Biotech products in Big Pharma clinical pipelines have grown dramatically

Large molecules represent dominant share of big Pharma sales

- The number of biotech products in clinical development grew 155% in 11 years, from 355 in 2001 to 907 in 2012.
- Financing of biotech research increased 10-fold, from $10.5 billion in 2001 to $103 billion in 2012.
- Worldwide growth in biotechnology product sales grew 353% between 2001 and 2012, from $36 billion to $163 billion.
- In 2012, the 21 largest pharmaceutical companies had 429 biotech products in clinical development, of which 58% were monoclonal antibody products.
- From 1998-02 to 2008-12, the number of biotech company acquisitions by Big Pharma increased five-fold—from 15 to 75—while the value of those deals jumped eight-fold.

Over the last 20 years, the pharmaceutical industry, especially Big Pharma, has dramatically changed its R&D strategy, evolving from having an almost singular focus on small molecule drugs in the early 1990s to today's broader and more dominant focus on biotechnology products. Last year, biotech products accounted for 71% of the revenue generated by the world's 10 top selling pharmaceutical-biotech drugs. This remarkable growth mirrors the successful evolution of biotech research over the last three decades, which has spawned novel technology platforms and an extensive pipeline of products across a wide range of therapeutic areas. In 1989, only 13 biotechnology products were commercially available; by 2012, that number grew to 210.

Biotech products often meet unmet medical needs, represent novel mechanisms of action, improve disease outcomes, possess relatively long effective patent lives, and command high prices. As a result, many have become blockbusters. These factors, along with patent expirations for many top-selling small molecule drugs, have constituted the driving force behind the dramatic evolution of Big Pharma R&D. To more fully understand the proliferation of biotech product development in large pharmaceutical companies, Tufts CSDD examined R&D, pipeline, and sales data for three specific time points: 2002, 2007, and 2012, key findings of which are summarized here.