Mesenchymal Stem Cells - Global Strategic Business Report

Description:
This report analyzes the worldwide markets for Mesenchymal Stem Cells in US$ Million. The report provides separate comprehensive analytics for the US, Canada, Japan, Europe, Asia-Pacific, and Rest of World.

Annual estimates and forecasts are provided for the period 2015 through 2022. Market data and analytics are derived from primary and secondary research.

Company profiles are primarily based on public domain information including company URLs. The report profiles 47 companies including many key and niche players such as -

- Aastrom Biosciences, Inc.
- Cell Applications, Inc.
- Celprogen, Inc.
- Cyagen Biosciences Inc.
- MilliporeSigma

Contents:
I. INTRODUCTION, METHODOLOGY & PRODUCT DEFINITIONS
- Study Reliability and Reporting Limitations
- Disclaimers
- Data Interpretation & Reporting Level
- Quantitative Techniques & Analytics
- Product Definitions and Scope of Study

II. EXECUTIVE SUMMARY
1. MARKET OVERVIEW
- Mesenchymal Stem Cells Market on a Rapid Growth Path
- Current and Future Analysis
- The Present and Future of MSC Therapies
- Select MSC-based Therapeutics
- Mesenchymal Stem Cell Research
- Table 1: Mesenchymal Stem Cells-based (MSCs) Clinical Trials by Region (2015) (includes corresponding Graph/Chart)
- Top 10 Countries Conducting Mesenchymal Stem Cells-based (MSCs) Clinical Trials 2015
- Table 2: China Leads the MSC-based Clinical Trials: 2010-2015 (includes corresponding Graph/Chart)
- Table 3: China's MSC-based Clinical Trials by Phase: 2015 (includes corresponding Graph/Chart)
- Table 4: China's MSC-based Clinical Trials by Source: 2015 (includes corresponding Graph/Chart)
- Table 5: China's MSC-based Clinical Trials by Indication: 2015 (includes corresponding Graph/Chart)
- MSCs are Being Explored for Several New Treatment Possibilities
- Widespread Commercialization of 'Off-the-Shelf' MSCs to Become a Reality
- Software Companies Endeavour to Cash in on the Boom

2. MARKET DRIVERS, TRENDS & ISSUES
- Development of Regenerative Medicine Accelerates Demand for MSCs
- Table 6: Global Regenerative Medicines Market by Category (2015): Percentage Breakdown for Biopharmaceuticals, Cell and Tissue-Based Therapies, and Regenerative Devices & Compounds (includes corresponding Graph/Chart)
- Ageing Demographics to Drive Demand for Mesenchymal Stem Cell Therapies
- Global Aging Population Statistics
- Opportunity Indicators
- Table 7: Elderly Population (60+ Years) as a Percentage of Total Population (2015 & 2050) (includes corresponding Graph/Chart)
- Table 8: Global Aging Population in Select Regions/Countries: Population of 60+ Individuals in ‘000s and as a Percentage of Total Population for 2015 & 2050 (includes corresponding Graph/Chart)
- Table 9: Life Expectancy at Age 60 and 80 Years
(2010-2015), (2020-2025) & (2045-2050) (includes corresponding Graph/Chart)
Table 10: Life Expectancy for Select Countries in Number of Years: 2015E (includes corresponding Graph/Chart)
Growing Prevalence of Chronic Diseases Propels Demand for Mesenchymal Stem Cells
Key Disease Statistics
Opportunity Indicators
Table 11: Worldwide Incidence of Cancer (2012, 2020 & 2030): Number of New Cases Diagnosed (includes corresponding Graph/Chart)
Table 12: World Cancer Incidence by Geographic Region and Gender (2012): Number of New Cancer Cases Reported (in Thousands) for Asia-Oceania, Europe, North America, Latin America & the Caribbean, and Africa (includes corresponding Graph/Chart)
Table 13: Fatalities by Heart Conditions
Estimated Percentage Breakdown for Cardiovascular Disease, Ischemic Heart Disease, Stroke, and Others (includes corresponding Graph/Chart)
Table 14: Global Annual Medical Cost of CVD in US$ Billion (2010-2030) (includes corresponding Graph/Chart)
Growing Volume of Orthopedic Procedures: An Opportunity for the MSC Market
Table 15: Global Orthopedic Market by Segment (2015): Percentage Breakdown of Value Sales for Extremities, Hips, Knees, Orthobiologics, Spine, Trauma and Others (includes corresponding Graph/Chart)
Adult Stem Cell Therapies on Growth Trajectory, as Controversies Continue to Haunt Embryonic Stem Cell Research
Adult Stem Cells and Embryonic Stem Cells
A Comparison
MSCs versus Embryonic or Induced Pluripotent Stem Cells
MSC Therapies
Immune to Ethical Issues Applicable to Embryonic Stem Cells
MSCs
A Potential Vehicle for ‘Targeted Drug Delivery’
Stem Cell Based Bone Grafts: Promising Growth Ahead
Loopholes Associated with In Vivo Properties Constrain Therapeutic Advancements
Major Challenges Confronting Mesenchymal Stem Cell Market
Allogeneic MSCs
Offering Promise in Immunosuppressive and Tissue Repair Therapy
Administration Route Determines the Effectiveness of MSCs

3. REVIEW OF SELECT MAJOR STEM CELL VARIANTS
Adult Stem Cells
A Low Risk Investment
Adult Stem Cells Garner More Investments for Research
Low Versatility
A Major Limiting Factor for Adult Stem Cells
Hematopoietic Stem Cells
Enjoying Enduring Success
Restraining Factors
Induced Pluripotent Stem Cells
An Alternative to ESCs
A Peek into the Discovery of iPS
Drug Development
A Major Application for IPS
Use of IPS for Regenerative Medicine
Establishing IPS Cell Banks
Intractable and Congenital Disease Treatments
Embryonic Stem Cells to Transfigure Medicine
Ethical Issues and Technical Hurdles Bog Down hESC Research
Lack of Safety and Efficacy Data
A Key Concern

4. MESENCHYMAL STEM CELL RESEARCH BY APPLICATION
Mesenchymal Stem Cells in Orthopedics
MSC based Models for Orthopedic Repair
Delivery of MSCs to Regions Requiring Therapy
MSCs in the Treatment of Osteoarthritis
MSCs in the Treatment of Rheumatoid Arthritis
MSCs in Cancer Treatment
MSCs in Hepatology
MSCs in Neurology
MSCs in Cardiology
MSCs in Radiotherapy
MSCs in the Treatment of Diabetes
MSCs in the Treatment of Autoimmune Diseases
MSCs in Treatment of Premature Ovarian Failure
MSCs for Gene Therapy
MSC Therapy in the Treatment of Lung Diseases
MSCs for Treating Liver Disease
MSCs for Treating Multiple Sclerosis-Phase II Clinical Trial Completed in the US (2016)
MSCs in Colon Repair
MSCs in Kidney Repair

5. PRODUCT OVERVIEW
Mesenchymal Stem Cells (MSCs)
An Introduction
History
What Are Allogeneic Mesenchymal Stem Cells?
Some Major Sources of Mesenchymal Stem Cells
Bone Marrow
Wharton’s Jelly and Umbilical Cord Blood
Adipose Tissue
Trophoblastic Tissues
Amniotic Fluid
Developing Tooth Bud of Mandibular Third Molar
Mechanism of Mesenchymal Stem Cell Therapy
Important Features of Mesenchymal Stem Cells
Morphology
Identification/Detection
Differentiation Capacity
Immuno-modulatory Effects
Culturing
Clinical Use
Production of Clinical-Grade MSCs
Drawbacks of MSCs

6. RECENT INDUSTRY ACTIVITY
JCR Pharmaceuticals Develops TEMCELL HS
Stemedica Receives FDA Approval for Phase Iia Clinical Study for Traumatic Brain Injury
PuRec Announces Plans to Produce MSCs/RECs
Stemedica Enrolls into Phase I/IIa Clinical Study for Ischemic Stroke
JCR Pharmaceuticals Receives Pricing Notification
JCR Pharmaceuticals Awaits Approval for JR-031
Stemedica Receives FDA’s Approval for Phase Iia Clinical Study
Mesoblast Announces Plans to Introduce Stem Cell Therapy Product
Stemedica Receives Patent
Stem Cell and Cancer Institute Receives IND approval
Thermo Fisher Scientific Takes Over Life Technologies

7. FOCUS ON SELECT PLAYERS
Cell Applications, Inc. (US)
Celprogen, Inc. (US)
Cyagen Biosciences, Inc. (US)
MilliporeSigma (US)
Genlantis, Inc. (US)
Thermo Fischer Scientific, Inc. (US)
Lonza Group (Switzerland)
Mesoblast Limited (Australia)
Neuromics (US)
Orthofix International N.V. (Curacao)
PromoCell GmbH (Germany)
8. GLOBAL MARKET PERSPECTIVE
Table 16: World Recent Past, Current and Future Analysis for Mesenchymal Stem Cells by Geographic Region
US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), and Rest of World Markets Independently Analyzed
with Annual Revenue Figures in US$ Million for Years 2015 Through 2022 (includes corresponding Graph/Chart)
Table 17: World Historic Review for Mesenchymal Stem Cells by Geographic Region
US, Canada, Japan, Europe, Asia-Pacific (excluding Japan), and Rest of World Markets Independently Analyzed
with Annual Revenue Figures in US$ Million for Years 2009 Through 2014 (includes corresponding Graph/Chart)
Table 18: World 14-Year Perspective for Mesenchymal Stem Cells by Geographic Region
Percentage Breakdown of Annual Revenues for US, Canada, Japan, Europe, Asia-Pacific (excluding Japan),
and Rest of World Markets for Years 2009, 2016 & 2022 (includes corresponding Graph/Chart)

III. MARKET

1. THE UNITED STATES
A. Market Analysis
Rapidly Ageing Population: A Major Driving Demand for MSC based Therapies
Table 19: North American Elderly Population by Age Group (1975-2050) (includes corresponding Graph/Chart)
Increasing Incidence of Chronic Diseases Drives Focus onto MSCs
Table 20: CVD in the US: Cardiovascular Disease Prevalence in Adults by Gender & Age Group (includes corresponding Graph/Chart)
Table 21: New Cancer Cases in Males in US by Body Site (2014) (includes corresponding Graph/Chart)
Table 22: New Cancer Cases in Females in US by Body Site (2014) (includes corresponding Graph/Chart)
Arthritis
Table 23: % of Population Diagnosed with Arthritis by Age Group (includes corresponding Graph/Chart)
Prochymal Obtains Fast Track Designation from FDA
MSCs for Treating Multiple Sclerosis-Phase II Clinical Trial Completed in the US
Rising Governmental Investments in Stem Cell Therapies
A Growth Booster
FDA Issues Warning Against Illegal Stem Cell Therapies
US Regulates Stem Cells as Drugs
Federal Law on Stem Cells in the US
NIH at the Forefront of Research Funding
NIH Guidelines on Stem Cell Research
Bans and Restrictions on Stem Cell Research
American Type Culture Collection Inc (ATCC)
A Major Non-Profit Organization
Strategic Corporate Developments
Select Key Players
B. Market Analytics
Table 24: The US Recent Past, Current and Future Analysis for Mesenchymal Stem Cells Analyzed with
Annual Revenue Figures in US$ Million for Years 2015 through 2022 (includes corresponding Graph/Chart)
Table 25: The US Historic Review for Mesenchymal Stem Cells Analyzed with Annual Revenue Figures in US$
Million for Years 2009 through 2014 (includes corresponding Graph/Chart)

2. CANADA
A. Market Analysis
Current and Future Analysis
Prochymal
Canada’s First MSC-based Therapy
Stemcell Technologies Inc
A Key Player
B. Market Analytics
Table 26: Canadian Recent Past, Current and Future Analysis for Mesenchymal Stem Cells Analyzed with Annual Revenue Figures in US$ Million for Years 2015 through 2022 (includes corresponding Graph/Chart)
Table 27: Canadian Historic Review for Mesenchymal Stem Cells Analyzed with Annual Revenue Figures in US$ Million for Years 2009 through 2014 (includes corresponding Graph/Chart)

3. JAPAN
A. Market Analysis
Current and Future Analysis
Increasing Demand for Regenerative Medicine in Geriatric Healthcare and Cancer Care to Drive Demand for Mesenchymal Stem Cells
Table 28: Japanese Elderly (65+ Years) Population: 2000-2020 (includes corresponding Graph/Chart)
Table 29: Cancer Related Deaths by Age Group in Japan (2013) (includes corresponding Graph/Chart)
New Regulation for Accelerated Stem Cell Approval and Its Impact on Stem Cells Product Market Strategic Corporate Development

B. Market Analytics
Table 30: Japanese Recent Past, Current and Future Analysis for Mesenchymal Stem Cells Analyzed with Annual Revenue Figures in US$ Million for Years 2015 through 2022 (includes corresponding Graph/Chart)
Table 31: Japanese Historic Review for Mesenchymal Stem Cells Analyzed with Annual Revenue Figures in US$ Million for Years 2009 through 2014 (includes corresponding Graph/Chart)

4. EUROPE
A. Market Analysis
Current and Future Analysis
Ageing Population to Drive Demand for MSC based Therapies
Table 32: European Aging Population by Age Group: 1975-2050 (includes corresponding Graph/Chart)
Table 33: European Country-wise Statistics of 60+ Population as % of Total Population: 2013 (includes corresponding Graph/Chart)
Cancer in Europe: Key Statistics
Table 34: Number of New Cancer Cases in Europe: 2012-2030 (includes corresponding Graph/Chart)
Legislations on Stem Cell Research and Therapy in the EU
Unproven Stem Cell Therapies Receive Government Backing in the EU?
Scientists and Government Tussle over Safety of Stamina Foundation’s MSC Therapy in Italy
Stem Cell Clinics Shut Down in Germany due to Malpractices
Key Players

B. Market Analytics
Table 35: European Recent Past, Current and Future Analysis for Mesenchymal Stem Cells Analyzed with Annual Revenue Figures in US$ Million for Years 2015 through 2022 (includes corresponding Graph/Chart)
Table 36: European Historic Review for Mesenchymal Stem Cells Analyzed with Annual Revenue Figures in US$ Million for Years 2009 through 2014 (includes corresponding Graph/Chart)

5. ASIA-PACIFIC
A. Market Analysis
Current and Future Analysis
Overview of Select Countries
Australia
Stem Cell Tourism
A Popular Trend in Australia
South Korea
South Korea Pacing towards Regaining Lost Glory in Stem Cell Research
South Korea Upbeat on Stem Cell Therapy Market Potential
India
An Outline of the Stem Cell Research Structure in India
Table 37: Indian Adult Stem Cell Research (2012): Percentage Share Breakdown by Type (includes corresponding Graph/Chart)
A Regulatory Picture of the Indian Stem Cell Research and Therapy
Adult Stem Cells
A Highly Money-Spinning Market
Indians ‘Bank’ on Dental Stem Cells
New Zealand
Stem Cell Research Scenario in New Zealand
Product Launches
Key Players

B. Market Analytics
Table 38: Asia-Pacific Recent Past, Current and Future Analysis for Mesenchymal Stem Cells Analyzed with Annual Revenue Figures in US$ Million for Years 2015 through 2022 (includes corresponding Graph/Chart)

Table 39: Asia-Pacific Historic Review for Mesenchymal Stem Cells Analyzed with Annual Revenue Figures in US$ Million for Years 2009 through 2014 (includes corresponding Graph/Chart)

6. REST OF WORLD
   A. Market Analysis
      Current and Future Analysis
      Stem Cell Research in Full Swing in Israel
      Key Players
   B. Market Analytics

Table 40: Rest of World Recent Past, Current and Future Analysis for Mesenchymal Stem Cells Analyzed with Annual Revenue Figures in US$ Million for Years 2015 through 2022 (includes corresponding Graph/Chart)

Table 41: Rest of World Historic Review for Mesenchymal Stem Cells Analyzed with Annual Revenue Figures in US$ Million for Years 2009 through 2014 (includes corresponding Graph/Chart)

IV. COMPETITIVE LANDSCAPE
Total Companies Profiled: 47
The United States (25)
Canada (1)
Japan (2)
Europe (6)
- Germany (2)
- The United Kingdom (1)
- Rest of Europe (3)
Asia-Pacific (Excluding Japan) (9)
Latin America (1)
Middle East (3)


Order by Fax - using the form below

Order by Post - print the order form below and send to

Research and Markets,
Guinness Centre,
Taylors Lane,
Dublin 8,
Ireland.
Fax Order Form
To place an order via fax simply print this form, fill in the information below and fax the completed form to 646-607-1907 (from USA) or +353-1-481-1716 (from Rest of World). If you have any questions please visit http://www.researchandmarkets.com/contact/

Order Information
Please verify that the product information is correct and select the format(s) you require.

<table>
<thead>
<tr>
<th>Product Name:</th>
<th>Mesenchymal Stem Cells - Global Strategic Business Report</th>
</tr>
</thead>
<tbody>
<tr>
<td>Web Address:</td>
<td><a href="http://www.researchandmarkets.com/reports/2769226/">http://www.researchandmarkets.com/reports/2769226/</a></td>
</tr>
<tr>
<td>Office Code:</td>
<td>SC</td>
</tr>
</tbody>
</table>

Product Formats
Please select the product formats and quantity you require:

<table>
<thead>
<tr>
<th>Format</th>
<th>Quantity</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic (PDF)</td>
<td>Single User</td>
<td>USD 4950</td>
</tr>
<tr>
<td>Electronic (PDF)</td>
<td>1 - 5 Users</td>
<td>USD 6930</td>
</tr>
<tr>
<td>Electronic (PDF)</td>
<td>1 - 10 Users</td>
<td>USD 9405</td>
</tr>
<tr>
<td>Electronic (PDF)</td>
<td>1 - 15 Users</td>
<td>USD 11880</td>
</tr>
</tbody>
</table>

* The price quoted above is only valid for 30 days. Please submit your order within that time frame to avail of this price as all prices are subject to change.

Contact Information
Please enter all the information below in BLOCK CAPITALS

<table>
<thead>
<tr>
<th>Title:</th>
<th>Mr ☐</th>
<th>Mrs ☐</th>
<th>Dr ☐</th>
<th>Miss ☐</th>
<th>Ms ☐</th>
<th>Prof ☐</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Name:</td>
<td></td>
<td></td>
<td></td>
<td>Last Name:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Email Address: *</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Title:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organisation:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Address:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>City:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Postal / Zip Code:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Country:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phone Number:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fax Number:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Please refrain from using free email accounts when ordering (e.g. Yahoo, Hotmail, AOL)
Payment Information

Please indicate the payment method you would like to use by selecting the appropriate box.

☐ Pay by credit card: You will receive an email with a link to a secure webpage to enter your credit card details.

☐ Pay by check: Please post the check, accompanied by this form, to:
Research and Markets,
Guinness Center,
Taylors Lane,
Dublin 8,
Ireland.

☐ Pay by wire transfer: Please transfer funds to:
Account number 833 130 83
Sort code 98-53-30
Swift code ULSBIE2D
IBAN number IE78ULSB98533083313083
Bank Address Ulster Bank,
27-35 Main Street,
Blackrock,
Co. Dublin,
Ireland.

If you have a Marketing Code please enter it below:

Marketing Code: ________________________

Please note that by ordering from Research and Markets you are agreeing to our Terms and Conditions at http://www.researchandmarkets.com/info/terms.asp

Please fax this form to:
(646) 607-1907 or (646) 964-6609 - From USA
+353-1-481-1716 or +353-1-653-1571 - From Rest of World