

PROTAC Market Size Will Witness Robust Growth with Emerging Therapies by 2034 | DelveInsight

Companies working in the PROTAC market are Pfizer/Arvinas, Celgene/Bristol Myers Squibb, Hivova Pharmaceuticals, and others.

LAS VEGAS, NV, UNITED STATES, December 10, 2024 /EINPresswire.com/ --

The PROTAC market is projected to experience rapid growth due to the expansion of indications for already approved therapies, increased R&D activities. Additionally, the competitive landscape is relatively sparse and the regulatory pathway for approval will likely involve extensive clinical trials to demonstrate safety and efficacy.

DelveInsight's PROTAC Market Insights report includes a comprehensive understanding of current treatment practices, emerging PROTAC, market share of individual therapies, and current and forecasted PROTAC market size from 2020 to 2034, segmented into 7MM [the United States, the EU4 (Germany, France, Italy, and Spain), the United Kingdom, and Japan].

Key Takeaways from the [PROTAC Market Report](#):

As per DelveInsight's analysis, the PROTAC market is anticipated to grow at a significant CAGR by 2034.

PROTAC (Proteolysis Targeting Chimeras) technology is an innovative therapeutic approach with significant clinical potential for selectively degrading disease-causing proteins within targeted cells. Several PROTAC molecules are currently being investigated in clinical trials, with promising developments in various therapeutic areas.

One such example is vepdegestrant, a joint development between Pfizer and Arvinas.

Vepdegestrant is an investigational PROTAC protein degrader designed to specifically target and degrade the estrogen receptor (ER) protein. It is currently undergoing evaluation as a monotherapy in the second-line setting in the ongoing Phase III VERITAC-2 trial, and in combination with palbociclib in the first-line setting in the Phase III VERITAC-3 trial (study lead-in cohort).

PROTAC molecules work through the ubiquitin-proteasome system, the natural cellular mechanism for protein degradation, to selectively target and break down specific proteins. The field holds significant promise for the development of novel therapeutics, particularly in oncology and other areas.

In February 2024, vepdegestrant received FDA Fast Track Designation for the treatment of

ER+/HER2- locally advanced or metastatic breast cancer in patients who have received prior endocrine-based therapy as a monotherapy.

Additionally, in February 2024, Arvinas announced the first-in-human dosing of ARV-102, an investigational PROTAC degrader for neurodegenerative diseases. ARV-102 is designed to cross the blood-brain barrier and target leucine-rich repeat kinase 2 (LRRK2), a key protein implicated in neurodegeneration.

Leading companies, including Pfizer/Arvinas, Celgene/Bristol Myers Squibb, Hinov Pharmaceuticals, and others, are actively involved in the development and production of selective PROTAC molecules. These advancements are expected to have a significant impact on the PROTAC market, offering new avenues for the treatment of a variety of diseases.

Discover which therapies are expected to grab the PROTAC market share @ PROTAC Market Report

PROTAC Market Dynamics

The PROTAC market is shaped by a range of dynamics, driven by advancements in medical research and a growing understanding of complement system-related diseases. As research progresses, the pipeline for PROTAC inhibitors is expanding, with several candidates undergoing clinical trials, which is expected to significantly impact market growth.

PROTAC inhibitors are primarily used to treat specific types of cancer associated with mutations in isocitrate dehydrogenase (IDH) genes, including gliomas, acute myeloid leukemia (AML), chondrosarcomas, and intrahepatic cholangiocarcinomas. Before starting treatment, patients undergo genetic testing to identify mutations in the IDH1 or IDH2 genes. If a mutation is confirmed and the patient is deemed suitable for therapy, an appropriate PROTAC inhibitor is prescribed. For instance, ivosidenib is used to treat AML patients with IDH1 mutations, while enasidenib is indicated for those with IDH2 mutations.

These inhibitors work by targeting mutated IDH enzymes, reducing the production of the oncometabolite 2-hydroxyglutarate (2-HG), which is implicated in tumor growth. By lowering 2-HG levels, PROTAC inhibitors can potentially slow or inhibit tumor progression. Their effectiveness in preclinical studies and clinical trials has supported their development as targeted therapies, offering a promising treatment approach for cancers with IDH mutations.

Learn more about the FDA-approved PROTAC @ [PROTAC Drugs](#)

Emerging Drugs in the PROTAC Inhibitors Market

ARV-471 (vepdegestrant): Arvinas/Pfizer

Vepdegestrant is an investigational oral PROTAC protein degrader co-developed by Arvinas and Pfizer. Utilizing Arvinas' proprietary PROTAC Discovery Engine platform, vepdegestrant is engineered to selectively target and degrade disease-causing proteins by leveraging the body's natural protein disposal system. This approach aims to efficiently remove harmful proteins implicated in disease processes.

Currently, vepdegestrant is being evaluated as a monotherapy in the second-line treatment setting in the ongoing Phase III VERITAC-2 clinical trial. Additionally, it is being assessed in combination with palbociclib in the lead-in cohort of the Phase III VERITAC-3 trial for first-line therapy. Other ongoing studies are investigating potential combinations with abemaciclib, ribociclib, samuraciclib, everolimus, and Pfizer's novel investigational CDK4 inhibitor PF-07220060.

ARV-110 (bavdegalutamide): Arvinas

ARV-110 is an orally bioavailable PROTAC designed to target and degrade the androgen receptor (AR) protein. As a hetero-bifunctional molecule, it facilitates the interaction between the androgen receptor and an intracellular E3 ligase complex, promoting the ubiquitination and subsequent proteasomal degradation of the androgen receptor.

Developed by Arvinas, ARV-110 is being explored as a treatment for metastatic castration-resistant prostate cancer. The drug's ability to degrade androgen receptors is a promising therapeutic strategy for patients with prostate cancer who no longer respond to traditional hormone therapies.

In March 2024, Arvinas announced plans to engage with regulatory authorities in the second quarter of 2024 to discuss aligning the Phase III trial for prostate cancer, specifically for hormone-refractory metastatic disease in second-line or later treatment settings.

To know more about PROTAC clinical trials, visit @ [PROTAC Treatment Drugs](#)

PROTAC Overview

PROTAC (PROteolysis TArgeting Chimera) is a cutting-edge drug development technology that is rapidly gaining attention in the pharmaceutical industry. PROTACs are heterobifunctional molecules designed to degrade target proteins by harnessing the ubiquitin-proteasome system. Unlike traditional small molecules, which merely inhibit protein function, PROTACs eliminate the target protein entirely by binding to it and triggering its proteasomal degradation.

PROTACs are categorized based on their composition and mechanism of action into three main types:

1. **Traditional Small-Molecule PROTACs:** These consist of two covalently linked protein-binding molecules. One part binds to an E3 ubiquitin ligase, while the other binds to the target protein, facilitating its degradation.
2. **BioPROTACs:** These PROTACs use peptides or other biological products for target protein engagement. They operate similarly to traditional small-molecule PROTACs but utilize biological molecules to interact with the target.
3. **Hybrid PROTACs:** Combining elements of both small-molecule and peptide-based "warheads," hybrid PROTACs capitalize on the strengths of both to achieve efficient and selective protein degradation.

Since its inception in 2001, PROTAC technology has evolved and is now approaching 23 years of development. In 2013–2014, Yale University licensed the PROTAC oncology market to Arvinas, which has been a significant player in advancing this technology. By 2019, Arvinas had conducted clinical trials for two PROTACs: bavdegalutamide (ARV-110), an androgen receptor degrader, and vepdegestrant (ARV-471), an estrogen receptor degrader.

This innovative technology has revolutionized small molecule drug discovery, sparking unprecedented advancements in drug development. Currently, several PROTACs are undergoing clinical evaluation in Phase I, II, and III trials, showing the significant promise of this approach in the treatment of various diseases.

PROTAC Inhibitors Market Outlook

Targeted Protein Degradation (TPD) is an emerging therapeutic approach with the potential to address disease-causing proteins that have been difficult to target with traditional small molecules.

PROTACs (Proteolysis Targeting Chimeras) are a form of targeted protein degradation. In the 20 years since the concept of using PROTACs to harness the ubiquitin-proteasome system for protein degradation was first introduced, the field has moved from academic research to industrial development. Numerous companies are now advancing programs in both preclinical and early clinical stages.

Currently, nearly 90 protein degradation-based candidates are under evaluation. Approximately 20% of these drugs are in clinical trials, while the remainder are in preclinical or discovery phases. PROTACs alone represent more than 30% of the drugs in development.

The PROTAC market is expected to see substantial growth in the coming years, driven by the increasing number of PROTAC-based drugs advancing through clinical trials. However, as of now, no PROTAC-derived therapies have been approved.

The first PROTAC molecule, ARV-110, entered clinical testing in 2019, and in 2020, the trials provided the first clinical proof-of-concept for the approach targeting well-known cancer proteins such as the estrogen receptor (ER) and androgen receptor (AR).

Currently, Pfizer, in collaboration with Arvinas, is testing vepdegestrant in clinical trials, both as a monotherapy and in combination with other drugs, for the treatment of conditions such as ER+/HER2- breast cancer and other diseases.

Key industry players, including Pfizer/Arvinas, Celgene/BMS, Hinova, and others, are actively developing PROTAC-based drugs for indications like ER+/HER2- breast cancer, metastatic prostate cancer, and metastatic castration-resistant prostate cancer.

Overall, this new class of agents holds immense potential. As ongoing studies mature, a deeper understanding of PROTACs will emerge, shaping their future role in cancer therapy and other diseases.

Scope of the PROTAC Market Report

Study Period: 2020–2034

PROTAC Report Coverage: 7MM [The United States, EU5 (Germany, France, Italy, Spain, and the United Kingdom), and Japan]

Key PROTAC Companies:

Key PROTAC:

PROTAC Therapeutic Assessment: PROTAC current marketed and emerging therapies

PROTAC Market Dynamics: Conjoint Analysis of Emerging PROTAC Drugs

Competitive Intelligence Analysis: SWOT analysis and Market entry strategies

PROTAC Unmet Needs, KOL's views, Analyst's views, PROTAC Market Access and Reimbursement

Discover more about PROTAC drugs in development @ PROTAC Clinical Trials

https://www.delveinsight.com/sample-request/protac-market-forecast?utm_source=einpresswire&utm_medium=pressrelease&utm_campaign=kpr

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