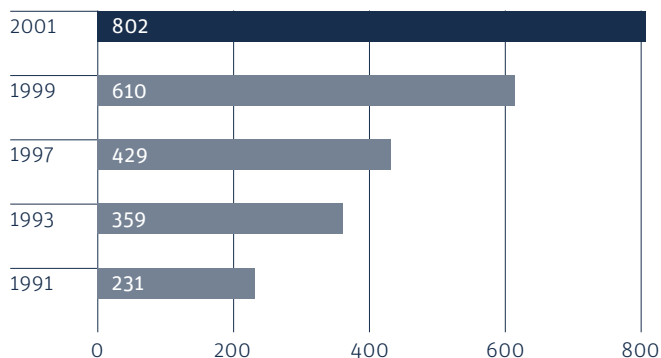


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## Development Costs for a new Pharmaceutical

in USD million

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Source: Di Masi J. et al., Tufts University (1991); Office of Technology Assessment (1993); Myers and Howe (1997); Office of Health Economics & Lehman Brothers (1999); Tufts University (2001)

In 2001, an average of USD 800 million was required for the research and development of a new drug with a new molecular entity. More than half of these expenditures are spent on clinical development, especially the logistically expensive, multinational phase III studies. The requirements with regard to proven safety, efficacy, tolerability and quality during the marketing authorization process have increased steadily. Another reason for the strong cost increase is the growing complexity of the diseases to be treated. Examples include multiple sclerosis or Parkinson's disease for which researchers must take into account many physical processes simultaneously to identify possibilities for risk-free pharmaceutical therapy.