Molecular Cytogenetics Market (Technologies: FISH and aCGH; Applications: Genetic Disorders And Cancer) - Global Industry Analysis, Size, Share, Growth, Trends and Forecast, 2013 – 2019

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REPORT DESCRIPTION

Molecular Cytogenetics Market is Expected to Reach USD 1.97 Billion Globally in 2019: Transparency Market Research

Transparency Market Research published new market report **"Molecular Cytogenetics Market (Technologies: FISH and aCGH; Applications: Genetic Disorders, Cancer and Personalized Medicine) - Global Industry Analysis, Size, Share, Growth, Trends and Forecast, 2013 - 2019,"** the global molecular cytogenetics market was valued at USD 469.2 million in 2012 and is estimated to reach a market worth USD 1.97 billion in 2019 at a CAGR of 23.4% from 2013 to 2019.

Molecular cytogenetics is emerging as an indispensable tool in the field of research and diagnosis. Until the advent of molecular cytogenetics techniques in 1980s, chromosomal analysis was mainly based on banding patterns. Although, the traditional banding techniques encountered problems such as low resolution and poor quality analysis.

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However, breakthrough in fluorescence in situ hybridization (FISH) and array-comparative genomic hybridization (aCGH) techniques has enhanced the diagnosis of chromosomal anomalies particularly in tumor and hematological malignancies. Nowadays, cytogenetics techniques are being considered mandatory in diagnosis and prognosis of leukemia. The techniques are considered as a standard laboratory test since they provide global screening of abnormalities. The scope of molecular cytogenetics is increasing with the rising cancer incidences worldwide and growing popularity of personalized medicines.

The ability of FISH technique to study cells at an interphase stage of the cell cycle has made the technique a breakthrough in molecular cytogenetics field. FISH technique is used in the research of diverse applications such as cancer, cardiovascular and genetic disorder. The impetus of FISH technique is a direct result of improved understanding of sequence, structure and function of human genome. Similarly, supported by technological advancements in fluorescent microscopes and digital imaging, FISH technique has emerged as a preferred tool in molecular cytogenetics. The technique facilitates the analysis of sub-chromosomal regions and the identifications of small translocations thereby, routinely used in clinical applications. Owing to the techniques' sensitivity and specificity, FISH is significantly used in number of cytogenetic and pathological laboratories.

The advent of aCGH is ushering new standards for the analysis of genome. The technology has turned out to be a greatest driver for the molecular cytogenetics market as it is overcoming the resolution problems associated with traditional banding techniques. aCGH is poised to witness a significant growth in the market and is likely to emerge as the fastest growing technology segment. aCGH has propelled the cytogenetics market from the microscopes to computers and thus, facilitated simultaneous analysis of thousands of discrete regions of the genome. Similarly, the technique is gaining popularity as one assay performed on this technique is comparable to thousands of FISH experiments and hence, saves time and cost. Moreover, the technique is expected to rapidly supplant FISH technique owing to further technological advancements in the technique. Likewise, increasing sensitivity of the aCGH technique is preferred as a primary diagnosis tool followed by validation with FISH. The technique is emerging as a powerful tool for high resolution analysis of sub-microscopic chromosomal abnormalities. aCGH is also evolving as a method of choice for molecular cytogenetics by the researchers owing to its work flow advantages and cost effectiveness.

North America accounts for the largest share of the molecular cytogenetics market followed by the European region. The markets for these regions are driven by factors such as increased level of public awareness, rising cancer incidences and large number of research institutes engaged in cytogenetics field. However, Asia-Pacific region is likely to emerge as the fastest growing region over the analysis period. Cancer diagnosis is likely to witness a

significant growth and emerge as the fastest growing segment during analysis period with a CAGR of more than 20%.

The growing demand for molecular cytogenetics techniques in research and data interpretation has resulted in quick expansion of manufacturers' product portfolio. The manufacturers are focused on building aggressive strategies for the development of innovative products that would cater research and diagnostic sectors. The vendors are eager to tap the emerging regions and end-users of this market. Major players engaged in development of innovative molecular cytogenetics techniques are Abbott laboratories, Affymetrix, Inc., Applies Spectral Imaging, BI Biological Industries, Life Technologies Corporation, Roche Diagnostics, Oxford Gene Technology, Illumina, Inc., among others.

The molecular cytogenetics market is segmented as follows:

Molecular Cytogenetics Market, by Technology

- FISH
- aCGH

Molecular Cytogenetics Market, by Application

- Genetic Disorders
- Cancer
- Personalized Medicine
- Others

Molecular Cytogenetics Market, by Geography

- North America
- Europe
- Asia-Pacific
- RoW

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We are privileged with highly experienced team of Analysts, Researchers and Consultants, who use proprietary data sources and various tools and techniques to gather, and analyze information. Our business offerings represent the latest and the most reliable information indispensable for businesses to sustain a competitive edge.

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