富山から世界へ TOYAMA PHARMACEUTICAL VALLEY DEVELOPMENT CONSORTIUM
Newsletter
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Special Interview with Dr. Lieve Ongena

Learn about Leading Examples: A Roadmap for Regional Development through Continuation and Impact

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Profile

- PhD in Biology, University of Ghent, Belgium (1989)
- Postdoc at Chiba University (1990) and Kyoto University (1991)
- Business Internship at Itochu Technochemical & Fujirebio (1994-1995)
- 1st grade Japanese language test for foreign students (1994)
- Research Planning, Business Development at Innogenetics NV (1992-2000)
- VIB Science Policy Manager (2000-2018)
- VIB Sr. Science Policy Manager & Head of the International Grants Office (2018‐present)

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Introduction

What comes to mind when you hear "Belgium"? A renowned gourmet nation famous for chocolate, waffles, and beer? Attractive tourist destinations like Brussels or Antwerp? Located in Western Europe, the country covers about 30,000 square kilometres—roughly one-twelfth the area of Japan— and has around 12 million inhabitants, about one-tenth of Japan's population. You might be surprised to learn that, within this relatively small country, a major life-sciences hub has grown rapidly through a strategic collaboration between industry, academia and government.

Belgium, a multilingual federal state, is made up of several autonomous regional governments, and Flanders occupies the northern half of the country. Since the late 1990s, the Flanders government has obtained more autonomy and from the start it focused on building a biotechnology ecosystem through strategic decision-making, achieving significant growth and development in the region.

At the heart of this successful model is **VIB** (Flanders Institute for Biotechnology, in Dutch: Vlaams Instituut voor Biotechnologie), which we introduce here. We spoke with Dr. Lieve Ongena, Senior Science Policy Manager and Head of the International Grants Office at VIB, who leads its strategic planning and fundraising efforts.

Interviewer: Hiroshi TAKAMORI, Toyama Pharmaceutical Consortium Secretariat

Background of VIB's establishment

First, why did the Flanders government decide to establish VIB back in 1995, 30 years ago?

The background relates to Belgium's unique and somewhat complex political structure. In 1993, Belgium transitioned to a federal system through constitutional reform. Around this time, regional governments gained significant authority over their own policies. In the 1960s, Flanders was mainly agricultural and had little industry. After the shift to federalism, the Flanders government decided to focus on areas where it had strengths to achieve economic stability and growth. The new government at that time needed to demonstrate, both domestically and internationally, that Flanders was an autonomous region by revitalizing its regional economy.

The region's strength lay in biotechnology research, which was already highly regarded internationally at the time. The first president of Flanders recognized this potential. Consequently, the non-profit research institute VIB was established. It all began with the goal to strengthen the region's economic growth by strengthening its research capabilities.

So, the VIB initiative that launched has since produced many outstanding researchers and numerous research achievements. The implementation and industrialization of these results have directly contributed to the growth and development of the regional economy. While the VIB's model is now internationally recognized as a "successful model," weren't there difficulties when VIB was launched 30 years ago?

The circumstances leading to the launch of VIB were, in a sense, quite unique, and I believe this worked to Flanders' advantage. In many cases, regional industrial cluster support organizations must strive for budgetary balance and tangible results within limited government funding.

However, compared to industrial sectors where results can be achieved within a few years, fields such as pharmaceuticals and agriculture require far longer development times. It is extremely difficult to explain to funders the importance of sustained research efforts and gain their understanding that these are fields where results take considerable time to materialize.

In our case, the first president of Flanders accepted a proposal from government officials at the time to "leverage Flanders' strength in biotechnology research" for regional economic revitalization. This led to the launch of a plan to establish an outstanding research institution in Flanders, similar to MIT in the United States.

Today, VIB's model is used in Europe to illustrate that "if governments have the courage to take a significant step in long-term funding of research where they have strengths, it will always pay off."

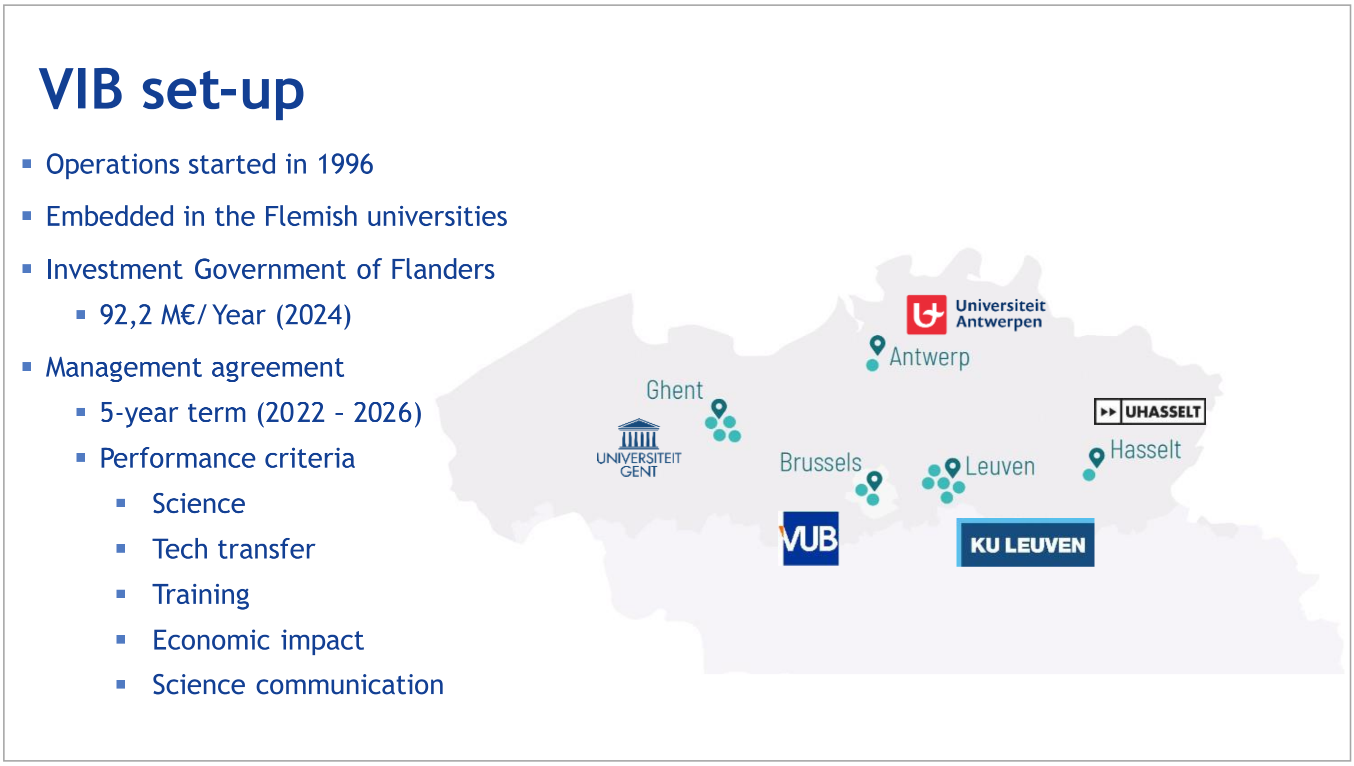
VIB's operational structure

Could you explain how VIB operates and drives its own initiatives?

VIB was launched with a dual mission: first, to achieve excellence in life-sciences research; second, to translate that research into economic value. To this end, we established collaborative agreements with five Flemish universities for research and education. Currently, these five universities host 96 VIB research groups comprising roughly 2,000 researchers. Primary research areas include brain disease research, cancer biology, inflammation research, microbiology, structural biology, plant systems biology, and molecular neurology. Recently, we set up the VIB.AI research center to pursue AI-driven research. VIB is also proactive in recruiting female researchers.

VIB research group leaders are chosen through rigorous screening, with one in four among the top 1% of scientists worldwide by citation count. (Clarivate's Highly Cited list) They obtain not only research funding provided by VIB but also significant amounts of national and international competitive funding. Furthermore, VIB has established a platform of core facilities (shared platforms for cutting-edge equipment). A total of 100 technology experts are assigned to the 14 core facilities, ensuring researchers have access to state-of-the-art research environments. Group leaders must demonstrate the future potential of their research fields within these environments, and VIB regularly reviews and evaluates their progress.

For fiscal 2024, VIB receives €92 million from the Flanders government, 90% of which goes directly to research, with the remaining 10% covering other operational expenses. When combined with international competitive research grants, subsidies, and income from industry, VIB's total revenue for 2024 amounts to 170 million euros. Although VIB secures substantial funds from sources other than the Flanders government, the government has not reduced its own allocation. This demonstrates the Flanders government's strong belief in VIB's mission. VIB submits a five-year strategic plan to the regional government, but the review process is extremely rigorous; all target metrics—publications, patent applications, spin-off companies, and the like—must be achieved.



Overview of VIB and its five partner universities (provided by Dr. Lieve). ©VIB

You mentioned that VIB itself is not an independent research institute but collaborates with five universities in Flanders, where about 2,000 VIB researchers work. What exactly does this collaborative relationship entail?

VIB is a private, not-for-profit research institute. The researchers of VIB are working at various faculties of the Flemish universities. Therefore, VIB has signed partnership agreements with each university, outlining the sharing of expertise and technology and committing both parties to enhancing each other’s strengths. The resulting achievements are shared between the university and VIB. In publications, authors refer to both affiliations (the university and VIB), and patents filed are jointly owned by the university and VIB. The roughly 2,000 VIB researchers include PhD students, who carry out their projects as VIB researchers while earning their doctorates from the partner universities. This partnership with universities is crucial for VIB, forming a mutually complementary relationship.

This cooperative relationship did not form overnight. During VIB’s first five years, winning the universities' confidence was difficult until VIB's value became clear. We persevered for a decade. It was only around the tenth year that we began to feel the collaborative efforts were truly taking hold. Today, we enjoy robust partnerships with each university.

Efforts toward commercialization

We learned that VIB has worked to enhance the overall research capabilities of Flanders through its unique approach, building collaborative relationships with five Flemish universities. As you mentioned earlier, since its founding, VIB has pursued two missions: aiming for “high research capability” while also pursuing economic growth in the region by the “commercialization of research outcomes.” Regarding commercialization, what kind of results have been achieved?

Securing intellectual property is essential for commercializing research outcomes. From its founding through fiscal year 2024, VIB has filed 821 patent applications. Revenue generated from industry through joint research and other activities totaled 350 million euros during this period.
Furthermore, based on VIB's research, 40 biotech ventures have been founded to date, receiving a total of 1.8 billion euros in venture capital investment. These venture launches have also created over 1,000 jobs in the region. To support these regional biotech ventures in getting their businesses off the ground smoothly, VIB has established five incubation facilities. VIB itself has also launched a venture fund to make investments.

To drive these commercialization activities, VIB headquarters has established an Innovation & Business Team. Their role is to connect the research findings of VIB's research groups to the market as innovative products and technologies. Patients and society alike are eagerly awaiting these new products and technologies. The team consists of 25 industry-trained experts. I call them "bilingual" because they fluently speak both the language of science and the language of business. They hold PhDs in life sciences but also possess 5-6 years of corporate work experience. This means they are bilingual professionals who can communicate with VIB researchers using their scientific background while also leveraging their corporate experience to engage in discussions and negotiations with industry.

As you know, Flanders hosts a cluster of pharmaceutical companies, and negotiating licensing and collaborative research agreements with these firms is also part of the team's role. The Innovation & Business team is extremely important to VIB. The team also includes patent attorneys. Furthermore, we allocate a budget for their training to become patent attorneys.

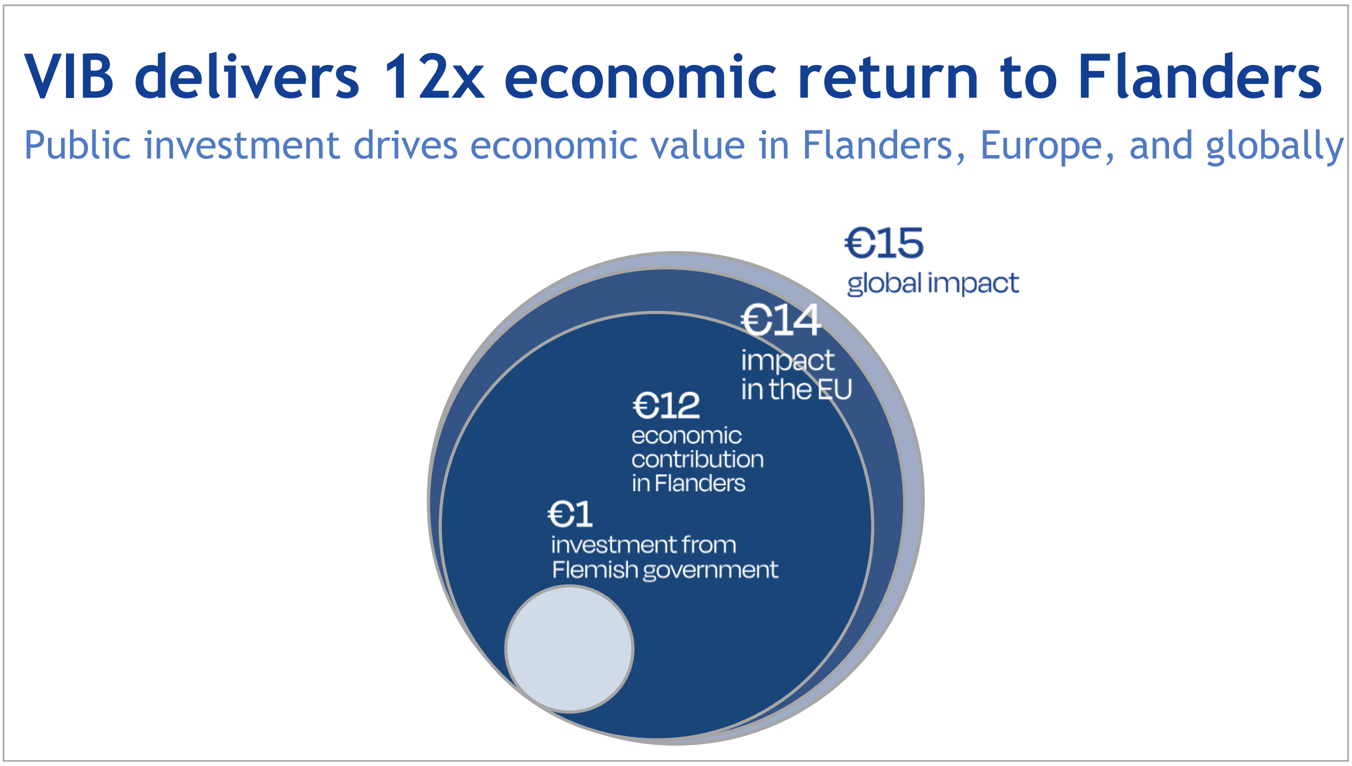
Impact on the regional economy

A management system is now in place that spans the entire pipeline—from research promotion to results generation and, ultimately, commercialization. What impact are these initiatives having on the regional economy of Flanders?

As I mentioned earlier, VIB undergoes rigorous evaluation of its performance by the regional government, and as part of that evaluation, we were asked to demonstrate the economic impact of VIB over the past 10 years. We commissioned the UK-based firm BiGGAR Economics to conduct this research and analysis. They collected and analyzed data not only from VIB but also from universities, researchers, companies in Flanders, as well as international sources and figures, covering the ten-year period from 2013 to 2023.

According to the BiGGAR report, VIB has created impact not only in Flanders but also internationally across three avenues: Human Health, Planetary Health, and the Biotechnology Ecosystem. The economic impact amounted to €994 million over ten years for the Flanders region alone and €1,359 million globally. Let's compare this to the budget allocated by the Flanders government. The budget from the regional government is an investment in VIB. This means that every euro invested by the Flanders government in VIB generates 12 euros for the Flanders economy, a 12-fold economic impact. The economic impact across the entire EU is 14-fold, and globally it is 15-fold. In other words, globally, every euro invested in VIB returns fifteen euros to the economy.

I believe our status as a "successful model" should by now be quite convincing to other government funding bodies as well. About ten years after VIB's launch, the model was still not fully formed. At that time, it was still a very small initiative, but thanks to the Flanders government's continuous investment, it has grown truly rapidly.



Economic Impact Relative to Flanders Government Investment (provided by Dr. Lieve). ©VIB

Future outlook

VIB plays a significant role not only in the growth and development of the Flanders regional economy but also globally. Looking back over the past 30 years, could you share your outlook for VIB's future?

The BiGGAR report I mentioned earlier evaluated not only VIB's economic impact but also its social contribution. They evaluated this contribution using the “Better Life Index,” an indicator developed by the OECD to measure well-being. The results confirmed that VIB can make a sustainable contribution to the well-being of humanity.

Graeme Bracket, Director of BiGGAR Economics, stated: *“What makes VIB so successful is that its activities extend far beyond research and valorization, to include the role of creating and enhancing the innovation ecosystem in which the biotech cluster in Flanders has flourished.”*

VIB pursues and achieves economic impact, ensuring that outstanding research activities are not confined to research alone. This strengthens research and industrial capabilities, linking them to further regional growth and development. VIB continues to play a vital role as the driving force of this ecosystem. 30 years is a long time, but if we gain the trust of the government for continuous investment in our activities, it will pay off. It will pay off more than anyone could ever expect.

Message to Toyama

Dr. Lieve, you serve on the Advisory Board of Toyama Pharmaceutical Consortium. Toyama Pharmaceutical Consortium is advancing its initiatives as a project aimed at regional revitalization, now in its eighth year. Would you kindly share a message for our project?

The most important factors are continuity and collaboration. Building trust with stakeholders is essential to achieving this.

I hope you will strategically focus on establishing a platform that addresses regional challenges with an eye toward the future of Toyama. A long-term commitment and trust from the Toyama Government will be crucial for the future of Toyama.

I offer this quote from Louis Pasteur: ***"Chance favors the prepared mind."***

I am convinced that this is a profoundly important message for Toyama.

(Fin)

After the Interview

Believing in the region's potential, the Flanders government took a bold step three decades ago, driven by immense ambition and resolve. The region, geographically small and resource-poor, faced the imperative to prevent its decline and demonstrate its self-reliance, both domestically and internationally. I sense that a desperate need for survival provided the impetus.

The initial direction for this challenge lay in their unwavering trust in science. I believe VIB, as introduced in this article, serves as the driving force behind a virtuous cycle of industry-academia-government collaboration: "Develop the region's research capabilities, generate high added value, thereby attracting economic growth, and use the acquired funds to further enhance research."

Its internationally acclaimed success model presents an ideal "way to leverage strengths," almost textbook-perfect in its management principles. However, Dr. Lieve's poignant remark, *"For the first ten years, there were no visible results, and we fought tirelessly to establish VIB's presence,"* revealed an overwhelming passion that goes far beyond surface appearances. For us at Toyama Pharmaceutical Consortium, striving for regional revitalization under the banner of "Toyama: The Pharmaceutical Cluster," this experience offered a wealth of invaluable insights.

Hiroshi TAKAMORI

- This Newsletter is a revised version of articles originally published in "KTT Tsushin," our email newsletter, on October 7 and October 15, 2025.
- Reference: VIB (Flanders Institute for Biotechnology) https://vib.be

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