# INDUSTRY OVERVIEW

*The information and statistics set out in this section and other sections of this document were extracted from the report prepared by CIC, which was commissioned by us, and from various official government publications and other publicly available publications. We engaged CIC to prepare the report, an independent industry report, in connection with the [REDACTED]. The information from official government sources has not been independently verified by us, the Joint Sponsors, [REDACTED], [REDACTED], [REDACTED], [REDACTED], [REDACTED], any of their respective directors and advisers or any other persons or parties involved in the [REDACTED], and no representation is given as to its accuracy.*

## SOURCE OF INFORMATION AND RESEARCH METHODOLOGY

We have commissioned CIC, an independent market research and consulting company, to conduct an analysis of, and to prepare a report on certain metabolic disease markets. We expect to pay a total fee of USD$70,000 to CIC for the preparation of the report, which we believe reflects market rates for reports of this type. CIC collected and reviewed publicly available data, company reports, industry statistics, and conducted interviews with industry experts in preparing the report. All statistics are based on information available as of the date of the report. CIC has exercised due care in preparing the report.

## DIRECTORS' CONFIRMATION

After making reasonable inquiries, our Directors confirm that, to the best of their knowledge, there has been no adverse change in the market information presented in the report since the date of the report that may qualify, contradict or have an impact on the information in this document.

## METABOLIC DISEASE MARKET

Metabolic diseases, encompassing obesity, MASH, T2D and SHTG, among others, disrupt normal metabolism and are critical drivers of cardiovascular and cerebrovascular diseases, chronic inflammation, and neurological dysfunction, representing a significant and growing global health burden.

The global prevalence of metabolic diseases increased from approximately 2,375.6 million in 2020 to approximately 2,570.0 million in 2024, and is projected to reach approximately 3,139.5 million by 2035; in China, the prevalence grew from approximately 513.2 million to approximately 555.2 million over the same period and is expected to reach approximately 678.2 million by 2035. Correspondingly, the global market for metabolic diseases therapies expanded from approximately US$121.8 billion in 2020 to approximately US$190.5 billion in 2024, and is projected to reach approximately US$573.9 billion by 2035, with the Chinese market growing from approximately US$12.5 billion to approximately US$16.7 billion over the same period and expected to reach approximately US$46.0 billion by 2035. The rising prevalence and increasing complexity of the metabolic diseases discussed above highlight a persistent need for therapies that improve long-term, systemic patient outcomes rather than merely addressing acute symptoms in the global and Chinese markets.

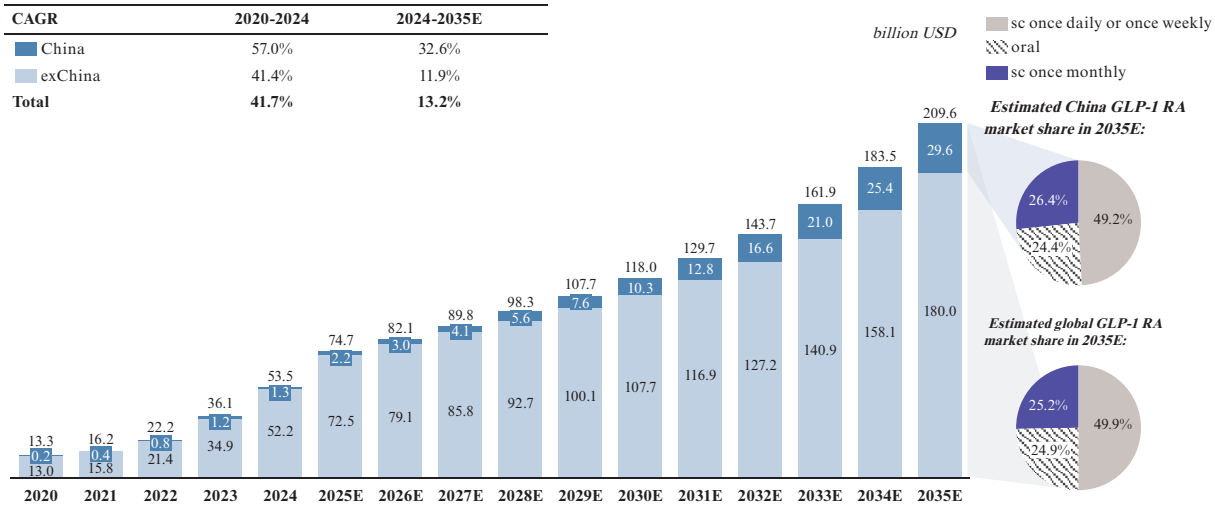
## GLP-1 RA MARKET

### Overview of GLP-1 RAs

GLP-1 RAs are a class of incretin-based therapies that enhance glucose-dependent insulin secretion, suppress glucagon release, and exert broad metabolic and systemic effects, including delayed gastric emptying, appetite suppression through central satiety pathways, and modulation of pancreatic secretions. Given their clinically meaningful systemic benefits, GLP-1 RAs have emerged as a foundational pharmacological modality in the management of diverse metabolic diseases and related comorbidities. As of the Latest Practicable Date, GLP-1 RAs have received regulatory approval for six indications globally: T2D, obesity, MASH, cardiovascular disease (CVD), OSA and diabetic nephropathy. Beyond these approved indications, GLP-1 RAs are being evaluated in clinical-stage development across a broad range of additional conditions, including Alzheimer's disease, type 1 diabetes mellitus, heart failure, chronic kidney disease, Parkinson's disease, alcohol use disorder, osteoarthritis, psoriatic arthritis, polycystic ovary syndrome, hypertension, hyperlipidemia/dyslipidemia, major depressive disorder, and asthma, underscoring the expanding therapeutic potential of GLP-1 RAs.

The global market size of GLP-1 RAs is expected to grow from US$53.5 billion in 2024 to US$209.6 billion in 2035. In China, the market size of GLP-1 RAs is expected to grow from approximately US$1.3 billion in 2024 to US$29.6 billion in 2035. Within the global GLP-1 RA market, monthly acting and oral-administered GLP-1 RAs are expected to rapidly increase their market share. The monthly acting GLP-1 RAs are expected to account for approximately 25.2% and 26.4% of the global and Chinese markets in 2035, respectively, and the oral GLP-1 RAs are expected to account for approximately 24.9% and 24.4% of the global and Chinese markets in 2035, respectively.

**Global GLP-1 RA Market Size, 2020–2035E**



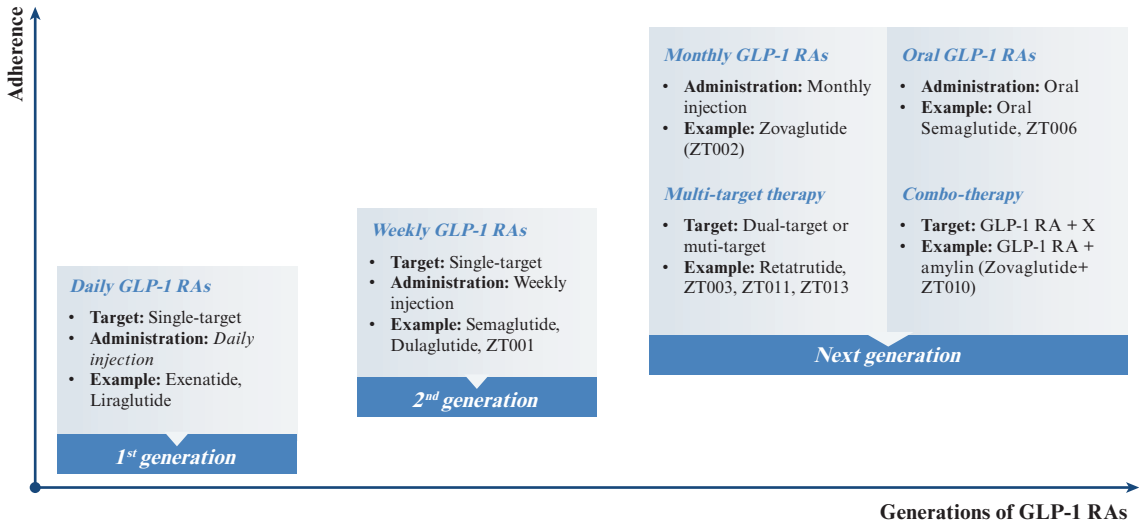

*Source: Obesity Medicine, JAMA Network Open, annual reports, CIC*

### Unmet Medical Needs for GLP-1 RAs

Despite significant advances in pharmacological management, substantial unmet clinical needs persist in the treatment of metabolic diseases: (i) real-world persistence and adherence remain poor, with approximately 65% to 81% of obesity patients without T2D discontinuing GLP-1 RA treatment within the first year due to dosing burden, side effects, and cost, and discontinuation is frequently followed by partial or complete weight regain, highlighting the importance of improving dosing convenience through next-generation formulations such as once-monthly injectables and oral delivery platforms; (ii) for patients with moderate-to-severe obesity, including those for whom bariatric surgery would otherwise be indicated, currently available GLP-1 RA monotherapies may not deliver sufficient weight reduction to achieve meaningful overall health benefits, as clinical evidence suggests that weight loss exceeding 25% may be required in this population, underscoring the need for more potent multi-target combination therapies capable of achieving greater efficacy beyond the plateau of single-target dose escalation; (iii) nausea, vomiting, and related gastrointestinal adverse events are among the most common side effects of GLP-1 RAs and increase in frequency with higher doses, frequently necessitating dose reductions or precluding escalation to therapeutically optimal levels, with particular burden on elderly or comorbid patients, and novel mechanistic approaches such as amylin-based therapies, which offer a milder gastrointestinal side effect profile, as well as long half-life formulations that reduce peak-to-trough concentration fluctuations, present promising strategies to improve tolerability; and (iv) the complex synthesis and biologics manufacturing processes underlying peptide-based GLP-1 RA therapies drive high unit costs and limit production scalability, creating supply chain constraints that represent a significant barrier to broad patient access and payer adoption, reinforcing the importance of advanced manufacturing capabilities to support large-scale commercial supply.

### Developments and Transactions in the GLP-1 RA Market

The GLP-1 RA landscape has evolved through distinct technological generations, each representing a significant leap in patient convenience, efficacy, and therapeutics scope. As summarized in the diagram below, first-generation GLP-1 RAs such as Exenatide and Liraglutide required daily injections and acted on a single target. Second-generation products, such as Semaglutide, extended the dosing interval to once weekly while maintaining a single-target mechanism. Innovation in next-generation GLP-1 RAs is advancing across multiple fronts, including the development of once-monthly mechanisms, oral administration platforms, and multi-target or combination therapies.




*Source: eBioMedicine, Signal Transduction and Targeted Therapy, CIC*

GLP-1 RA is one of the most active areas of global mergers, acquisitions, and licensing transactions in recent years. Representative transactions involving GLP-1 RAs are set out in the table below.

| Rank | Date | Transferor | Transferee | Transaction Details | Target | Administration | Dosage frequency | Total Deal Value *(USD mn)* | Transaction Types |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2026/01 | CSPC | AstraZeneca | SYH2082 | GLP-1R/GIPR | s.c. | QM | 18,500 | Licensing |
| | | | | 3 preclinical programmes + 4 programmes based on CSPC's AI/LiquidGel platform | | | | | |
| 2 | 2025/11 | Metsera | Pfizer | MET-097i | GLP-1R | s.c. | QW/QM | 10,000 | M&A |
| | | | | MET-233i | amylin/CTR | s.c. | QM | | |
| | | | | MET-002 | GLP-1R | p.o. | — | | |
| 3 | 2024/05 | Hengrui | Kailera Therapeutics | HRS-4729 | GLP-1R/GIPR/GCGR | s.c. | — | 6,035 | NewCo |
| | | | | HRS-7535 | GLP-1R | p.o. | — | | |
| | | | | HRS9531 | GLP-1R/GIPR | s.c./p.o. | — | | |
| 4 | 2023/12 | Carmot Therapeutics | Roche | CT-388 | GLP-1R/GIPR | s.c. | QW | 3,100 | M&A |
| | | | | CT-996 | GLP-1R | p.o. | QD | | |
| | | | | CT-868 | GLP-1R/GIPR | s.c. | QD | | |
| 5 | 2025/01 | Sciwind | Verdiva Bio | Ecnoglutide | GLP-1R | p.o. | QW | Over 2,400 | Licensing |
| | | | | VRB-103 | amylin/CTR | p.o. | QW | | |
| | | | | VRB-102 | amylin | s.c. | — | | |
| 6 | 2025/05 | Septerna | Novo Nordisk | Multiple oral small molecule medicines targeting GPCR targets, including GLP-1R, GIPR and glucagon receptors | | | | 2,200 | Licensing |
| 7 | 2025/12 | YaoPharma | Pfizer | YP05002 | GLP-1R | p.o. | — | 2,085 | Licensing |
| 8 | 2025/07 | CSPC | Madrigal | SYH2086 | GLP-1R | p.o. | — | 2,075 | Licensing |
| 9 | 2024/12 | Hansoh Pharma | Merck | HS-10535 | GLP-1R | p.o. | — | 2,012 | Licensing |
| 10 | 2025/06 | Hansoh Pharma | Regeneron | HS-20094 | GLP-1R/GIPR | s.c. | QW | 2,010 | Licensing |
| 11 | 2023/11 | Eccogene | AstraZeneca | ECC5004 | GLP-1R | p.o. | QD | 2,010 | Licensing |
| 12 | 2025/03 | United Laboratories | Novo Nordisk | UBT251 | GLP-1R/GIPR/ glucagon receptor | s.c. | QW | 2,000 | Licensing |

*Source: Company announcements, CIC*

*Note:* The list only includes the transactions within the last three years with publicly disclosed aggregate transaction value of over US$2.0 billion. Total deal value refers to upfront payments and disclosed milestone payments, and excludes royalties unless specifically quantified and excludes the equity portion.

**Manufacturing of Peptide GLP-1 RAs**

Currently approved GLP-1 RAs are manufactured using chemical peptide synthesis, recombinant fermentation and, to a lesser extent, mammalian cell-based Fc-fusion expression. Chemical synthesis remains the most widely adopted approach, while recombinant fermentation is used in only a limited number of products due to its higher technical complexity, despite offering potential advantages in scalability, consistency and long-term cost efficiency. Except semaglutide and liraglutide, other approved GLP-1 therapies as well as biosimilars of semaglutide and liraglutide predominantly rely on chemical peptide synthesis.

Compared with chemical synthesis, non-mammalian fermentation-based peptide manufacturing offers structurally superior scalability, higher effective yields, and a more favorable cost profile, making it better suited for large-volume GLP-1 production and long-term commercial supply. Notably, comparable domestic semaglutide biosimilar and innovative GLP-1 products typically report recombinant protein expression levels of approximately one to three g/L; in contrast, our proprietary fermentation-based process has achieved expression levels of approximately 15 to 20 g/L, translating into significantly higher manufacturing productivity with yields estimated to be approximately five to 10 times higher than the average industry benchmarks. In addition, API manufactured in-house through the fermentation-based process was priced approximately 20% lower than outsourced API produced through chemical synthesis, further reinforcing the cost advantages associated with our integrated manufacturing approach. These cost dynamics are further illustrated by industry cost data: as of 2025, the estimated cost of API produced through chemical synthesis ranges from approximately US$450/g to US$1,200/g, while the estimated

cost of API produced through fermentation-based methods ranges from approximately US$50/g to US$400/g, reflecting the lower production costs achievable through fermentation-based manufacturing.

| Dimension | Chemical Synthesis (SPPS/LPPS) | Biotechnological Fermentation (Recombinant Protein Expression) |
|---|---|---|
| **Process principle** | Stepwise solid- or liquid-phase peptide elongation with repetitive coupling, deprotection and washing cycles | Microbial expression (e.g., E. coli, yeast) of peptide or precursor, followed by downstream purification and optional chemical modification |
| **Typical peptide length** | < **40** amino acids | < **200** amino acids |
| **Process complexity** | Chemically straightforward but highly repetitive; **cumulative yield loss across multiple synthesis cycles** | **High biological** system complexity, but fewer repetitive steps once expression system is established |
| **Scalability** | **Medium**; scalability due to resin capacity, solvent handling, and purification bottlenecks | **Highly scalable**; compatible with industrial fermentation and large-volume bioreactors |
| **Expression/synthesis yield** | **Low** effective overall yield due to stepwise losses | **Relatively high** volumetric productivity |
| **Cost structure** | **Cost-intensive**, driven by protected amino acids, coupling reagents, large solvent consumption and waste treatment | **Lower unit cost potential;** fermentation media are inexpensive and production benefits from economies of scale |
| **Environmental footprint** | **High solvent usage and waste generation;** peptide manufacturing can generate several thousand kg of waste per kg API | **Significantly lower solvent usage;** waste profile mainly aqueous and easier to treat |
| **Manufacturing cost (relative)** | **High** e.g., the cost of API ranges from 450 to 1,200 USD/g | **Low** e.g., the cost of API ranges from 50 to 400 USD/g |

*Source: Nature Communications, expert interviews, CIC*

### Growth Drivers for GLP-1 RAs

The GLP-1 RA market is entering a phase of broad evolution shaped by converging dynamics: (i) inelastic market demand driven by the growing global prevalence of obesity and metabolic disease; (ii) rising health awareness accelerating diagnosis rates and treatment-seeking behavior; (iii) technological advancement across once-monthly mechanisms, oral delivery platforms, and multi-target combination therapies is broadening the clinical utility and commercial reach of GLP-1 RA therapies; (iv) expansion of therapeutic indications beyond diabetes and obesity is materially enlarging the total addressable market; and (v) progressive market segmentation driven by increasing payer coverage, biosimilar entry, and next-generation therapies improving affordability and patient access.

### Future Trends of GLP-1 RAs

Key future trends shaping GLP-1 RA development include: (i) improving convenience through once-monthly injectables and oral formulations, and enhancing safety and tolerability as approximately 65%-81% of obesity patients without T2D discontinue GLP-1 RA therapy within the first year due to dosing burden, side effects or costs; (ii) advancing multi-target approaches, particularly GLP-1/GIPR/amylin combinations demonstrating enhanced weight reduction; and (iii) expanding GLP-1 RA applications across cardiovascular, renal, and hepatic indications.

## INTRODUCTION TO FGF21

### Overview of FGF21

FGF21 is an endogenous metabolic regulator that governs systemic energy homeostasis and lipid handling. In human clinical trials, FGF21 analog treatment has produced significant improvements in dyslipidemia, including reductions in triglycerides and low-density lipoprotein cholesterol alongside increases in high-density lipoprotein cholesterol, as well as meaningful reductions in liver fat, MASH resolution, and improvements in liver fibrosis, together with favorable effects on insulin-related markers.

FGF21-based therapies have demonstrated potential activity in cirrhotic MASH (F4), a high-risk population with no currently approved treatments, differentiating FGF21 from most MASH candidates targeting F2 to F3 fibrosis. Success in the F4 population would address a critical unmet need, potentially preventing hepatic decompensation and liver failure. Confirmed activity in this stage would position FGF21 as a transformative advance in managing advanced liver diseases. As a key regulator of hepatic energy metabolism, FGF21 directly targets the core pathological mechanisms of MASH by promoting hepatic fat clearance, improving lipid metabolism, and exerting anti-fibrotic effects, thereby achieving direct intervention in liver pathology; GLP-1 RAs through weight reduction and glycemic management, systemically ameliorate metabolic risk factors that drive MASH progression. The combination of these two agents synchronously addresses the multiple pathological mechanisms of MASH, creating a synergistic therapeutic effect with the potential to achieve superior MASH resolution and fibrosis reversal compared to monotherapy.

**Developments and Transactions in the FGF21 Market**

FGF21 has emerged as one of the most actively transacted mechanisms in metabolic drug development in the past 12 months, attracting significant market transactions and licensing activities across global and China-based innovators targeting MASH and severe dyslipidemia. Representative transactions involving FGF21 analogs are set out in the table below.

| Rank | Date | Transferor | Transferee | Transaction Details | Target | Administration | Dosage frequency | Total Deal Value *(USD mn)* | Transaction Types |
|---|---|---|---|---|---|---|---|---|---|
| 1 | 2025-10-09 | Akero Therapeutics | Novo Nordisk | Efruxifermin | FGF21 | s.c. | QW | 5,200 | M&A |
| 2 | 2025-09-18 | 89bio | Roche | Pegozafermin | FGF21 | s.c. | QW/Q2W | 3,500 | M&A |
| 3 | 2025-05-14 | BP Asset IX | GSK | Efimosfermin alfa | FGF21 | s.c. | QM | 2,000 | M&A |
| 4 | 2025-10-31 | Minwei | Sidera Bio | MWN105 | GLP-1R/GIPR/FGF21 | s.c. | QW | 1,045 | Licensing with equity |

*Source: Company announcements, CIC*

*Note:* The list includes transactions with a published total deal value over US$1 billion. Total deal value refers to upfront payments and disclosed milestone payments, and excludes royalties unless specifically quantified and excludes the equity portion.

## INTRODUCTION TO AMYLIN

**Overview of Amylin**

Amylin is a naturally occurring 37-amino acid peptide hormone co-secreted with insulin from the pancreatic β cells in response to nutrient intake. It enhances satiety signaling and slows gastric emptying through distinct receptors that are independent of the GLP-1 pathway, providing a mechanistically differentiated approach to weight management relative to the currently approved GLP-1 RAs.

**Clinical Advantages of Amylin and Combining Amylin and GLP-1 RA**

Amylin-based therapies offer differentiated clinical advantages: a milder gastrointestinal side effect profile compared to GLP-1 RAs, and weight loss that preferentially reduces fat mass while preserving lean muscle mass. This profile may benefit patients who are unresponsive to or intolerant of GLP-1 RAs. Amylin also offers a strong mechanistic rationale for combination with GLP-1 RAs, complementing them through distinct receptor pathways that independently reduce food intake and slow gastric emptying. Preclinical and clinical evidence demonstrates that GLP-1/amylin combinations produce greater weight reduction than either mechanism alone, potentially achieving superior efficacy beyond GLP-1 RA monotherapy dose escalation.

## OBESITY/OVERWEIGHT DRUG MARKET

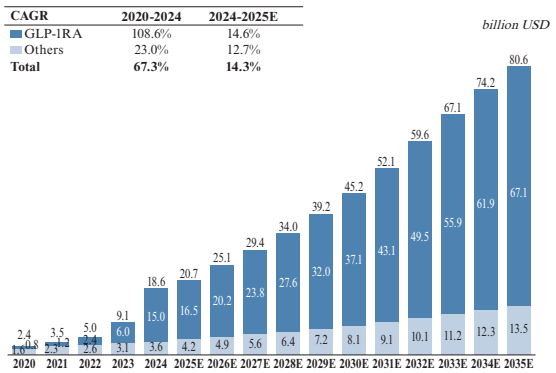
### Overview of Obesity/Overweight Drug Market

Obesity/overweight is a chronic condition defined as abnormal or excessive fat accumulation that presents health risks, including CVD, T2D, osteoarthritis, and certain cancers. Its multifactorial nature, encompassing genetic, behavioral, environmental, and socioeconomic determinants, has contributed to its rapid spread globally, driving substantial investment in treatment and drug development.

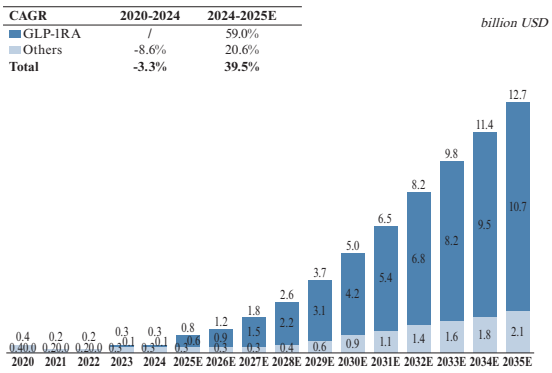
The global burden of obesity/overweight has grown substantially. Globally, the number of individuals affected by obesity/overweight increased from approximately 2,328.7 million in 2020 to approximately 2,638.7 million in 2024 and is expected to reach approximately 3,426.7 million by 2035 (CAGR of approximately 2.4%). In China, prevalence increased from approximately 551.2 million in 2020 to approximately 645.2 million in 2024 and is expected to reach approximately 847.5 million by 2035 (CAGR of approximately 2.5%), reflecting rapid urbanization, dietary changes, sedentary lifestyles, and an aging population.

The global market for obesity/overweight drugs has experienced exceptional growth in recent years, driven by the increased prevalence of obesity/overweight conditions, a growing recognition of obesity/overweight as a chronic disease requiring medical intervention, and the emergence of highly effective pharmacological treatments. GLP-1 RAs have become the dominant therapeutic class in this market, accounting for the vast majority of obesity/overweight drug revenues and fundamentally reshaping the competitive landscape. The global market grew from approximately US$2.4 billion in 2020 to approximately US$18.6 billion in 2024, representing a CAGR of approximately 67.3% over this four-year period. The global market is further projected to reach approximately US$80.6 billion by 2035, representing a CAGR of approximately 14.3% from 2024 to 2035. The Chinese market represents a particularly significant growth opportunity. The Chinese market is expected to grow from approximately US$0.3 billion in 2024 to an estimated US$12.7 billion in 2035, driven predominantly by the expansion of GLP-1 RA therapies, which are projected to grow from approximately US$0.1 billion to an estimated US$10.7 billion over the same period.

**Market Size of Obesity/Overweight Drugs Global Market, 2020–2035E**




**Market Size of Obesity/Overweight Drugs Chinese Market, 2020–2035E**




*Source: World Obesity Atlas, WHO, annual reports, expert interviews, CIC*

### Competitive Landscape of Obesity/Overweight Drug Market

As of the Latest Practicable Date, multiple GLP-1 RAs have been approved for the treatment of obesity/overweight by the NMPA and/or FDA. Development continues for next-generation therapies, including once-monthly injectable GLP-1 RAs and oral peptide GLP-1 RAs, with multiple candidates currently in Phase II or later stages of clinical development, as presented in the tables below.

### NMPA approved innovative GLP-1 RA in the indication of obesity/overweight, as of the Latest Practicable Date

| Drug Name | Brand Name | Target | Company | Modality | Administration | Dosage Frequency | Approval Date | 2025 NRDL | Monthly cost *(thousand RMB)*[1] |
|---|---|---|---|---|---|---|---|---|---|
| **Beinaglutide** | 菲塑美® | GLP-1R | Benemae | Peptide | s.c. | TID | 2023–07–25 | No | ~7.9 |
| **Semaglutide** | 諾和盈® | GLP-1R | Novo Nordisk | Peptide | s.c. | QW | 2024–06–18 | No[2] | ~0.9 |
| **Tirzepatide** | 穆峰達® | GLP-1R/GIPR | Eli Lilly | Peptide | s.c. | QW | 2024–07–16 | No[2] | ~1.3 |
| **Mazdutide** | 信爾美® | GLP-1R/GCGR | Innovent Biologics | Peptide | s.c. | QW | 2025–06–24 | No | ~1.4 |
| **Ecnoglutide** | 先維盈® | GLP-1R | Sciwind | Peptide | s.c. | QW | 2026–03–03 | No | ~1.5 |

*Notes:*

(1) Monthly cost = unit price* average monthly dose in maintenance stage, based on four weeks or 28 days treatment cycle.

(2) Products included in the 2025 NRDL are reimbursed only for the treatment of T2DM, and 2025 NRDL coverage does not extend to the indication of overweight or obesity.

### FDA Approved GLP-1 RA for Obesity/Overweight, as of the Latest Practicable Date

| Drug Name | Brand Name | Target | Company | Modality | Administration | Dosage Frequency | Approval Date | Monthly Cost *(thousand USD)*[1] |
|---|---|---|---|---|---|---|---|---|
| Liraglutide | Saxenda® | GLP-1R | Novo Nordisk | Peptide | s.c. | QD | 2014–12–23 | ~0.6 |
| **Semaglutide** | Wegovy® | GLP-1R | Novo Nordisk | Peptide | s.c. | QW | 2021–06–04 | ~0.3 |
| **Tirzepatide** | Zepbound® | GLP-1R/GIPR | Eli Lilly | Peptide | s.c. | QW | 2023–11–08 | ~0.4 |
| **Oral semaglutide** | Wegovy® | GLP-1R | Novo Nordisk | Peptide | p.o. | QD | 2025–12–22 | ~0.3 |
| **Orforglipron** | Foundayo™ | GLP-1R | Eli Lilly | Small molecule | p.o. | QD | 2026–04–01 | ~0.3 |

*Source: FDA, FDA label, CIC*

*Note:*

(1) Monthly cost = unit price * average monthly dose in maintenance stage or monthly subscription fee if available, based on four weeks or 28 days treatment cycle.

### Once-Monthly Injectable GLP-1 RA under Development for Obesity/Overweight (Phase II or Later), as of the Latest Practicable Date

| Drug Name | Target | Company | Phase | Modality | Administration | Dose Frequency | First Posted Date | Location |
|---|---|---|---|---|---|---|---|---|
| MariTide (AMG133) | GLP-1R/GIPR | Amgen | III | Antibody-peptide conjugate | s.c. | Q4W | 2025/3/5 | Global excl. China |
| Zovaglutide (ZT002) | GLP-1R | QL Biopharm | III | Peptide | s.c. | Q4W | 2025/11/17 | China |
| PF'3944 (MET-097i) | GLP-1R | Pfizer | IIb | Peptide | s.c. | QW/Q4W | 2025/5/15 | US |
| ASC30 | GLP-1R | Ascletis | IIa | Small molecule | s.c. | Q4W | 2025/6/4 | US |

*Source: Clinicaltrials.gov, CDE, CIC*

**Oral Peptide GLP-1 RA under Development for Obesity/Overweight (Phase II or Later), as of the Latest Practicable Date**

| Drug Name | Target | Company | Phase | Modality | Administration | Dose Frequency | First Posted Date | Location |
|---|---|---|---|---|---|---|---|---|
| Amycretin | GLP-1R/amylin | Novo Nordisk | III | Peptide | p.o. | QD | 2026/3/19 | Global excl. China |
| VK2735 Tablet | GLP-1R/GIPR | Viking Therapeutics | II | Peptide | p.o. | QD | 2025/2/14 | US |
| HRS-9531 | GLP-1R/GIPR | Hengrui/Kailera | II | Peptide | p.o. | QD | 2025/2/19 | China |
| ZT006 | GLP-1R | QL Biopharm | II | Peptide | p.o. | QD/QW | 2025/10/28 | China |
| MWN109 | GLP-1R/GIPR/GCGR | Minwei | II | Peptide | p.o. | QD | 2025/12/8 | China |
| Oral Ecnoglutide | GLP-1R | Sciwind/Verdiva | II | Peptide | p.o. | QD/QW | 2025/12/15 | US |
| | | | I/II | Peptide | p.o. | QD/QW | 2025/10/24 | China |

*Source: Clinicaltrials.gov, CDE, CIC*

**Global MNCs' GLP-1 Pipeline Landscape in Obesity/Overweight Drug Market**

The following table presents the development pipeline of several global multi-national corporations (MNCs) active within the obesity/overweight drug market, illustrating the current competitive landscape across GLP-1 RAs and next-generation candidates. As reflected in the table below, leading MNCs are increasingly focused on once-monthly injection, oral formulation and targets combination therapies designed to reduce dosing frequency and improve patient adherence, thereby enhancing treatment compliance and broadening the addressable patient population. While Novo Nordisk and Eli Lilly remain frontrunners in this space, the competitive landscape is deepening as additional MNCs progress differentiated candidates across varying multi-agonist target profiles and delivery formats.

| | Once Monthly | Oral Formulation | | Targets Combination | | | | |
|---|---|---|---|---|---|---|---|---|
| | Injection Monthly | Peptide | Small Molecule | GLP-1 + GIP | GLP-1 + GCG | GLP-1 + GIP + GCG | GLP-1 + Amylin | GLP-1 + GIP + Amylin |
| Novo Nordisk | | Approved (Semaglutide) | Pre-clinical (SP-2297)[2] | Phase II (NN9542) | | Phase II (UBT251) | NDA (CagriSema) | Phase II (NNC0662-0419) |
| Eli Lilly | | | Approved (Orforglipron) | Approved (Tirzepatide) | Approved (Mazdutide) | Phase III (Retatrutide) | | |
| Amgen | Phase III (MariTide)[1] | | | | | | | |
| BI | | | | | Phase III (Survodutide) | | | |
| Roche | | | Phase II (CT-996) | Phase III (CT-388) | | | | |
| Merck | | | Phase I (HS-10535) | | Phase II (Efinopegdutide) | | | |
| AZ | Phase I (SYH2082)[1] | | Phase II (Elecoglipron) | | Phase II (AZD9550) | | | |
| Pfizer | Phase II (MET-097i) | Phase I (MET-002o) | Phase I (YP05002) | | | | Phase I (MET-097i + MET-233i) | |
| Regeneron | | | | Phase III (HS-20094) | | | | |
| Gilead | | | Phase I (GS-4571) | | | | | |
| QL Biopharm | Phase III (Zovaglutide) | Phase II (ZT006) | | | | | Pre-clinical (Zovaglutide + ZT010) | Pre-Clinical (ZT011, ZT013) |

*Notes:* 1) MariTide is a GLP-1R agonist/GIPR antagonist, while SYH2082 is a GLP-1R/GIPR dual agonist; 2) SP-2297 is a GLP-1R/GIPR/GCGR triple agonist.

## Clinical Results of Major GLP-1 RA for Obesity/Overweight

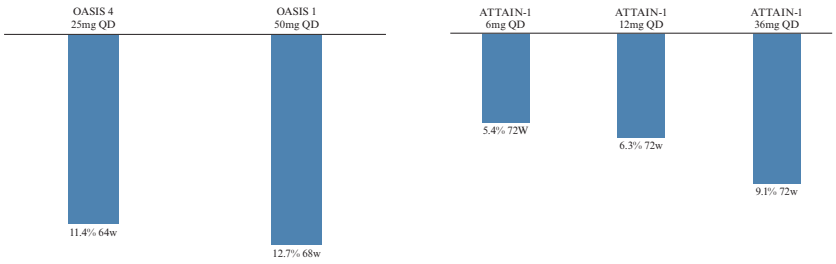
The following table summarizes certain key clinical efficacy and safety data for major once-monthly and commercialized GLP-1 RA therapies.

| Product | Zovaglutide (ZT002) | MariTide (AMG133) | PF'3944 (MET-097i) | Semaglutide | | Tirzepatide | |
|---|---|---|---|---|---|---|---|
| *Company* | QL Biopharm | Amgen | Pfizer | Novo Nordisk | | Eli Lilly | |
| *Target* | **GLP-1R SC Q4W** | **GLP-1R/ anti-GIPR SC Q4W** | GLP-1R SC Q4W | GLP-1R SC QW | | GLP-1R/GIPR SC QW | |
| *Molecule types* | Human GLP-1 based peptide | Antibody-peptide conjugate | Exendin-4 based peptide | Human GLP-1 based peptide | | Human GLP-1/GIP based peptide | |
| *Manufacturing* | *E.coli* recombinant | Mammalian recombinant + chemical synthesis | Chemical synthesis | Yeast recombinant | | Chemical synthesis | |
| *Population* | China | Global | the U.S. | China | Global | China | Global |
| *Mean BMI ($kg/m^2$)* | 34.7 | 37.9 | 36 | 34.0 | 38.4 | 32.0 | 38.1 |
| *Dosage* | 160mg Q4W (the maxi dose) | 420mg Q4W (the maxi dose) | 4.8mg Q4W (the maxi dose) | 2.4mg QW (the only dose) | 2.4mg QW (the only dose) | 15mg QW (the maxi dose) | 15mg QW (the maxi dose) |
| *Trial duration (weeks)* | 24 | 52 | 28 | 44 | 68 | 52 | 72 |
| *Placebo-adjusted weight loss (%)*[1] | –11.4% at week 24 | –11.8% at week 24 | –12.3% at week 28 | –6.5% at week 24 | –8% at week 24 | –12.5% at week 24 | –12% at week 24 |
| *SAE (%)* | 3.9% | 6% | N/A | 6.2% | 9.8% | 11.3% | 5.1% |
| *Discontinuation rates due to GIAE (%)* | 0% | 8% | N/A | 1.5% | 4.5% | 4.2% | N/A |
| *Discontinuation rates due to AE (%)* | 5.3% | 12% | 9.2% | 3.6% | 7.0% | 7.0% | 6.2% |
| *Data source* | Phase II NCT06371326, EASD 2025 | Phase II NCT05669599, NEJM 2025 | Phase II VESPER-1, VESPER-3, Pfizer official announcements | Phase III STEP 7 (Chinese subgroup), Diabetes Obes Metab. | Phase III STEP 1, NEJM 2021 | Phase III SURMOUNT-CN, JAMA | Phase III SURMOUNT-1, NEJM 2022 |

*Source: N Engl J Med, Diabetes Obes Metab, JAMA, company announcements, CIC*

*Notes*: 1) Data are from efficacy estimand or trial product estimand in full analysis set; and 2) To ensure a fair comparison, weight loss efficacy was evaluated at the 24-week mark or the closest proxy.

The following table compares the key characteristics of oral peptide GLP-1 RAs and oral small molecule GLP-1 RAs.

| Comparison dimensions | Oral Peptides | Oral Small Molecules |
|---|---|---|
| **Representative drug** | **Novo Nordisk**<br>Oral semaglutide | **Eli Lilly**<br>Orforglipron |
| **Stage** | Approved in the US (2025), Phase III in China | Approved in the US (2026), NDA in China |
| **Safety** | Safety verified in >50 million people for GLP-1 peptide drugs;<br>long half-life; good safety and tolerability profiles | Short half-life; safety/tolerability not yet verified in large populations; Orforglipron was associated with **~four times higher** odds of treatment discontinuation due to **any AEs** and **~14 times higher** odds of treatment discontinuation due to **GIAEs** in ORION study[1]; The FDA has requested additional safety data on orforglipron to evaluate cardiovascular and liver risks |
| **Efficacy** | Comparable to injectable peptides; Oral semaglutide demonstrated greater weight loss compared with orforglipron of **-3.2%** regardless of whether patients stayed on treatment in ORION study[1] | Less efficacious than peptides |
| **Convenience** | Fasting condition | No fasting required; limited usage of CYP3A4 inhibitors and inducers; limited dosage of Simvastatin |
| **Weight loss[2]** |  | |

*Source: The Lancet, NEJM, company announcements, CIC*

*Notes:* 1) The ORION study was a population-adjusted indirect treatment comparison evaluating weight loss efficacy and tolerability between oral semaglutide 25mg and orforglipron 36mg using data from the OASIS 4 and ATTAIN-1; 2) Placebo-adjusted weight loss; data from treatment-regimen estimand.

## MASH DRUG MARKET

### Overview of MASH Drug Market

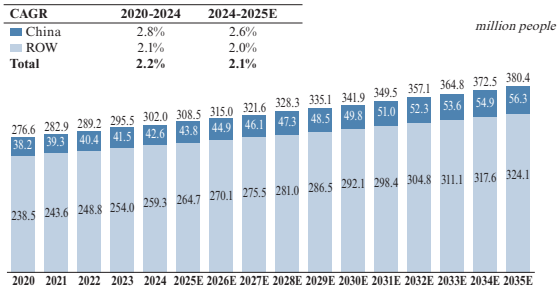
MASH is an advanced and progressive form of metabolic dysfunction-associated fatty liver disease (MAFLD), characterized by harmful hepatic inflammation that triggers the formation of scar tissue in the liver. If left untreated or inadequately managed, MASH can lead to serious and potentially life-threatening complications, including cirrhosis, liver failure, and liver cancer. The progressive nature of the disease, combined with the absence of broadly effective therapeutic options until recently, has established MASH as a critical area of unmet medical need and a focal point of drug development activity globally.

# INDUSTRY OVERVIEW

The global prevalence of MASH has grown steadily in recent years and is projected to continue expanding in line with the rising prevalence of obesity/overweight, T2D, and other metabolic risk factors. Globally, the number of individuals affected by MASH increased from approximately 276.6 million in 2020 to approximately 302.0 million in 2024, and is projected to reach approximately 380.4 million by 2035; in China, prevalence grew from approximately 38.2 million in 2020 to approximately 42.6 million in 2024, and is expected to reach approximately 56.3 million by 2035.

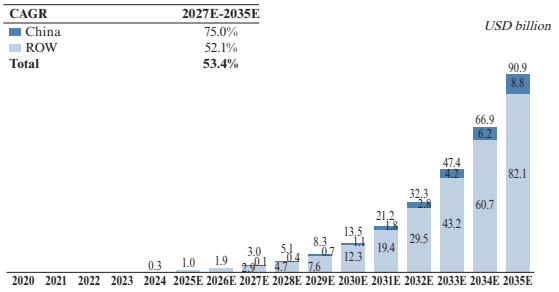
The MASH drug market is at an early but rapidly accelerating stage of commercial development, following the first approvals of MASH-specific therapies. Globally, the market size of MASH drugs was approximately US$0.3 billion in 2024 and is projected to reach approximately US$90.9 billion by 2035; in China, the MASH drug market is expected to reach approximately US$8.8 billion by 2035, as shown in the graphs below.

**Global Prevalence of MASH, 2020–2035E**




*Source: WHO, CIC*

**Global Market Size of MASH Drugs, 2020–2035E**




*Source: Journal of Hepatology, FDA, clinicaltrials.gov, CIC*

## Competitive Landscape of MASH Drug Market

MASH represents a significant area of unmet medical need globally. As of the Latest Practicable Date, no drugs have been approved for the treatment of MASH in China. In the United States, FDA-approved therapies are limited to patients with MASH prior to progression to cirrhosis, or F4 fibrosis, as set out in the table below.

**FDA-Approved Therapies for MASH in the U.S., as of the Latest Practicable Date[2]**

| Drug Name | Brand Name | Target | Company | Modality | Administrative | Dosage Frequency | Approval Date | Targeted MASH Stages | Monthly Cost *(thousand USD)*[1] |
|---|---|---|---|---|---|---|---|---|---|
| Resmetirom | Rezdiffra® | THR-β | Madrigal | Small molecule | p.o. | QD | 2024/3/14 | F2~F3 | ~4.1 |
| Semaglutide | Wegovy® | GLP-1R | Novo Nordisk | Peptide | s.c. | QW | 2025/8/15 | F2~F3 | ~0.3 |

*Source: FDA, FDA label, NMPA, CIC*

*Notes:* 1) Monthly cost = unit price * average monthly dose, based on four weeks or 28 days treatment cycle; and 2) No approved drugs in China for MASH as of the Latest Practicable Date.

Several FGF21-based therapeutic candidates were currently under clinical development for the treatment of MASH globally as of the Latest Practicable Date, which are summarized in the following table.

**FGF21 Candidates under Development for MASH, as of the Latest Practicable Date**

| Drug Name | Target | Company | Phase | Modality | Administration | Dose Frequency | First Posted Date | Targeted MASH Stages | Location |
|---|---|---|---|---|---|---|---|---|---|
| Pegozafermin | FGF21 | Roche | III | Engineered protein | s.c. | QW/Q2W | 2024/3/19 | F2~F4 | Global excl. China |
| Efruxifermin | FGF21 | Novo Nordisk | III | Fusion protein | s.c. | QW | 2023/12/1 | F2~F4 | Global excl. China |
| AP025 | FGF21 | Ampsource/CT Tianqing | II | Fusion protein | s.c. | QW | 2023/8/11 | F1~F3 | China |
| DR10624 | FGF21/GCGR/GLP-1R | Huadong Medicine | II | Fusion protein | s.c. | QW | 2025/2/14 | — | China |
| Efimosfermin alfa | FGF21 | GSK | II | Engineered protein | s.c. | Q4W | 2025/10/27 | F2~F4 | US |
| HEC88473 | FGF21/GLP-1R | Sunshine Lake Pharma/Apollo Therapeutics | I | Fusion protein | s.c. | QW | 2021/5/27 | — | China |
| ZT003 | FGF21/GLP-1R | QL Biopharm | I | Fusion protein | s.c. | QW | 2025/9/22 | F2-F4 | Australia |
| DMR2301 | FGF21 | Sinopharm Group | Ia | Peptide | s.c. | — | 2026/2/2 | — | China |

*Source: CDE, clinicaltrials.gov, CIC*

## OTHER METABOLIC DISEASES DRUG MARKET

### T2D

T2D accounts for approximately 90% of all diabetes cases globally. It is characterized by progressive insulin resistance and declining insulin production, resulting in chronic hyperglycemia and associated microvascular and macrovascular complications.

The global prevalence of T2D has grown steadily, driven by the rising burden of obesity, sedentary lifestyles, aging populations, and urbanization. Globally, the number of individuals affected by T2D increased from approximately 506.1 million in 2020 to approximately 542.9 million in 2024, and is projected to reach approximately 632.5 million by 2035; while China bears one of the largest absolute burdens of T2D of any country worldwide, with prevalence growing from approximately 118.9 million in 2020 to approximately 127.6 million in 2024, and expected to reach approximately 143.9 million by 2035.

The global market for GLP-1 RA therapies in T2D has experienced rapid and sustained growth, reflecting the increasing adoption of GLP-1 RAs as a preferred pharmacological modality for glycemic management given their established efficacy, favorable cardiovascular outcomes data, and weight-reducing benefits. Globally, the GLP-1 RA market for T2D grew from approximately US$12.5 billion in 2020 to approximately US$38.5 billion in 2024, and is projected to reach approximately US$106.5 billion by 2035; in China, the market size grew from approximately US$0.2 billion in 2020 to approximately US$1.3 billion in 2024, and is projected to reach approximately US$13.1 billion by 2035, reflecting both the scale of the domestic patient population and the accelerating penetration of GLP-1 RA therapies within the Chinese healthcare system. As of the Latest Practicable Date, 14 innovative GLP-1 RAs have been approved for T2D by the NMPA and seven by the FDA, with 16 innovative GLP-1 RA candidates having entered Phase III clinical development globally.

## SHTG

SHTG is a serious lipid disorder defined by severely elevated fasting triglyceride levels of 500 mg/dL or above. SHTG is characterized by a markedly increased risk of acute pancreatitis, one of its most dangerous acute complications, as well as atherosclerotic cardiovascular disease, representing a significant and under-addressed area of metabolic medicine. The condition arises from a combination of genetic predisposition and secondary factors including obesity/overweight, T2D, alcohol consumption, and certain medications, and is associated with substantial morbidity and mortality if inadequately managed.

The global prevalence of SHTG has grown in tandem with rising metabolic disease burden. Globally, the number of individuals affected by SHTG increased from approximately 86.2 million in 2020 to approximately 92.7 million in 2024, and is projected to reach approximately 111.9 million by 2035; in China, the prevalence grew from approximately 20.2 million in 2020 to approximately 22.2 million in 2024, and is expected to reach approximately 27.7 million by 2035, reflecting the parallel growth in metabolic risk factors across the Chinese population.

Current treatment options for SHTG are limited to lifestyle modifications, dietary interventions and the off-label use of lipid-lowering therapies, none of which have demonstrated sufficient efficacy in adequately controlling triglyceride levels in SHTG patients. FGF21-based RAs have emerged as a promising option to treat SHTG, with three FGF21-based RAs currently in clinical development globally as set forth in the table below.

**FGF21-based RAs under Development for SHTG, as of the Latest Practicable Date**

| Drug Name | Target | Company | Phase | Modality | Administration | Dose Frequency | Classification | First Posted Date | Location |
|---|---|---|---|---|---|---|---|---|---|
| Pegozafermin | FGF21 | Roche | III | Engineered protein | s.c. | QW | Mono | 2023-05-10 | Global excl. China |
| DR10624 | FGF21/GCGR/ GLP-1R | Huadong Medicine | II | Fusion protein | s.c | QW | Mono | 2024-07-11 | China |
| ZT003 | FGF21/GLP-1R | QL Biopharm | I | Fusion protein | s.c. | QW | Mono | 2025-09-22 | Australia |

*Source: Clinicaltrials.gov, CDE, CIC*