

A Patent Creates a Monopoly for TPA

Genentech owns a patent on tissue plasminogen activator (TPA), an enzyme that helps the body break down blood clots. TPA is particularly valuable to cardiac patients, because it often allows physicians to treat heart problems with medication rather than surgery.

The patent Genentech holds on TPA gives it a monopoly in the production of the product. By having a monopoly on TPA, Genentech is able to charge a price in excess of marginal cost. To be able to charge a higher price, however, Genentech must reduce the quantity produced. Genentech's monopoly position allows it to charge a price of \$2,200 per dose. The marginal cost of

producing Genentech is relatively low, although substantial developmental costs were incurred in creating the product.

Recently Genetics Institute introduced a variant of TPA. However, Genentech sued for patent violations and initially won, allowing it to keep its monopoly position for now. The monopoly profits Genentech earned are Genentech's reward for developing the new product. Patients who pay higher medical costs, however, may not recognize that the drug exists because of this reward.

Source: Gary Slutsker, "Patenting Mother Nature," *Forbes*, January 7, 1991, p. 290.