Eric Halioua – President & CEO, PDC*Line Pharma, Belgium

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*PDC*Line Pharma's Eric Halioua introduces the Belgian immuno-oncology biotech, its clinical-stage assets, the impact of the firm's collaboration with Korean LG Chem, and future internationalisation strategies.*

Let us begin the interview with a brief overview of PDC*Line Pharma.

PDC*Line Pharma is a biotechnology company involved in the development of immuno-oncology products. We have a unique asset of Plasmacytoid Dendritic Cells from which we get the name of our company which is a proprietary cell line derived from a human leukemic cell expressing HLA-A*02:01 phenotype. Using GMP standards we have used these cells to generate a vaccinal platform to treat cancer patients.

PDC*Line Pharma is a clinical-stage company and we already have a clinical trial for lung cancer running in both France and Belgium. In fact, even before the foundation of the company, this cell line platform went through an initial feasibility academic clinical trial in the area of melanoma.

We are a team of 25 people primarily in Belgium with a team in France. Thus far, we have raised close to EUR 31.5 million in equity and non-diluted money since PDC*Line's establishment.

What is your expected development timeline for PDC*Line's pipeline?

PDC*lung is our leading product for non-small-cell lung cancer (NSCLC). This flagship asset is under clinical development and we have already enrolled first patients for the phase I/II trial of which we hope to see the results mid-2022. The trial plans to enrol 62 patients.

What added value will the PDC*lung asset bring to the treatment of lung cancer compared to the products which already exist on the market?

In the area of lung cancer treatments, there is an approved medicinal product family that has emerged in the last several years: PD-1 inhibitors. The position of PDC*lung is to be administered in association to anti-PD-1, targeting first-line metastatic lung cancers.

Checkpoint inhibitors, which include anti-PD-1, aim to interfere with the defence mechanisms set up by the tumour to avoid being killed by the body's T lymphocytes. However, even with PD-1 inhibitor treatment, if a patient does not have sufficient immunity (T lymphocytes) then they cannot reach a threshold that will make the treatment clinically effective. Therefore, with our cancer vaccine, we aim to increase the level of T lymphocytes which are specific to the antigens present in the tumour, increasing the effectiveness of anti-PD-1. This is truly a synergetic approach to cancer treatment we are targeting.

In March 2019 PDC*Line penned a development and commercialization agreement with Korean life science company LG Chem. What will be the impact of this milestone for the company's development?

This is absolutely an important breakthrough for the company. Last March we signed a licensing deal with LG Chem for the total value of USD 123 million, including upfront and milestone payments, additionally to royalties. The agreement covers South Korea and exclusive options for other Asian territories for the development and commercialization of PDC*lung. LG Chem will launch clinical trials in South Korea with our cell therapy product which is a great value for PDC*Line as we needed a partner to reach the Asian market and it will also drive the development of this product. This deal was made even before PDC*lung Phase I/II approval in Europe, which attests of the promising potential that LG Chem sees in our PDC*lung vaccine.

Speaking about PDC*Line's operations locally, what is your commercialization strategy for USA, Europe and Asia if all goes well?

Once we will reach the end of our current Phase I/II trial, we hope to have enough clinical data to start solidifying the efficacy of the vaccine in combination with anti-PD-1 and launch a phase II proof-of-concept randomized clinical trial. This clinical trial would imply many clinical centres located in Europe but also in US and Asia. Having a partner in the US, like the one we have in Asia with LG Chem, would be interesting for PDC*Line. Indeed, such a trial would involve hundreds of patients and require much more resources. It can be a risky move for a biotech company to conduct large and global clinical trial on its own. Furthermore, the lung cancer market is so large and global that we will not be able to commercialize the product on our own. Like any biotech, we need the sales and marketing muscle of Big Pharma to penetrate the market. Future partnerships are absolutely in our scope and we are open to see the collaboration opportunities that are accessible to PDC*Line.

How do you concretely raise your profile to the big players when there is a multitude of promising biotech companies in France, the UK, the Netherlands, and even the US or Canada?

This is true, but at the end of the day, it is the clinical results that make a biotech stand out from the crowd. We know the competition is tough, but we believe that the unique assets our company has combined with the versatility of our allogeneic vaccine platform, will be added values. While today we are launching our first lung cancer trial, in the future we can extend the cancer indications targeted by the PDC*lung product, and also develop personalized vaccines consisting of PDC*line loaded with neoantigens (antigens specifics to the patient tumours). Our Plasmacytoid Dendritic Cells can be loaded with any kind of antigens to target theoretically all cancer types. PDC*Line has developed a robust management team to leverage these strengths and implement this strategic plan.

Is Belgium the right place to grow PDC*Line from a startup biotech to a true success story? What are the strengths and rooms for improvement of the Belgian biotech landscape?

Although PDC*Line was originally established in France, I joined the company in 2016 and made the decision to develop our operations to Belgium. Although I am French, I have been based in Brussels for over a decade leading other biotechs, so I had built my knowledge of the cell therapy field and established a wide network of investors and talent in this particular area. With these factors, some members of my previous management team joined PDC*Line along with me and we have been able to easily access funding in the country.

Although the French biotech ecosystem is quite good, we still have part of the management team and an R&D lab based in Grenoble, Belgium was a better-suited place for the growth of a company focused on cell-based immunotherapies. For example, the global operations of GSK Vaccines is based in Wallonia. They have a massive R&D team and have done a lot of clinical development for cancer vaccines. This proximity is highly beneficial as GSK created its own ecosystem in immuno-oncology in the country, and after stopping this activity, generated an availability of talent which works in our favour.

Furthermore, for historical reasons, a high concentration of companies developing cell-based products have grown in Wallonia. There are several CMOs and specialized providers which are also present in the region. When considering where to establish our Belgian operations, we had access to the Labhotel inside Liege CHU, which is a space where companies can rent laboratories and offices and have access to shared technology platforms. In Europe, this is not as common as in the US. Therefore, you can see that the infrastructure, the money, the investors, and access to talent – the entire value chain – is present here in Belgium.

Of course, there is also room for improvement in the availability of funding for biotechs. The Euronext stock exchange is not as fertile as the NASDAQ yet in the sense of enabling biotechs to raise large amounts of growth funds like it is possible in the US. However, this does not pertain specifically to Belgium but is rather a European issue. Overall, I would say I am quite satisfied with the Belgium biotechnology landscape.

One challenge we could face in the future within PDC*Line is attracting talents. As we continue to grow rapidly it can be difficult to find and train the right talents to support our development at the pace we are moving. Attracting international talents is also becoming increasingly important and is even more challenging.

What final message would you like to deliver about PDC*Line Pharma and the Belgian biotech scene?

The foundation on which PDC*Line was founded is our mission to save lives. Treating patients is at the core of our DNA and we are very proud of the ecosystem we have managed to build in Belgium and France. As a multicultural company, we believe in the future growth of Belgium’s innovative biotechnology sector. It is absolutely a country which should be observed carefully by the international life science community.

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