

Live Cell Imaging Market is segmented by product as equipment, consumables, and software. The greater market share of XX% in 2018 was accounted for by the equipment Live Cell Imaging segment of the Live Cell Imaging market which was followed by consumables. Microscopes, cell analyzers, image capturing systems, and standalone systems are part of the equipment segment. Consumables play a significant role in optimizing the results produced. For time-lapse imaging in which the cells are exposed for a long duration, the optimal dye, probes, and medium are critical. The strength of cells may be adversely influenced by the wrong choice of medium. Many players in the industry are active in the market, such as Thermo Fisher and Enzium Inc. The overall industry trend is shifting towards automation, systems integration, and the maximization of microscope data generation. This shift has resulted from the increasing use of live-cell imaging among cell biologists to understand the fundamental nature of cell function and structure.

Stem Cell & Drug Discovery Segment to grow with the highest CAGR of XX.X% during 2019-30

Live Cell Imaging Market is segmented by Application into cell biology, developmental biology, stem cell & drug discovery, and others. Cell biology dominated the application segment due to the rising number of researchers working on molecular interaction networks. Innovations such as filter techniques and advanced illumination devices further enable the procedure. Live-cell imaging is used by cell biologists to understand basic cellular structures and their tissue-level interaction. In order to further boost the market, advantages such as clarity of structural components and spatial heterogeneity of a cell offered by live-cell imaging are anticipated. Because of the use of live-cell imaging in observing cell embryogenesis and studying the physiological state of the cell,

developmental biology has also closely followed cell biology in terms of application. It allows researchers throughout the developmental process to view the activity and proliferation of cells.

## Live Cell Imaging Market: Market Dynamics

### Drivers

#### Rising Prevalence of Chronic Disease

Global demand for live-cell imaging is largely affected by the increasing incidence of chronic diseases and the corresponding need for quick diagnostic techniques. The availability of accurate and precise live-cell imaging techniques also helps speed up the processes of drug discovery and other biotechnology research. In the future, growth in expenditure and funding for the development of advanced cell imaging is also expected to boost the market for live-cell imaging. Collaborations between market players and research and academic institutions for the development and introduction of breakthrough products have recently gained pace. In order to strengthen their stronghold in the market, small players are increasingly acquired by large incumbents for the procurement of breakthrough technologies.

#### Government Funding for Cell-based Research

Over the forthcoming years increasing funding for the development of efficient live-cell imaging techniques is also expected to boost the market. Over the forecast period, extensive research being carried out to develop microscopes of higher resolution is likely to boost the market. The growth of the market has been augmented by recent technological advances in microscopes. An inverted research-grade microscope, for example, has supported imaging of adherent cells and organelles and yields results of less than 5  $\mu\text{m}$  thickness for tissue sections. The overall industry trend is shifting towards automation, system integration, and maximizing microscope data generation. New developments also allow the cells to be imaged within a time range at spatial resolutions.

### Restrain

#### High cost of high-content screening systems

High-content screening (HCS) tools are equipped with advanced functionalities and features and are therefore priced at a premium. As they have limited budgets, academic research laboratories find it hard to afford such high-priced tools. As they require multiple HCS systems in their R&D activities, the high price of these tools is also a concern for several pharmaceutical companies. In addition to the high cost of procurement, the total cost of ownership of these instruments is increased by maintenance costs and several other indirect costs. This is one of the major factors

limiting the adoption of live cell imaging tools, particularly in emerging countries, in clinical and research applications.

## Live Cell Imaging Market: Key Players

Becton, Dickinson, and Company

Company Overview

Business Strategy

Key Product Offerings

Financial Performance

Key Performance Indicators

Risk Analysis

Recent Development

Regional Presence

SWOT Analysis

Carl Zeiss AG

GE Healthcare

Leica Microsystems

Olympus Corporation

Molecular Devices LCC

Nikon Corporation

PerkinElmer Inc.

Sigma-Aldrich Corporation

Thermo Fisher Scientific Inc

Live Cell Imaging Market: Regions

Live Cell Imaging Market is segmented based on regional analysis into five major regions. These include North America, Latin America, Europe, APAC, and MENA.

Live Cell Imaging Market in North America held the largest market share of XX.X% in the year 2018 and will continue its lead through the forecast period. The North American market is largely driven by heavy funding for research and development activities in the region. On the basis of the rapid adoption of new research technologies, Europe closely follows the North American market. Asia Pacific will be the fastest-growing market for live cell imaging because of widespread research and development outsourcing activities. In addition, Europe held a noteworthy bid due to the early appropriation of innovation. The emerging maturing population calls for focused research on perpetual diseases, such as malignancy, neurodegeneration, and cardiovascular diseases. This has encouraged the investigation and propelled microscopy of immature microorganisms.

### Competitive Landscape:

The Live Cell Imaging market, which is highly competitive, consists of several major players such as Leica Microsystems, Becton, Dickinson, and Company, Olympus Corporation hold a substantial market share in the Live Cell Imaging market. Other players analyzed in this report are Carl Zeiss Meditec AG, Thermo Fisher Scientific, Inc. among others.

The market competition has been stepped up by the availability of many players offering Live Cell Imaging. In September 2020, CytoSMART Technologies (Netherlands) launched CytoSMART Multi Lux, a remote live cell imaging system.

Live Cell Imaging Market is further segmented by region into:

North America Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – United States and Canada

Latin America Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – Mexico, Argentina, Brazil, and Rest of Latin America

Europe Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – United Kingdom, France, Germany, Italy, Spain, Belgium, Hungary, Luxembourg, Netherlands, Poland, NORDIC, Russia, Turkey, and Rest of Europe

APAC Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – India, China, South Korea, Japan, Malaysia, Indonesia, New Zealand, Australia, and Rest of APAC

MENA Market Size, Share, Trends, Opportunities, Y-o-Y Growth, CAGR – North Africa, Israel, GCC, South Africa, and Rest of MENA

Live Cell Imaging Market report also contains analysis on:

Live Cell Imaging Market Segments:

By Product:

Equipment

Consumable

Software

By Technology:

Time-lapse Microscopy

Fluorescence recovery after photobleaching

Fluorescence resonance energy transfer

High content screening

Others

By Application:

Cell Biology

Developmental Biology  
Stem Cell & Drug Discovery  
Others  
Live Cell Imaging Market Dynamics  
Live Cell Imaging Market Size  
Supply & Demand  
Current Trends/Issues/Challenges  
Competition & Companies Involved in the Market  
Value Chain of the Market  
Market Drivers and Restraints

## Contents

### **1. EXECUTIVE SUMMARY**

### **2. LIVE CELL IMAGING MARKET**

- 2.1. Product Overview
- 2.2. Market Definition
- 2.3. Segmentation
- 2.4. Assumptions and Acronyms

### **3. RESEARCH METHODOLOGY**

- 3.1. Research Objectives
- 3.2. Primary Research
- 3.3. Secondary Research
- 3.4. Forecast Model
- 3.5. Market Size Estimation

### **4. AVERAGE PRICING ANALYSIS**

### **5. MACRO-ECONOMIC INDICATORS**

### **6. MARKET DYNAMICS**

- 6.1. Growth Drivers
- 6.2. Restraints
- 6.3. Opportunity
- 6.4. Trends

### **7. CORRELATION & REGRESSION ANALYSIS**

- 7.1. Correlation Matrix
- 7.2. Regression Matrix

### **8. RECENT DEVELOPMENT, POLICIES & REGULATORY LANDSCAPE**

### **9. RISK ANALYSIS**



9.1. Demand Risk Analysis

9.2. Supply Risk Analysis

## **10. LIVE CELL IMAGING ANALYSIS**

10.1. Porters Five Forces

10.1.1. Threat of New Entrants

10.1.2. Bargaining Power of Suppliers

10.1.3. Threat of Substitutes

10.1.4. Rivalry

10.2. PEST Analysis

10.2.1. Political

10.2.2. Economic

10.2.3. Social

10.2.4. Technological

## **11. LIVE CELL IMAGING MARKET**

11.1. Market Size & forecast, 2019A-2030F

11.1.1. By Value (USD Million) 2019-2030F; Y-o-Y Growth (%) 2020-2030F

11.1.2. By Volume (Million Units) 2019-2030F; Y-o-Y Growth (%) 2020-2030F

## **12. LIVE CELL IMAGING: MARKET SEGMENTATION**

12.1. By Regions

12.1.1. North America: By Value (USD Million) 2019-2030F; Y-o-Y Growth (%) 2020-2030F

12.1.2. Europe: By Value (USD Million) 2019-2030F; Y-o-Y Growth (%) 2020-2030F

12.1.3. Asia-Pacific: By Value (USD Million) 2019-2030F; Y-o-Y Growth (%) 2020-2030F

12.1.4. MEA: By Value (USD Million) 2019-2030F; Y-o-Y Growth (%) 2020-2030F

12.1.5. Latin America: By Value (USD Million) 2019-2030F; Y-o-Y Growth (%) 2020-2030F

12.2. By Product: Market Share (2020-2030F)

12.2.1. Equipment, By Value (USD Million) 2019-2030F; Y-o-Y Growth (%) 2020-2030F

12.2.2. Consumable, By Value (USD Million) 2019-2030F; Y-o-Y Growth (%) 2020-2030F



12.2.3. Software, By Value (USD Million) 2019-2030F; Y-o-Y Growth (%) 2020-2030F

12.3. By Technology: Market Share (2020-2030F)

12.3.1. Time-lapse Microscopy, By Value (USD Million) 2019-2030F; Y-o-Y Growth (%) 2020-2030F

12.3.2. Fluorescence recovery after photobleaching, By Value (USD Million) 2019-2030F; Y-o-Y Growth (%) 2020-2030F

12.3.3. Fluorescence resonance energy transfer, By Value (USD Million) 2019-2030F; Y-o-Y Growth (%) 2020-2030F

12.3.4. High content screening (HCS), By Value (USD Million) 2019-2030F; Y-o-Y Growth (%) 2020-2030F

12.3.5. Others, By Value (USD Million) 2019-2030F; Y-o-Y Growth (%) 2020-2030F

12.4. By Application: Market Share (2020-2030F)

12.4.1. Cell Biology, By Value (USD Million) 2019-2030F; Y-o-Y Growth (%) 2020-2030F

12.4.2. Developmental Biology, By Value (USD Million) 2019-2030F; Y-o-Y Growth (%) 2020-2030F

12.4.3. Stem Cell & Drug Discovery, By Value (USD Million) 2019-2030F; Y-o-Y Growth (%) 2020-2030F

12.4.4. Others, By Value (USD Million) 2019-2030F; Y-o-Y Growth (%) 2020-2030F

## **13. COMPANY PROFILE**

### **1. BECTON, DICKINSON, AND COMPANY**

#### **1. COMPANY OVERVIEW**

#### **2. COMPANY TOTAL REVENUE (FINANCIALS)**

#### **3. MARKET POTENTIAL**

#### **4. GLOBAL PRESENCE**

#### **5. KEY PERFORMANCE INDICATORS**

#### **6. SWOT ANALYSIS**

#### **7. PRODUCT LAUNCH**

### **2. CARL ZEISS AG**

**3. GE HEALTHCARE**

**4. LEICA MICROSYSTEMS**

**5. OLYMPUS CORPORATION**

**6. MOLECULAR DEVICES LCC**

**7. NIKON CORPORATION**

**8. PERKINELMER INC.**

**9. SIGMA-ALDRICH CORPORATION**

**10. THERMO FISHER SCIENTIFIC INC**

Consultant Recommendation

\*\*The above-given segmentations and companies could be subjected to further modification based on in-depth feasibility studies conducted for the final deliverable.

## I would like to order

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