

Supplementary Box S3 | The Pharmaceutical Benchmarking Forum

The Pharmaceutical Benchmarking Forum (PBF) integrates R&D productivity data from a group of large pharmaceutical firms. PBF firms provide blinded pipeline and productivity information through a third-party administrator (KMR Group, Chicago Illinois 312-795-0400). KMR Group analyses the data to provide industry summaries of key performance metrics. The data reported includes pipeline and productivity information through December 2007.

The PBF was organized in 1997. In 2008, the following 13 companies submitted R&D data: Abbott, AstraZeneca, Bristol-Myers Squibb, Boehringer Ingelheim, Eli Lilly, GlaxoSmithKline, Johnson & Johnson, Merck Research Labs, Novartis, Pfizer, Roche, Sanofi-Aventis, and Schering-Plough.

Success rates were calculated for the industry; that is, all data from contributing companies was combined into a single analysis, as if they were a single company. Success rates by phase were calculated according to the following method: (number of successes in phase)/((number of terminations in phase) + (number of successes in phase)).

Cycle times for Discovery (from target identification through first GLP toxicology dose) and Development (from first GLP toxicology dose to first approval in a major market) were calculated as industry median, composite cycle times (cycle time results for all R&D phases are combined based on NMEs that completed the specific phase in a given 3-year period).