

EVAXION

Evaxion Biotech among the top 16 global companies using artificial intelligence to revolutionize drug discovery, according to experts from Frost & Sullivan

July 22, 2020

Artificial intelligence is poised to dramatically overhaul how pharmaceutical giants like Bayer, Pfizer, and GlaxoSmithKline pinpoint innovative — and potentially lucrative — new drugs.

The technology is [under the spotlight now](#), as top companies and federal agencies try to use it to [quickly find a vaccine or treatment for COVID-19](#). But the increase in partnerships between drug manufacturers and AI-powered startups could have much broader ramifications for the drug discovery process.

It currently takes upwards of a decade and billions of dollars to bring a new treatment to market — including five or more years of testing just to discover promising leads. Artificial intelligence can help cut that initial research period by as much as 50%, according to some experts.

Industry titans are [rushing to link-up with promising startups](#) that can help shave time and money off of the process. Swiss drug-giant Roche, for example, has ongoing deals with French data-science firm Owkin, among others, and [bought the cancer research startup Flatiron Health in 2018](#).

The AI drug discovery market is [expected to swell to \\$1.4 billion by 2024](#) and the number of startups vying for their piece has grown too. In 2014, there were an estimated 89 AI-driven companies focused on drug discovery. Now, [there are as many as 217](#).

“There’s been quite good investment within this area,” Amol Jadhav, an analyst at consulting firm Frost & Sullivan, told Business Insider. “There’s a lot of innovative partnerships with big pharma. And they’re seeing the results, which is now reinforcing that you can really cut time.”

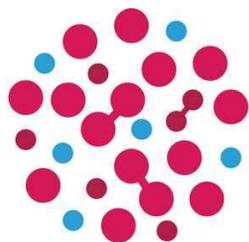
Frost & Sullivan recently selected the top 16 firms revolutionizing research into new treatments, basing its selection on a number of factors, including ongoing deals with pharmaceutical giants, fundraising to-date, and how successful each has been in helping to advance promising drugs to human testing.

While the list doesn’t include every hot AI health company — for instance, Insitro, which has raised significant funding and scored multi-million partnerships, didn’t make the cut — Jadhav says the startups chosen were the ones with the most promising drugs in clinical development.

“They have the technology, they’re generating data, but they still do not have any molecules with the partner companies or in their own pipeline,” he said of Insitro.

Business Insider compiled the firm’s choices — including fundraising estimates from PitchBook when the company declined or did not respond to requests to provide — to highlight the key players in the industry:

AcuraStem Inc.



AcuraStem
PATIENT-BASED DRUG DISCOVERY

AcuraStem Inc.

Fundraising to-date: \$7 million

Valuation: Declined to disclose

CEO: Kirsten Bjergarde

Headquarters: California

Notable partnerships and milestones: A study with the CMT Research Foundation indicated a drug compound under development by AcuraStem [could be effective](#) in treating nerve disorder Charcot-Marie-Tooth disease.

AI Therapeutics



Fundraising to-date: \$77 million

Valuation: \$132 million

CEO: Henri Lichenstein

Headquarters: Connecticut

Notable partnerships or milestones: Its treatment for facial angiofibroma [recently cleared the non-human-testing phase](#), and a drug intended to treat women with a rare lung disease is currently being tested on humans.

Atomwise



Fundraising to-date: \$57.84 million

Valuation: \$171.64 million (per PitchBook)

CEO: Abraham Heifets

Headquarters: California

Notable partnerships or milestones: Atomwise teamed up with Eli Lilly to [help the drug giant uncover new treatments](#), with a reward of \$1 million per successful discovery. It's also working with Bayer to find [new ways to protect crops](#).

BenevolentAI



Fundraising to-date: \$363.81 million

Valuation: \$1 billion

CEO: Baroness Joanna Shields

Headquarters: London

Notable partnerships or milestones: Benevolent AI is working with AstraZeneca to try to find [new treatments for kidney diseases](#). It's also working with Novartis to [pinpoint potentially new uses](#) for its existing oncology drugs.

BERG



B E R G™

Fundraising to-date: Declined to disclose

Valuation: Declined to disclose

CEO: Niven Narain

Headquarters: Massachusetts

Notable partnerships or milestones: It's partnering with the Department of Energy's Oak Ridge National Lab [to try to find potential coronavirus treatments.](#)

Biovista Inc.



BioVista
To seek - To know - To act

Fundraising to-date: \$10 million

Valuation: Declined to disclose

CEO: Andreas Persidis

Headquarters: Virginia

Notable partnerships or milestones: BioVista is teaming up with Hewlett Packard Enterprise to [help advance research into precision medicine,](#) specifically for patients in community hospitals like the Sarah Bush Lincoln Health Center.

Cotinga Pharmaceuticals Inc.



Fundraising to-date: Publicly-traded

Valuation: ~584,000 CAD ([via Bloomberg](#)) CEO: Niven Narain

Headquarters: Toronto, Canada

Notable partnerships or milestones: Cotinga is supporting ongoing human testing for its treatment for gynecological cancer

Evaxion Biotech



Fundraising to-date: \$36 million

Valuation: Declined to disclose

CEO: Lars Wegner

Headquarters: Copenhagen, Denmark

Notable partnerships or milestones: Evaxion is [running ongoing human testing](#) for its experimental cancer immunotherapy.

Exscientia Ltd.



Fundraising to-date: \$104 million

Valuation: \$116 million (per PitchBook)

CEO: Andrew Hopkins

Headquarters: Oxford, England

Notable partnerships or milestones: Exscientia entered into a roughly \$71 million deal with Roche to [help find pre-clinical drug candidates](#). It is also worked with GlaxoSmithKline to find a [potential treatment](#) for chronic obstructive pulmonary disease.

Gritstone Oncology Inc.



Fundraising to-date: Publicly-traded

Valuation: ~\$143 million market cap ([via Bloomberg](#))

CEO: Andrew Allen

Headquarters: California

Notable partnerships or milestones: Gritstone is working with Bristol-Myers Squibb to determine [whether an early drug candidate is effective](#) in treating advanced solid tumors.

Healx Ltd

healx

Fundraising to-date: \$67.63 million (per PitchBook)

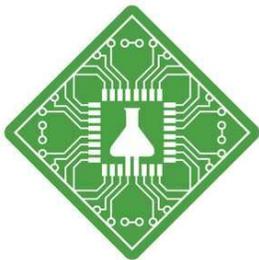
Valuation: \$32.78 million (per PitchBook)

CEO: Tim Guilliams

Headquarters: Cambridge

Notable partnerships or milestones: Healx is working with The Children's Tumor Foundation to try to [uncover treatments for neurofibromatosis](#), a rare disease that leads to tumors in the brain and spine. It's also working with Boehringer Ingelheim to determine if any of the drug giant's [existing treatments could be used](#) on rare neurological diseases.

Insilico Medicine



**Insilico
Medicine**
insilico.com

Fundraising to-date: \$52 million

Valuation: \$56 million (per PitchBook)

CEO: Alex Zhavoronkov

Headquarters: Hong Kong

Notable partnerships or milestones: Insilico is working with Boehringer Ingelheim to try to [uncover potential treatments](#) for "a variety of diseases." It has a [similar partnership](#) with Pfizer also targeted at multiple disease areas.

Lantern Pharma Inc.

Lantern 
Pharma®

Fundraising to-date: Publicly-traded

Valuation: \$75 million market cap ([via Yahoo Finance](#))

CEO: Panna Sharma

Headquarters: Texas

Notable partnerships or milestones: Lantern Pharma is working with the National Cancer Institute to [try to find indicators to suggest](#) what specific drug therapies could work best to treat cancerous tumors in individual patients.

Pharnext



Fundraising to-date: Publicly-traded

Valuation: €58 million market cap ([via Bloomberg](#))

CEO: David Horn Solomon

Headquarters: France

Notable partnerships or milestones: Chinese drug giant Tasly [invested roughly \\$22 million into Pharnext](#) as part of a partnership to try to uncover new treatments mainly in the areas of cardiovascular and oncology.

Recursion Pharmaceuticals



Fundraising to-date: \$200 million

Valuation: \$647.06 million (per PitchBook)

CEO: Chris Gibson

Headquarters: Utah
Notable partnerships or milestones: Recursion entered into a \$90 million deal with Takeda Pharmaceuticals [to try to find potential drug candidates](#) to treat rare diseases.

TwoXAR



Fundraising to-date: \$14.31 million

Valuation: \$45 million (per PitchBook)

CEO: Andrew Radin

Headquarters: California

Notable partnerships or milestones: TwoXAR is working with SK Biopharmaceuticals [identify and develop treatments](#) for non-small cell lung cancer. The South Korean drug firm will retain rights to commercialize any successful drug candidates, while TwoXAR is eligible for royalties.