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Nuclear Medicine and Radiopharmaceuticals Market 2012-2017

Markets and Markets has released a new report on the nuclear medicine and radiopharmaceuticals market.

The Nuclear Medicine/ Radiopharmaceuticals Market [SPECT/PET Radioisotopes (Technetium, F-18)], [Beta/Alpha Radiation Therapy (I131, Y-90)], [Applications (Cancer/Oncology, Cardiac)] & Stable Isotopes (Deuterium, C-13) - Global Trends & Forecast To 2017 covers the major market drivers, restraints, and opportunities in North America, Latin America, Europe, Asia, and Rest of the World.

The global radiopharmaceutical market was valued at $3.8 billion in 2012 and is expected to reach $5.5 billion by 2017 at a CAGR of 7.8 percent.

The radioisotopes market comprises diagnostic and therapeutic applications. The diagnostic market consists of PET and SPECT technologies, while the therapy market comprises of beta emitters and brachytherapy seeds. The SPECT market accounted for a major share of the diagnostic segment in 2012. Significant radioisotopes in the SPECT diagnostic market are Tc-99m, Tl- 201, Ga-67, and I-123, while the PET market is dominated by F-18, and Rb-82. The therapy market is led by I-131, Sm-153, Re-186, Y-90, and Lu-177. Alpha emitters are being developed and considered for cancer treatment; however, they are not available commercially.

It is estimated that Tc-99m diagnostic procedures are expected to increase by more than 15 percent in the mature markets of North America, Europe, Japan, the Republic of Korea, and Oceania between 2010 and 2030, but shortage of Mo-99/Tc-99m has been a threat to this industry. The scheduled shutdown of the NRU reactor in 2016 and OSIRIS in France in 2018 is a major risk for manufacturers in the near future. Companies have increased the production of thallium to meet the shortage, as it is the most commonly used substitute for technetium-99 in cardiac-stress tests, conducted to evaluate the functioning of coronary arteries. Radiopharmaceuticals in neurological applications such as Alzheimer's disease, Parkinsons disease, and dementia are also being preferred by practitioners besides conventional treatment. Further, upcoming radioisotopes such as Ra-223 (Alpharadin) and Ga-68 possess huge potential for clinical applications.

Increasing use of SPECT and PET scans, technical advancements in equipment and other factors such as rising awareness of radiopharmaceuticals among physicians, alpha radioimmunotherapy based targeted cancer treatment, and the ready availability of the nuclear medicine market from cyclotrons have driven the market. High cost of devices using radioisotopes, short half-life, lack of good manufacturing practices, and stringent regulatory approvals are major hurdles to growth.

North America is the dominant market for diagnostic radioisotopes with close to half of the market share. The U.S. is the largest consumer market for radiopharmaceuticals, while Canada is one of the largest producers of Tc-99m.

Processors such as Nordion, Inc., Covidien Plc., and NTP Radioisotopes Pty Ltd. run reactors that are involved in the irradiation of U-235 to make crude isotopes. They follow various strategies to achieve sustainable growth, one of which is shifting to Low Enriched Uranium (LEU) from High Enriched Uranium (HEU). These key players were mainly involved in strategic agreements and contracts with other institutes and players, while generator manufacturers followed several strategies to maintain a sustainable supply chain.

The stable isotopes market was less than $150 million in 2012 and is poised to grow at more than 10 percent CAGR in the next 5 years. Carbon-13 commanded the largest share of the global stable isotope market in 2012; however deuterium and oxygen show tremendous potential to grow in the near future. The market was dominated by two players, Cambridge Isotope Laboratories (CIL) (U.S.) and Isotec (Sigma Aldrich) (U.S.) in 2012 jointly contributing more than 90 percent to the global revenue.

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