Chang Woo Lee – CEO, CUROGEN

Building stronger bridges between Korean biotech companies and global capital will be critical to unlocking the ecosystem's full potential

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Chang Woo Lee, CEO of CUROGEN, discusses translating academic science into innovative medicines, developing multispecific proteins and an oral IBD therapy, and pursuing global expansion. He highlights Korea's biotech strengths and funding challenges, while outlining plans for international investment, licensing, clinical development and potential IPO options. Ultimately, his focus remains on advancing differentiated treatments that address unmet needs and reach patients.

Could you introduce yourself to our international readers, and talk us through your transition from academia to founding the company?

Truly innovative science tends to originate in academia, since that ecosystem is built around pursuing novel targets rather than incremental ones. My own laboratory identified a new mechanism underpinning inflammatory bowel disease and broader autoimmune inflammation, and we worked to identify small molecules and biologics that could specifically inhibit the targets driving it. That research became the basis for a university spin-off.

Good science alone is never enough to secure FDA or EMA approval, though. Every company believes its own science is strong, but a drug also has to demonstrate a genuine competitive advantage against everything else in the field, including already-commercialised drugs and

everything moving through Phase I, II, or III. Even without deep pockets or a high profile early on, that differentiation is what drew serious licensing interest from major pharmaceutical companies, and that interest is really how we got to where we are today.

Your core platform grew out of academic research into a multi-targeting protein technology. Could you explain the science, and why you saw commercial potential in it?

Antibody-based therapies have become the standard of care across many autoimmune diseases, and single-target antibodies work well for a meaningful share of patients. But a significant proportion, sometimes up to seventy percent depending on the disease, stop responding after a year or two as their disease relapses, and need to move to another therapy entirely. That limitation is rooted in the underlying biology of antibodies themselves, most of which are built on an IgG1 or IgG3 backbone carrying an inherent susceptibility to immunogenicity and anti-drug antibody response that is difficult to fully engineer around. Even as the industry has pushed toward bispecific and trispecific formats, and combination therapies pairing two mechanisms, those approaches have often made the underlying immunogenicity problem worse rather than better, since it is a fundamental limitation of the antibody format itself. Relatively few genuinely multi specific antibodies have reached approval, even though many major pharmaceutical companies have candidates in early trials.

That is precisely why we started with multispecific proteins rather than antibodies. Our platform was designed from the outset to overcome those limitations. Fc-fusion protein platforms typically carry their own trade-off in productivity and molecular size, since they tend to be considerably larger than a comparable antibody, so we worked to improve protein stability and half-life while reducing immunogenicity, removing unnecessary exogenous protein sequences and introducing specific mutations to further reduce that risk. Building a genuine trispecific format is technically much harder than bispecific; adding a third target typically introduces severe productivity and process-development hurdles that many platforms cannot overcome. Our trispecific format overcame that, retaining strong binding affinity and neutralisation potency against each target.

You are pursuing two distinct modalities, small molecule and multispecific protein. As a young company with limited resources, why split focus across both?

Each modality addresses a different strategic opportunity, and the decision was driven by the long-term development of the company. We began with the small molecule, a novel chemical entity with a completely new mechanism of action, which remains our lead pipeline asset today and has attracted considerable interest from major pharmaceutical companies given its efficacy profile as an oral IBD treatment. We subsequently moved into multispecific proteins at a time when the industry was still overwhelmingly focused on conventional antibodies. There was already a broad understanding of the limitations of antibodies in pharmacokinetics, bioavailability, and immunogenicity, but small molecule development takes considerably longer than most biologics programmes.

For us, developing a second modality was therefore a strategic decision about building a sustainable company rather than relying on a single asset. If we focused exclusively on the small molecule, particularly if that programme were licensed out, we could potentially find ourselves without a wholly company-owned asset progressing through clinical development. The multispecific platform gives us an additional and highly differentiated path to build our own pipeline. There is also a fundamental scientific advantage. Multispecific proteins can be engineered as bispecific or multispecific molecules capable of addressing multiple signalling pathways simultaneously. That creates opportunities to intervene in disease biology in ways that a conventional small molecule cannot. That dual approach is reflected in how we allocate resources, with roughly half the organisation focused on each modality. We have around 50 employees in total, split across two centres: our small molecule work is based in Suwon, and our biologics work is based in Seoul, though certain functions naturally support both.

Your lead small-molecule asset targets inflammatory bowel disease, a market approaching USD 25 billion but still dominated by injectable therapies. What would an effective oral option mean for patients?

Existing oral options for IBD remain limited..Our own small molecule, CR-C003, a first-in-class oral inhibitor of the pathogenic ubiquitin E3 ligase CR-E1, has been tested extensively in vitro and in vivo across toxicity, efficacy, pharmacokinetics, and metabolism, both in-house and with partner laboratories. Across four different IBD animal models, benchmarked against strong controls including cyclosporine, approved JAK inhibitors, and IL-23 inhibitors, our efficacy consistently compared favourably. Safety is a further advantage: our cytotoxicity in hepatocytes and T cells, measured by CC50, sits considerably higher than obefazimod’s, meaningfully lower cellular toxicity at equivalent concentration. In longer-duration studies of 20 to 25 days or more, a substantial

proportion of animals on competitor drugs died, in some cohorts 40, 50, even over 60 percent, whereas no mortality was observed with our compound. We are currently in the middle of GLP toxicology studies and preparing GMP material ahead of a planned Phase I start; our preclinical package compares very favourably with competitors already in the clinic.

Given that several competitors are already in Phase III or commercialised, how are investors and potential partners responding to a preclinical asset making these claims?

Other companies are working on oral small molecules too, but CR-C003 shows robust efficacy and a favorable safety profile by comparison. The most widely prescribed IBD treatments are JAK inhibitors, alongside antibodies such as Abbvie’s Skyriziand Takeda’s Entyvio. Several TL1A-targeting antibodies are in Phase III, but not orally administered. Large pharmaceutical companies are actively looking for an oral small molecule with a genuinely improved efficacy and safety profile relative to existing IBD treatments , and we have met a considerable number of MNCsat conferences across Europe, US, andAsia. Even at a preclinical, GLP-toxicology stage, our data package has generated real interest from both pharmaceutical partners and global investors specifically because it meets that bar.

The IBD market itself remains substantial and growing, with an estimated USD 33 billion global market size projected for 2027 and roughly 2.4 to 3.1 million US patients as of 2024.

We are planning to advance the small molecule into Phase I clinical development in the first half of 2027. As we move toward the clinic, we would be open to exploring licensing opportunities if we can find a partner and terms that are attractive to us. At the same time, we are fully prepared to continue developing the program independently.

Looking further ahead, is the ultimate business model built primarily around licensing, or do you have ambitions to commercialise something independently as CEO?

Since both of our lead assets, CR-C003 and CR-T1-T4, are attracting interest from multinational pharmaceutical companies, our current plan is to license out one of these two lead assets under the right terms. At the same time, we intend to retain the other asset and continue developing it

ourselves, including advancing it into clinical trials in the U.S.

In parallel, we will continue to build and develop our broader CR-Nx nanobody platform. So, while licensing will be an important part of our business model, we also have clear ambitions to retain development capabilities for selected programs ourselves. We believe this balanced approach will allow us to create value through partnerships while maintaining meaningful ownership of our most promising assets.

Turning to financing, are you pursuing an IPO in Korea or in the US, and how is the company approaching fundraising more broadly?

The specific listing venue, whether KOSDAQ or Nasdaq, has not yet been finalised; that decision rests with our board and requires consultation with our existing investors. Each path carries its own advantages: a Nasdaq listing appeals to global investors for structural reasons, while a KOSDAQ listing benefits from how Korean listing criteria are structured.

One important difference is how investors assess biotech companies. Korean listing boards and domestic investors tend to place significant weight on whether a company has already established a successful licensing track record. Global investors, by contrast, tend to evaluate a company more directly on the value and potential of its pipeline, regardless of whether a licensing transaction has already been completed.

We currently have investment from both Korean and global sources. We have secured a lead investment from the United States and now final using additional members of the syndicate, with the goal of closing our global funding round by the end of this year. Global investors have shown strong interest in the underlying potential of our pipeline and have been more willing to assess the company based on the science and development opportunities. If successfully completed, this financing will allow us to advance one of our lead pipelines into global-standard clinical trials. We are currently pursuing a Series A2 financing round targeting USD 50 million, which began in 2026. This financing will be an important step in supporting the next stage of our global clinical development strategy.

Securing global investment as a Korean biotech is often described as complicated. What do you see as the real strengths of Korea’s biotech ecosystem, and where does the greatest potential lie?

One of Korea’s real strengths is the quality of its talent and the ability of its biotech companies to respond quickly to global trends. For us, our business development team has been a particular strength. They are highly attuned to developments in the global biotech and pharmaceutical markets, which has helped us identify opportunities and build relationships internationally.

Our lead global investor has also played a much broader role than simply providing capital. Their network, experience and practical support have been instrumental in helping us expand our reach internationally, particularly into the U.S. That kind of hands-on guidance is extremely valuable and difficult to substitute.

At the same time, there are structural challenges that should not be overlooked. For a Korean company, moving capital into and out of the country can involve regulatory procedures, including advance approval from the Bank of Korea, and navigating these requirements can be challenging for companies that are not familiar with the process. This can become particularly important when a company is trying to engage with international investors.

There is also significant legal and regulatory complexity when bringing new global investors into a Korean company. International investors have their own requirements regarding the source and movement of funds, and those requirements need to be reconciled with the terms and regulatory constraints of existing investors. Since fund regulations can differ substantially across jurisdictions, resolving these issues in advance can require considerable time, coordination and cost.

We have been able to navigate these challenges because we have had investors and partners who were willing to provide practical support and help us work through the issues as they emerged. That experience has shown us that Korea has strong underlying scientific and business-development capabilities, but building stronger bridges between Korean biotech companies and global capital will be critical to unlocking the ecosystem’s full potential.

What broader trends are you seeing among Korean biotechs right now?

We are seeing several important trends emerging across the Korean biotech sector. A number of Korean companies are currently placing a strong focus on antibody-drug conjugates. At the same time, many Korean biotechs are still primarily looking to raise capital within Korea. I think this is partly related to the resource gap we discussed earlier. Without dedicated teams or advisors focused on international business development and fundraising, companies can find it difficult to reach global investors and partners. They may also have less exposure to the market intelligence

and strategic insights that global investment banks and investors can provide.

This is particularly important for companies considering a Nasdaq-style listing. If a company wants to build a truly global business and eventually access international capital markets, establishing relationships with global pharmaceutical companies and licensing assets internationally will likely become essential at some stage.

Fundraising conditions in Korea were genuinely difficult for roughly two years, and a number of biotechs were forced to close, but the market has been improving this year, with more capital being directed toward Korean biotech again. We understand that at least one portfolio company backed by a Korean venture fund recently secured American investment too, following a similar path to ours. We hope that signals a broader opening of doors for global capital to reach Korean biotechs, since there are genuinely strong assets here that remain under-recognised simply due to limited international exposure.

With roughly 600 biotechs in Korea, and China representing an even larger pool of licensing opportunities, how are you ensuring CUROGEN stands out to a global audience navigating that landscape?

Globalisation has always been central to how we think about CUROGEN. We have never viewed ourselves simply as a Korean biotech competing within Korea; from the beginning, we have wanted to build a company that can compete and operate on a global stage. Every member of our team is committed to and ready for globalisation, so I do not think that willingness or ambition is the limiting factor. If anything, the scarcer resource may not be capital alone, but the scientific and R&D depth required to support that level of ambition.

We are still relatively early in that journey, and there will inevitably be challenges ahead that we cannot fully anticipate. Some exciting, and some genuinely difficult. But the direction is clear, and we have made the decision to pursue it regardless.

We have specifically prioritised the US as our initial focus for global expansion, since our team is well positioned for that market. I do not pretend to know every detail of what successful global expansion will require, but we intend to work through each issue as it arises. The company is now roughly seven and a half years old; when I founded it, my own background was rooted in academic research and postgraduate supervision. I had to develop expertise across areas such as capital raising, organisational leadership, and team building. That transition has been an important part of

my own growth as a leader, and it has also shaped how we have built CUROGEN. As the company has evolved, we have continuously strengthened our capabilities, adapted to new challenges, and made the decisions necessary to position the organisation for its next stage of growth.

As a final, more personal question, you are a scientist who built a company and learned along the way. How do you reconcile the demands of business with the science, and what ultimately guides you as a scientist?

Ultimately, I am still here because I want to see the drugs we develop reach patients. I want to see the impact they can have on people’s lives. That is my primary goal.I began my career in academia in Korea as a professor, and many of the people I worked with have since gone on to become professors themselves or joined biotech and pharmaceutical companies. I have tried to bring that academic experience into the company, but I also recognise that it is not, on its own, sufficient to build a truly global business.

We have therefore brought together a broader range of expertise and professional experience. For me, and for the company, the goal is not simply to commercialise assets or pursue an IPO. It is to develop medicines that genuinely address unmet needs and ultimately benefit patients. That patient focus remains the central principle behind what we do**.**

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