

Humanized Mouse and Rat Model Market by Type (Genetic, Cell-Based (CD34, PBMC, BLT)), Application (Neuroscience, Oncology, Toxicology, Immunology & Infectious diseases, Hematopoiesis), End Users, and Region - Global Forecast to 2027

Market Report | 2023-05-08 | 180 pages | MarketsandMarkets

AVAILABLE LICENSES:

- Single User \$4950.00
- Multi User \$6650.00
- Corporate License \$8150.00
- Enterprise Site License \$10000.00

Report description:

The global humanized mouse and rat model market is projected to reach USD 338 million by 2027 from USD 237 million in 2022, at a CAGR of 7.4% during the forecast period of 2022 to 2027. Currently, immunodeficient mice engrafted with functional human cells, genes, and tissues have emerged as an important tool for the preclinical study of human diseases. Medical testing is done on humanized models as their genetic, biological, and behavioural characteristics resemble those of humans. Also, several medical conditions of humans can be replicated in humanized models and this is promoting market growth. Along with this growth in the humanized mouse and rat model market can be attributed to increased demand for personalized medicine, growing support through investments and grants from the government and private sector, and growth in the number of R&D activities carried out by pharmaceutical and biotechnology companies is driving market growth.

Humanized Rat Model Market is expected to account for the second-largest share for by type segment.

Based on type, the humanized mouse and rat model market has been segmented into humanized mouse models and humanized rat models. In 2021, humanized rat model market accounted for the second largest share. The liver metabolism of rats (in terms of the number and type of liver enzymes) is similar to humans. It is also easy to surgically modify rats and collect samples. The other advantages of rat models include favourable absorption, ease of handling, ability to sustain more intense intravenous dosing, and larger tissue sample. These advantages of rat models over mouse models are encouraging the development of humanized rat models.

The Oncology segment accounted for the highest market share of the application segment in the humanized mouse and rat model market

Based on application, the humanized mouse and rat model market is segmented into oncology, immunology and infectious diseases, neuroscience, haematopoiesis, toxicology, and other applications. In 2021 Oncology application had the highest market

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

share as humanized mouse models have significantly contributed to the understanding of cancer biology, as they are useful in validating gene functions, identifying novel cancer genes & tumor biomarkers, understanding the molecular and cellular mechanisms underlying in tumor initiation, and providing better clinical models to test novel therapeutic strategies.

Europe is the second largest region in the humanized mouse and rat model market

The humanized mouse and rat model market is segmented into North America, Europe, Asia Pacific, Latin America (LATAM) and Middle East and Africa (MEA). After North America, In Europe, the growing pharmaceutical R&D expenditure and growth in the pharmaceutical and biotechnology are major driver for high market share.

The primary interviews conducted for this report can be categorized as follows:

-□By Respondent: Supply Side- 80% and Demand Side 20%

-□By Designation: Managers- 55%, CXOs and Director level - 20%, and Executives - 25%

-□By Region: North America -45%, Europe -30%, Asia-Pacific -20%, Latin America -3%, and Middle East and Africa - 2%

Prominent Players of the humanized mouse and rat model market are Charles River Laboratories International, Inc. (US), The Jackson Laboratory (JAX) (US), Taconic Biosciences, Inc. (US), Crown Bioscience (US), Envigo (US).

Research Coverage:

This report provides a detailed picture of the humanized mouse and rat model market. It aims at estimating the size and future growth potential of the market across different segments such as the type, application, end user and region. The report also includes an in-depth competitive analysis of the key market players along with their company profiles recent developments and key market strategies.

Key Benefits of Buying the Report:

The report will help market leaders/new entrants by providing them with the closest approximations of the revenue numbers for the overall humanized mouse and rat model market and its subsegments. It will also help stakeholders better understand the competitive landscape and gain more insights to better position their business and make suitable go-to-market strategies. This report will enable stakeholders to understand the market's pulse and provide them with information on the key market drivers, restraints, challenges, trends, and opportunities.

?

The report provides insights on the following pointers:

-□Analysis of key drivers (Increasing research activities using humanized models, Rising demand for personalized medicine, Continuous support and initiatives from government and private sectors for cancer research, and Growing R&D activities in pharmaceutical and biotechnology sectors), restraint (High cost of custom humanized models, Laws and regulations for ethical use of animal models in research), opportunities (Rising demand for humanized PDX models, Emergence of CRISPR as a powerful tool in biomedical research, Rising demand for humanized rat models), challenges (Alternatives for animal testing, Limitations of humanized mouse models) are influencing the growth of humanized mouse and rat model market.

-□Product Development/Innovation: Detailed insights on newly launched product, and technological assessment of the humanized mouse and rat model market.

-□Market Development: Comprehensive information about lucrative markets - the report analyses the humanized mouse and rat model market across varied regions.

-□Market Diversification: Exhaustive information about new product, untapped geographies, recent developments, and investments in the humanized mouse and rat model market.

-□Competitive Assessment: In-depth assessment of market shares, growth strategies and service offerings of leading players like Charles River Laboratories International, Inc. (US), The Jackson Laboratory (JAX) (US), Taconic Biosciences, Inc. (US), Envigo (US),

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

among others in the humanized mouse and rat model market. The report also helps stakeholders understand the pulse of humanized mouse and rat model market and provides them information on key market drivers, restraints, challenges, and opportunities.

Table of Contents:

1	INTRODUCTION	20	
1.1	STUDY OBJECTIVES	20	
1.2	MARKET DEFINITION	20	
1.2.1	INCLUSIONS AND EXCLUSIONS	21	
1.3	MARKET SCOPE	21	
1.3.1	MARKETS COVERED	21	
1.3.2	YEARS CONSIDERED	22	
1.4	CURRENCY CONSIDERED	22	
1.5	LIMITATIONS	22	
1.6	STAKEHOLDERS	23	
1.7	SUMMARY OF CHANGES	23	
2	RESEARCH METHODOLOGY	24	
2.1	RESEARCH APPROACH	24	
2.1.1	SECONDARY DATA	24	
2.1.2	PRIMARY DATA	24	
2.1.2.1	Breakdown of primary sources	25	
	FIGURE 1	BREAKDOWN OF PRIMARY INTERVIEWS: BY COMPANY TYPE, DESIGNATION, AND REGION	25
2.1.2.2	Key industry insights	26	
2.2	MARKET SIZE ESTIMATION	26	
	FIGURE 2	MARKET SIZE ESTIMATION: SUPPLY-SIDE ANALYSIS	26
	FIGURE 3	CAGR PROJECTIONS FROM ANALYSIS OF DEMAND-SIDE DRIVERS, RESTRAINTS, OPPORTUNITIES, AND CHALLENGES	27
	FIGURE 4	HUMANIZED MOUSE AND RAT MODEL MARKET: FINAL CAGR PROJECTIONS	28
	FIGURE 5	HUMANIZED MOUSE AND RAT MODEL MARKET: SEGMENTAL ASSESSMENT	28
2.3	MARKET BREAKDOWN AND DATA TRIANGULATION	29	
	FIGURE 6	DATA TRIANGULATION METHODOLOGY	30
2.4	MARKET RANKING ANALYSIS	30	
2.5	RESEARCH ASSUMPTIONS	31	
3	EXECUTIVE SUMMARY	32	
	FIGURE 7	HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2022 VS. 2027 (USD MILLION)	32
	FIGURE 8	HUMANIZED MOUSE AND RAT MODEL MARKET, BY APPLICATION, 2022 VS. 2027 (USD MILLION)	33
	FIGURE 9	HUMANIZED MOUSE AND RAT MODEL MARKET, BY END USER, 2022 VS. 2027 (USD MILLION)	34
	FIGURE 10	REGIONAL SNAPSHOT OF HUMANIZED MOUSE AND RAT MODEL MARKET	35
4	PREMIUM INSIGHTS	36	
4.1	HUMANIZED MOUSE AND RAT MODEL MARKET OVERVIEW	36	
	FIGURE 11	GROWING RESEARCH ACTIVITIES USING HUMANIZED MODELS TO DRIVE MARKET GROWTH	36
4.2	ASIA PACIFIC: HUMANIZED MOUSE AND RAT MODEL MARKET, BY END USER AND COUNTRY (2021)	37	
	FIGURE 12	PHARMACEUTICAL AND BIOTECHNOLOGY COMPANIES SEGMENT DOMINATED ASIA PACIFIC MARKET IN 2021	37
4.3	GEOGRAPHICAL SNAPSHOT OF HUMANIZED MOUSE AND RAT MODEL MARKET	38	
	FIGURE 13	INDIA TO WITNESS HIGHEST GROWTH RATE FROM 2022 TO 2027	38
4.4	HUMANIZED MOUSE AND RAT MODEL MARKET, BY REGION	38	
	FIGURE 14	NORTH AMERICA TO DOMINATE MARKET IN 2027	38
4.5	HUMANIZED MOUSE AND RAT MODEL MARKET: DEVELOPED VS. DEVELOPING MARKETS	39	

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

FIGURE 15 □ DEVELOPING MARKETS TO REGISTER HIGHER GROWTH RATE DURING FORECAST PERIOD □ 39

5 □ MARKET OVERVIEW □ 40

5.1 □ INTRODUCTION □ 40

5.2 □ MARKET DYNAMICS □ 40

FIGURE 16 □ HUMANIZED MOUSE AND RAT MODEL MARKET: DRIVERS, RESTRAINTS, OPPORTUNITIES, AND CHALLENGES □ 40

5.2.1 □ DRIVERS □ 41

5.2.1.1 □ Increasing research activities using humanized models □ 41

5.2.1.2 □ Rising demand for personalized medicine □ 41

5.2.1.3 □ Continuous support and initiatives from government and private sectors for cancer research □ 42

5.2.1.4 □ Growing R&D activities in pharmaceutical and biotechnology sectors □ 42

TABLE 1 □ NUMBER OF DRUGS IN DEVELOPMENT, BY DISEASE AREA (2020) □ 43

5.2.2 □ RESTRAINTS □ 43

5.2.2.1 □ High cost of custom humanized models □ 43

5.2.2.2 □ Laws and regulations for ethical use of animal models in research □ 43

5.2.3 □ OPPORTUNITIES □ 44

5.2.3.1 □ Rising demand for humanized PDX models □ 44

5.2.3.2 □ Emergence of CRISPR as a powerful tool in biomedical research □ 44

5.2.3.3 □ Rising demand for humanized rat models □ 45

5.2.4 □ CHALLENGES □ 45

5.2.4.1 □ Alternatives for animal testing □ 45

5.2.4.2 □ Limitations of humanized mouse models □ 46

5.3 □ REGULATORY ANALYSIS □ 46

5.3.1 □ NORTH AMERICA □ 46

5.3.2 □ EUROPE □ 47

5.3.3 □ ASIA PACIFIC □ 49

5.3.3.1 □ China □ 49

5.3.3.2 □ Japan □ 49

5.3.3.3 □ India □ 50

5.3.3.4 □ Australia □ 50

5.3.4 □ LATIN AMERICA □ 50

5.3.5 □ MIDDLE EAST & AFRICA □ 51

5.4 □ PRICING ANALYSIS □ 51

TABLE 2 □ PRICE OF HUMANIZED MOUSE MODELS (2022) □ 51

5.5 □ TECHNOLOGY ANALYSIS □ 51

5.6 □ VALUE CHAIN ANALYSIS □ 52

FIGURE 17 □ CREATION OF HUMANIZED MODELS-MAXIMUM VALUE IS ADDED DURING IMPLANTATION OF GRAFT/TUMOR CELLS IN IMMUNODEFICIENT MICE OR RATS □ 52

5.7 □ ECOSYSTEM ANALYSIS OF HUMANIZED MOUSE AND RAT MODEL MARKET □ 53

FIGURE 18 □ ECOSYSTEM ANALYSIS OF HUMANIZED MOUSE AND RAT MODEL MARKET □ 53

TABLE 3 □ SUPPLY CHAIN ECOSYSTEM □ 54

5.8 □ PORTER'S FIVE FORCES ANALYSIS □ 55

TABLE 4 □ HUMANIZED MOUSE AND RAT MODEL MARKET: PORTER'S FIVE FORCES ANALYSIS □ 55

5.8.1 □ THREAT OF NEW ENTRANTS □ 55

5.8.2 □ THREAT OF SUBSTITUTES □ 55

5.8.3 □ BARGAINING POWER OF BUYERS □ 55

5.8.4 □ BARGAINING POWER OF SUPPLIERS □ 55

5.8.5 □ INTENSITY OF COMPETITIVE RIVALRY □ 55

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

5.9 PATENT ANALYSIS 56

FIGURE 19 PATENT APPLICATIONS FOR HUMANIZED MOUSE MODEL MARKET, JANUARY 2013 -SEPTEMBER 2022 56

6 HUMANIZED MOUSE AND RAT MODEL MARKET, BY TYPE 57

6.1 INTRODUCTION 58

TABLE 5 HUMANIZED MOUSE AND RAT MODEL MARKET, BY TYPE, 2020-2027 (USD MILLION) 58

6.2 HUMANIZED MOUSE MODELS 58

TABLE 6 HUMANIZED MOUSE MODEL MARKET, BY TYPE, 2020-2027 (USD MILLION) 59

TABLE 7 HUMANIZED MOUSE MODEL MARKET, BY COUNTRY, 2020-2027 (USD MILLION) 59

6.2.1 GENETIC HUMANIZED MOUSE MODELS 60

6.2.1.1 Genetic humanized mouse models segment to account for larger market share 60

TABLE 8 GENETIC HUMANIZED MOUSE MODELS MARKET, BY COUNTRY, 2020-2027 (USD MILLION) 60

6.2.2 CELL-BASED HUMANIZED MOUSE MODELS 61

TABLE 9 CELL-BASED HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 61

TABLE 10 CELL-BASED HUMANIZED MOUSE MODELS MARKET, BY COUNTRY, 2020-2027 (USD MILLION) 61

6.2.2.1 CD34 humanized mouse models 62

6.2.2.1.1 Increasing demand for stem cell therapy to drive market growth 62

TABLE 11 CD34 HUMANIZED MOUSE MODELS MARKET, BY COUNTRY, 2020-2027 (USD MILLION) 63

6.2.2.2 PBMC humanized mouse models 63

6.2.2.2.1 Growing prevalence of infectious diseases to drive demand 63

TABLE 12 PBMC HUMANIZED MOUSE MODELS MARKET, BY COUNTRY, 2020-2027 (USD MILLION) 64

6.2.2.3 BLT humanized mouse models 65

6.2.2.3.1 Increasing HIV cases to drive demand 65

TABLE 13 BLT HUMANIZED MOUSE MODELS MARKET, BY COUNTRY, 2020-2027 (USD MILLION) 66

6.3 HUMANIZED RAT MODELS 66

6.3.1 LACK OF GERMLINE-COMPETENT RAT EMBRYONIC STEM CELL LINES AFFECTED ADOPTION OVER LAST TWO DECADES 66

TABLE 14 HUMANIZED RAT MODELS MARKET, BY COUNTRY, 2020-2027 (USD MILLION) 67

7 HUMANIZED MOUSE AND RAT MODEL MARKET, BY APPLICATION 68

7.1 INTRODUCTION 69

TABLE 15 HUMANIZED MOUSE AND RAT MODEL MARKET, BY APPLICATION, 2020-2027 (USD MILLION) 69

7.2 ONCOLOGY 70

7.2.1 INCREASING APPLICATIONS OF MOUSE MODELS IN CANCER STUDIES TO DRIVE GROWTH 70

TABLE 16 HUMANIZED MOUSE AND RAT MODEL MARKET FOR ONCOLOGY, BY COUNTRY, 2020-2027 (USD MILLION) 71

7.3 IMMUNOLOGY AND INFECTIOUS DISEASES 71

7.3.1 DEVELOPMENT OF ADVANCED MODELS FOR HUMAN IMMUNOLOGY STUDIES TO BOOST GROWTH 71

TABLE 17 HUMANIZED MOUSE AND RAT MODEL MARKET FOR IMMUNOLOGY AND INFECTIOUS DISEASES, BY COUNTRY, 2020-2027 (USD MILLION) 72

7.4 NEUROSCIENCE 73

7.4.1 INCREASING FOCUS ON HUMANIZED MOUSE MODEL DEVELOPMENT FOR CNS DISORDERS TO PROPEL GROWTH 73

TABLE 18 HUMANIZED MOUSE AND RAT MODEL MARKET FOR NEUROSCIENCE, BY COUNTRY, 2020-2027 (USD MILLION) 73

7.5 HEMATOPOIESIS 74

7.5.1 GROWING DEMAND FOR STEM CELL THERAPY TO PROPEL GROWTH 74

TABLE 19 HUMANIZED MOUSE AND RAT MODEL MARKET FOR HEMATOPOIESIS, BY COUNTRY, 2020-2027 (USD MILLION) 74

7.6 TOXICOLOGY 75

7.6.1 RISING NUMBER OF CLINICAL STUDIES TO DRIVE DEMAND 75

TABLE 20 HUMANIZED MOUSE AND RAT MODEL MARKET FOR TOXICOLOGY, BY COUNTRY, 2020-2027 (USD MILLION) 76

7.7 OTHER APPLICATIONS 76

TABLE 21 HUMANIZED MOUSE AND RAT MODEL MARKET FOR OTHER APPLICATIONS, BY COUNTRY, 2020-2027 (USD MILLION) 77

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

8 HUMANIZED MOUSE AND RAT MODEL MARKET, BY END USER 78

8.1 INTRODUCTION 79

TABLE 22 HUMANIZED MOUSE AND RAT MODEL MARKET, BY END USER, 2020-2027 (USD MILLION) 79

8.2 PHARMACEUTICAL AND BIOTECHNOLOGY COMPANIES 79

8.2.1 INCREASING R&D ON DRUG DEVELOPMENT TO DRIVE GROWTH 79

TABLE 23 HUMANIZED MOUSE AND RAT MODEL MARKET FOR PHARMACEUTICAL AND BIOTECHNOLOGY COMPANIES, BY COUNTRY, 2020-2027 (USD MILLION) 81

8.3 CONTRACT RESEARCH ORGANIZATIONS 81

8.3.1 RISING OUTSOURCING OF DRUG DISCOVERY SERVICES TO DRIVE GROWTH 81

TABLE 24 HUMANIZED MOUSE AND RAT MODEL MARKET FOR CONTRACT RESEARCH ORGANIZATIONS, BY COUNTRY, 2020-2027 (USD MILLION) 82

8.4 ACADEMIC AND RESEARCH INSTITUTIONS 83

8.4.1 INCREASING LIFE SCIENCE R&D EXPENDITURE TO DRIVE GROWTH 83

TABLE 25 HUMANIZED MOUSE AND RAT MODEL MARKET FOR ACADEMIC AND RESEARCH INSTITUTIONS, BY COUNTRY, 2020-2027 (USD MILLION) 84

9 HUMANIZED MOUSE AND RAT MODEL MARKET, BY REGION 85

9.1 INTRODUCTION 86

TABLE 26 HUMANIZED MOUSE AND RAT MODEL MARKET, BY REGION, 2020-2027 (USD MILLION) 86

9.2 NORTH AMERICA 86

FIGURE 20 NORTH AMERICA: HUMANIZED MOUSE AND RAT MODEL MARKET SNAPSHOT 87

TABLE 27 NORTH AMERICA: HUMANIZED MOUSE AND RAT MODEL MARKET, BY COUNTRY, 2020-2027 (USD MILLION) 87

TABLE 28 NORTH AMERICA: HUMANIZED MOUSE AND RAT MODEL MARKET, BY TYPE, 2020-2027 (USD MILLION) 88

TABLE 29 NORTH AMERICA: HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 88

TABLE 30 NORTH AMERICA: CELL-BASED HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 88

TABLE 31 NORTH AMERICA: HUMANIZED MOUSE AND RAT MODEL MARKET, BY APPLICATION, 2020-2027 (USD MILLION) 89

TABLE 32 NORTH AMERICA: HUMANIZED MOUSE AND RAT MODEL MARKET, BY END USER, 2020-2027 (USD MILLION) 89

9.2.1 US 89

9.2.1.1 US to dominate North American market 89

TABLE 33 US: HUMANIZED MOUSE AND RAT MODEL MARKET, BY TYPE, 2020-2027 (USD MILLION) 90

TABLE 34 US: HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 90

TABLE 35 US: CELL-BASED HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 91

TABLE 36 US: HUMANIZED MOUSE AND RAT MODEL MARKET, BY APPLICATION, 2020-2027 (USD MILLION) 91

TABLE 37 US: HUMANIZED MOUSE AND RAT MODEL MARKET, BY END USER, 2020-2027 (USD MILLION) 91

9.2.2 CANADA 92

9.2.2.1 Government initiatives to drive market growth 92

TABLE 38 CANADA: HUMANIZED MOUSE AND RAT MODEL MARKET, BY TYPE, 2020-2027 (USD MILLION) 93

TABLE 39 CANADA: HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 93

TABLE 40 CANADA: CELL-BASED HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 93

TABLE 41 CANADA: HUMANIZED MOUSE AND RAT MODEL MARKET, BY APPLICATION, 2020-2027 (USD MILLION) 94

TABLE 42 CANADA: HUMANIZED MOUSE AND RAT MODEL MARKET, BY END USER, 2020-2027 (USD MILLION) 94

9.3 EUROPE 95

TABLE 43 EUROPE: HUMANIZED MOUSE AND RAT MODEL MARKET, BY COUNTRY, 2020-2027 (USD MILLION) 95

TABLE 44 EUROPE: HUMANIZED MOUSE AND RAT MODEL MARKET, BY TYPE, 2020-2027 (USD MILLION) 95

TABLE 45 EUROPE: HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 96

TABLE 46 EUROPE: CELL-BASED HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 96

TABLE 47 EUROPE: HUMANIZED MOUSE AND RAT MODEL MARKET, BY APPLICATION, 2020-2027 (USD MILLION) 96

TABLE 48 EUROPE: HUMANIZED MOUSE AND RAT MODEL MARKET, BY END USER, 2020-2027 (USD MILLION) 97

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

9.3.1 GERMANY 97

9.3.1.1 Germany to account for largest share in European market 97

TABLE 49 GERMANY: HUMANIZED MOUSE AND RAT MODEL MARKET, BY TYPE, 2020-2027 (USD MILLION) 98

TABLE 50 GERMANY: HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 98

TABLE 51 GERMANY: CELL-BASED HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 98

TABLE 52 GERMANY: HUMANIZED MOUSE AND RAT MODEL MARKET, BY APPLICATION, 2020-2027 (USD MILLION) 99

TABLE 53 GERMANY: HUMANIZED MOUSE AND RAT MODEL MARKET, BY END USER, 2020-2027 (USD MILLION) 99

9.3.2 UK 99

9.3.2.1 Increasing cancer research to drive growth 99

TABLE 54 UK: HUMANIZED MOUSE AND RAT MODEL MARKET, BY TYPE, 2020-2027 (USD MILLION) 100

TABLE 55 UK: HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 100

TABLE 56 UK: CELL-BASED HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 100

TABLE 57 UK: HUMANIZED MOUSE AND RAT MODEL MARKET, BY APPLICATION, 2020-2027 (USD MILLION) 101

TABLE 58 UK: HUMANIZED MOUSE AND RAT MODEL MARKET, BY END USER, 2020-2027 (USD MILLION) 101

9.3.3 FRANCE 101

9.3.3.1 Increasing government funding for research and investments in genomics to drive growth 101

TABLE 59 FRANCE: HUMANIZED MOUSE AND RAT MODEL MARKET, BY TYPE, 2020-2027 (USD MILLION) 102

TABLE 60 FRANCE: HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 102

TABLE 61 FRANCE: CELL-BASED HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 102

TABLE 62 FRANCE: HUMANIZED MOUSE AND RAT MODEL MARKET, BY APPLICATION, 2020-2027 (USD MILLION) 103

TABLE 63 FRANCE: HUMANIZED MOUSE AND RAT MODEL MARKET, BY END USER, 2020-2027 (USD MILLION) 103

9.3.4 ITALY 103

9.3.4.1 Increasing pharmaceutical production in Italy to drive growth 103

TABLE 64 ITALY: HUMANIZED MOUSE AND RAT MODEL MARKET, BY TYPE, 2020-2027 (USD MILLION) 104

TABLE 65 ITALY: HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 104

TABLE 66 ITALY: CELL-BASED HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 105

TABLE 67 ITALY: HUMANIZED MOUSE AND RAT MODEL MARKET, BY APPLICATION, 2020-2027 (USD MILLION) 105

TABLE 68 ITALY: HUMANIZED MOUSE AND RAT MODEL MARKET, BY END USER, 2020-2027 (USD MILLION) 106

9.3.5 SPAIN 106

9.3.5.1 Rising R&D expenditure to boost growth 106

TABLE 69 SPAIN: HUMANIZED MOUSE AND RAT MODEL MARKET, BY TYPE, 2020-2027 (USD MILLION) 106

TABLE 70 SPAIN: HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 107

TABLE 71 SPAIN: CELL-BASED HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 107

TABLE 72 SPAIN: HUMANIZED MOUSE AND RAT MODEL MARKET, BY APPLICATION, 2020-2027 (USD MILLION) 107

TABLE 73 SPAIN: HUMANIZED MOUSE AND RAT MODEL MARKET, BY END USER, 2020-2027 (USD MILLION) 108

9.3.6 REST OF EUROPE 108

TABLE 74 ROE: HUMANIZED MOUSE AND RAT MODEL MARKET, BY TYPE, 2020-2027 (USD MILLION) 109

TABLE 75 ROE: HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 109

TABLE 76 ROE: CELL-BASED HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 109

TABLE 77 ROE: HUMANIZED MOUSE AND RAT MODEL MARKET, BY APPLICATION, 2020-2027 (USD MILLION) 110

TABLE 78 ROE: HUMANIZED MOUSE AND RAT MODEL MARKET, BY END USER, 2020-2027 (USD MILLION) 110

9.4 ASIA PACIFIC 110

FIGURE 21 ASIA PACIFIC: HUMANIZED MOUSE AND RAT MODEL MARKET SNAPSHOT 111

TABLE 79 ASIA PACIFIC: HUMANIZED MOUSE AND RAT MODEL MARKET, BY COUNTRY, 2020-2027 (USD MILLION) 112

TABLE 80 ASIA PACIFIC: HUMANIZED MOUSE AND RAT MODEL MARKET, BY TYPE, 2020-2027 (USD MILLION) 112

TABLE 81 ASIA PACIFIC: HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 112

TABLE 82 ASIA PACIFIC: CELL-BASED HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 113

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

TABLE 83 ASIA PACIFIC: HUMANIZED MOUSE AND RAT MODEL MARKET, BY APPLICATION, 2020-2027 (USD MILLION) 113

TABLE 84 ASIA PACIFIC: HUMANIZED MOUSE AND RAT MODEL MARKET, BY END USER, 2020-2027 (USD MILLION) 114

9.4.1 CHINA 114

9.4.1.1 China to dominate Asia Pacific market 114

TABLE 85 CHINA: HUMANIZED MOUSE AND RAT MODEL MARKET, BY TYPE, 2020-2027 (USD MILLION) 115

TABLE 86 CHINA: HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 115

TABLE 87 CHINA: CELL-BASED HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 116

TABLE 88 CHINA: HUMANIZED MOUSE AND RAT MODEL MARKET, BY APPLICATION, 2020-2027 (USD MILLION) 116

TABLE 89 CHINA: HUMANIZED MOUSE AND RAT MODEL MARKET, BY END USER, 2020-2027 (USD MILLION) 117

9.4.2 JAPAN 117

9.4.2.1 Growing research collaborations to drive market growth in Japan 117

TABLE 90 JAPAN: HUMANIZED MOUSE AND RAT MODEL MARKET, BY TYPE, 2020-2027 (USD MILLION) 118

TABLE 91 JAPAN: HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 118

TABLE 92 JAPAN: CELL-BASED HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 118

TABLE 93 JAPAN: HUMANIZED MOUSE AND RAT MODEL MARKET, BY APPLICATION, 2020-2027 (USD MILLION) 119

TABLE 94 JAPAN: HUMANIZED MOUSE AND RAT MODEL MARKET, BY END USER, 2020-2027 (USD MILLION) 119

9.4.3 INDIA 119

9.4.3.1 Growing biotech industry in India to drive market growth 119

TABLE 95 INDIA: HUMANIZED MOUSE AND RAT MODEL MARKET, BY TYPE, 2020-2027 (USD MILLION) 120

TABLE 96 INDIA: HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 120

TABLE 97 INDIA: CELL-BASED HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 121

TABLE 98 INDIA: HUMANIZED MOUSE AND RAT MODEL MARKET, BY APPLICATION, 2020-2027 (USD MILLION) 121

TABLE 99 INDIA: HUMANIZED MOUSE AND RAT MODEL MARKET, BY END USER, 2020-2027 (USD MILLION) 122

9.4.4 SOUTH KOREA 122

9.4.4.1 Growing efforts by government to drive market growth 122

TABLE 100 SOUTH KOREA: HUMANIZED MOUSE AND RAT MODEL MARKET, BY TYPE, 2020-2027 (USD MILLION) 123

TABLE 101 SOUTH KOREA: HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 123

TABLE 102 SOUTH KOREA: CELL-BASED HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 123

TABLE 103 SOUTH KOREA: HUMANIZED MOUSE AND RAT MODEL MARKET, BY APPLICATION, 2020-2027 (USD MILLION) 124

TABLE 104 SOUTH KOREA: HUMANIZED MOUSE AND RAT MODEL MARKET, BY END USER, 2020-2027 (USD MILLION) 124

9.4.5 REST OF ASIA PACIFIC 124

TABLE 105 ROAPAC: HUMANIZED MOUSE AND RAT MODEL MARKET, BY TYPE, 2020-2027 (USD MILLION) 125

TABLE 106 ROAPAC: HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 125

TABLE 107 ROAPAC: CELL-BASED HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 126

TABLE 108 ROAPAC: HUMANIZED MOUSE AND RAT MODEL MARKET, BY APPLICATION, 2020-2027 (USD MILLION) 126

TABLE 109 ROAPAC: HUMANIZED MOUSE AND RAT MODEL MARKET, BY END USER, 2020-2027 (USD MILLION) 127

9.5 LATIN AMERICA 127

9.5.1 INCREASING PHARMACEUTICAL R&D EXPENDITURE TO DRIVE MARKET GROWTH 127

TABLE 110 LATIN AMERICA: HUMANIZED MOUSE AND RAT MODEL MARKET, BY TYPE, 2020-2027 (USD MILLION) 128

TABLE 111 LATIN AMERICA: HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 128

TABLE 112 LATIN AMERICA: CELL-BASED HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 128

TABLE 113 LATIN AMERICA: HUMANIZED MOUSE AND RAT MODEL MARKET, BY APPLICATION, 2020-2027 (USD MILLION) 129

TABLE 114 LATIN AMERICA: HUMANIZED MOUSE AND RAT MODEL MARKET, BY END USER, 2020-2027 (USD MILLION) 129

9.6 MIDDLE EAST & AFRICA 130

9.6.1 UAE HAS EMERGED AS KEY MARKET IN MEA REGION 130

TABLE 115 MIDDLE EAST & AFRICA: HUMANIZED MOUSE AND RAT MODEL MARKET, BY TYPE, 2020-2027 (USD MILLION) 130

TABLE 116 MIDDLE EAST & AFRICA: HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION) 131

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

TABLE 117	MIDDLE EAST & AFRICA: CELL-BASED HUMANIZED MOUSE MODELS MARKET, BY TYPE, 2020-2027 (USD MILLION)	131
TABLE 118	MIDDLE EAST & AFRICA: HUMANIZED MOUSE AND RAT MODEL MARKET, BY APPLICATION, 2020-2027 (USD MILLION)	131
TABLE 119	MIDDLE EAST & AFRICA: HUMANIZED MOUSE AND RAT MODEL MARKET, BY END USER, 2020-2027 (USD MILLION)	132
10	COMPETITIVE LANDSCAPE	133
10.1	OVERVIEW	133
10.2	KEY PLAYER STRATEGIES/RIGHT TO WIN	133
FIGURE 22	KEY DEVELOPMENTS IN HUMANIZED MOUSE AND RAT MODEL MARKET, 2019-2022	133
10.3	MARKET SHARE ANALYSIS	134
FIGURE 23	HUMANIZED MOUSE AND RAT MODEL MARKET SHARE, BY KEY PLAYER, 2021	134
TABLE 120	HUMANIZED MOUSE AND RAT MODEL MARKET: DEGREE OF COMPETITION	134
10.4	COMPANY EVALUATION MATRIX	135
10.4.1	STARS	135
10.4.2	EMERGING LEADERS	135
10.4.3	PERVASIVE PLAYERS	136
10.4.4	PARTICIPANTS	136
FIGURE 24	HUMANIZED MOUSE AND RAT MODEL MARKET: COMPANY EVALUATION MATRIX, 2021	136
10.5	COMPANY EVALUATION MATRIX: START-UPS/SMES	137
10.5.1	PROGRESSIVE COMPANIES	137
10.5.2	STARTING BLOCKS	137
10.5.3	RESPONSIVE COMPANIES	137
10.5.4	DYNAMIC COMPANIES	137
FIGURE 25	HUMANIZED MOUSE AND RAT MODEL MARKET: COMPANY EVALUATION MATRIX FOR START-UPS/SMES, 2021	138
10.6	FOOTPRINT ANALYSIS OF COMPANIES	139
10.6.1	PRODUCT FOOTPRINT OF COMPANIES	139
TABLE 121	PRODUCT FOOTPRINT OF COMPANIES: HUMANIZED MOUSE AND RAT MODEL MARKET (2021)	139
10.6.2	END-USER FOOTPRINT OF COMPANIES	140
TABLE 122	END-USER FOOTPRINT OF COMPANIES: HUMANIZED MOUSE AND RAT MODEL MARKET (2021)	140
10.6.3	REGIONAL FOOTPRINT OF COMPANIES	141
TABLE 123	REGIONAL FOOTPRINT OF COMPANIES: HUMANIZED MOUSE AND RAT MODEL MARKET (2021)	141
10.7	COMPETITIVE SCENARIO	141
TABLE 124	PRODUCT LAUNCHES	141
TABLE 125	DEALS	142
11	COMPANY PROFILES	143
11.1	KEY PLAYERS	143
	(Business Overview, Products offered, Recent Developments, MnM View)*	
11.1.1	CHARLES RIVER LABORATORIES INTERNATIONAL, INC.	143
TABLE 126	CHARLES RIVER LABORATORIES INTERNATIONAL, INC.: BUSINESS OVERVIEW	143
FIGURE 26	CHARLES RIVER LABORATORIES INTERNATIONAL, INC.: COMPANY SNAPSHOT (2021)	144
11.1.2	THE JACKSON LABORATORY	147
TABLE 127	THE JACKSON LABORATORY: BUSINESS OVERVIEW	147
FIGURE 27	THE JACKSON LABORATORY: COMPANY SNAPSHOT (2021)	147
11.1.3	TACONIC BIOSCIENCES, INC.	150
TABLE 128	TACONIC BIOSCIENCES, INC.: BUSINESS OVERVIEW	150
11.1.4	CROWN BIOSCIENCE	152
TABLE 129	CROWN BIOSCIENCE: BUSINESS OVERVIEW	152
11.1.5	CHAMPIONS ONCOLOGY, INC.	154
TABLE 130	CHAMPIONS ONCOLOGY: BUSINESS OVERVIEW	154

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

FIGURE 28 CHAMPIONS ONCOLOGY: COMPANY SNAPSHOT (2022) 154

11.1.6 INOTIV 156

TABLE 131 INOTIV: BUSINESS OVERVIEW 156

FIGURE 29 INOTIV: COMPANY SNAPSHOT 157

11.1.7 HERA BIOLABS 160

TABLE 132 HERA BIOLABS: BUSINESS OVERVIEW 160

11.1.8 GENOWAY 161

TABLE 133 GENOWAY: BUSINESS OVERVIEW 161

11.1.9 BEIJING VITALSTAR BIOTECHNOLOGY CO. LTD. 162

TABLE 134 VITALSTAR BIOTECHNOLOGY: BUSINESS OVERVIEW 162

11.1.10 INGENIOUS TARGETING LABORATORY 163

TABLE 135 INGENIOUS TARGETING LABORATORY: BUSINESS OVERVIEW 163

11.1.11 AXENIS 164

TABLE 136 AXENIS: BUSINESS OVERVIEW 164

11.1.12 TRANS GENIC 165

TABLE 137 TRANS GENIC: BUSINESS OVERVIEW 165

11.1.13 HARBOUR ANTIBODIES (A SUBSIDIARY OF HARBOUR BIOMED) 166

TABLE 138 HARBOUR ANTIBODIES: BUSINESS OVERVIEW 166

11.1.14 ONCODESIGN 167

TABLE 139 ONCODESIGN: BUSINESS OVERVIEW 167

11.1.15 PHARMATEST SERVICES 168

TABLE 140 PHARMATEST SERVICES: BUSINESS OVERVIEW 168

*Details on Business Overview, Products offered, Recent Developments, MnM View might not be captured in case of unlisted companies.

11.2 OTHER PLAYERS 169

11.2.1 OZGENE PTY LTD. 169

11.2.2 TRANSCURE BIOSERVICES 169

11.2.3 CYAGEN BIOSCIENCES 170

11.2.4 GVK BIO 170

11.2.5 BIOCYTOGEN 171

12 APPENDIX 172

12.1 DISCUSSION GUIDE 172

12.2 KNOWLEDGE STORE: MARKET SAND MARKETS' SUBSCRIPTION PORTAL 175

12.3 CUSTOMIZATION OPTIONS 177

12.4 RELATED REPORTS 177

12.5 AUTHOR DETAILS 178

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Humanized Mouse and Rat Model Market by Type (Genetic, Cell-Based (CD34, PBMC, BLT)), Application (Neuroscience, Oncology, Toxicology, Immunology & Infectious diseases, Hematopoiesis), End Users, and Region - Global Forecast to 2027

Market Report | 2023-05-08 | 180 pages | MarketsandMarkets

To place an Order with Scotts International:

- Print this form
- Complete the relevant blank fields and sign
- Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Single User	\$4950.00
	Multi User	\$6650.00
	Corporate License	\$8150.00
	Enterprise Site License	\$10000.00
		VAT
		Total

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*	<input type="text"/>	Phone*	<input type="text"/>
First Name*	<input type="text"/>	Last Name*	<input type="text"/>
Job title*	<input type="text"/>		
Company Name*	<input type="text"/>	EU Vat / Tax ID / NIP number*	<input type="text"/>
Address*	<input type="text"/>	City*	<input type="text"/>
Zip Code*	<input type="text"/>	Country*	<input type="text"/>

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com

Date

2026-03-02

Signature

A large, empty rectangular box intended for a signature.

Scotts International. EU Vat number: PL 6772247784

tel. 0048 603 394 346 e-mail: support@scotts-international.com

www.scotts-international.com