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## FEATURED

# Blackstone Life Sciences' Nicholas Galakatos hails 'new era in medicine'

Galakatos says 'the most important current breakthrough in science is our increasing ability to practise precision medicine based on our understanding of the human genome'.

**A**rtificial intelligence, machine learning and a deeper understanding of complex chronic diseases means that the world is at the beginning of a "new era in medicine", Dr Nicholas Galakatos, global head of life sciences at Blackstone, told PE Hub Europe.

The private equity firm is also excited by new developments in treating cardiovascular disease, oncology and precision medicine approaches to neurology and inflammation.

### What are some of Blackstone's recent investments in the sector?

We have invested over \$4 billion in life sciences in the UK, US, France and Switzerland since launching our BXL V fund four years ago. It is very exciting to play a role in supporting a sector that dedicates itself to groundbreaking medical innovations that make a tangible difference to patients' lives.

One great example of this is Autolus, a company based in the UK, which spun out of University College London. We have committed to investing up to \$250 million in Autolus to advance their cell therapies for blood cancer. Another example is Anthos, a cardiovascular company we launched in 2019 in partnership with Novartis which focuses on preventing strokes.

Despite a more challenging public



Nicholas Galakatos, Blackstone Life Sciences

market backdrop for life sciences over the past 12-18 months, we have continued to invest in the areas where we have strong conviction and where we see opportunities for our investors' capital to enable important products to receive approvals to the benefit of patients. During 2023, we entered into a \$430 million funding agreement with the biotechnology company Amicus Therapeutics to give them the capital they need to advance new treatments for patients with rare diseases, and provided \$140 million to Sutro Biopharma – the inventor of a key technology required for the next

generation vaccines for pneumococcal infections.

### What's the outlook and what is needed to help the sector grow?

The life sciences industry is experiencing massive innovation, driven by rapid advancements in our understanding of human biology and the breakthroughs in technology. Innovation has generated a large pipeline of exciting product candidates against many of the diseases for which there is a large unmet need, but progress has been limited by the availability of capital.

A report from a consulting firm found it costs the world's 20 leading pharmaceutical companies \$2.3 billion on average to develop a new medicine. Therefore, today, there are more promising new treatments than can be adequately funded consequently leaving highly promising treatments to languish in development.

This is where Blackstone Life Sciences can play a critical role. Our capital at scale and deep in-house operational expertise in clinical development, regulatory approval and commercialisation enables us to partner with top-tier biopharma and medtech companies to accelerate the development of their critical path products and bring them to the patients who need them.

### Which subsectors and trends are

## **particularly attractive?**

At Blackstone Life Sciences, we are focused on identifying and investing in products rather than companies. We think therapeutics and medical technologies in late stage of development are the most attractive investment area. It is an area with great products that require access to additional expertise and capital to get to market, and that is where we really add value. In terms of subsectors, we are excited by innovations in the treatment of cardiovascular disease, oncology, and precision medicine approaches to neurology and inflammation.

## **Is the sector downturn-proof?**

Life science is an innovation business, and scientific breakthroughs happen when inventions occur, not timed to the markets. We saw that recently with the mRNA technology in the Covid vaccines, gene editing in sickle cell disease, and new medicines for weight loss and Alzheimer's disease.

The fundamental challenge for life sciences is to adequately and consistently fund the enormous innovation of the sector. This is a particularly acute problem when the public markets are volatile and the large companies face earnings pressure, as is currently the case. At Blackstone Life Sciences, we are fortunate to be in a position to help alleviate such pressures

with our scale capital and operational expertise.

## **What are the most exciting breakthroughs scientifically?**

The sector has seen significant innovation. That said, it may surprise you that there are as many as 30,000 diseases that we know of. And we have cures for less than 500, so we have a long way to go.

I believe the most important current breakthrough in science is our increasing ability to practise precision medicine based on our understanding of the human genome. Common diseases can be caused by different factors and manifest themselves in disease in multiple ways. Our growing ability to understand the genetic basis of disease is helping us better define the genes that cause disease and therefore direct customised medicines that are specific for these targets.

For example, there are over 30 distinct forms of epilepsy and knowing the specific genes that cause each one is helping us find selective medicines for many of them. Advances in technology, particularly artificial intelligence and machine learning, are helping us find the 'bad actors' faster than ever before, by rapidly interrogating massive data sets. Because of these advances, I think that we will be seeing more new treatments for the many diseases for which there are no good medicines.

## **How did covid-19 and the rapid development of vaccines change the industry?**

The breakthroughs we have seen in vaccines over the last four years have been staggering. The positive trajectory for vaccine development has been there throughout, but the pandemic accelerated that process.

The pandemic taught us that with the right levels of focus and funding these therapies don't need to take decades to reach the patient. The adoption of mRNA technology has been a game-changer in how we produce vaccines, and the pandemic has pushed us towards looking beyond that to the next advance in vaccine products.

## **Will ageing demographics speed investment in the sector?**

As demographic age trends put more and more pressure on healthcare systems, we will see an increased focus of drug development to address diseases of ageing. This is not a new trend, but in the past we did not have as good an understanding of complex chronic diseases as we have now. A good example is Alzheimer's disease, where we now know that managing plaque formation in the brain can delay the onset of this terrible disease. We are just at the beginning of a new era in medicine. ■