

MARKET REPORT



Frontier Pharma: Chronic, Acute and Neuropathic Pain - GPCR and Nerve Growth Factor-based therapies offer strong potential in difficult-to-treat subtypes

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Summary

Pain, and in particular chronic pain, is a significant global health issue. While pain is not considered a disease in its own right, there is a growing body of evidence that substantiates chronic pain as a disease, rather than just as a symptom of a primary cause. In the US, pain affects more people than cancer, diabetes and heart disease combined, with an estimated 100 million people having experienced at least one chronic pain episode in the last 12 months, at an annual cost of around \$600 billion in medical treatment and lost productivity.

The pain therapeutics market has been largely characterized by only incremental product innovation over the last decade, as most market segments continue to be dominated by long-established product categories, active pharmaceutical ingredients and concomitant mechanisms of action.

Moderate-to-severe pain has been and continues to be dominated by opioids, which are increasingly being reformulated to offer abuse-resistance, whereas mild pain is effectively treated with non-steroidal anti-inflammatory drugs (NSAID). However, significant unmet needs remain, as chronic pain subtypes - and particularly neuropathic pain - do not respond well to existing therapies, which do not align to the underlying molecular pathophysiological profile of pain.

However, strong unmet needs remain in core therapy types such as NSAIDs, which are associated with often severe gastrointestinal adverse events (AE), and opioids, which have a range of AEs associated with them - in addition to the potential for abuse, which has not been fully alleviated by the development of abuse-deterrent formulations.

The exceptionally large active pain pipeline, second only to breast cancer in terms of size, consists of 810 products across all stages of development, indicating that a great deal of resources are being invested into R&D, with the aim of ultimately overcoming the limitations of existing therapies.

Moreover, GBI Research's analyses identified 129 first-in-class programs in active development, constituting 20% of the pipeline for which there is a disclosed molecular target, and acting on 80 distinct first-in-class molecular targets. Although there is significant differentiation in the scientific rationale and clinical prospects across these first-in-class products, the majority of first-in-class targets demonstrate significant preclinical evidence, and alignment to molecular pathophysiological changes.

Scope

- Analysis of innovation in the pain markets (including both nociceptive and neuropathic pain, of both a chronic and acute nature), in the context of the overall pipeline and current market landscape. Also includes analysis of the deals landscape surrounding first-in-class products in pain, and highlights opportunities for in-licensing.

- A brief introduction to chronic and acute pain, including subtypes, symptoms, pathophysiology, and an overview of pharmacotherapy and treatment algorithms.
- The changing molecular target landscape between the market and the pipeline, and particular focal points of innovation in the pipeline.
- Comprehensive review of the pipeline for first-in-class therapies, analyzed on the basis of stage of development, molecule type and molecular target.
- Identification and assessment of first-in-class molecular targets, with a particular focus on early-stage programs for which clinical utility has yet to be evaluated, as well as literature reviews on novel molecular targets.
- Assessment of the licensing and co-development deal landscape for pain therapeutics, and benchmarking of deals involving first-in-class versus non-first-in-class-products.

Reasons to buy

- Understand the current clinical and commercial landscape, including a comprehensive study of disease pathogenesis, diagnosis, prognosis and the available treatment options available at each stage of diagnosis.
- Visualize the composition of the pain markets in terms of dominant molecule types and targets, highlighting what the current unmet needs are and how they can be addressed. This knowledge allows a competitive understanding of the gaps in the current market.
- Analyze the pain pipeline, stratified by pain subtype, stage of development, molecule type and molecular target.
- Assess the therapeutic potential of first-in-class targets. Using a proprietary matrix, first-in-class products have been assessed and ranked according to clinical potential. Promising early-stage targets have been further reviewed in greater detail.
- Identify commercial opportunities in the pain deals landscape by analyzing trends in licensing and co-development deals, and producing a list of pain therapeutics that are not yet involved in deals and may be potential investment opportunities.

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