Table of Exhibits Executive Summary Chapter 1. **Introduction and Methodology Report Scope** Thematic Scope Scope of Data Analysis Temporal Scope of Analysis Geographical Scope **Report objective** Methodology Cientifica, Ltd Nanotechnology Model Major Assumptions Market Values And Publishing Activity Publishing Activity And TAM (2000-2010 period) Calculation of CAGR The Nanoscale Chapter 2. Introduction to Nanotechnology & Medicine **Overview of nanotechnology** Why is Nanotechnology A Critical Application for Medicine and Biomedicine? Why Nanotechnology Is Needed for Medicine and Biomedicine? What are the Key Drivers for Adoption of Nanotechnology in Medicine and **Biomedicine**? Drivers For Nanoparticle Drug Delivery THE AIM OF DRUG TARGETING REASONS WHY THE DRUG DELIVERY MARKET IS RAPIDLY EXPANDING MARKET DRIVERS FOR ENHANCED DRUG DELIVERY Increasing Proportion of The Aging Population Demand More Affordable Health Care Public Health - Ending disease Demand for More Innovation Social responsibility The Most Important Fields in The Adoption of Nanotechnology in Medicine and **Biomedicine** Nanotechnology in Drug Delivery Nanotechnology in Medical and Biomedical Diagnostics Nanotechnology in Regenerative Medicine and Tissue Engineering Other Applications For Nanomaterials In The Medical And Pharmaceutical Sector How Nanotechnology is Already Having an Impact on The Drug Delivery Sector Case Study 1 - Magnetic Field Acts as "Remote Control" to Deliver Nanomedicine Case Study 2 - Adaptive Micro and Nanoparticles: Temporal Control Over Carrier Properties to Facilitate Drug Delivery Case Study 3 - Fabrication of a Nanocarrier System Through Self-Assembly of Plasma Protein And Its Tumour Targeting Case Study 4 - IBM And The Institute of Bioengineering and Nanotechnology

Find Breakthrough For MRSA Treatment - New Molecular Structures Could Fight Infectious Diseases Better Than Conventional Antibiotics References Chapter 3. Key Barriers to The Adoption of Nanotechnology in Medicine and Biomedicine Nanotoxicity Nanopollution and Nanosafety Ethical considerations of nanotherapies **Delayed Nanoregulation** Current & Future Challenges of The Adoption of Nanotechnology in Medicine and Biomedicine Current & Future Challenges of Nanosafety And Risk Management Current & Future Challenges of Nanoregulation Current & Future Challenges of Nanomedicine Industry Current & Future Challenges of Sustained Innovation Current & Future Challenges of Cooperation Market Analysis (2000-2010) Without Segmentation Market Forecast to 2021 Without Segmentation References Chapter 4: Nanotechnology in Drug Delivery **Overview of The Key Nanotechnologies Used in Drug Delivery Sorted by Applications** Nanopharmaceuticals Nanotechnology In Drug Delivery Nanobiotechnology In Drug Delivery Analytical Techniques For Nanoparticle Drug Delivery **! PROPERTIES ! PRODUCTION OF NANOPARTICLES ! MEASURING DISPERSION OF NANOPARTICLES ! ANALYSIS OF CARRIER SYSTEMS** Nanocarriers **! CLASSIFICATION OF NANOCARRIERS** ! MULTIFUNCTIONAL NANOCARRIERS - DRUG DELIVERY AND MEDICAL/BIOMEDICAL DIAGNOSTICS **! NANOCARRIERS AS DRUG CARRIERS** ! WHAT CAN NANOPARTICLES DO IN DRUG DELIVERY? **! POLYMER-BASED NANOCARRIERS (POLYMERIC NANOPARTICLES) ! LIPID-BASED NANOCARRIERS ! ORGANIC NANOCARRIERS ! INORGANIC NANOCARRIERS ! DISADVANTAGES ASSOCIATED WITH NANOCARRIERS** Nanotechnology-Based Alternatives to Nanocarriers in Drug Delivery **! DRUG NANOCRYSTALS: NANOSIZING THE DRUGS** The Most Relevant Key Technologies in The Key Area of Nanotechnology in Drug Delivery Stage of Development of Key Nanotechnologies Used in Drug Delivery

Clinically Approved Nanocarrier-Based Formulations With Presence in The Market

! THE FIRST NANOPARTICLE DRUG DELIVERY SYSTEM REACHES THE MARKET

Clinically Approved Nanocrystals-Based Formulations With Presence in the Market Present And Future Applications

Market Analysis With Segmentation

! MARKET BY COUNTRY (2000-2010)

! MARKET BY KEY TECHNOLOGY (2000-2010)

Technology Adoption Roadmap

Projected Product Pipeline For Nanocarrier-Based Drug Formulations In Drug Delivery Market ! OVERVIEW OF NANOPARTICLE DRUG DELIVERY SYSTEM (DDS) IN VARIOUS APPLICATIONS ! AVAILABLE APPLICATIONS OF NANOPARTCILE IN DRUG DELIVERY Projected Product Directions for Nanoparticle Page d Drug Formulations in Drug

Projected Product Pipeline For Nanocrystals-Based Drug Formulations In Drug Delivery Market;

! SEMAPIMOD® (CYTOKINE, PHARMASCIENCES)

! PAXCEED™

! THERALUX™

! NUCRYST®

Market Forecast to 2021, With Segmentation

! MARKET FORECAST BY COUNTRY BY 2021

! MARKET FORECAST BY KEY TECHNOLOGY BY 2021

SWOT Analysis (2011-2021 period)

References

Table of Exhibits

Chapter One. Introduction and Methodology

Exhibit 1.1

Formula for the calculation of the Compound Annual Growth Rate (CAGR), (top). Formula for the calculation of the Compound Annual Growth Rate (CAGR) in this report, for the 2011-2021 period, (bottom) [2].

Exhibit 1.2

Formula for the verification of the calculated values of the Compound Annual Growth Rate (CAGR), (top).

Formula for the verification of the calculated values of the Compound Annual Growth Rate (CAGR) in this report, for the 2011-2021 period, (bottom) [2]. Exhibit 1.3

The equivalence between 1 nm in meter (top). The equivalence between 1 meter in nanometre (bottom).

Chapter Two: Introduction to Nanotechnology & Medicine

Exhibit 2.1

Illustration of the fact that the periodic table of elements, as we know it (at meter scale) governed by classic Newtonian laws of physics. However, when perceived at nanoscale,those elements are governed by the laws of quantum physics. Exhibit 2.2

Proportion of the population aged over 65 and over 80 [7].

Exhibit 2.3

Illustration of a diagram of each property of nanocarriers (size, shape, surface chemistry and mechanical properties) and their parameters subjected to optimization in order to improve their efficiency [10].

Chapter Three: Technology Adoption Roadmap

Exhibit 3.1

Specified expected barriers in the development of particular types of nanoparticles (Courtesy of CienNanoroadmap Synthesis Report), [6].

Exhibit 3.2

Illustration of the measures adoption roadmap to combat/attenuate the key barriers to the adoption of nanotechnology in medicine and biomedicine (Source: Cientifica, Ltd.). Exhibit 3.3

Table representing the Total Addressable Market, TAM (2000-2010), for nanotechnology in drug delivery, without segmentation, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 3.4

Line chart representing Total Addressable Market, TAM (2000-2010), for nanotechnology in drug delivery, without segmentation, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 3.5

Bar chart representing Total Addressable Market, TAM (2000-2010), for nanotechnology in drug delivery, without segmentation, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 3.6

Table representing the Total Addressable Market, TAM forecast by 2021 (for the 2011-2021 period), for nanotechnology in drug delivery, without segmentation, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 3.7

Line chart representing the Total Addressable Market, TAM forecast by 2021 (for the 2011-2021 period), for nanotechnology in drug delivery, without segmentation, source:Cientifica (all figures US\$ Million Dollars).

Exhibit 3.8

Bar chart representing the Total Addressable Market, TAM forecast by 2021 (for the 2011-2021 period), for nanotechnology in drug delivery, without segmentation, source: Cientifica (all figures US\$ Million Dollars).

Chapter Four: Nanotechnology in Drug Delivery

Exhibit 4.1

Typical Image of Colloidal Gold Nanoparticles [1].

Exhibit 4.2

Examples of nanocarriers used for targeting cancer. (A) A whole range of delivery agents are possible but the main components typically include a nanocarrier, a targeting moiety conjugated to the nanocarrier and a cargo (such as the desired chemotherapeutic drugs); (B)

Schematic diagram of the drug conjugation and entrapment processes. The chemotherapeutics could be bound to the nanocarrier, as in the use of polymer - drug conjugates, dendrimers and some particulate carriers or they could be entrapped inside the nanocarrier [3].

Exhibit 4.3

Schematic representation of different mechanisms of drug delivery to tumours using nanocarriers. Polymeric nanoparticles are shown as representative nanocarriers (circles). Passive tissue targeting is achieved by extravasation of nanoparticles through increased permeability of the tumour vasculature and ineffective lymphatic drainage (EPR effect). Active cellular targeting (inset) can be achieved by functionalizing the surface of nanocarriers with ligands that induce cell-specific recognition and binding. The nanocarriers can (a) release their contents in close proximity to the target tumour cells; (b) attach to the membrane of the tumour cell and play the role of an extracellular sustained release drug depot; or (c) internalize into the tumour cell [3]. Exhibit 4.4

Advantages and disadvantages of different methods for the production of drug nanocrystals [6].

Exhibit 4.5

Representative examples of clinically approved nanocarrier-based drug formulations with presence on the market [4].

Exhibit 4.6

Some examples of nano-based platforms and their current stage of development for use in cancer therapy [3].

Exhibit 4.7

Representative examples of clinically approved nanocrystals-based drug formulations with presence on the market [6]

Exhibit 4.8

Table representing the Total Addressable Market, TAM (2000-2010), for nanotechnology in drug delivery, all countries studied, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.9

3-D pie chart representing the Total Addressable Market, TAM in 2010, for nanotechnology in drug delivery, by world regions and countries, source: Cientifica (all figures in percentage).

Exhibit 4.10

Horizontal bar graph representing the Total Addressable Market, TAM in 2010, for nanotechnology in drug delivery, by world regions and countries, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.11

Line chart representing the Total Addressable Market, TAM (2000-2010), for nanotechnology in drug delivery, by world regions and countries, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.12

3-D stacked vertical bar graph representing the Total Addressable Market, TAM (2000-2010), for nanotechnology in drug delivery, by world regions and countries,

source:Cientifica (all figures US\$ Million Dollars).

Exhibit 4.13

3-D stacked area chart representing the Total Addressable Market, TAM (2000-2010), for nanotechnology in drug delivery, by world regions and countries, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.14

3-D pie chart representing the Total Addressable Market, TAM in 2010, for nanotechnology in drug delivery, all world regions and countries studied, source: Cientifica (all figures in percentage).

Exhibit 4.15

Horizontal bar graph representing the Total Addressable Market, TAM in 2010, for nanotechnology in drug delivery, all world regions and countries studied, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.16

3-D pie chart representing the Total Addressable Market, TAM in 2010, for nanotechnology in drug delivery, European Union countries studied, source: Cientifica (all figures in percentage).

Exhibit 4.17

Horizontal bar graph representing the Total Addressable Market, TAM in 2010, for nanotechnology in drug delivery, European Union countries studied, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.18

Line chart representing the Total Addressable Market, TAM (2000-2010), for nanotechnology in drug delivery, European Union countries studied, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.19

3-D stacked vertical bar graph representing the Total Addressable Market, TAM (2000-2010), for nanotechnology in drug delivery, European Union countries studied, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.20

3-D stacked area chart representing the Total Addressable Market, TAM (2000-2010), for nanotechnology in drug delivery, European Union countries studied, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.21

3-D pie chart representing the Total Addressable Market, TAM in 2010, for nanotechnology in drug delivery, Asian countries studied, source: Cientifica (all figures in percentage).

Exhibit 4.22

Horizontal bar graph representing the Total Addressable Market, TAM In 2010, for nanotechnology in drug delivery, Asian countries studied, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.23

Line chart representing the Total Addressable Market, TAM (2000-2010), for nanotechnology in drug delivery, Asian countries studied, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.24

3-D stacked vertical bar graph representing the Total Addressable Market, TAM (2000-2010), for nanotechnology in drug delivery, Asian countries studied, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.25

3-D stacked area chart representing the Total Addressable Market, TAM (2000-2010), for nanotechnology in drug delivery, Asian countries studied, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.26

Table representing the Total Addressable Market, TAM (2000-2010), for nanotechnology in drug delivery, all most relevant key technologies, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.27

3-D pie chart representing the Total Addressable Market, TAM in 2010, for nanotechnology in drug delivery, all key technologies studied, source: Cientifica (all figures in percentage).

Exhibit 4.28

Horizontal bar graph representing the Total Addressable Market, TAM in 2010, for nanotechnology in drug delivery, all key technologies studied, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.29

Line chart representing the Total Addressable Market, TAM (2000-2010), for nanotechnology in drug delivery, all key technologies studied, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.30

3-D stacked vertical bar graph representing the Total Addressable Market, TAM (2000-2010), for nanotechnology in drug delivery, all key technologies studied, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.31

3-D stacked area chart representing the Total Addressable Market, TAM (2000-2010), for nanotechnology in drug delivery, all key technologies studied, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.32

3-D pie chart representing the Total Addressable Market, TAM in 2010, for nanotechnology in drug delivery, nanocarriers as a whole, source: Cientifica (all figures in percentage).

Exhibit 4.33

Horizontal bar graph representing the Total Addressable Market, TAM in 2010, for nanotechnology in drug delivery, nanocarriers as a whole, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.34

Line chart representing the Total Addressable Market, TAM (2000-2010), for nanotechnology in drug delivery, nanocarriers as a whole, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.35

3-D stacked vertical bar graph representing the Total Addressable Market, TAM (2000-2010), for nanotechnology in drug delivery, nanocarriers as a whole, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.36

3-D stacked area chart representing the Total Addressable Market, TAM (2000-2010), for nanotechnology in drug delivery, nanocarriers as a whole, source: Cientifica (all figures US\$

Million Dollars).

Exhibit 4.37

3-D pie chart representing the Total Addressable Market, TAM in 2010, for nanotechnology in drug delivery, nanocarriers versus drug nanocrystals, source: Cientifica (all figures in percentage).

Exhibit 4.38

Line chart representing the Total Addressable Market, TAM (2000-2010), for nanotechnology in drug delivery, nanocarriers versus drug nanocrystals, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.39

3-D stacked vertical bar graph representing the Total Addressable Market, TAM (2000-2010), for nanotechnology in drug delivery, nanocarriers versus drug nanocrystals, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.40

3-D stacked area chart representing the Total Addressable Market, TAM (2000-2010), for nanotechnology in drug delivery, nanocarriers versus drug nanocrystals, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.41

3-D pie chart representing the Total Addressable Market, TAM in 2010, for nanotechnology in drug delivery, impact of drug solubility and drug bioavailability, source: Cientifica (all figures in percentage).

Exhibit 4.42

Line chart representing the Total Addressable Market, TAM (2000-2010), for nanotechnology in drug delivery, impact of drug solubility and drug bioavailability, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.43

3-D pie chart representing the Total Addressable Market, TAM in 2010, for nanotechnology in drug delivery, impact of targeted delivery, source: Cientifica (all figures in percentage).

Exhibit 4.44

Line chart representing the Total Addressable Market, TAM (2000-2010), for nanotechnology in drug delivery, impact of targeted delivery, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.45

In vivo effects of nanocrystals-based drug formulations [6].

Exhibit 4.46

Table representing the Total Addressable Market, TAM forecast by 2021 (for the 2011-2021 period), for nanotechnology in drug delivery, by world regions / countries, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.47

3-D pie chart representing the Total Addressable Market, TAM forecast in 2021, for nanotechnology in drug delivery, by world regions, source: Cientifica (all figures in percentage).

Exhibit 4.48

Horizontal bar graph representing the Total Addressable Market, TAM forecast in 2021, for nanotechnology in drug delivery, by world regions, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.49

Line chart representing the Total Addressable Market, TAM forecast by 2021 (for the 2011-2021 period), for nanotechnology in drug delivery, by world regions, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.50

3-D stacked vertical bar graph representing the Total Addressable Market, TAM forecast by 2021 (for the 2011-2021 period), for nanotechnology in drug delivery, by world regions, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.51

3-D stacked area chart representing the Total Addressable Market, TAM forecast by 2021 (for the 2011-2021 period), for nanotechnology in drug delivery, by world regions, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.52

3-D pie chart representing the Total Addressable Market, TAM forecast in 2021, for nanotechnology in drug delivery, by all world regions / countries studied, source: Cientifica (all figures in percentage).

Exhibit 4.53

Horizontal bar graph representing the Total Addressable Market, TAM forecast in 2021, for nanotechnology in drug delivery, by all world regions / countries studied, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.54

Line chart representing the Total Addressable Market, TAM forecast by 2021 (for the 2011-2021 period), for nanotechnology in drug delivery, by all world regions / countries studied, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.55

3-D stacked vertical bar graph representing the Total Addressable Market, TAM forecast by 2021 (for the 2011-2021 period), for nanotechnology in drug delivery, by all world regions / countries studied, source: Cientifica (all figures US\$ Million Dollars). Exhibit 4.56

3-D stacked area chart representing the Total Addressable Market, TAM forecast by 2021 (for the 2011-2021 period), for nanotechnology in drug delivery, by all world regions /countries studied, source: Cientifica (all figures US\$ Million Dollars). Exhibit 4.57

3-D pie chart representing the Total Addressable Market, TAM forecast in 2021, for nanotechnology in drug delivery, European Union countries studied, source: Cientifica (all figures in percentage).

Exhibit 4.58

Horizontal bar graph representing the Total Addressable Market, TAM forecast in 2021, for nanotechnology in drug delivery, European Union countries studied, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.59

Line chart representing the Total Addressable Market, TAM forecast by 2021 (for the 2011-2021 period), for nanotechnology in drug delivery, European Union countries studied, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.60 3-D stacked vertical bar graph

3-D stacked vertical bar graph representing the Total Addressable Market, TAM forecast by 2021 (for the 2011-2021 period), for nanotechnology in drug delivery, European Union countries studied, source: Cientifica (all figures US\$ Million Dollars). Exhibit 4.61

3-D stacked area chart representing the Total Addressable Market, TAM forecast by 2021 (for the 2011-2021 period), for nanotechnology in drug delivery, European Union countries studied, source: Cientifica (all figures US\$ Million Dollars). Exhibit 4.62

3-D pie chart representing the Total Addressable Market, TAM forecast in 2021, for nanotechnology in drug delivery, Asian countries studied, source: Cientifica (all figures in percentage).

Exhibit 4.63

Horizontal bar graph representing the Total Addressable Market, TAM forecast in 2021, for nanotechnology in drug delivery, Asian countries studied, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.64

Line chart representing the Total Addressable Market, TAM forecast by 2021 (for the 2011-2021 period), for nanotechnology in drug delivery, Asian countries studied, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.65

3-D stacked vertical bar graph representing the Total Addressable Market, TAM forecast by 2021 (for the 2011-2021 period), for nanotechnology in drug delivery, Asian countries studied, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.66

3-D stacked area chart representing the Total Addressable Market, TAM forecast by 2021 (for the 2011-2021 period), for nanotechnology in drug delivery, Asian countries studied, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.67

Table representing the Total Addressable Market, TAM forecast by 2021 (for the 2011-2021 period), for nanotechnology in drug delivery, all most relevant key technologies, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.68

3-D pie chart representing the Total Addressable Market, TAM forecast in 2021, for nanotechnology in drug delivery, all key technologies studied, source: Cientifica (all figures in percentage).

Exhibit 4.69

Horizontal bar graph representing the Total Addressable Market, TAM forecast in 2021, for nanotechnology in drug delivery, all key technologies studied, source: Cientifica (all figures in percentage).

Exhibit 4.70

Line chart representing the Total Addressable Market, TAM forecast by 2021 (for the

2011-2021 period), for nanotechnology in drug delivery, all key technologies studied, source: Cientifica (all figures US\$ Million Dollars). Exhibit 4.71

3-D stacked vertical bar graph representing the Total Addressable Market, TAM forecast by 2021 (for the 2011-2021 period), for nanotechnology in drug delivery, all key technologies studied, source: Cientifica (all figures US\$ Million Dollars). Exhibit 4.72

3-D stacked area chart representing the Total Addressable Market, TAM forecast by 2021 (for the 2011-2021 period), for nanotechnology in drug delivery, all key technologies studied, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.73

3-D pie chart representing the Total Addressable Market, TAM forecast in 2021, for nanotechnology in drug delivery, nanocarriers as a whole, source: Cientifica (all figures in percentage).

Exhibit 4.74

Horizontal bar graph representing the Total Addressable Market, TAM forecast in 2021, for nanotechnology in drug delivery, nanocarriers as a whole, source: Cientifica (all figures

US\$ Million Dollars).

Exhibit 4.75

Line chart representing the Total Addressable Market, TAM forecast by 2021 (for the 2011-2021 period), for nanotechnology in drug delivery, nanocarriers as a whole, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.76

3-D stacked vertical bar graph representing the Total Addressable Market, TAM forecast by 2021 (for the 2011-2021 period), for nanotechnology in drug delivery, nanocarriers as a whole, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.77

3-D stacked area chart representing the Total Addressable Market, TAM forecast by 2021 (for the 2011-2021 period), for nanotechnology in drug delivery, nanocarriers as a whole, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.78

3-D pie chart representing the Total Addressable Market, TAM forecast in 2021, for nanotechnology in drug delivery, nanocarriers versus drug nanocrystals, source: Cientifica (all figures in percentage).

Exhibit 4.79

Horizontal bar graph representing the Total Addressable Market, TAM forecast in 2021, for nanotechnology in drug delivery, nanocarriers versus drug nanocrystals, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.80

Line chart representing the Total Addressable Market, TAM forecast by 2021 (for the 2011-2021 period), for nanotechnology in drug delivery, nanocarriers versus drug nanocrystals, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.81 3-D stacked vertical bar graph representing the Total Addressable Market, TAM forecast by 2021 (for the 2011-2021 period), for nanotechnology in drug delivery,

nanocarriers versus drug nanocrystals, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.82

3-D stacked area chart representing the Total Addressable Market, TAM forecast by 2021 (for the 2011-2021 period), for nanotechnology in drug delivery, nanocarriers versus drug nanocrystals, source: Cientifica (all figures US\$ Million Dollars). Exhibit 4.83

3-D pie chart representing the Total Addressable Market, TAM forecast in 2021, for nanotechnology in drug delivery, impact of drug solubility and drug bioavailability, source: Cientifica (all figures in percentage).

Exhibit 4.84

Horizontal bar graph representing the Total Addressable Market, TAM forecast in 2021, for nanotechnology in drug delivery, impact of drug solubility and drug bioavailability, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.85

Line chart representing the Total Addressable Market, TAM forecast by 2021 (for the 2011-2021 period), for nanotechnology in drug delivery, impact of drug solubility and drug bioavailability, source: Cientifica (all figures US\$ Million Dollars). Exhibit 4.86

3-D pie chart representing the Total Addressable Market, TAM forecast in 2021, for nanotechnology in drug delivery, impact of targeted delivery, source: Cientifica (all figures in percentage).

Exhibit 4.87

Horizontal bar graph representing the Total Addressable Market, TAM forecast in 2021, for nanotechnology in drug delivery, impact of targeted delivery, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.88

Line chart representing the Total Addressable Market, TAM forecast by 2021 (for the 2011-2021 period), for nanotechnology in drug delivery, impact of targeted delivery, source: Cientifica (all figures US\$ Million Dollars).

Exhibit 4.89

SWOT analysis to evaluate the strengths, weaknesses, opportunities and threats involved in nanotechnology in drug delivery In the scope of the technology adoption roadmap (during the 2011-2021 period).

Appendix

Exhibit A.1

Table of the top 20 organizations showing the highest publishing activity in PubMed periodicals (2000-2010), based on PubMed, for Nanotechnology in Drug Delivery. World Region: North America; country: USA.

Organizations are ordered first by descending order of total articles published and then ordered alphabetically (increasing order), if applicable.

Exhibit A.2

Table of the top 20 organizations showing the highest publishing activity in PubMed periodicals (2000-2010), based on PubMed, for Nanotechnology in Drug Delivery. World Region: European Union; country: Germany.

Organizations are ordered first by descending order of total articles published and then ordered alphabetically (increasing order), if applicable. Exhibit A.3

Table of the top 20 organizations showing the highest publishing activity in PubMed periodicals (2000-2010), based on PubMed, for Nanotechnology in Drug Delivery. World \Region: European Union; country: France.

Organizations are ordered first by descending order of total articles published and then ordered alphabetically (increasing order), if applicable.

Exhibit A.4

Table of the top 20 organizations showing the highest publishing activity in PubMed periodicals (2000-2010), based on PubMed, for Nanotechnology in Drug Delivery. WorldRegion: European Union; country: UK.

Organizations are ordered first by descending order of total articles published and then ordered alphabetically (increasing order), if applicable.

Exhibit A.5

Table of the organizations with publishing activity in PubMed periodicals (2000-2010), based on PubMed, for Nanotechnology in Drug Delivery. Country: Russian Federation.

Organizations are ordered alphabetically (increasing order).

Exhibit A.6

Table of the top 20 organizations showing the highest publishing activity in PubMed periodicals (2000-2010), based on PubMed, for Nanotechnology in Drug Delivery. World Region: Asia; country: India.

Organizations are ordered first by descending order of total articles published and then ordered alphabetically (increasing order), if applicable.

Exhibit A.7

Table of the top 20 organizations showing the highest publishing activity in PubMed periodicals (2000-2010), based on PubMed, for Nanotechnology in Drug Delivery. World Region: Asia; country: India.

Organizations are ordered first by descending order of total articles published and then ordered alphabetically (increasing order), if applicable.

Exhibit A.8

Table of the top 20 organizations showing the highest publishing activity in PubMed periodicals (2000-2010), based on PubMed, for Nanotechnology in Drug Delivery. World Region: Asia; country: Japan.

Organizations are ordered first by descending order of total articles published and then ordered alphabetically (increasing order), if applicable. Exhibit A.9

Table of the top 20 organizations showing the highest publishing activity in PubMed periodicals (2000-2010), based on PubMed, for Nanotechnology in Drug Delivery. World Region: Asia; country: P R China.

Organizations are ordered first by descending order of total articles published and then ordered alphabetically (increasing order), if applicable.

Exhibit A.10

Table of the top 20 organizations showing the highest publishing activity in PubMed

periodicals (2000-2010), based on PubMed, for Nanotechnology in Drug Delivery. World Region: Asia; country: South Korea (Republic of Korea).

Organizations are ordered first by descending order of total articles published and then ordered alphabetically (increasing order), if applicable.

Exhibit A.11

Table of the organizations with publishing activity in PubMed periodicals (2000-

2010), based on PubMed, for Nanotechnology in Drug Delivery. Asia; country: Taiwan. Organizations are ordered first by descending order of total articles published and then ordered alphabetically (increasing order), if applicable.