Innovation all for the patients

CHUGAI

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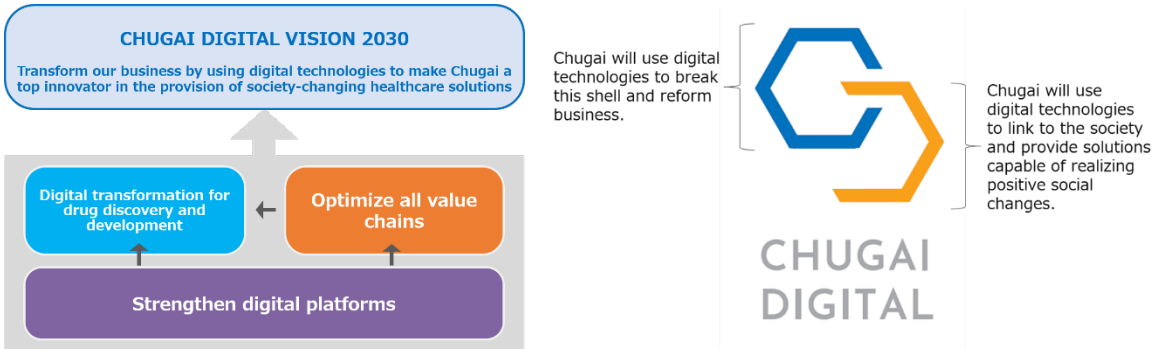
Chugai Announces CHUGAI DIGITAL VISION 2030 to Accelerate Digital Transformation

- Aims to transform our business by using digital technologies to make Chugai a top innovator in the provision of society-changing healthcare solutions
- CHUGAI DIGITAL VISON 2030 focuses on digital transformation for drug discovery and development, optimization of all value chains and strength of digital platform.

TOKYO, March 31, 2020 -- Chugai Pharmaceutical Co., Ltd. (TOKYO: 4519) announced formulation of CHUGAI DIGITAL VISION 2030 for a digital transformation clearly distinct from earlier digitalization efforts.

Rapid advances in IT and digital technology enabled new scientific methods utilizing means including artificial intelligence (AI), real-world data (RWD) and real-world evidence (RWE). Moreover, amid growing measures to contain healthcare costs, there is increasing need for pharmaceutical products with true value for patients. Chugai has formulated CHUGAI DIGITAL VISION 2030 for a digital transformation clearly distinct from earlier digitalization efforts. It aims to realize business transformation by digital technologies and provide society-changing healthcare solution.

“In CHUGAI DIGITAL VISION 2030, Chugai has set its goal for 2030 to transform our business by using digital technologies to make Chugai a top innovator in the provision of society-changing healthcare solutions,” said Satoko Shisai, Chugai’s Vice President, General Manager of Digital & IT Supervisory Division. “Our three basic strategies consisting of; 1) Strengthen digital platform, 2) Optimize all value chains, and 3) Digital transformation for drug discovery and development, aims to accelerate the advancement of society and Chugai by generating innovation focused on novel drugs.”



Please also visit CHUGAI DIGITAL we created today in Chugai’s website (Japanese only).

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<Three basic strategies of CHUGAI DIGITAL VISION 2030>

Strengthen digital platforms

We will build the hard and soft digital platform. We aim to establish world-class IT platforms through the integration of internal data and creation of a data analysis platform in cooperation with Roche.

Specific Measures:

- Chugai Scientific Infrastructure（CSI)
  Chugai developed an IT infrastructure utilizing Amazon Web Services to access, transfer and store large-capacity data securely, providing five benefits to accelerate digital projects;
  1. Enhance the utilization of internal data across divisions
  2. Securely handle various data with high security requirements including genomic data
  3. Provide academia, medical facilities and partnering companies with analytical environment to accelerate collaborative projects
  4. Reduce cost and time to build environments by automation and standardization
  5. Reduce security risk including information leaks and cyber attacks
- Establishment and operation of Digital Innovation Lab (DIL)
  We will offer a steady system that can embody new ideas and challenge from employees to help create new values. We promote a range of initiatives focusing on innovation, expandability, and potential, rather than on immediate return on investment (ROI).
- Enhancement of the Strategy for Recruitment of IT Personnel
  We will define job descriptions of the data scientist, data engineer, and digital strategist and promote recruitment activities and development of human resources, which is essential in achieving the goal of CHUGAI DIGITAL VISION 2030. As part of our initiatives to enhance recruitment, we plan to make an arrangement which allows applicants to confirm the compatibility of their skills with the task requirements as well as their aptitude for the position in advance, for example, through internship.

Optimize all value chains

We will use digital technology to dramatically boost the efficiency of each department and function, in particular production and marketing processes. Through comprehensive analysis of customer data, we will also commence development of new solutions to enhance the customer experience.

Specific Measures:

- Promotion of utilization of AI in each process
  DataRobot, a machine learning platform which allows prediction with high precision and automation, has been introduced throughout the company including research, production, and sales. As an example, we use it to determine the optimal manufacturing conditions at our plant. The machine learning allows us to identify optimal manufacturing conditions, which was difficult with conventional methods, and to reduce risk of nonconforming products.
- Development of lab automation at research laboratories
  We will develop an IT infrastructure that integrates a series of research processes including pharmaceutical molecular design, compound management, high-throughput screening, drug evaluation, and data analysis, in addition to utilization of robots and automatic equipment for experiments, to significantly improve the efficiency in the drug discovery process and develop innovative new drugs.

- Further advancement of real-time safety information provision
  We support treatment by building a tool to provide real-time safety information that covers clinical trials to post-marketing consistently, according to request from healthcare professionals. Furthermore, we plan to expand the existing digital platform to promptly respond to urgent need for safety information, to ensure secure and safe treatment. In this platform, healthcare professionals can directly access the safety database and have an online communication with patients.
- Development of new solutions to contribute to healthcare
  We will contribute treatment support for patients and healthcare professionals by promoting further information provision and communication through digital technology (e.g., establishment of membership site for physicians, utilization of 24-hour chatbots, and development of a disease-related application for patients and healthcare professionals, and holding of web seminars for private viewing). Furthermore, we will build a digital platform which allow us to utilize in-house data for further consulting promotion to provide the optimal solution to each need of healthcare professionals.

Digital transformation for drug discovery and development

We will improve our capabilities in AI, digital biomarkers (dBMs) and RWD to achieve Digital transformation for Drug Discovery and Development (DxD3) in a way that only Chugai can, with the aim of achieving true personalized healthcare.

Specific Measures:

- AI-driven drug discovery
  We have been developing antibody discovery technologies with AI to further strengthen our advantage of antibody engineering technologies. Examples include development of a unique machine learning algorithm with numerous antibody amino acid sequences and corresponding information on their characteristics. We use the machine learning algorithm for selection of lead antibodies as seeds of pharmaceutical products, as well as for optimization of antibodies with target characteristics.
- dBMs initiatives
  We achieve continuous measurement of biological changes in real time which was difficult in the past, by developing wearable devices to measure biological changes in association with disease status. This initiative will mainly focus on verification of product value, clinical application and better understanding of disease. Wearable devices are used to assess data on physical activities by patients being treated with our several investigational drugs. In some clinical research, an application of electronic patient-reported outcome (ePRO) has been utilized to assess relationship between exercise and bleeding by recording patients' data related to hemophilia including sports they played, medications and bleeding.
- Utilization of RWD
  Our plan includes an extension the regulatory application strategy, renewal of the clinical development strategy, and validation of evidence in the real-world setting, by accessing clinic-genomic database or analyzing RWD and RWE.

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