



HELPING DRUG MAKERS BE LEANER AND MEANER

Foreword by John Maldonado, Managing Partner

e live in an exciting time for drug development. To take just one example: the wildly successful GLP-1 agonists, which include diabetes drugs such as Ozempic, could become one of the biggest drug categories of all time.

On top of that, you have the emergence of precision medicine, in which treatments are tailored to the individual based on their DNA. Then there are the potential of MRNA vaccines, launched to great effect during the coronavirus pandemic, which are being adapted as potential treatments for diseases such as cancer.

There is no shortage of new and exciting medical science that could help us live longer and better lives.

The challenge is how to pay for it.

This is simple economics. If a drug company comes up with a new treatment for a disease that affects, say, a million Americans, and the therapy costs \$500,000 per individual, the cost to treat everyone would be huge.

That sum is not unrealistic. One of the headwinds facing the pharma industry is that the return per dollar on R&D spending has been in decline for decades. That means the cost of bringing treatments to market continues to spiral.

One way to get medicines to patients more cheaply is to produce generic drugs inexpensive copies of off-patent medication. Our investment in Zentiva, based in Czechia, is aimed at creating an independent generics leader in Europe (see page 11 for a list of our pharma investments since 2016).

But we also need to lower the cost of delivering completely new drugs. To solve the health challenges of the future, we need innovation, and innovation is expensive.

Here's where pharma services come in. By outsourcing various aspects of their business to pharma services companies, the big drug companies become leaner and meaner. They can deliver their medicines to the market in a more effective way, treating more patients and saving more lives.

As an investor, Advent has already supported many businesses in the pharma services sector. Working alongside management teams, we hope to help these companies become the best they can be. •



FROM CLINICAL TRIALS TO DRUG MANUFACTURE

linical trials were the gateway to the outsourcing trend in the pharma industry. Clinical trials are lengthy and costly to run, and, starting a few decades ago, the big drug companies realized that managing large numbers of trials was a distraction from developing, marketing, and selling their medicines

One of Advent's key investments in this area was InVentiv Health, a provider of clinical and commercial outsourcing services to the pharma industry. Alongside Thomas H. Lee Partners, we invested in the business in 2016.

"Our investment aimed at achieving scale to allow the business to become more competitive, and we achieved this through a merger with INC Research," says Tom Allen, Managing Director at Advent. The merged company became Syneos Health. "Today coowned by Elliott Investment Management, Patient Square Capital and Veritas Capital, it is one of the largest contract research organizations in the world."

Outsourcing of clinical trials generally proved an effective way for drug companies to streamline their operations, and it kicked off a march of outsourcing in the pharma industry. The next place to look was drug manufacturing.

Our investment in BioDuro, a contract research and development organization, exemplifies this trend. The business has operations in contract research, in China, but also contract development and manufacturing, in the US. That means that as well as testing drugs, it develops and manufactures them, and because of its specialist focus, it is able to do so more cost-effectively than its big pharma clients. Advent's investment in 2019 was aimed at driving operational expansion, including a new research base in China and expansion of preclinical discovery facilities in San Diego.

Service providers that can lower the cost of drug production are an essential part of the market at a time when drug development costs are rocketing.

"The pharma industry is at a crucial stage where we've got an affordability crisis coupled with a dramatic step forward in innovation," says Carmine Petrone, Managing Director at Advent. "One of the reasons we like pharma services is that it's a whole ecosystem of service providers that aren't taking the underlying R&D risk but are riding that wave of innovation - and helping the innovators bring those therapies to market." •



Tom Allen, Managing Director in the London office

Carmine Petrone, Managing Director in the Boston office





A BOOMING MARKET FOR PHARMA OUTSOURCING

- It cost an average of \$2.3 billion to develop a new drug in 2022 and 2023, according to a report by consultancy Deloitte published in 2024.
- The report studied the efforts of the top 20 global biopharma companies and attributed recent increases in cost to rising R&D expenses.

- Against this backdrop, analysts are predicting growing demand for contract development and manufacturing organizations (CDMOs).
- Straits Research, a market researcher in India, predicted the global CDMO market will expand by 6.6% a year between 2022 and 2030 to be worth more than \$300 billion.



HOW PHARMA SERVICES ENABLE ADVANCED THERAPIES

There is a revolution under way in the pharma industry as biologics, which are complex therapeutic agents derived from living organisms, and advanced therapy medicinal products (ATMPs), a subset of biologics that involve gene manipulation or tissue engineering (ie. cell and gene therapies), are gaining relevance as more precise and effective tools in the clinicians' toolbox.

But biologics and advanced therapies are complex. Specialist skills are needed to produce them, and the big drug companies are increasingly reliant on outsourcing to specialised providers.

"The more complex the market becomes, the more you need specialist competencies," says Sergio D'Angelo, Director in the London office. "Our strategy is to invest in pharma services businesses that are enabling pharma companies and biotechs to bring these advanced therapies to market in an efficient and cost-effective way." •



Sergio D'Angelo, Director at Advent in London

NEW MARKETS AND NEW FUNCTIONS TO OUTSOURCE

he pharma services market continues to evolve. One trend has been the rise of CDMOs in India, which have reached a high level of technical competence while still offering competitive costs. These businesses are benefiting as some companies reorganize supply chains to be less dependent on China.

Advent is invested in Indian pharma services through Cohance Lifesciences, a pharmaceutical ingredients business and CDMO that we created through consolidation. We are working to create an even larger and more valuable CDMO by merging Cohance with Suven Pharmaceuticals, which we backed in 2022 (see page 10).

Elsewhere, we are creating value by means of carveouts, such as Simtra, formerly the BioPharma Solutions business of Baxter International (see page 8). In Europe, we invested in Industria Chimica Emiliana (ICE), an Italian pharmaceutical ingredient producer (see page 9).

We are supported in making significant investments by our network of Operating Partners. In healthcare, these include Jim Mullen, ex-CEO of Patheon, who is helping us build our pharma services platform. "Advent's depth of investment and operating expertise across pharma services positions the firm to drive value with their companies," he says.



We continue to see exciting opportunities develop in the pharma services sector. The outsourcing trend is nowhere near complete. As well as drug manufacturing, packaging, and discovery, the big pharma companies are increasingly looking to outsource functions such as distribution, sales, and marketing.

"Commercialization has always been a core function for Big Pharma, but the evolution of the commercial model accelerated meaningfully in Covid," says Mike Miltenberger, Principal at Advent. "Recent years have seen a significant shift toward commercialization partners with deep capabilities in digital, rare disease, and reimbursement."

These changes reflect the rise in precision medicine. Modern drugs may also be targeted at a relatively small, geographically dispersed population of patients. Salespeople and marketers need to be sophisticated in locating and supplying patients. They also have less access to physicians' offices than before the Covid pandemic, which has accelerated innovation around commercializing new therapies. As ever, nimble pharma services companies that specialize in these functions are often able to provide these services at a lower cost than the big drug companies themselves.

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> Mike Miltenberger, Principal at Advent in Boston

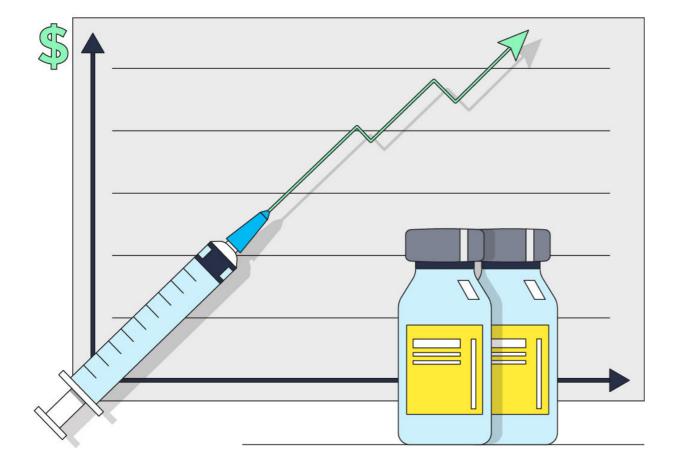
ENSURING A STABLE SUPPLY OF CRITICAL MEDICINES

he explosive growth of the GLP-1 agonists, such as semaglutide (known by brand names Wegovy and Ozempic), has buoyed the pharma services market, and delivered huge profits to Danish manufacturer Novo Nordisk. Given the large potential market for these drugs, which treat diabetes and help with weight loss, manufacturers are predicting significant demand in the coming years. Meeting this booming demand will be no small feat.

Simtra is a business that Advent acquired in October 2023 through the carveout of Baxter International's BioPharma Solutions business – a deal we completed alongside Warburg Pincus. The company is a provider of contract manufacturing solutions for sterile products, specialized parenteral delivery systems, and tailored support services to the pharmaceutical and biotech sectors. Crucially, Simtra's production services include prefilled syringes for the GLP-1 category, along with other types of drugs. These items are essential for the delivery of these medicines, and, given the rapid growth of this market segment, capacity is constrained.

To help meet demand, Advent is supporting Simtra in building a new 150,000-square-foot facility at its site in Bloomington, Indiana, that will increase its ability to supply prefilled syringes. The facility will involve a \$250 million investment. The business is also expanding its facility in Halle Westfalen, Germany, with a \$100 million investment. This project will add new vial and prefilled syringe filling lines.

Simtra aims to relieve its clients of laborintensive manufacturing processes, reducing overall costs significantly, and giving its clients flexibility to produce drugs at affordable rates.



THE PRESCRIPTION FOR AFFORDABLE MEDS

ndustria Chimica Emiliana (ICE) manufactures specialty biliary acid products, particularly ursodeoxycholic acid, which is used in the production of drugs for liver and gastroenterological diseases.

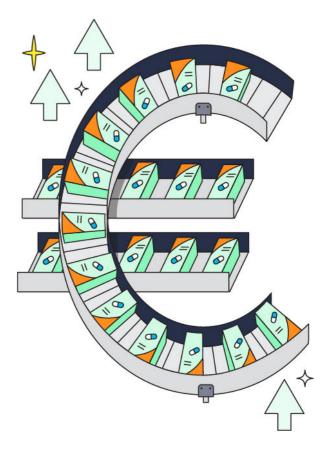
Advent acquired ICE in 2019 having forecast increasing prevalence of liver and gastro conditions, driven by factors such as ageing populations and lifestyle choices.

"Already a key player in an attractive market supported by strong fundamentals, we see significant growth opportunities for this business," says Francesco Casiraghi, a Managing Director at Advent International.

Under Advent's ownership, ICE has significantly lowered the price per kilo of its core product through transforming its processes and optimizing its supply chain. Alongside these changes, the acquisition of New Zealand Pharmaceuticals has strengthened research and development capabilities. With five global R&D centers, ICE has been granted several international patents.

Established in 1949 by the Bartoli family, ICE was already a significant player in its niche at the time of Advent's investment. Together, we are helping the business to grow.

ICE is one of many Advent investments in Europe. Others include Zentiva, which was established by a carveout of the European generics business owned by French multinational Sanofi. Generics, which are copies of drugs whose patents have expired, offer another solution to the affordability crisis in modern healthcare.





Francesco Casiraghi, Managing Director at Advent in Milan

CREATING A DRUG-MAKING POWERHOUSE IN INDIA

ndia's pharma market is booming. It is predicted to enjoy some of the highest growth rates of any country thanks to India's highly skilled workforce, its ability to offer lower costs than the US and Europe, and a comparatively robust legal framework for protecting intellectual property rights.

At Advent, we believe India's CDMOs are at the start of their journey, with huge growth still to come. We are present in the sector through our investment in Cohance Lifesciences, a significant player in both CDMO and active pharmaceutical ingredients (API) manufacturing.

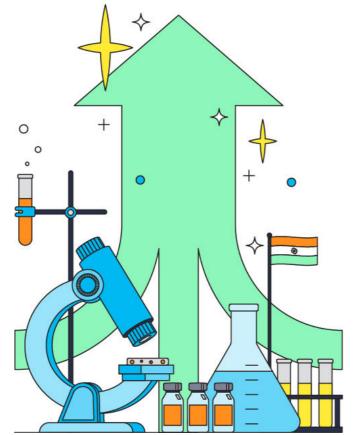
Cohance Lifesciences was formed in November 2022 by the merger of three existing portfolio companies: RA Chem Pharma, ZCL Chemicals, and Avra Laboratories. Seeing continued opportunities for expansion, we developed plans to merge the business with Suven Pharmaceuticals, another Indian CDMO in which we acquired a significant stake in 2022. The merger of Cohance and Suven is a key part of our pharma services strategy that seeks to build a major CDMO player in this expanding market.



According to Pankaj Patwari, Advent Managing Director, the Cohance business model is characterized by a focus on customer service, sustainability, efficient infrastructure, and robust quality systems.

Based in India, Cohance provides products and services across all stages of a molecule's lifecycle, from development to commercialization.

It is driving improved patient outcomes, optimized healthcare processes, and costeffectiveness, while empowering providers to develop solutions at breakneck speed with its full suite offering.



Pankaj Patwari, Managing Director at Advent in Mumbai

OUR INVESTMENTS IN PHARMA & PHARMA SERVICES Since 2016

- Simtra BioPharma Solutions, Sep 2023, US
- Suven Pharmaceuticals, Sep 2023, India
- GS Capsule, Dec 2021, Greater China
- Cohance Lifesciences (formerly RA Chem Pharma), Oct 2020, India
- Bharat Serums and Vaccines, Feb 2020, India
- ICE Pharma, Sep 2019, Italy
- BioDuro, Jan 2019, China
- Zentiva, Sep 2018, Czechia
- Grupo Farmaceutico Somar, Oct 2017, Mexico
- Syneos Health (formerly INC Research Holdings), Nov 2016, US

