

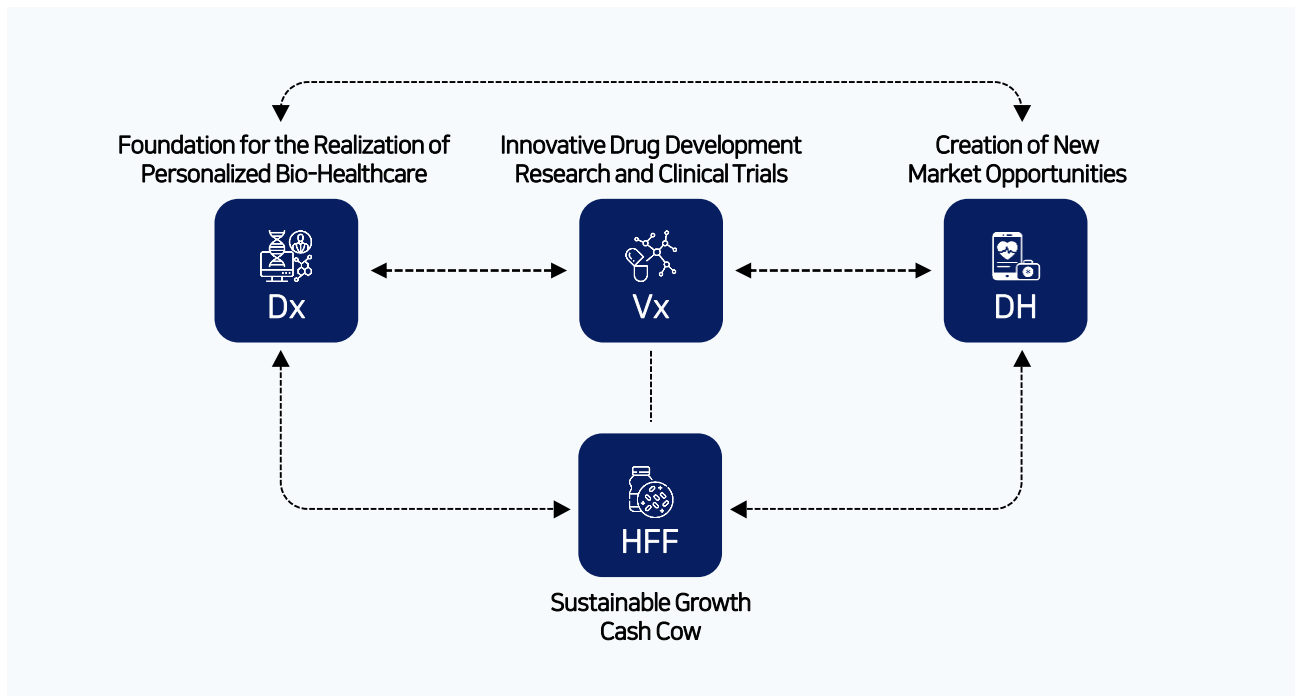
# Dx&Vx

## IR Letter

(Oct. 2024)



# Dx&Vx Business Roadmap



## Medical Diagnostics

Dx&Vx's genomic diagnostics and in vitro diagnostics contribute to reducing healthcare costs and improving treatment outcomes. Genomic diagnostic technologies enable more precise and personalized treatments, combined with new drug developments, driving innovation in the medical field. Our companion diagnostic services enhance the efficacy of both our own and third-party drug developments, minimizing side effects and facilitating the development of personalized treatment options for patients.

- Genomic Diagnostics
- In Vitro Diagnostics and CDMO
- Genomics CRO
- Companion Diagnostic Services (CliDex)



## Consumer Healthcare

Using our diagnostic technologies, we provide integrated consumer healthcare solutions based on the microbiome for disease prevention, treatment, and management. Our services include health functional foods for prevention, general pharmaceuticals and prescription drugs for treatment, and products for lifestyle and hygiene management. We target the global market and continue to achieve high sales growth.

- Microbiome-based Therapeutic Adjuncts
- Nutrition Products
- Domestic and International CSO
- Functional Skincare/Personal Hygiene Products



## Drug Development

Our affiliate, Oxford Vacmedix, is preparing to initiate phase 1b clinical trials both domestically and internationally for its cancer vaccine, OVM-200, and our subsidiary Avixgen is about to start phase 2 trials for a dry eye treatment. Additionally, we have a pipeline of in-house developed drugs including microbiome-based therapies, mRNA cancer vaccines, oncology antibodies, and oral obesity treatments.

- Microbiome-based Drug Development
- ROP and mRNA Cancer Vaccines
- Cancer Antibody Drugs, Synthetic Organic Drugs
- Ophthalmic Disease Treatment Drugs










## Digital Healthcare

Dx&Vx is on the verge of launching K-hub, a bio-pharmaceutical portal, combined with our genomic analysis platform and telemedicine services. We aim to shift from a treatment-centric to a prevention and management-focused approach in healthcare services, ultimately aiming to develop a Clinical Decision Support System (CDSS) to assist medical professionals in their decision-making.

- K-hub
- Telemedicine Services
- AI-based Drug Development Platform
- Smart Diagnostic Devices

## Performance Summary for September 2024

-  Patent Application for Second Candidate of Oral Obesity Treatment
-  Subsidiary Avixgen files domestic patent application for ophthalmic formulation to treat dry eyes
-  Anti-cancer antibody drug research results revealed
-  Development of a full-fledged strategy for the treatment of innovative universal infectious diseases
-  Recruiting peptide experts
-  Completed Metabolic Disease Pipeline for Obesity Treatment
-  Completion of paid-in capital increase procedures and strengthening financial soundness

### Drug Development

#### Patent Application for Second Candidate of Oral Obesity Treatment ▼

Our company completed the patent application for our second oral GLP-1 (Glucagon-like peptide-1) receptor agonist-based candidate for obesity treatment on September 2nd. This application follows another from last month, reflecting our strong commitment to accelerate development and enhance competitiveness in the obesity treatment market. The patents filed are based on small molecule GLP-1RA technology and are expected to offer distinct effects through different compound structures and mechanisms of action.

Our drug development team is led by PhD-level researchers from Hanmi Pharmaceutical and Daewoong Pharmaceutical, with Kwon Kyu-Chan, who oversees our drug development efforts, being an expert who has successfully led multiple products to FDA approval while at Hanmi Pharmaceutical. We are actively seeking various strategic collaborations, including early licensing out, global joint clinical trials, and research funding, with domestic and international pharmaceutical and biotech firms to accelerate the development of our oral GLP-1 obesity treatment.

#### Subsidiary Avixgen files domestic patent application for ophthalmic formulation to treat dry eyes ▼

Our subsidiary, Avixgen, completed a domestic patent application in September 2024 for an eye drop formulation for treating dry eye syndrome. We are the majority shareholder of Avixgen, holding a 63% stake. The treatment developed by Avixgen is known to have fewer side effects compared to existing products and has demonstrated safety, pharmacokinetic properties, and tolerability in Phase I clinical trials. Avixgen plans to submit an Investigational New Drug (IND) application for Phase II trials to the U.S. FDA early next year.

The global market for dry eye syndrome treatments is projected to reach \$6.5 billion by 2027. Following the application for a use patent, Avixgen has strengthened its market competitiveness by completing an additional patent application for its eye drop formulation. Additionally, Avixgen is exploring potential collaborations with global pharmaceutical and biotech companies, considering various strategic cooperation options such as early technology transfers and joint clinical trials.

#### Anti-cancer antibody drug research results revealed ▼

We are making smooth progress in developing a new antibody drug candidate, 'DX-DRG-B01', which is the first-in-class within our group. This novel drug targets a new biomarker frequently found in cancers but has yet to see a success story in the global market. Our DxVx research team has developed a library through cancer gene analysis that predicts regions capable of targeting challenging antigens, and based on this, we are developing antibody candidates recognizable by T-cell receptors. Additionally, we are nearing completion of an 'immune cell engager' platform designed to maximize efficacy against cancer cells.

## Development of a full-fledged strategy for the treatment of innovative universal infectious diseases

Following the recruitment of globally renowned Dr. Cho Nam-jun, we are in discussions with LUCAAICELL, where he serves as co-CEO, to jointly develop antiviral drugs. LUCAAICELL's drug candidate, AviPep (LAC-003), is a broad-spectrum antiviral therapy capable of addressing various types of viruses, offering potential solutions for pandemics caused by the coronavirus and dengue virus, among others. This technology has been recognized by the U.S. National Institutes of Health (NIH) as a pivotal pandemic response technology. Dr. Cho is actively collaborating with international health organizations to advance this research. Through this partnership, our company plans to prepare treatments in advance for deadly viral infections and potential future pandemics, contributing to proactive pandemic preparedness.

## Recruiting peptide experts

We have recruited Chang-ki Lim as the new team leader of our Drug Research Team 3, a specialist in peptide drug development and linker technologies. Mr. Lim has held key positions at Hanmi Pharmaceutical, Huons Group, Ahngook Pharmaceuticals, and CentrixBio, accumulating extensive experience in the development of peptide and recombinant protein drugs, as well as anticancer antibody drugs. His addition is expected to accelerate the development and commercialization of OVM-200, an ROP-based cancer vaccine, which we are currently developing in collaboration with Oxford Vacmedix.

OVM-200 has completed Phase 1a trials and is now progressing through Phase 1b, with a licensing agreement recently reached and a final contract imminent. We plan to conduct later-stage clinical trials of this pipeline in Korea, China, and other Asian regions. With the recruitment of this peptide development expert, DxVx aims to enhance our ROP technology, speed up development, and push for rapid commercialization.

## Completed Metabolic Disease Pipeline for Obesity Treatment

We are completing our pipeline for obesity and metabolic diseases and accelerating our research and development, as well as commercialization efforts. Following the development of our oral obesity treatment and an ingestible anti-obesity probiotic strain, we have initiated the development of a GLP-1 based peptide injectable, broadening our range of obesity treatment options. The oral obesity treatment is expected to enhance patient convenience and satisfaction by overcoming the limitations of existing injectable treatments, prompting significant clinical development investments by global companies. Additionally, beyond the development of oral treatments, our microbiome research lab has discovered and patented a probiotic strain effective in reducing body fat, and we are also advancing projects on microbiome-based dietary supplements and drug developments for obesity treatment.

The new peptide-based injectable in our obesity treatment pipeline will be led by Chang-ki Lim, our recently appointed executive. As an expert in peptide design and linker technologies, Mr. Lim will spearhead new projects in the obesity injection field, including GLP-1 based designs and synthesis, alongside his work on the OVM-200 cancer vaccine.



## Matters concerning overall management

### Completion of paid-in capital increase procedures and strengthening financial soundness

On May 29th, we announced a rights issue to our shareholders and proceeded with the process, culminating in the listing of 19 million new shares on September 30th, thereby completing the rights issue and securing a total of 424 billion KRW in raised funds. This rights issue has allowed us to improve our financial structure and secure funds for research and development, accelerating our efforts in new drug development and business expansion.

During this rights issue, Coree Group purchased the rights to subscribe to new shares from our largest shareholder, Jong-yoon Lim, a director at Hanmi Pharmaceutical. Established in 2009 in Hong Kong, Coree Group is a technology development and investment company focused on vaccine and biopharmaceutical new drug development, as well as digital healthcare R&D. The participation of Coree Group in this rights issue is expected to create synergistic effects in drug development and business operations between our two companies.

## Compliance Notice

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