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Drug Delivery Technology: Revolutionizing Cardiovascular Treatment

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Abstracts

Use the incisive analysis, commentary, opinions and forecasts provided in this note to:

gain an in-depth understanding of the technology landscape for CV devices including active & passive targeting platforms, cell- & gene-based therapeutic delivery platforms & biomaterials for medical devices including drug-eluting stents

assess the options available for delivering existing & novel cardiovascular agents now & in the future

gauge the current & future technology requirements of pharma, biotech & medical device companies developing cardiovascular products & devices

analyze how the market is evolving & the influence that drug delivery may have on pharma cardiovascular pipelines

identify key pharma & delivery companies focusing on the improved delivery of existing & novel cardiovascular agents

highlight alliances between delivery companies & pharma & device manufacturers and recent market activity

evaluate where progress has been made in the delivery of potential new cardiovascular products & devices

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KEY FINDINGS:

2006 global cardiovascular market worth over US$75 billion.

attracted attention of specialty pharma and big pharma players such as Amgen, Bristol-Myers Squibb, Johnson & Johnson, Merck & Co., Novartis, Pfizer, sanofi-aventis and Schering-Plough.

>270 products in clinical development however; 3 key challenges remain - ensuring efficient, targeted and con-trolled-release of mono and combination therapies, improve delivery of novel regenerative therapies and improve the biocompatibility & biodegradability of medical devices.

Analysis of historic (2000-2005) market trends of the cardiovascular pharmaceutical sales and advanced drug delivery sales.

Forecasts for near-term (2006-2012) and the future (2020) market growth based on the technology platforms evaluated in the report.

Plus, sales forecasts for approved and pipeline cardiovascular products and medical devices used as a basis for our cardiovascular drug delivery sales (CDDS) forecasts.

Drug delivery companies applying a plethora of platforms, including controlled-release, targeted systems, to overcome the above challenges.

Many new classes of drugs and combinations will reach the market over the next 6 years, driving future market growth. Their success is analyzed in detail and case studies provided to highlight the progress of each technology.

As the cardiovascular market evolves new approaches to treatment will emerge targeting the reversal of cardiovascular conditions utilizing cutting edge cell- and gene based therapies. Several Biotherapeutics companies are working towards this goal including: Advanced Cell Technology, Angioblast Systems, Cytori Therapeutics, Geron Corporation, MG Biotherapeutics, Osiris Therapeutics and Tissue Genesis. A number of delivery options are currently being evaluated to optimize the clinical utility of these regenerative therapies and are analyzed in detail in the report.

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The medical devices market is going through a transition period as novel biomaterials are evaluated that may have wide ranging utility in medical devices including drug eluting stents. Competition in this market is fierce where Abbott Laboratories, Boston Scientific Corporation, Johnson & Johnson and Medtronic dominate but newer players such as MIV Therapeutics are venturing into the arena. The latest development in drug-eluting stents and biomaterials are analyzed in detail in the report.

“The ability to deliver therapeutics site specifically,safely and efficiently remains a major challenge for the treatment of cardiovascular diseases. Additional drug delivery hurdles will need to be overcome as pharma companies and medical device manufacturers target specific areas of the vasculature. These advances will help to develop a new generation of medicines and devices to tackle the world’s leading killer.”

Dr Cheryl Barton

Cardiovascular disease (CVD) is the leading cause of death in the world, killing almost 17 million people each year. Types of CVD include coronary heart disease, hypertension, dyslipidemia and stroke - stroke is now the third leading cause of death, and the leading cause of disability in the western world (source: American Heart Association, AHA). Each year these conditions account for almost half of all deaths and are a tremendous financial burden on the healthcare system estimated to cost the US around US$560 billion annually (Source: Buxton, 2007).

The following report summarizes some of the latest developments in CV drug development and devices and analyzes some of the most promising solutions which drug delivery companies and device manufacturers are providing in order to address this unmet clinical need.

EIGHT QUESTIONS THIS NOTE ANSWERS:

1. How will the drug delivery technology drivers change in the cardiovascular arena during the next decade and beyond?
2. What are the key delivery technologies and devices in the cardiovascular field?
3. When are products and medical devices which utilize these key delivery technologies likely to reach the market?
4. Which drug delivery specialists are forming strategic alliances with the pharma industry in the cardiovascular arena?

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5. Which companies are the winners in each technology category?
6. How are drug delivery technologies evolving to meet the demands of the cardiovascular market?
7. Where are the market opportunities now and in the future?
8. What do we predict will be the value of the cardiovascular drug delivery and medical devices market each year until 2012, in 2015 and in 2020?

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COMPANIES MENTIONED:

Abbott Vascular, Actelion Pharmaceuticals, Advanced Cell Technology, Alltracel Technologies, Alnylam Pharmaceuticals, ALZA , Amgen, AnGes MG, Angioblast Systems, Ark Therapeutics, AVI BioPharma Inc, Bard Inc, Bioavail Pharmaceuticals, Bioheart, Biophan Technologies, Biosense Webster, BioSensors International, Biosync Scientific Corporation, Biotechnology Research Corporation of Hong Kong, Biotronik AG, Boston Scientific Inc, Bristol-Myers Squibb, Cardium Therapeutics, Celladon Corporation, Clearstream, Conor Medsystems Inc, Cook Medical, Copernicus Therapeutics, Cordis Corporation, Cytori Therapeutics, Diachii-Sankyo, Dendritic Nanotechnologies, DepoMed Inc, EMD BioSciences (Merck KGaA), Emisphere Technologies, EndoTex Interventional Systems, Endovasc, GlaxoSmithKline, Geron Corporation, Guidant Corporation, ImaRx Therapeutics, Infigen Inc., Innocore Technologies, Invitrogen, Johnson & Johnson, Kereos, Maxcyte, Medtronic Inc, Merck & Co., MG Biotherapeutics, Micell Technologies, Miravant Medical Technologies, Mirus Bio Corporatiom, MIV Therapeutics, Myosix, Mytogen Inc., Nastech Pharmaceutical, NaturalNano Inc, Northern Therapeutics, Novartis, OBS Medical, OrbusNeich, Osiris Therapeutics, Otsuka, Pacific Northwest National Laboratory, Penwest Pharma, Phosphagenics Ltd, Pfizer, PolyNovo, Protiva Biotherapeutics, pSivida, Remon Medical Technologies Inc, Resverlogix Corporation, sanofi-aventis, Schering-Plough, SCOLR Pharma, StarPharma, SurModics Inc, Tissue Genesis Inc, TyRx Pharma, UCB, Vical Inc, Volcano Corporation, X-Cell Medical Inc.

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