

Volume 19 • Number 1

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Printed in the U.S.A.

Volume Nineteen, Number One

PharmaVOICE (ISSN: 1932961X) is published monthly except joint issues in July/Aug. and Nov./Dec., by PharmaLinx LLC, P.O. Box 327, Titusville, NJ 08560. Periodicals postage paid at Titusville, NJ 08560 and additional mailing offices.

**Postmaster:** Send address changes to PharmaVOICE, P.O. Box 292345, Kettering, OH 45429-0345.

**PharmaVoice Coverage and Distribution:**

Domestic subscriptions are available at \$190 for one year (10 issues). Foreign subscriptions: 10 issues US\$360. Contact PharmaVoice at P.O. Box 327, Titusville, NJ 08560. Call us at 609.730.0196 or FAX your order to 609.730.0197.

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## Letters...

Send your letters to feedback@pharmavoices.com. Please include your name, title, company, and business phone number. Letters chosen for publication may be edited for length and clarity. All submissions become the property of PharmaLinx LLC.



## Artificial Intelligence

Happy New Year. As we enter 2019, we take note of one of the major trends expected to impact all aspects of the life-sciences industry: artificial intelligence. In 2019, according to Forrester, AI solutions will continue to spread across the healthcare continuum thanks to the promise of improved experiences and outcomes. The key vector will be the growth of commercial AI solutions — from FDA-approved, AI-based diagnostic tools to specialized chatbots for managing patient engagement — that are easy for companies to buy, available through enterprise health clouds, and increasingly easy to integrate with existing systems.

A recent McKinsey Global Institute discussion paper suggests that AI has the potential to create between \$3.5 trillion and \$5.8 trillion in value annually, with a significant portion of that growth in the life-sciences and healthcare verticals. And Gartner recently projected that the global value of AI as a business could reach \$1.2 trillion by 2018 and \$3.9 trillion by 2022.



AI capabilities, such as machine learning, computer vision, natural language processing, and forecasting and optimization, say SAS analysts, can unleash the full potential of data to solve some of our greatest health challenges and dramatically change the way healthcare and therapies are delivered. They outline that this necessary evolution will enable healthcare and life-sciences organizations to:

- Improve healthcare outcomes. Empower physicians with more accurate diagnostics and targeted prevention capabilities.
- Ensure drug safety. Enable pharmaceutical manufacturers to quickly determine the quality, efficacy, and safety of new product candidates.
- Get new therapies to market faster. Accelerate clinical trials using real-world data sources.
- Control costs. Improve the operational performance of hospitals by optimizing staffing resources and taking action to reduce the number of hospital readmissions.

The focus on AI in the life-sciences industry continues to intensify. As noted in this month's cover story, more than 100 startup companies using AI to develop biomedical products have emerged since 2014, with almost all existing large cap companies initiating AI development programs in an attempt to keep up. One of the specific areas where AI is expected to have a major impact is that of drug discovery. In fact, according to one source, more than 30 pharmaceutical companies are currently using AI as part of their drug discovery efforts.

According to Frost & Sullivan's Cecilia Van Cauwenberghe, pharmaceutical companies are increasingly recognizing the value of deploying AI-based platforms that can leverage data on gene mutations, protein targets, signaling pathways, disease events, and clinical trials to find hidden drug-disease correlations. Further, this technology will enable scientists to derive structured and unstructured data from multiple sources as never before. Strategic collaborations with AI-driven companies can help large pharmaceutical companies establish a robust, AI-based pipeline as part of their portfolios and address new therapeutic areas.

We will continue to track AI developments throughout the year in a new monthly department. Stay tuned!

*Taren Grom*  
Taren Grom  
Editor

## Their word...

**DENISE MYSHKO**  
Managing Editor



*The approvals of the first plant-based cannabinoid drugs open the doors for research into therapies derived from cannabis.*

**ROBIN ROBINSON**  
Senior Editor



*Despite the challenges, AI offers many powerful applications across all facets of pharma business, from R&D to marketing segmentation.*

**KIM RIBBINK**  
Features Editor



*Diversity has been shown to benefit the business, yet progress appears to have stalled, demonstrating that organizations need to broaden their gender parity initiatives.*

FEBRUARY 2019

## Special Issue: Agile Transformation

To build 21st century organizations, C-suite leaders will need to think differently, lead differently, and transform their companies differently. Dozens of C-suite executives discuss the challenges and opportunities on the horizon.

- Showcase: Outsourcing
- Showcase: Rare Diseases