

# AI becomes higher priority for drug discovery with Pfizer, CytoReason deal extension

Article

**The news:** Pfizer renewed an agreement with technology platform **CytoReason** to apply AI to drug discovery and development.

- Pfizer will invest **\$20 million in equity**, and the deal could reach up to **\$110 million** over the next five years.
- Pfizer and CytoReason will use AI to create new disease models.

**How we got here:** Pfizer and CytoReason inked a deal in January 2019 to leverage CytoReason's platform for cell-based models of the immune system. Pfizer has used CytoReason's AI technology to develop new drugs for immune-mediated and immunology diseases.

**How it works:** CytoReason's computational modeling technology helps scientists gain a better understanding of the immune system and develop new targets for drug development.

**Here's why it matters:** Pharma companies use AI to reduce the time and money spent on drug R&D. The drug discovery process is so long that many compounds fail to move from clinical trials to commercialization.

- Without AI, R&D for new drugs in development could take **12-18 years** and cost **\$1 billion to \$3 billion** on average, per GlobalData Healthcare.
- With cancer the largest driver of healthcare costs, AI data models can help find the best drug targets. Cancer medicine spending increased to **\$185 billion** globally in 2021 from **\$165 billion** in 2020 and is projected to rise to **\$307 billion** in 2026, per IQVIA's Global Oncology Trends 2022 report.

**Trendspotting:** The healthcare industry is growing more comfortable with AI.

- **51% of life sciences executives in pharma and biotech had not begun using AI** for predictive diagnostics and preventive medicine but **plan to do so in the next five years**, per a March 2022 Capgemini report.
- Global pharma giant **UCB** is using **Microsoft's** computational AI and cloud capabilities. AI helped UCB develop an oral antiviral drug for COVID-19.
- **GlaxoSmithKline (GSK)** partnered with **PathAI** to develop AI algorithms that can speed up drug discovery and improve the success rates of new drugs.

- **AstraZeneca** [teamed](#) up with **Nvidia** and the University of Florida to test how AstraZeneca's drug discovery model, **MegaMoIBART**, can quickly analyze and predict drug targets and research processes while saving on time, money, and research supplies.

### Current Adoption of Connected Health Use Cases According to Life Science Executives Worldwide\*, Nov 2021

% of respondents

|   | Use case is not initiated and not planned in the next 5 years | Use case is not initiated but planned in the next 5 years | Have a proof of concept |
|---|---|---|-------------------------|
| Smart/connected drug delivery devices                         | 48%   | 41%   | 11%                     |
| Mobile app for patients to capture and track symptoms at home | 46%   | 16%   | 38%                     |
| Clinical support tools  | 44%   | 40%   | 16%                     |
| Decentralized/virtual clinics                                 | 40%   | 46%   | 14%                     |
| Neurofeedback devices   | 40%   | 48%   | 11%                     |
| AR/VR for mental health or rehabilitation purposes            | 38%   | 48%   | 14%                     |
| AI-enabled predictive diagnostics and preventive medicine     | 37%   | 51%   | 12%                     |
| Remote patient monitoring                                     | 34%   | 33%   | 33%                     |
| Digital biomarker applications                                | 28%   | 54%   | 18%                     |

Note: n=523; \*seven countries in North America, Europe, and Asia-Pacific  
Source: Capgemini, "Unlocking the Value in Connected Health," March 23, 2022

275349 [InsiderIntelligence.com](http://InsiderIntelligence.com)

**What's next?** Big names in pharma will continue to invest in AI to gain efficiencies in money and time as well as address hiring difficulties in launching AI projects.

- For example, **Bristol-Myers Squibb** partnered with AI drug discovery firm **Exscientia** to speed up the discovery of "small molecule" therapeutic drug candidates in oncology and immunology.
- In addition, more AI startups could go public as the AI drug discovery market matures, as [Valo](#) did in June 2021.

AI could also continue aiding pharma companies with personalized medicine, in which they make informed decisions on which drugs are right to develop for patients. AI insights, particularly from machine learning, help scientists better understand patients' conditions.

*This article originally appeared in Insider Intelligence's Digital Health Briefing—a daily recap of top stories reshaping the healthcare industry. Subscribe to have more hard-hitting takeaways delivered to your inbox daily.*

- *Are you a client? [Click here to subscribe.](#)*

- *Want to learn more about how you can benefit from our expert analysis? [Click here.](#)*