Peptide Therapeutics in Metabolic Disorders, 2016 - 2025

Description:

Peptide therapeutics, due to their numerous advantages such as high selectivity, stability, efficacy, safety, bioavailability and tolerability offer a number of benefits over other therapeutic classes. In addition, peptides (when compared to proteins) are much smaller in size and can be easily synthesized, optimized and evaluated as viable therapeutic solutions for a number of diseases.

These highly favourable and intrinsic characteristics of peptides have caused an evident shift in the interest of pharmaceutical / life science companies towards developing peptide based drugs during the last decade. The number of marketing approvals granted to such molecules has increased recently. Researchers have continued to develop novel strategies to synthesize customized peptides to elicit desired biological responses.

Metabolic disorders have gained significant attention for the development of peptide based therapies. Some of the marketed drugs in this space, including BYETTA® / BYDUREON® and Victoza®, have already emerged as blockbusters with over USD 1 billion annual sales. It is worth highlighting that the evolution of peptides into potent therapeutic solutions has been facilitated by a variety of novel technologies that have been developed by drug / technology developers.

Technologies designed to enhance the stability, increase the bioavailability and facilitate the effective delivery of peptides have acted as key enablers to the market's growth. Specifically, technologies that offer alternative routes of administration (oral / intranasal / transdermal) and sustained drug delivery over a longer time duration are expected to significantly improve patient compliance. In fact, companies have actively entered into collaboration with other stakeholders to either acquire or develop peptide therapies. There have also been a growing number of partnerships related to technology licensing.

The "Peptide Therapeutics in Metabolic Disorders, 2016-2025" report provides a comprehensive analysis of the current market landscape and future outlook of peptide therapeutics targeting metabolic disorders. Novartis' Miacalcin, a calcitonin analogue, was the first peptide therapeutic approved for the treatment of post-menopausal osteoporosis in 1986. Following Miacalcin, several more peptide based therapies targeting various metabolic diseases have been approved so far. The overall pipeline is rich and continues to grow at a healthy pace. These therapies hold the potential to capture a significant share of the pharmaceutical market in the foreseen future.

A majority of peptide therapeutics that we identified during our research are being developed for the treatment of diabetes, obesity, osteoporosis and acromegaly. In addition, there are several peptide therapeutics targeting other metabolic disorders such as Cushing's disease, hypoglycemia, cystic fibrosis and achondroplasia.

One of the key objectives of the study is to review and quantify the opportunities laid by the development programs of both small and big pharma firms. Amongst other elements, the report elaborates on the following key areas:

- The current state of the market with respect to key players, developmental stage of pipeline products (both clinical / pre-clinical), route of administration and metabolic indications being targeted.
- The innovative technology platforms and delivery systems being offered to eliminate the challenges associated with the administration of peptide therapeutics.
- Partnerships that have taken place in the recent past covering research and development collaborations, manufacturing agreements, license agreements specific to technology platforms or product, co-development and co-commercialization of promising candidates.
- Recently approved and mid / late stage peptide therapeutics in terms of their history of development, available formulations, associated patents, key clinical trials and results.
- The epidemiology and patient population for each key metabolic indication.

The report provides sales forecast for the overall peptide therapeutics market targeting metabolic disorders for the period 2016 - 2025. We have provided three market forecast scenarios to add robustness to our model. Accordingly, the conservative, base and optimistic scenarios represent three different tracks of industry evolution. For the purposes of the study, we interviewed important stakeholders to solicit their
opinions on upcoming opportunities and challenges that must be considered for a more inclusive growth. All actual figures have been sourced and analyzed from publicly available information.

Chapter Outlines

Chapter 2 presents an executive summary of the report. It offers a high level view on the current scenario of the peptide therapeutics market for metabolic disorders and where it is headed in the mid-long term.

Chapter 3 provides a general introduction to peptide therapeutics. In this section, we have discussed the structure, chemistry and other fundamental aspects of peptides. In addition, we have also discussed the methods of synthesis, purification strategies and stabilization methods for peptides, along with relevant advantages and disadvantages.

Chapter 4 provides a general introduction to metabolic disorders. It includes a comprehensive classification of the various types of metabolic disorders and detailed description of the most common metabolic disorders, along with their respective causes and symptoms.

Chapter 5 provides a comprehensive overview on the landscape of peptide therapeutics for metabolic disorders. It includes information on over 80 different peptide therapeutics that are currently in various stages of development (both clinical and preclinical / discovery). It also contains a detailed analysis of the development pipeline highlighting the different types of peptides and peptide analogues used, their targeted metabolic indications, the current phase of development of each molecule, various routes of administration and the dosage frequency of drugs. In addition, we have presented a detailed ten year forecast, based on primary and secondary research, for the overall market of peptide therapeutics in metabolic disorders.

Chapter 6 focuses on peptide therapeutics that have been / are being developed to specifically target diabetes. It presents an overview of the current market scenario and provides our likely future growth outlook. It includes detailed drug profiles of marketed drugs and drugs in late stages of development. The profiles cover information on several aspects of these therapeutics such as their history of development, clinical trial results, manufacturing, product costs and related collaborations.

Chapter 7 focuses on peptide therapeutics that have been / are being developed to specifically target acromegaly. It presents an overview of the current market scenario and provides our likely future growth outlook. Similar to the previous chapter, this chapter also includes detailed drug profiles of marketed drugs and drugs in late stage of development covering information on several aspects such as their history of development, clinical trial results, manufacturing, product costs and related collaborations.

Chapter 8 focuses on peptide therapeutics that have been / are being developed to specifically target obesity. It presents an overview of the current market scenario and provides our likely future growth outlook. Similar to the earlier chapters, this chapter also includes detailed drug profiles of marketed drugs and drugs in late stage of development covering information on several aspects such as their history of development, clinical trial results, manufacturing, product costs and related collaborations.

Chapter 9 focuses on peptide therapeutics that have been / are being developed to specifically target osteoporosis. It presents an overview of the current market scenario and provides our likely future growth outlook. Similar to the earlier chapters, this chapter also includes detailed drug profiles of marketed drugs and drugs in late stage of development covering information on several aspects such as their history of development, clinical trial results, manufacturing, product costs and related collaborations.

Chapter 10 focuses on peptide therapeutics that have been / are being developed for metabolic disorders other than diabetes, obesity, osteoporosis and acromegaly. Similar to the earlier chapters, this chapter also includes detailed drug profiles of marketed drugs and drugs in late stage of development covering information on several aspects such as their history of development, clinical trial results, manufacturing, product costs and related collaborations.

Chapter 11 highlights the various technologies that are currently being utilized for the development of peptide therapeutics. It includes detailed profiles of the relatively more popular technologies covering their key features and advantages.

Chapter 12 is a collection of interview transcripts of the discussions that we held with key stakeholders in this market. These include Andrew Mallon (CEO, Calista Therapeutics), Andrew Parker (CEO, ArisGen), John
Dodd (VP Discovery and Research, Palatin Technologies) and Dennis Goldberg (President, Lipimetix Development).

Chapter 13 summarizes the overall report. In this chapter, we provide a recap of the key takeaways and also present our independent opinion based on the research and analysis described in the previous chapters.

Chapter 14 is an appendix, which provides tabulated data and numbers for all the figures provided in the report.

Chapter 15 is an appendix, which provides the list of companies and organizations that have been mentioned in the report.

Contents:

1. Preface
   1.1. Scope of the Report
   1.2. Research Methodology
   1.3. Chapter Outlines

2. Executive Summary

3. Introduction to Peptide Therapeutics
   3.1. Chapter Overview
   3.2. Peptides: An Introduction
   3.3. Peptides: Structure and the Peptide Bond
   3.4. Peptide Therapeutics: An Introduction
   3.5. Peptide Therapeutics: Classification
      3.5.1. Synthetic Peptide Therapeutics
      3.5.2. Recombinant Peptide Therapeutics
   3.6. Peptide Therapeutics: Methods of Production
      3.6.1. Chemical Synthesis
      3.6.1.1. Solution / Liquid Phase Peptide Synthesis (LPPS)
      3.6.1.2. Solid Phase Peptide Synthesis (SPPS)
      3.6.1.2.1. Advantages of SPPS
      3.6.1.3. Combination of SPPS and LPPS
      3.6.2. Recombinant Production
      3.6.3. Purification of Peptide Based Therapeutics
      3.6.4. Peptide Therapeutics Manufacturing: Role of CMOs
   3.7. Advantages of Peptide Therapeutics
   3.8. Disadvantages of Peptide Therapeutics
   3.9. Alteration of Key Physico-chemical Properties of Peptide Therapeutics
      3.9.1. Plasma Half-Life Extension of Peptide Therapeutics: Approaches
      3.9.1.1. Reduction in Enzymatic Degradation of the Peptide
      3.9.1.2. Protection Against Enzymatic Cleavage
      3.9.1.3. Binding to Albumin Protein
      3.9.1.4. Addition of Polyethylene Glycol (PEG) Groups

4. Introduction to Metabolic Disorders
   4.1. Chapter Overview
   4.2. Metabolic Disorders: An Introduction
   4.3. Metabolic Disorders: Classification
      4.3.1. Mitochondrial Disorders
      4.3.2. Amino Acid Metabolism Disorders
      4.3.3. Porphyrias
      4.3.4. Lysosomal Storage Disorders
      4.3.5. Lipid Metabolism Disorders
      4.3.6. Peroxisomal Disorders
      4.3.7. Purine and Pyrimidine Disorders
      4.3.8. Carbohydrate Metabolism Disorders
   4.4. Metabolic Disorders: Most Prominent Diseases

5. Peptide Therapeutics in Metabolic Disorders: Current Market Landscape
   5.1. Chapter Overview
   5.2. Peptide Therapeutics: Overall Market Overview
5.3. Peptide Therapeutics: Landscape of Metabolic Disorders
5.3.1. Peptide Therapeutics in Metabolic Disorders: Approved Drugs
5.3.2. Peptide Therapeutics in Metabolic Disorders: Clinical Pipeline
5.3.3. Peptide Therapeutics in Metabolic Disorders: Pre-Clinical / Discovery Pipeline
5.3.4. Peptide Therapeutics in Metabolic Disorders: Distribution by Highest Phase of Development
5.3.5. Peptide Therapeutics in Metabolic Disorders: Distribution by Indication
5.3.6. Peptide Therapeutics in Metabolic Disorders: Distribution by Route of Administration
5.3.7. Peptide Therapeutics in Metabolic Disorders: Distribution by Type of Analogue
5.3.8. Peptide Therapeutics in Metabolic Disorders: Distribution by Type of Peptide
5.3.9. Peptide Therapeutics in Metabolic Disorders: Distribution by Dosage Frequency
5.4. Peptide Therapeutics Market: Metabolic Disorders, 2015 - 2025
5.4.1. Scope and Forecast Methodology
5.4.2. Overall Market Size and Forecast

6. Peptide Therapeutics in Diabetes
6.1. Chapter Overview
6.2. Diabetes: Epidemiology
6.3. Peptide Therapeutics in Diabetes: Current Market Landscape
6.4. Peptide Therapeutics in Diabetes: Pipeline Analysis
6.5. Peptide Therapeutics in Diabetes: Distribution by Highest Phase of Development
6.6. Peptide Therapeutics in Diabetes: Distribution by Sub-Indication
6.7. Peptide Therapeutics in Diabetes: Distribution by Type of Analogue
6.8. Peptide Therapeutics in Diabetes: Distribution by Route of Administration
6.9. Peptide Therapeutics in Diabetes: Distribution by Dosage Frequency
6.10. Peptide Therapeutics in Diabetes: Distribution by Type of Peptide
6.11. Lyxumia® / Lixisenatide (Sanofi)
6.11.1. Product Overview
6.11.2. Mechanism of Action
6.11.3. History of Development
6.11.4. Dosage Form and Regimen
6.11.4.1. Lyxumia® as Combination Treatment
6.11.5. Treatment Cost
6.11.6. Historical Sales
6.11.7. Current Status of Development
6.11.8. GetGoal Phase III Clinical Trial Program
6.11.9. Key Clinical Trial Results
6.11.9.1. GetGoal-L-Asia: Phase III Results
6.11.9.2. GetGoal-X: Phase III Results
6.11.9.3. GetGoal-F1: Phase III Results
6.11.9.4. Get-Goal Duo 1: Phase III Results
6.11.9.5. GetGoal-P: Phase III Results
6.11.9.6. ELIXA: Phase III Results
6.11.9.7. GetGoal Duo-2: Phase III Results
6.11.10. Collaborations
6.11.10.1. License Agreement between Zealand Pharma and Sanofi
6.11.1. BYDUREON® / Exenatide Once Weekly / Exenatide Extended Release (AstraZeneca)
6.12.1. Product Overview
6.12.2. History of Development
6.12.3. Mechanism of Action
6.12.4. The Medisorb® Microsphere Technology
6.12.5. Patents
6.12.6. Dosage Form, Regimen and Price
6.12.7. Historical Sales
6.12.9. DURATION Phase III Clinical Trial Program
6.12.10. Key Clinical Trial Results
6.12.10.1. DURATION-1: Phase III Results
6.12.10.2. DURATION-2: Phase III Results
6.12.10.3. DURATION-3: Phase III Results
6.12.10.4. DURATION-4: Phase III Results
6.12.10.5. DURATION-5: Phase III Results
6.12.10.6. DURATION-6: Phase III Results
6.12.10.7. DURATION-NEO-1: Phase III Results
6.12.11. Collaborations
6.12.11.1. Acquisition Agreement with Astra Zeneca
6.12.11.2. Acquisition Agreement with BMS
6.12.11.3. Product Supply Agreement with Eli Lilly
6.13. Semaglutide / NN9535 / NN9924 / OG217SC (Novo Nordisk)
6.13.1. Product Overview
6.13.2. Mechanism of Action
6.13.3. History of Development
6.13.4. NN9924 (OG217SC) and the Eligen® Technology
6.13.5. Manufacturing
6.13.6. Dosage Form and Regimen
6.13.7. Current Status of Development
6.13.7.1. PIONEER Clinical Program
6.13.7.2. SUSTAIN Clinical Program
6.13.8. Key Clinical Trial Results
6.13.8.1. NN9535: Phase III Results
6.13.8.2. NN9924/OG217SC: Phase II Results
6.13.9. Collaborations
6.13.9.1. License Agreement with Zosano Pharma
6.13.9.2. Development and Licence Agreement with Emisphere Technologies
6.14. ITCA 650 (Intarcia Therapeutics / Servier)
6.14.1. Product Overview
6.14.3. History of Development
6.14.4. Intarcia’s Technology Platform
6.14.5. Current Status of Development
6.14.6. Key Clinical Trial Results
6.14.6.1. FREEDOM 1 HBL: Interim Results
6.14.6.2. FREEDOM-1 and FREEDOM-1 High Baseline (HBL): Top-Line Results
6.14.6.3. Freedom-2 Comparative Trial: Top-Line Results
6.14.7. Funding
6.14.8.1. Acquisition of Phoundry Pharmaceuticals
6.15. Polyethylene Glycol Loxenatide / PEX 168 (Jiangsu Hansoh Pharmaceutical Co.)
6.15.1. Product Overview
6.15.2. Mechanism of Action
6.15.3. Current Status of Development
6.15.4. Key Clinical Trial Results
6.16. Peptide p277/AVE-0277/DiaPep277 (Hyperion Therapeutics / Yeda Research and Development Company)
6.16.1. Product Overview
6.16.2. Mechanism of Action
6.16.3. History of Development
6.16.4. Current Status of Development
6.16.5. Key Clinical Trial Results
6.16.5.1. Phase III DIA-AID 1 Results
6.16.5.2. Phase III DIA-AID 1 Extension Study Results
6.16.6. Collaborations
6.16.6.1. Acquisition of Horizon Pharma by Hyperion Therapeutics
6.16.6.2. Acquisition of Andromeda by Hyperion Therapeutics
6.16.6.3. Acquisition Agreement between Teva and Andromeda
6.16.6.4. Acquisition of DeveloGen by Evotec
6.17. Efpeglenatide / HM11260C (Hanmi Pharmaceuticals)
6.17.1. Product Overview
6.17.2. Mechanism of Action
6.17.3. History of Development
6.17.4. The LAPSCOVERY™ Technology
6.17.5. Current Status of Development
6.17.6. Key Clinical Trial Results
6.17.6.1. Phase Ib Results: Type II Diabetes
6.17.6.2. Phase II Results (20-week): Non-diabetic Obesity
6.17.6.3. Phase II Results (12-week): Type II Diabetes
6.17.7. Collaborations
6.17.7.1. Product Development Agreement with Sanofi
6.17.7.2. Services Agreement with Ypsomed Group
6.18. PB1023 (PhaseBio Pharmaceuticals)
6.19. RO6811135 (Roche)
6.20. CJC-1134-PC / Albenatide (ConjuChem)

7. Peptide Therapeutics in Acromegaly
7.1. Chapter Overview
7.2. Acromegaly: Epidemiology
7.3. Peptide Therapeutics in Acromegaly: Current Market Landscape
7.4. Peptide Therapeutics in Acromegaly: Pipeline Analysis
7.5. Peptide Therapeutics in Acromegaly: Distribution by Highest Phase of Development
7.6. Peptide Therapeutics in Acromegaly: Distribution by Route of Administration
7.7. Peptide Therapeutics in Acromegaly: Distribution by Dosage Frequency
7.8. Peptide Therapeutics in Acromegaly: Distribution by Type of Peptide
7.9. Signifor® LAR / Pasireotide (Novartis)
7.9.1. Product Overview
7.9.2. History of Development
7.9.3. Mechanism of Action
7.9.4. Dosage Form and Regimen
7.9.5. Patents
7.9.6. Current Status of Development
7.9.7. Key Clinical Trial Results
7.9.7.1. C2305: Phase III results
7.9.7.2. C2402: Phase III Results
7.10. Mycapssa™ / Octreolin™ / Oral Octreotide (Chiasma Pharma)
7.10.1. Product Overview
7.10.2. Mechanism of Action
7.10.3. History of Development
7.10.4. Funding
7.10.5. Transient Permeability Enhancer (TPE) Technology
7.10.6. Current Status of Development
7.10.7. Key Clinical Trial Results
7.10.8. Collaborations
7.10.8.1. Manufacturing Agreement with Capsugel
7.10.8.2. Development and Commercialization Agreement with Roche
7.11. Somatoprim / DG3173 / COR-005 (Aspireo Pharmaceuticals / Cortendo AB)
7.11.1. Product Overview
7.11.2. Mechanism of Action
7.11.3. History of Development
7.11.4. Current Status of Development
7.11.5. Key Clinical Trial Results
7.11.5.1. Phase I Results: Somatoprim as Monotherapy
7.11.5.2. Phase I Results: Somatoprim as Combination Therapy
7.11.5.3. Phase II Results: Somatoprim as Monotherapy
7.11.6. Collaborations
7.11.6.1. Acquisition Agreement with Cortendo
7.11.6.2. Strategic Advisory Agreement with Evotec
7.12. ITF 2984 (Italfarmaco)
7.13. CAM2029 (Camurus Pharmaceuticals / Novartis)

8. Peptide Therapeutics in Obesity
8.1. Chapter Overview
8.2. Obesity: Epidemiology
8.3. Peptide Therapeutics in Obesity: Current Market Landscape
8.4. Peptide Therapeutics in Obesity: Pipeline Analysis
8.5. Peptide Therapeutics in Obesity: Distribution by Highest Phase of Development
8.6. Peptide Therapeutics in Obesity: Distribution by Target Sub-Indication
8.7. Peptide Therapeutics in Obesity: Distribution by Type of Analogue
8.8. Peptide Therapeutics in Obesity: Distribution by Route of Administration
8.9. Peptide Therapeutics in Obesity: Distribution by Dosage Frequency
8.10. Saxenda® / Liraglutide 3 mg (Novo Nordisk)
     8.10.1. Product Overview
     8.10.2. History of Development
     8.10.3. Mechanism of Action
     8.10.4. Dosage Form, Regimen and Price
     8.10.5. Patents
     8.10.6. Current Status of Development
     8.10.7. SCALE™ Phase III Clinical Trial Program
     8.10.8. Key Clinical Trial Results
     8.10.8.1. SCALE™ Obesity and Prediabetes Trial
     8.10.8.2. SCALE™ Diabetes Clinical Trial Results
8.11. Setmelanotide / RM-493 / BIM-22493 (Rhythm Pharmaceuticals)
8.12. LY2944876 / TT-401 (Eli Lilly / Transition Therapeutics)

9. Peptide Therapeutics in Osteoporosis
9.1. Chapter Overview
9.2. Osteoporosis: Epidemiology
9.3. Peptide Therapeutics in Osteoporosis: Current Market Landscape
9.4. Peptide Therapeutics in Osteoporosis: Pipeline Analysis
9.5. Peptide Therapeutics in Osteoporosis: Distribution by Highest Phase of Development
9.6. Peptide Therapeutics in Osteoporosis: Distribution by Type of Analogue
9.7. Peptide Therapeutics in Osteoporosis: Distribution by Route of Administration
9.8. Peptide Therapeutics in Osteoporosis: Distribution by Dosage Frequency
9.9. Peptide Therapeutics in Osteoporosis: Distribution by Type of Peptide
9.10. TBRIA™ (Tarsa Therapeutics / Unigene Laboratories)
     9.10.1. Product Overview
     9.10.2. Mechanism of Action
     9.10.3. History of Development
     9.10.4. Peptelligence Technology
     9.10.5. Funding
     9.10.6. Patents
     9.10.7. Current Status of Development
     9.10.8. Key Clinical Trial results
     9.10.8.1. Meta-Analysis
     9.10.8.2. Phase III ORACAL Clinical Trial Results
     9.10.8.3. Phase II Results
     9.10.9. Collaborations
     9.10.9.1. Commercial Supply Agreement with QS Pharma
     9.10.9.2. License Agreement with Unigene Laboratories
     9.10.9.3. Abaloparatide / BIM44058 / BA058 (Radius Health / Teijin Pharma)
     9.11.1. Product Overview
     9.11.2. Mechanism of Action
     9.11.3. History of Development
     9.11.4. Abaloparatide-TD and 3M Microneedle Drug Delivery Technology
     9.11.4.1. Life Cycle Management
     9.11.5. Dosage Form and Regimen
     9.11.6. Manufacturing
     9.11.7. Patents
     9.11.8. Current Status of Development
     9.11.9. Key Clinical Trial Results
     9.11.9.1. Abaloparatide-SC: Phase III ACTIVE Results
     9.11.9.2. Abaloparatide-SC: Phase III ACTIVExtend Results
     9.11.9.3. Abaloparatide-TD: Phase II Results
     9.11.10. Collaborations
     9.11.10.1. Commercialization Strategy Agreement with Myrtle Potter & Company
     9.11.10.2. Clinical Trial Services Agreement with Nordic Bioscience
     9.11.10.3. Feasibility, Development and Clinical Supplies Agreement with 3M Drug Delivery Systems
     9.11.10.4. Development and Manufacturing Services Agreement with Lonza
     9.11.10.5. License Option Agreement with Novartis
9.11.10.6. License Agreement with Ipsen Pharma

10. Peptide Therapeutics in Other Metabolic Disorders
10.1. Chapter Overview
10.2. Peptide Therapeutics in Other Metabolic Disorders: Current Market Landscape
10.3. Peptide Therapeutics in Other Metabolic Disorders: Pipeline Analysis
10.4. Peptide Therapeutics in Other Metabolic Disorders: Distribution by Highest Phase of Development
10.5. Peptide Therapeutics in Other Metabolic Disorders: Distribution by Type of Analogue
10.6. Peptide Therapeutics in Other Metabolic Disorders: Distribution by Route of Administration
10.7. Peptide Therapeutics in Other Metabolic Disorders: Distribution by Dosage Frequency
10.8. SCENESSE® / Afamelanotide / CUV1647 (Clinuvel Pharmaceuticals)
10.8.1. Product Overview
10.8.2. Mechanism of Action
10.8.3. History of Development
10.8.3.1. Historical Timeline: FDA Related Events
10.8.3.2. Historical Timeline: EC Related Events
10.8.3.3. Historical Timeline: Swissmedic Related Events
10.8.3.4. Historical Timeline: Italian Medicines Agency (AIFA) Related Events
10.8.3.5. Historical Timeline: Australian Therapeutic Goods Administration (TGA) Related Events
10.8.4. Dosage Form, Regimen and Price
10.8.5. Manufacturing
10.8.6. Target Population
10.8.7. Historical Sales
10.8.8. Current Status of Development
10.8.9. Key Clinical Trial Results
10.8.9.1. Phase III Results: US
10.8.9.2. Phase III Results: Europe
10.8.10. SCENESSE®: Key Publications
10.8.11. Collaborations
10.8.11.1. Joint Venture Agreement with Biotech Lab Singapore
10.8.11.2. Manufacturing and License Agreement with SurModics (Evonik)
10.9. Signifor® / Pasireotide (Novartis)
10.9.1. Product Overview
10.9.2. History of Development
10.9.3. Mechanism of Action
10.9.4. Dosage Form, Regimen and Price
10.9.5. Patents
10.9.6. Historical Sales
10.9.7. Target Population
10.9.8. Current Status of Development
10.9.9. Key Clinical Trial Results
10.10. AEM-28 (LipimetiX Development)
10.11. BMN-111 / Vosoritide (BioMarin Pharmaceutical)
10.12. AZP-131 (Alize Pharma)
10.13. Peptide Therapeutics Market: Other Metabolic Disorders, 2015 - 2025

11. Key Technology Platforms
11.1. Chapter Overview
11.1.1. Peptide Technology Platforms: Distribution by Key Features
11.2. ArisCrown Technology (ArisGen)
11.2.1. Company Overview
11.2.2. Technology Overview
11.2.3. Mechanism of Action
11.2.4. Advantages
11.2.5. Peptide Therapeutics based on the ArisCrown Technology
11.2.6. Collaborations
11.3. Chimeric Apo E Mimetic Peptide (CHAMP) Technology (LipimetiX Development)
11.3.1. Company Overview
11.3.2. Technology Overview
11.3.3. Mechanism of Action
11.3.4. Peptide Therapeutics based on the CHAMP Technology
11.3.5. Patents
11.3.6. Collaborations
11.4. Glide SDI® (Solid Dose Injector) (Glide Technologies)
  11.4.1. Company Overview
  11.4.2. Technology Overview
  11.4.3. Components
  11.4.4. Process of Drug Formulation
  11.4.5. Mechanism of Drug Delivery
  11.4.6. Advantages
  11.4.7. Peptide Therapeutics based on the Glide SDI® Technology
  11.4.8. Collaborations
  11.4.9. Funding
11.5. FluidCrystal® Injection Depot (Camurus Pharmaceuticals)
  11.5.1. Company Overview
  11.5.2. Technology Overview
  11.5.3. Mechanism of Action
  11.5.4. Advantages
  11.5.5. Peptide Therapeutics based on the FluidCrystal® Injection Depot Technology
  11.5.6. Collaborations
11.6. PC-DAC™ (ConjuChem)
  11.6.1. Company Overview
  11.6.2. Technology Overview
  11.6.3. Mechanism of Action
  11.6.4. Advantages
11.7. PharmFilm® Technology Platform (MonoSol Rx)
  11.7.1. Company Overview
  11.7.2. Technology Overview
  11.7.3. Mechanism of Action
  11.7.4. Advantages
  11.7.5. Patents
  11.7.6. Peptide Therapeutics based on the PharmFilm® Technology
  11.7.7. Collaborations
11.8. Intarcia Technology Platform (Intarcia Therapeutics)
  11.8.1. Company Overview
  11.8.2. Technology Overview
  11.8.3. Mechanism of Action
  11.8.4. Advantages
  11.8.5. Peptide Therapeutics based on the Intarcia Technology
  11.8.6. Collaborations
11.9. Eligen® Technology (Emisphere Technologies)
  11.9.1. Company Overview
  11.9.2. Technology Overview
  11.9.3. Mechanism of Action
  11.9.4. Advantages
  11.9.5. Peptide Therapeutics based on the Eligen® Technology
  11.9.6. Collaborations
11.10. XTEN® Technology (Amunix)
  11.10.1. Company Overview
  11.10.2. Technology Overview
  11.10.3. Mechanism of Action
  11.10.4. Advantages
  11.10.5. Patents
  11.10.6. XTEN® Versus PEG
  11.10.7. Peptide Therapeutics Based on the XTEN® Technology
  11.10.8. Collaborations
11.11. Axcess™ Oral Drug Delivery Technology (Proxima Concepts / Diabetology)
  11.11.1. Company Overview
  11.11.2. Technology Overview
  11.11.3. Mechanism of Action
  11.11.4. Advantages
  11.11.5. Peptide Therapeutics based on the Axcess™ Technology
  11.11.6. Patents
11.11.7. Collaborations
11.12. POD™ (Protein Oral Delivery) Technology (Oramed Pharmaceuticals)
  11.12.1. Company Overview
  11.12.2. Technology Overview
  11.12.3. Mechanism of Action
  11.12.4. Advantages
  11.12.5. Patents
  11.12.6. Peptide Therapeutics Based on the POD™ Technology
11.12.7. Collaborations
11.13. Transient Permeability Enhancer (TPE®) Technology (Chiasma)
  11.13.1. Company Overview
  11.13.2. Technology Overview
  11.13.3. Mechanism of Action
  11.13.4. Advantages
  11.13.5. Peptide Therapeutics based on the TPE® Technology
11.13.6. Collaborations
11.14. SmartDepot™ (Peptron)
  11.14.1. Company Overview
  11.14.2. Technology Overview
  11.14.3. Mechanism of Action
  11.14.4. Advantages
  11.14.5. Patents
  11.14.6. Peptide Therapeutics based on the SmartDepot™ Technology
11.14.7. Collaborations
11.15. 3M Microneedle Drug Delivery Technology (3M Drug Delivery Systems)
  11.15.1. Company Overview
  11.15.2. Technology Overview
  11.15.3. Mechanism of Action
    11.15.3.1. Solid Microneedle Technology
    11.15.3.2. Hollow Microneedle Technology
  11.15.4. Advantages
    11.15.4.1. Solid Microneedle Technology
    11.15.4.2. Hollow Microneedle Technology
  11.15.5. Peptide Therapeutics based on the 3M Microneedle Drug Delivery Technology
11.15.6. Collaborations
11.16. Gastrointestinal Permeation Enhancement Technology (GIPET®) (Merrion Pharmaceuticals)
  11.16.1. Company Overview
  11.16.2. Technology Overview
  11.16.3. Mechanism of Action
11.16.4. Advantages
  11.16.5. Patents
  11.16.6. Peptide Therapeutics based on the GIPET® Technology
11.16.7. Collaborations
11.17. LAPSCOVERY™ Technology (Hanmi Pharmaceuticals)
  11.17.1. Company Overview
  11.17.2. Technology Overview
  11.17.3. Mechanism of Action
  11.17.4. Advantages
  11.17.5. Patents
  11.17.6. Peptide Therapeutics based on the LAPSCOVERY™ Technology
11.17.7. Collaborations
11.18. Peptelligence™ Technology (Unigene Laboratories / Enteris Biopharma)
  11.18.1. Company Overview
  11.18.2. Technology Overview
  11.18.3. Components and Functions
    11.18.3.1. Tablet Design
    11.18.3.2. Mechanism of Drug Delivery
  11.18.4. Advantages
  11.18.5. Patents
  11.18.6. Peptide Therapeutics based on the Peptelligence™ Technology
11.18.7. Collaborations
12. Interview Transcripts
12.1. Chapter Overview
12.2. Andrew Mallon, CEO, Calista Therapeutics
12.3. Andrew Parker, CEO, ArisGen
12.4. John Dodd, VP Discovery and Research, Palatin Technologies
12.5. Dennis Goldberg, President, Lipimetix Development

13. Conclusion
13.1. Peptide Therapeutics Has Gradually Gained the Attention of Drug Developers
13.2. Metabolic Disorders is One of the Prime Focus Areas
13.3. In Addition to Diabetes, Obesity, Acromegaly and Osteoporosis, Research is Underway on Several
Lesser-known Disorders
13.4. Technological Advancements Have Emerged As Strong Enablers to the Ongoing Growth
13.5. Challenges Remain; Innovative Approaches Will Continue to Sustain the Momentum
13.6. Overall Opportunity is Big; We Project a ~10 % Growth in Our Base Scenario

14. Appendix 1: Tabulated Data
15. Appendix 2: List of Companies and Organizations

List of Figures:
Figure 3.1 Peptide Therapeutics: Methods of Chemical Synthesis
Figure 3.2 Solid Phase Peptide Synthesis: Steps Involved
Figure 4.1 Metabolic Disorders: Classification
Figure 4.2 Amino Acid Metabolism Disorders: Classification
Figure 4.3 Porphyria: Classification
Figure 4.4 Lipid Metabolism Disorders: Classification
Figure 4.5 Peroxisomal Disorders: Classification
Figure 4.6 Purine and Pyrimidine Disorders: Classification
Figure 4.7 Carbohydrate Metabolism Disorders: Classification
Figure 5.1 Peptide Therapeutics in Metabolic Disorders: Distribution by Highest Phase of Development
Figure 5.2 Peptide Therapeutics in Metabolic Disorders: Distribution by Indication
Figure 5.3 Peptide Therapeutics in Metabolic Disorders: Distribution by Indication Across Marketed, Clinical
and Preclinical Phases of Development
Figure 5.4 Peptide Therapeutics in Metabolic Disorders: Distribution by Route of Administration
Figure 5.5 Peptide Therapeutics in Metabolic Disorders: Distribution by Route of Administration across
Marketed, Clinical and Preclinical Phases of Development
Figure 5.6 Peptide Therapeutics in Metabolic Disorders: Distribution by Type of Analogue
Figure 5.7 Peptide Therapeutics in Metabolic Disorders: Distribution by Type of Analogue across Marketed,
Clinical and Preclinical Phases of Development
Figure 5.8 Peptide Therapeutics in Metabolic Disorders: Distribution by Type of Peptide
Figure 5.9 Peptide Therapeutics in Metabolic Disorders: Distribution by Dosage Frequency
Figure 5.10 Peptide Therapeutics in Metabolic Disorders: Distribution by Dosage Frequency across Daily,
Weekly, Monthly, Semi Annually and Annually Categories
Figure 5.11  Peptide Therapeutics Market (USD Billion): Metabolic Disorders, 2015 – 2025 (Base Scenario)

Figure 6.1  Diabetes: Worldwide Prevalence and Diagnosis (Million)

Figure 6.2  Diabetes: Prevalence by Region / Country (Million)

Figure 6.3  Diabetes: Diagnosed Cases by Region / Country (Million)

Figure 6.4  Peptide Therapeutics in Diabetes: Distribution by Highest Phase of Development

Figure 6.5  Peptide Therapeutics in Diabetes: Distribution by Target Sub-Indication

Figure 6.6  Peptide Therapeutics in Diabetes: Distribution by Type of Analogue

Figure 6.7  Peptide Therapeutics in Diabetes: Distribution by Route of Administration

Figure 6.8  Peptide Therapeutics in Diabetes: Distribution by Dosage Frequency

Figure 6.9  Peptide Therapeutics in Diabetes: Distribution by Type of Peptide

Figure 6.10  Lyxumia® (Lixisenatide): Historical Timeline

Figure 6.11  BYDUREON® / Exenatide Once Weekly / Exenatide Extended Release: Historical Timeline

Figure 6.12  BYDUREON® / Exenatide Once Weekly / Exenatide Extended Release: Historical Sales (USD Million)

Figure 6.13  BYDUREON® / Exenatide Once Weekly / Exenatide Extended Release: Regional Distribution of Historical Sales (USD Million)

Figure 6.14  ITCA 650: FREEDOM-1 and FREDDOM-1 HBL Clinical Trials

Figure 6.15  Peptide p277 / AVE-0277 / DiaPep277: Development Timeline (Post Acquisition by Andromeda)

Figure 6.16  Peptide Therapeutics Market (USD Million): Diabetes, 2015 - 2025: (Base Scenario)

Figure 7.1  Peptide Therapeutics in Acromegaly: Distribution by Highest Phase of Development

Figure 7.2  Peptide Therapeutics in Acromegaly: Distribution by the Route of Administration

Figure 7.3  Peptide Therapeutics in Acromegaly: Distribution by Dosage Frequency

Figure 7.4  Signifor® LAR: Administration Procedure

Figure 7.5  Signifor® LAR: Key Clinical Trials

Figure 7.6  Mycapssa: Development Timeline

Figure 7.7  Peptide Therapeutics Market (USD Million): Acromegaly, 2015 - 2025: (Base Scenario)

Figure 8.1  Peptide Therapeutics in Obesity: Distribution by Highest Phase of Development

Figure 8.2  Peptide Therapeutics in Obesity: Distribution by Target Sub-Indication

Figure 8.3  Peptide Therapeutics in Obesity: Distribution by Type of Analogue

Figure 8.4  Peptide Therapeutics in Obesity: Distribution by Route of Administration

Figure 8.5  Peptide Therapeutics in Obesity: Distribution by Dosage Frequency

Figure 8.6  Saxenda® / Liraglutide rDNA origin / Liraglutide 3 mg: Administration Procedure
Figure 8.7  Peptide Therapeutics Market (USD Million): Obesity, 2015-2025 (Base Scenario)

Figure 9.1  Peptide Therapeutics in Osteoporosis: Distribution by Highest Phase of Development

Figure 9.2  Peptide Therapeutics in Osteoporosis: Distribution by Type of Analogue

Figure 9.3  Peptide Therapeutics in Osteoporosis: Distribution by Route of Administration

Figure 9.4  Peptide Therapeutics in Osteoporosis: Distribution by Dosage Frequency

Figure 9.5  Peptide Therapeutics in Osteoporosis: Distribution by Type of Peptide

Figure 9.6  Peptide Therapeutics Market (USD Million): Osteoporosis, 2015 - 2025: (Base Scenario)

Figure 10.1  Peptide Therapeutics in Other Metabolic Disorders: Distribution by Highest Phase of Development

Figure 10.2  Peptide Therapeutics in Other Metabolic Disorders: Distribution by Type of Analogue

Figure 10.3  Peptide Therapeutics in Other Metabolic Disorders: Distribution by Route of Administration

Figure 10.4  Peptide Therapeutics in Other Metabolic Disorders: Distribution by Dosage Frequency

Figure 10.5  SCENESSE® / Afamelanotide / CUV1647: Mechanism of Action

Figure 10.6  SCENESSE® / Afamelanotide / CUV1647: FDA / US Related Events

Figure 10.7  SCENESSE® / Afamelanotide / CUV1647: EC / EMA / Europe Related Events

Figure 10.8  Signifor® / Pasireotide: Mechanism of Action

Figure 10.9  Signifor® / Pasireotide: Dosing and Administration

Figure 10.10  Signifor® / Pasireotide: Dose Formulations

Figure 10.11  Signifor® Sales (USD Million), 2012 – 2014

Figure 10.12  Peptide Therapeutics Market (USD Million): Other Metabolic Disorders, 2015 – 2025 (Base Scenario)

Figure 11.1  Peptide Technology Platforms: Distribution by Key Features

Figure 11.2  ArisCrown Technology: Mechanism of Action

Figure 11.3  Glide SDI® System: Key Components

Figure 11.4  Glide SDI®: Drug Formulation Process

Figure 11.5  FluidCrystal® Injection Depot: Mechanism of Action

Figure 11.6  Intarcia Technology: Mechanism of Action

Figure 11.7  XTEN® Technology Platform: Genetic Fusion of XTEN® to Peptides

Figure 11.8  XTEN® Technology Platform: Chemical Conjugation of XTEN to Peptides

Figure 11.9  Axcess™ Technology: Components of the Capsule

Figure 11.10  Transient Permeability Enhancer (TPE®) Technology: Mechanism of Action

Figure 11.11  SmartDepot™ Technology: Components

Figure 11.12  SmartDepot™ Technology: Mechanism of Action
Figure 11.13  Multifunctional Role of Absorption Enhancer in GIPET®

Figure 11.14  LAPSCOVERY™ Technology: Components

Figure 11.15  Peptelligence™ Technology: Components of Enteric Coated Tablet

Figure 11.16  Peptelligence™ Technology: Mechanism of Drug Delivery

Figure 13.1  Peptide Therapeutic Market (USD Billion): Metabolic Disorders- 2015, 2020 and 2025

List of Tables

Table 4.1  Metabolic Disorders: Most Prominent Diseases

Table 5.1  Peptide Therapeutics in Metabolic Disorders: Marketed Drugs

Table 5.2  Peptide Therapeutics in Metabolic Disorders: Clinical Pipeline

Table 5.3  Peptide Therapeutics in Metabolic Disorders: Preclinical / Discovery Pipeline

Table 5.4  Dosage Frequency: Categories

Table 5.5  Metabolic Disorders: Peptide Therapeutics and Current Development Phase

Table 6.1  Peptide Therapeutics in Diabetes: Pipeline

Table 6.2  Lyxumia® (Lixisenatide) as Combination Treatment

Table 6.3  Lyxumia®: Price

Table 6.4  Lyxumia® (Lixisenatide): Price Comparison

Table 6.5  Lyxumia® (Lixisenatide): Current Status of Development

Table 6.6  Lyxumia® (Lixisenatide): GetGoal Phase III Clinical Program

Table 6.7  Lyxumia® (Lixisenatide): GetGoal F-1Phase III Results

Table 6.8  Lyxumia® (Lixisenatide): ELIXA Clinical Trial Results

Table 6.9  Lyxumia® (Lixisenatide): GetGoal Duo-2 Clinical Trial Results

Table 6.10  Lyxumia® (Lixisenatide): Adverse Events Reported in GetGoal Duo-2 Clinical Trial

Table 6.11  Lyxumia® (Lixisenatide) Versus Liraglutide: Phase II Results

Table 6.12  Lyxumia® (Lixisenatide) Versus Liraglutide: Phase II Study Adverse Events

Table 6.13  Lyxumia® (Lixisenatide) Versus Liraglutide Phase II study: Amylase Levels from baseline

Table 6.14  BYDUREON® / Exenatide Once Weekly / Exenatide Extended Release: Patents

Table 6.15  BYDUREON® / Exenatide Once Weekly / Exenatide Extended Release: Patent Expiry

Table 6.16  BYDUREON® / Exenatide Once Weekly / Exenatide Extended Release: Ingredients

Table 6.17  BYDUREON® / Exenatide Once Weekly / Exenatide Extended Release: Microsphere Composition

Table 6.18  BYDUREON® / Exenatide Once Weekly / Exenatide Extended Release: Diluent Composition

Table 6.19  BYDUREON® / Exenatide Once Weekly / Exenatide Extended Release: Dosage Forms
Table 6.20  BYDUREON® / Exenatide Once Weekly / Exenatide Extended Release: Current Status of Development

Table 6.21  BYDUREON® / Exenatide Once Weekly / Exenatide Extended Release: DURATION Phase III Clinical Trial Program

Table 6.22  BYDUREON® / Exenatide Once Weekly / Exenatide Extended Release: DURATION-2 Phase III Study Results

Table 6.23  BYDUREON® / Exenatide Once Weekly / Exenatide Extended Release: DURATION-3 Study Adverse Events

Table 6.24  BYDUREON® / Exenatide Once Weekly / Exenatide Extended Release: DURATION-4 Study Results

Table 6.25  BYDUREON® / Exenatide Once Weekly / Exenatide Extended Release: DURATION-5 Study Results

Table 6.26  BYDUREON® / Exenatide Once Weekly / Exenatide Extended Release: DURATION-6 Study Adverse Events

Table 6.27  BYDUREON® / Exenatide Once Weekly / Exenatide Extended Release: DURATION-NEO Study Results

Table 6.28  BYDUREON® / Exenatide Once Weekly / Exenatide Extended Release: DURATION-NEO-1 Study Adverse Events

Table 6.29  BYDUREON® / Exenatide Once Weekly / Exenatide Extended Release: DURATION-NEO-1 Study Gastrointestinal Adverse Events

Table 6.30  Semaglutide: Current Status of Development

Table 6.31  SUSTAIN Clinical Program: Key Characteristics

Table 6.32  Semaglutide: SUSTAIN 3 Clinical Trial Results

Table 6.33  ITCA 650: FREEDOM Clinical Trial Development Program

Table 6.34  ITCA 650: Current Status of Development

Table 6.35  PEX 168: Current Status of Development

Table 6.36  PEX 168: Clinical Trial Results

Table 6.37  Peptide p277 / AVE-0277 / DiaPep277: DIA-AID 1 Clinical Trial Results

Table 6.38  Peptide p277/AVE-0277/DiaPep277: DIA-AID 1 Extension study results

Table 6.39  Efpeglenatide / HM11260C: Current Status of Development

Table 6.40  Efpeglenatide/ HM11260C: Phase II Clinical Trial Arms

Table 6.41  Efpeglenatide/ HM11260C: Phase Ib Clinical Trial Arms

Table 6.42  Efpeglenatide / HM11260C: Phase Ib Clinical Trial arms

Table 6.43  Efpeglenatide / HM11260C: Phase Ib Clinical Trial Results

Table 6.44  Efpeglenatide / HM11260C: Phase II (20-week) Study, Dose Regimens

Table 6.45  Efpeglenatide / HM11260C: Phase II (20-week) Study, Results

Table 6.46  Efpeglenatide / HM11260C: Phase II (20-week) Study, Adverse Events
<table>
<thead>
<tr>
<th>Table</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.47</td>
<td>Efpeglenatide / HM11260C: Phase II (12-week) Study, Arms</td>
</tr>
<tr>
<td>6.48</td>
<td>Efpeglenatide / HM11260C: Phase II (12-week) Study, Results</td>
</tr>
<tr>
<td>6.49</td>
<td>Efpeglenatide / HM11260C: Phase II (12-week) Study, Adverse Events</td>
</tr>
<tr>
<td>6.50</td>
<td>PB1023: Product Overview</td>
</tr>
<tr>
<td>6.51</td>
<td>RO6811135: Product Overview</td>
</tr>
<tr>
<td>6.52</td>
<td>CJC-1134-PC: Product Overview</td>
</tr>
<tr>
<td>7.1</td>
<td>Peptide Therapeutics in Acromegaly: Pipeline</td>
</tr>
<tr>
<td>7.2</td>
<td>Signifor® LAR: Drug Composition</td>
</tr>
<tr>
<td>7.3</td>
<td>Signifor® LAR: Diluent Composition</td>
</tr>
<tr>
<td>7.4</td>
<td>Signifor® LAR: Patents</td>
</tr>
<tr>
<td>7.5</td>
<td>Signifor® LAR: Current Status of Development</td>
</tr>
<tr>
<td>7.6</td>
<td>Signifor® LAR: Phase III C2305 Trial Adverse Events</td>
</tr>
<tr>
<td>7.7</td>
<td>Signifor® LAR: Phase III C2402 Study Results</td>
</tr>
<tr>
<td>7.8</td>
<td>Signifor® LAR trial, C2305: Adverse Events</td>
</tr>
<tr>
<td>7.9</td>
<td>Mycapssa™ / Octreolin™ / Oral Octreotide: Current Status of Development</td>
</tr>
<tr>
<td>7.10</td>
<td>Mycapssa™ / Oral Octreotide: Phase III Study Results (Response Rates to Injectable Somatostatin Analogues)</td>
</tr>
<tr>
<td>7.11</td>
<td>Mycapssa™ / Oral Octreotide: Phase III Study Results (Response Rates to Oral Octreotide)</td>
</tr>
<tr>
<td>7.12</td>
<td>Somatoprim / DG3173 / COR-005: Current Status of Development</td>
</tr>
<tr>
<td>7.13</td>
<td>ITF2984: Product Overview</td>
</tr>
<tr>
<td>7.14</td>
<td>CAM2029: Product Overview</td>
</tr>
<tr>
<td>8.1</td>
<td>Peptide Therapeutics in Obesity: Pipeline</td>
</tr>
<tr>
<td>8.2</td>
<td>Saxenda® / Liraglutide 3 mg: Pharmaceutical Ingredients in 1 ml Solution</td>
</tr>
<tr>
<td>8.3</td>
<td>Saxenda® / Liraglutide 3 mg: Dose Escalation Schedule</td>
</tr>
<tr>
<td>8.4</td>
<td>Saxenda® / Liraglutide rDNA origin / Liraglutide 3 mg: Patents</td>
</tr>
<tr>
<td>8.5</td>
<td>Saxenda® / Liraglutide rDNA origin / Liraglutide 3 mg: Phase IIIa SCALE™ Trial Program</td>
</tr>
<tr>
<td>8.6</td>
<td>Saxenda® / Liraglutide 3 mg: Phase IIIa SCALE Obesity and Prediabetes Study Results (56-week)</td>
</tr>
<tr>
<td>8.7</td>
<td>Saxenda® / Liraglutide rDNA origin / Liraglutide 3 mg: Phase IIIa SCALE Obesity and Prediabetes 3-year Extension Study Results</td>
</tr>
<tr>
<td>8.8</td>
<td>Saxenda® / Liraglutide 3 mg: Phase III SCALE™ Obesity and Prediabetes, Proportion of Responders (56-week)</td>
</tr>
<tr>
<td>8.9</td>
<td>Saxenda® / Liraglutide rDNA origin / Liraglutide 3 mg: SCALE™ Phase III Obesity and Prediabetes Study Adverse Events</td>
</tr>
<tr>
<td>8.10</td>
<td>Saxenda® / Liraglutide 3 mg: Phase III SCALE™ Diabetes Study Results (56-week)</td>
</tr>
<tr>
<td>Table 8.11</td>
<td>Saxenda® / Liraglutide 3 mg: SCALE™ Phase III Diabetes Study Adverse Events</td>
</tr>
<tr>
<td>Table 8.12</td>
<td>Setmelanotide / RM-493 / BIM-22493: Product Overview</td>
</tr>
<tr>
<td>Table 8.13</td>
<td>Setmelanotide / RM-493 / BIM-22493: Funding</td>
</tr>
<tr>
<td>Table 8.14</td>
<td>LY2944876 / TT-401: Product Overview</td>
</tr>
<tr>
<td>Table 9.1</td>
<td>Peptide Therapeutics in Osteoporosis: Pipeline</td>
</tr>
<tr>
<td>Table 9.2</td>
<td>TBRIA™: Phase III ORACAL Clinical Trial Results</td>
</tr>
<tr>
<td>Table 9.3</td>
<td>Abaloparatide / BIM44058 / BA058: Patent Information</td>
</tr>
<tr>
<td>Table 9.4</td>
<td>Abaloparatide / BIM44058 / BA058: ACTIVE Study Results</td>
</tr>
<tr>
<td>Table 9.5</td>
<td>Abaloparatide / BIM44058 / BA058: ACTIVE AND ACTIVExtend Clinical Trial Results (Fracture Reduction over 25-month period)</td>
</tr>
<tr>
<td>Table 9.6</td>
<td>Abaloparatide / BIM44058 / BA058: ACTIVE AND ACTIVExtend Clinical Trial Results (Increase in BMD over 25-month Period)</td>
</tr>
<tr>
<td>Table 9.7</td>
<td>Abaloparatide / BIM44058/ BA058: ACTIVE AND ACTIVExtend Clinical Trial Results (Adverse events reported over 25-month period)</td>
</tr>
<tr>
<td>Table 10.1</td>
<td>Peptide Therapeutics in Other Metabolic Disorders: Pipeline</td>
</tr>
<tr>
<td>Table 10.2</td>
<td>SCENESSE® / Afamelanotide / CUV1647: Current Status of Development</td>
</tr>
<tr>
<td>Table 10.3</td>
<td>Signifor® / Pasireotide: Binding Affinity to the Five Human SSTR Subtypes</td>
</tr>
<tr>
<td>Table 10.4</td>
<td>Signifor® / Pasireotide: Price</td>
</tr>
<tr>
<td>Table 10.5</td>
<td>Signifor® / Pasireotide: Patents</td>
</tr>
<tr>
<td>Table 10.6</td>
<td>Signifor® / Pasireotide: Additional Patents</td>
</tr>
<tr>
<td>Table 10.7</td>
<td>Signifor® / Pasireotide: Current Status of Development</td>
</tr>
<tr>
<td>Table 10.8</td>
<td>Signifor® / Pasireotide: Phase III Study Results (24-Hour Urinary Free Cortisol (UFC) Study Results at Month 6 in Patients with Cushing's disease)</td>
</tr>
<tr>
<td>Table 10.9</td>
<td>AEM-28: Product Overview</td>
</tr>
<tr>
<td>Table 10.10</td>
<td>BMN-111 / Vosoritide: Product Overview</td>
</tr>
<tr>
<td>Table 10.11</td>
<td>AZP-531: Product Overview</td>
</tr>
<tr>
<td>Table 11.1</td>
<td>Peptide Therapeutics in Metabolic Disorders: Technology Platforms</td>
</tr>
<tr>
<td>Table 11.2</td>
<td>ArisCrown Technology: Peptide Therapeutics for Metabolic Disorders</td>
</tr>
<tr>
<td>Table 11.3</td>
<td>CHAMP Technology: Peptide Therapeutics for Metabolic Disorders</td>
</tr>
<tr>
<td>Table 11.4</td>
<td>Glide SDI® (Solid Dose Injector): Peptide Therapeutics for Metabolic Disorders</td>
</tr>
<tr>
<td>Table 11.5</td>
<td>XTEN® Platform: Patent Status</td>
</tr>
<tr>
<td>Table 11.6</td>
<td>XTEN® vs PEG: Comparison of Key Features</td>
</tr>
<tr>
<td>Table 11.7</td>
<td>XTEN® Technology: Drugs Targeting Metabolic Diseases</td>
</tr>
</tbody>
</table>
Table 11.8  Axcess™ Technology: Peptide Therapeutics for Metabolic Disorders
Table 11.9  Axcess™ Technology: Patent Info
Table 11.10  POD™ Patent Status
Table 11.11  Transient Permeability Enhancer (TPE®) Technology: Pipeline Drugs Targeting Metabolic Disorders
Table 11.12  SmartDepot™ Technology: Patent Info
Table 11.13  Smart Depot™ Technology: Drugs Targeting Metabolic Diseases
Table 11.14  GIPET® Technology: Platforms
Table 11.15  GIPET® Technology: Molecules Tested
Table 11.16  LAPSCOVERY™ Technology: Drugs Targeting Metabolic Diseases
Table 11.17  Peptelligence ™ Technology: Patent Info
Table 14.1  Peptide Therapeutics in Metabolic Disorders: Distribution by Highest Phase of Development
Table 14.2  Peptide Therapeutics in Metabolic Disorders: Distribution by Indication
Table 14.3  Peptide Therapeutics in Metabolic Disorders: Distribution by Indication across Marketed, Clinical and Preclinical phases of development
Table 14.4  Peptide Therapeutics in Metabolic Disorders: Distribution by Route of Administration
Table 14.5  Peptide Therapeutics in Metabolic Disorders: Distribution by Route of Administration across Marketed, Clinical and Preclinical phases of development
Table 14.6  Peptide Therapeutics in Metabolic Disorders: Distribution by Type of Analogue
Table 14.7  Peptide Therapeutics in Metabolic Disorders: Distribution by Type of Analogue across Marketed, Clinical and Preclinical Phases of Development
Table 14.8  Peptide Therapeutics in Metabolic Disorders: Distribution by Type of Peptide
Table 14.9  Peptide Therapeutics in Metabolic Disorders: Distribution by Dosage Frequency
Table 14.10  Peptide Therapeutics in Metabolic Disorders: Distribution by Dosage Frequency across Daily, Weekly, Monthly, Semi Annually and Annually Categories
Table 14.11  Peptide Therapeutics Market (USD Billion): Metabolic Disorders, 2015 – 2025 (Base Scenario)
Table 14.12  Peptide Therapeutics Market (USD Billion): Metabolic Disorders, 2015 – 2025 (Optimistic Scenario)
Table 14.13  Peptide Therapeutics Market (USD Billion): Metabolic Disorders, 2015 – 2025 (Conservative Scenario)
Table 14.14  Diabetes: Worldwide Prevalence and Diagnosis (Million)
Table 14.15  Diabetes: Prevalence by Region / Country (Million)
Table 14.16  Diabetes: Diagnosed Cases by Region / Country (Million)
Table 14.17  Peptide Therapeutics in Diabetes: Distribution by Highest Phase of Development
Table 14.18  Peptide Therapeutics in Diabetes: Distribution by the Target Sub-Indication
Table 14.19  Peptide Therapeutics in Diabetes: Distribution by the Type of Analogue
Table 14.20  Peptide Therapeutics in Diabetes: Distribution by the Route of Administration
Table 14.21  Peptide Therapeutics in Diabetes: Distribution by Dosage Frequency
Table 14.22  Peptide Therapeutics in Diabetes: Distribution by Type of Peptide
Table 14.23  BYDUREON® / Exenatide Once Weekly / Exenatide Extended Release: Historical Sales (USD Million)
Table 14.24  BYDUREON® / Exenatide Once Weekly / Exenatide Extended Release: Regional Distribution of Historical Sales (USD Million)
Table 14.25  Peptide Therapeutics Market (USD Million): Diabetes Sales, 2015 – 2025 (Base Scenario)
Table 14.26  Peptide Therapeutics Market (USD Million): Diabetes Sales, 2015 – 2025 (Optimistic Scenario)
Table 14.27  Peptide Therapeutics Market (USD Million): Diabetes Sales, 2015 – 2025 (Conservative Scenario)
Table 14.28  Peptide Therapeutics in Acromegaly: Distribution by Highest Phase of Development
Table 14.29  Peptide Therapeutics in Acromegaly: Distribution by the Route of Administration
Table 14.30  Peptide Therapeutics in Acromegaly: Distribution by Dosage Frequency
Table 14.31  Peptide Therapeutics Market (USD Million): Acromegaly, 2015 - 2025: (Base Scenario)
Table 14.32  Peptide Therapeutics Market (USD Million): Acromegaly, 2015 - 2025: (Optimistic Scenario)
Table 14.33  Peptide Therapeutics Market (USD Million): Acromegaly, 2015 - 2025: (Conservative Scenario)
Table 14.34  Peptide Therapeutics in Obesity: Distribution by Highest Phase of Development
Table 14.35  Peptide Therapeutics in Obesity: Distribution by the Target Sub-Indication
Table 14.36  Peptide Therapeutics in Obesity: Distribution by Route of Administration
Table 14.37  Peptide Therapeutics in Obesity: Distribution by Dosage Frequency
Table 14.38  Peptide Therapeutics in Obesity: Distribution by Type of Analogue
Table 14.39  Peptide Therapeutics Market (USD Million): Obesity, 2015 – 2025 (Base Scenario)
Table 14.40  Peptide Therapeutics Market (USD Million): Obesity, 2015 – 2025 (Optimistic Scenario)
Table 14.41  Peptide Therapeutics Market (USD Million): Obesity, 2015 – 2025 (Conservative Scenario)
Table 14.42  Peptide Therapeutics in Osteoporosis: Distribution by Highest Phase of Development
Table 14.43  Peptide Therapeutics in Osteoporosis: Distribution by Type of Analogue
Table 14.44  Peptide Therapeutics in Osteoporosis: Distribution by Route of Administration
Table 14.45  Peptide Therapeutics in Osteoporosis: Distribution by Type of Peptide
Table 14.46  Peptide Therapeutics in Osteoporosis: Distribution by Dosage Frequency
Table 14.47  Peptide Therapeutics Market (USD Million): Osteoporosis, 2015 - 2025: (Base Scenario)
Table 14.48  Peptide Therapeutics Market (USD Million): Osteoporosis, 2015 - 2025: (Optimistic Scenario)
Table 14.49  Peptide Therapeutics Market (USD Million): Osteoporosis, 2015 - 2025: (Conservative Scenario)
Table 14.50  Peptide Therapeutics in Other Metabolic Disorders: Distribution by Highest Phase of Development
Table 14.51  Peptide Therapeutics in Osteoporosis: Distribution by Type of Analogue
Table 14.52  Peptide Therapeutics in Other Metabolic Disorders: Distribution by Route of Administration
Table 14.53  Peptide Therapeutics in Other Metabolic Disorders: Distribution by Dosage Frequency
Table 14.54  Signifor Sales (USD Million), 2012 – 2014
Table 14.55  Peptide Therapeutics Market (USD Million): Other Metabolic Disorders, 2015 – 2025 (Base Scenario)
Table 14.56  Peptide Therapeutics Market (USD Million): Other Metabolic Disorders, 2015 – 2025 (Optimistic Scenario)
Table 14.57  Peptide Therapeutics Market (USD Million): Other Metabolic Disorders, 2015 – 2025 (Conservative Scenario)
Table 14.58  Peptide Technology Platforms: Distribution by Key Features
Table 14.59  Peptide Therapeutic Market (USD Billion): Metabolic Disorders- 2015, 2020 and 2025

Ordering:

Order Online - [http://www.researchandmarkets.com/reports/3616971/](http://www.researchandmarkets.com/reports/3616971/)

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.

Product Name: Peptide Therapeutics in Metabolic Disorders, 2016 - 2025
Web Address: http://www.researchandmarkets.com/reports/3616971/
Office Code: SCBR9USH

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

<table>
<thead>
<tr>
<th>Quantity</th>
<th>Product Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electronic (PDF) - Single User:</td>
<td></td>
<td>USD 2199</td>
</tr>
<tr>
<td>Electronic (PDF) - Site License:</td>
<td></td>
<td>USD 4999</td>
</tr>
<tr>
<td>Electronic (PDF) - Enterprisewide:</td>
<td></td>
<td>USD 8999</td>
</tr>
</tbody>
</table>

Contact Information
Please enter all the information below in BLOCK CAPITALS

Title: [ ] Mr  [ ] Mrs  [ ] Dr  [ ] Miss  [ ] Ms  [ ] Prof
First Name: ___________________________________________ Last Name: _________________________________________
Email Address: * _______________________________________
Job Title: _____________________________________________
Organisation: __________________________________________
Address: _____________________________________________
City: _________________________________________________
Postal / Zip Code: _____________________________________
Country: ______________________________________________
Phone Number: __________________________________________
Fax Number: ___________________________________________

* 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