IBM UK Newsroom

IBM and Pfizer to Accelerate Immuno-oncology Research with Watson for Drug Discovery

Collaboration combines IBM Watson's cognitive computing capabilities with Pfizer's scientific knowledge to help scientists generate meaningful insights

ARMONK, New York and NEW YORK - 01 Dec 2016: IBM (NYSE: IBM) Watson Health and Pfizer Inc. (NYSE: PFE) today announced a collaboration that will utilize IBM Watson for Drug Discovery to help accelerate Pfizer's research in immuno-oncology, an approach to cancer treatment that uses the body's immune system to help fight cancer. Pfizer is one of the first organizations worldwide to deploy Watson for Drug Discovery, and the first to customize the cloud-based cognitive tool – tapping in to Watson's machine learning, natural language processing, and other cognitive reasoning technologies to support the identification of new drug targets, combination therapies for study, and patient selection strategies in immuno-oncology.

Immunotherapies, which modify a patient's immune system to recognize and target cancer cells using a combination of vaccines, immunomodulators, and small/large molecules, are reshaping the field of oncology. Oncology researchers at Pfizer will use Watson for Drug Discovery to analyze massive volumes of disparate data sources, including licensed and publicly available data as well as Pfizer's proprietary data. With this new tool, Pfizer researchers will analyze and test hypotheses to generate evidence-based insights for real-time interaction. The customized technology can also support efficient safety assessments.

Cancer is one of the leading causes of death worldwide, and is arguably one of the most complex diseases known to mankind.1 Many researchers believe that the future of immuno-oncology lies in combinations tailored to unique tumor characteristics, which could transform the cancer treatment paradigm and enable more oncology patients to be treated.

"Pfizer remains committed to staying at the forefront of immuno-oncology research," said Mikael Dolsten, President, Pfizer Worldwide Research & Development. "With the incredible volume of data and literature available in this complex field, we believe that tapping into advanced technologies can help our scientific experts more rapidly identify novel combinations of immune-modulating agents. We are hopeful that by leveraging Watson's cognitive capabilities in our drug discovery efforts, we will be able to bring promising new immuno-oncology therapeutics to patients more quickly."

Laurie Olson, Executive Vice President, Strategy, Portfolio and Commercial Operations, Pfizer, said, "At Pfizer, we are entering a new frontier in data innovation in which we are investing in a range of new technologies and digital solutions to help us dynamically mine both internal and external data sources to find new connections in science, as well as help us better understand how diseases progress and how they could potentially be treated. Applying the power of cognitive computing to an area that is a core part of our DNA – discovering new medicines – is helping Pfizer to learn how we can most efficiently discover those immuno-oncology therapies that have the best chance of successful outcomes for patients."

The newly launched Watson for Drug Discovery is a cloud-based offering that aims to help life sciences researchers discover new drug targets and alternative drug indications. The average researcher reads between 200 and 300 articles in a given year2, while Watson for Drug Discovery has ingested 25 million Medline abstracts, more than 1 million full-text medical journal articles, 4 million patents and is regularly updated. Watson for Drug Discovery can be augmented with an organization's private data such as lab reports and can help researchers look across disparate data sets to surface relationships and reveal hidden patterns through dynamic visualizations.

"We believe that the next great medical innovations will emerge as researchers and scientists find new patterns in existing bodies of knowledge. In order to do this, they need access to R&D tools that can help them efficiently navigate the opportunities and challenges presented by the explosion of data globally," said Lauren O'Donnell, Vice President of Life Sciences, IBM Watson Health. "IBM is honored to collaborate with Pfizer, and put Watson for Drug Discovery to work to support efforts in bringing life-saving immunotherapies to doctors and patients worldwide."

About IBM Watson Health

Watson is the first commercially available cognitive computing capability representing a new era in computing. The system, delivered through the cloud, analyzes high volumes of data, understands complex questions posed in natural language, and proposes evidence-based answers. Watson continuously learns, gaining in value and knowledge over time, from previous interactions. In April 2015, the company launched IBM Watson Health and the Watson Health Cloud platform. The new unit works with doctors, researchers and insurers to help them innovate by surfacing insights from the massive amount of personal health data being created and shared daily. The Watson Health Cloud can mask patient identities and allow for information to be shared and combined with a dynamic and constantly growing aggregated view of clinical, research and social health data. The Watson Health portfolio includes a variety of data, analytic and cognitive offerings to help life sciences organizations address the complex challenges involved in drug discovery, regulatory compliance, real world evidence and commercial optimization. For more information about Watson for Drug Discovery, please visit http://ibm.co/WDD. For more information on IBM Watson Health, visit: ibm.com/watsonhealth.

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At Pfizer, we apply science and our global resources to bring therapies to people that extend and significantly improve their lives. We strive to set the standard for quality, safety and value in the discovery, development and manufacture of health care products. Our global portfolio includes medicines and vaccines as well as many of the world's best-known consumer health care products. Every day, Pfizer colleagues work across developed and emerging markets to advance wellness, prevention, treatments and cures that challenge the most feared diseases of our time. Consistent with our responsibility as one of the world's premier innovative biopharmaceutical companies, we collaborate with health care providers, governments and local communities to support and expand access to reliable, affordable health care around the world. For more than 150 years, Pfizer has worked to make a difference for all who rely on us. For more information, please visit us at www.pfizer.com. In addition, to learn more, follow us on Twitter at @Pfizer and @Pfizer_News, LinkedIn, YouTube and like us on Facebook at Facebook.com/Pfizer.

PFIZER DISCLOSURE NOTICE: The information contained in this release is as of December 1, 2016. Pfizer

assumes no obligation to update forward-looking statements contained in this release as the result of new information or future events or developments.

This release contains forward-looking information about the potential of immuno-oncology and a collaboration between Watson Health and Pfizer to customize IBM Watson for Drug Discovery to help accelerate Pfizer's research in immuno-oncology, including their potential benefits, that involves substantial risks and uncertainties that could cause actual results to differ materially from those expressed or implied by such statements. Risks and uncertainties include, among other things, the uncertainties inherent in research and development; uncertainties regarding whether and when the collaboration will be successful and whether and when it will yield any potential drug targets or immuno-oncology therapy candidates; whether and when any applications may be filed with regulatory authorities for any potential immuno-oncology therapy candidates; whether and when regulatory authorities may approve any such applications, which will depend on the assessment by such regulatory authorities of the benefit-risk profile suggested by the totality of the efficacy and safety information submitted; decisions by regulatory authorities regarding labeling and other matters that could affect the availability or commercial potential of any potential immuno-oncology therapy candidates; and competitive developments.

A further description of risks and uncertainties can be found in Pfizer's Annual Report on Form 10-K for the fiscal year ended December 31, 2015 and in its subsequent reports on Form 10-Q, including in the sections thereof captioned "Risk Factors" and "Forward-Looking Information and Factors That May Affect Future Results", as well as in its subsequent reports on Form 8-K, all of which are filed with the U.S. Securities and Exchange Commission and available at www.sec.govand www.pfizer.com.

Sources:

- National Cancer Institute, "Cancer Statistics." Accessed 18 November 2016. Available at http://ibm.biz/Bdsqw9
- Van Noorden R. Scientists may be reaching a peak in reading habits, http://ibm.biz/BdrAjS, February 3, 2014.

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