

## David McCombs, Vincent Shier, Eugene Goryunov, Dina Blikshteyn, Brooke Cohen in *Life Science Leader*: ‘AI and Life Sciences: How Much Disclosure Is Enough?’

---

November 21, 2022 David McCombs, Dina Blikshteyn, Brooke Parker

---

**PRACTICES** Patents, Patent Litigation, Life Sciences, AI and Deep Learning

---

Under the *quid pro quo* of the patent system, inventors are given a 20-year exclusionary right over their inventions in return for disclosing to the public sufficient details about their invention. Through this exchange, inventors are rewarded for investing time and resources into advancing the science. At the same time, science continues to advance as a result of the enabling disclosure.

However, is this bargain worth it? The answer is nuanced. Companies must first decide whether getting a valid patent will require too much disclosure such that it would negatively affect commercializing the invention. Indeed, disclosure usually leads to new competition and a competitor could easily design around the invention and produce a similar, competing product.

Extending this analysis to patenting artificial intelligence (AI) inventions is especially challenging. AI inventions are often “black boxes” that receive data and generate a result. During training, these “black boxes” manipulate the weights given to the training data to increase the accuracy of the program. Moreover, these “black boxes” are often not front facing, and instead are stored securely within the companies’ servers. Accordingly, unless a company publicly discloses the type of a neural network or the algorithm that its AI uses, the AI inventions, weights given to training data, and internal optimizations are difficult to copy or reverse engineer. Thus, companies may favor maintaining their AI inventions a trade secret rather than disclosing it in patents.

As tempting as a trade secret route is, however, it may be impractical in AI for drug discovery, therapeutic target identification, or other aspects relevant to pharmaceuticals or medical device technologies. Companies that choose the patent route must decide how much disclosure is enough to satisfy the patent disclosure requirements.

In our previous articles, we discussed how life sciences inventions incorporating AI face hurdles getting patented for lack of inventorship or for being directed towards patent ineligible subject matter. In this article, we focus on what it takes to meet the enablement and written description requirements of 35 U.S.C. § 112(a) when patenting AI inventions in life sciences.

Excerpted from *Life Science Leader*. To read the full article, click [here](#).