2003-2004 MIT Patent Scorecards Show Gains in Technology Strength By ATP-Funded Biotechnology Companies

The 2003-2004 MIT Patent Scorecards rate the patent portfolio of companies in the pharmaceutical and biotechnology industry.[1] Four of those companies started and/or completed ATP R&D projects to develop high-risk enabling technologies between the years 1997 and 2001. Their data are listed below as well as those data from some well-known pharmaceutical companies:

Company	Average Technology Strength (2002-2003)	Average Technology Strength (1997-2001)	Average Current-Impact Index (2002-2003)
ATP Awardees			
Caliper Technologies	**340**	**84**	**7.0**
Maxygen	**258**	**45**	**7.9**
Affymetrix	**173**	**75**	**3.45**
Nanogen	**38**	**40**	**3.26**
Large Pharmaceutical Companies			
Pfizer	**250**	**163**	**.66**
Bristol-Myers Squibb	**113**	**139**	**.64**
Merck	**104**	**187**	**.51**
Abbott Labs	**98**	**124**	**.7**

Technology Strength equals the number of patents awarded to the company that year multiplied by the current-impact index. The current-impact index measures how *significant* a patent is: this is determined by how often a company's patents from the previous five years are cited as prior art in the current year's batch. A value of 1.0 represents average citation frequency; so for example, a value of 1.2 means that a company's patents were cited 20% more than average.

Three of the four ATP awardees increased their technology strength significantly from the base period (1997-2001) to the last two years. All four ATP awardees possess higher than 1.0 current-impact indexes over the last two years. A company such as Maxygen has its patents cited almost *eight times* more than the average company's patents. In comparison, large pharmaceutical company patents are cited much less than the average.

By encouraging high-technical risk projects, ATP promotes innovation and knowledge spillovers. The knowledge spillovers, or public benefit gained, are represented by both the technology strength and the current-impact index.

Factsheet 1.H2 (March 2005 by John Nail and Prasad Gupte)

[1] For information on methodology and actual data see http://technologyreview.com/scorecards.