

Meet Achim, leading the data42 program ^[1]

Discovery ^[2]

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Achim Plueckebaum is a down-to-earth guy. Even as he sits in the midst of what is probably one of the pharmaceutical industry's hottest development in decades, the experienced computer scientist is keeping a cool head. The recently appointed leader of the Novartis' digital research and development platform data42 is a strong believer that data and digital technologies will change the path of medical science. But in spite of this view, he expects human inquisitiveness to remain instrumental in the race to leverage the power of data and digital in the hunt for new drugs.

"There is a hype surrounding data and digital that we need to be aware of," Plueckebaum says. He and his team are currently setting up the infrastructure – which spans locations in Switzerland, the US and India – to accelerate the development of data42.

Their goal is to capture the hidden insights from the massive amount of research and clinical trial data of Novartis and to tap into a powerful technological trend that has also attracted unconventional players such as Google and Amazon to the pharmaceutical arena.

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Achim Plueckebaum

"The ability of artificial intelligence tools to perform better than humans in certain specified tasks has led to a misunderstanding of what can be done in the pharmaceutical and medical industries," Plueckebaum says. "Many believe it is enough just to run a smart computer program through a pile of big data and find new drugs just like that."

The problem, he says, is much harder. Besides cleaning up huge amounts of isolated and unstructured data, uploading them to a single machine-readable platform, and creating powerful algorithms that can analyze the data, scientists need to have precise questions in mind. Otherwise, Plueckebaum says, they will receive a nonsensical answer much like the characters in "The Hitchhiker's Guide to the Galaxy."



Achim Plueckebaum, Head of data42

In Douglas Adams' 1979 science fiction comedy, a supercomputer named Deep Thought calculates the answer to "the ultimate question of life, the universe and everything." When the machine comes up with the number 42, everyone is dumbfounded, only to learn that the answer will only make sense if the question is known.

With data42, Novartis wants to avoid such nonsensical outcomes. "It is really important to keep in mind that, if you don't understand the question really well, you probably won't understand the answer," Plueckebaum says. "That's why we decided to call our venture data42. The number is a constant reminder for us that we want to understand the questions in order to receive specific answers that are actionable."

If the right questions are asked, however, data and digital could prove transformational for the pharmaceutical industry, which is benefiting from recent digital breakthroughs in the areas of data storage and processing, and artificial intelligence.



Discovery [2]

The data42 program shows Novartis' intent to go big on data and digital [3]

Tags:

Data Science [4]

Digital [5]

Emerging Technology [6]

Future of Healthcare [7]

Innovation [8]

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Links

[1] <https://www.novartis.com/stories/discovery/meet-achim-leading-data42-program>

[2] <https://www.novartis.com/stories/discovery>

[3] <https://www.novartis.com/stories/discovery/data42-program-shows-novartis-intent-go-big-data-and-digital>

[4] <https://www.novartis.com/tags/data-science>

[5] <https://www.novartis.com/tags/digital>

[6] <https://www.novartis.com/tags/emerging-technology>

[7] <https://www.novartis.com/tags/future-healthcare>

[8] <https://www.novartis.com/tags/innovation>