



10 June 2022



Market	EUronext GROWT						
ISIN / Mnemonic	FR0012788065 / ALCOF						
Reuters / Bloomberg	ALCOR.PA / ALCOR:FI						
Index		Euronext	GROWTH				
Analysis Service Agreem	ent						
DEA-DME	ente		Voc				
			103				
Market Can (fm)			120 72				
Market Cap (Em)			138.72				
Float (%)			53.9%				
Nbre of shares (Mio)			4.362				
Closing			31-Dec				
Shareholding							
Famille Gardette			45.8%				
Actions auto détenues			0.3%				
Elettent			E2 0%				
FIOLIAIIL			55.9%				
	21	22e	23e				
PER	ns	ns	52.2				
PCF	ns	ns	ns				
EV/Sales	12.0	11.0	6.9				
EV/EBIT	ns	ns	ns				
PB	ns	ns	19.6				
Yield	0.0%	0.0%	0.0%				
Free Cash Flow Yield	-1.2%	0.0%	-0.7%				
ROACE	4.5%	17.2%	28.9%				
Sales	10.2	12.7	20.4				
Previous Sales	10.2	12.7	20.4				
chge y/y-1	20.9%	24.5%	60.3%				
EBITDA	0.9	1.8	3.7				
Underlying EBIT	0.1	1.0	2.6				
% Sales	1.3%	<i>7.9%</i>	12.6%				
EBIT	0.2	1.0	2.6				
% Sales	1.8%	<i>7.9%</i>	12.6%				
Decl.Net inc Group Sh	0.3	1.3	2.7				
% Sales	2.9%	10.1%	13.0%				
EPS	0.07	0.30	0.61				
Previous EPS	0.07	0.30	0.61				
chge y/y-1	ns	338.4%	106.1%				
Restated EPS	0.07	0.30	0.61				
Net Asset per Share	0.7	1.0	1.6				
Net Dividend	0.00	0.00	0.00				
NFD	2.1	2.1	3.0				
Clément Bass	at, Finan	cial Analy	st				

Price: €28.60 10 June 2022

Target Price €43.80

STRONG BUY (1)

Initiation of coverage

Get in the loop

Biocorp is a French company which has been listed on Euronext Growth since 2015. Its history as a plastics specialist in the pharmaceutical industry served as a springboard to the medtech industry, the ambition of which is to provide patients with connected, miniaturised and customised solutions. Its flagship product Mallya, currently only used in diabetes, incorporates technology suitable for many indications.

A breakthrough in connected medicine

Diabetes is one of the indications in which patients are the most independent in monitoring their condition and administering their treatment. They are assisted by numerous medical devices that are now connected to each other. Mallya is one such device, which clips onto disposable insulin pens that have no connectivity. Its ambition is to become a permanent part of the diabetes treatment ecosystem.

First revenues expected in 2022 in diabetes

Following the CE mark being obtained in 2019, Biocorp entered into numerous partnerships in 2020 and 2021 for marketing in pharmacies (Roche) but mainly for international distribution via large diabetes pharmaceutical companies (Novo Nordisk, Sanofi). The first commercial batches of Mallya are in production and are expected to be delivered to Sanofi in the second half of 2022. Mallya will start to be sold this year and the first revenues outside of research fees will be seen, bringing Biocorp into what we believe will be sustainable profitability after several years of investment.

A robust, diversified model

Mallya is an add-on that is dependent on another device, namely an insulin pen. There are three insulin manufacturers and Mallya is compatible with most of their disposable pens. The future of Mallya is therefore closely linked to partnerships with these pharma companies.

However, Biocorp is currently adapting Mallya's technology to growth hormone and female fertility and it has a diversified product portfolio of connected syringes and inhalers, giving it growth drivers outside of diabetes. Therefore, Biocorp's business model involves connecting disposable devices that cannot embed connectivity for obvious cost reasons.

We aim to have sales of more than 1 million Mallya units by 2026 for all indications combined, with milestone and revenues from historical activity. The expected 2026 revenue is €66M with very high margins (EBITDA> 40%e, EBIT> 30%e), with Biocorp in our view able to capitalise on its partners to deliver strong growth while maintaining a rather small cost structure. We are initiating the stock coverage with a recommendation at Strong Buy (1) and a target price at €43.8 computed using a DCF methodology.

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SWOT

Weaknesses
 Risk of a lack of capacity to handle large contracts signed with large pharma companies Mono-technology for the moment
Threats
 Limited number of clients as market is composed of three companies Competition in the medical device market The development (still currently hypothetical) of oral insulin and/or GLP-1 would reduce Biocorp's target market

1. Digitise the treatment of diabetes

1.1. Increased adherence

Biocorp is a drug delivery company that digitised its historical know-how in 2015 to devise Mallya, its flagship product. These "caps" are currently used in diabetes but Biocorp R&D is already working on other therapeutic areas.

Diabetes is a disease that affected approximately 1 in 10 adults worldwide in 2021 and is on the rise on all continents. Treatments were once limited to insulin delivery, the hundredth anniversary of the first injection was celebrated in 2022, but have now evolved into multi-drug connected models, and Mallya is a link in that chain.

Diabetes is not the only disease to be digitised; the entire sector is moving towards Telemedicine and Point of Care. This is a form of medicine where monitoring and treatment administration is carried out almost in real time with limited human intervention.

Diabetes is very demanding for patients because they have to check their blood sugar several times a day and administer their own treatment, usually with a disposable insulin pen. Diabetic patients therefore suffer a heavy mental burden since they must also monitor their daily diet, plan out their activities, be aware of their metabolism and manage their supply of refrigerated medicines. This burden causes nearly half of all patients to not strictly adhere to their medication, which can result in serious and costly complications. This is why any device that lessens the burden of diabetes is welcomed by patients, practitioners and payers alike because it leads to better treatment adherence and therefore better living conditions as well as lower costs for society as a whole.



1.2. A brief overview of diabetes

To see how Mallya fits into the diabetes treatment ecosystem, let's quickly review how a healthy body functions and what diabetes is. For more information on the condition itself, please see Appendix 1.

During a meal, fast-acting sugars are absorbed by the intestines and immediately enter the bloodstream, therefore raising blood sugar levels. In response, the body synthesises several hypoglycaemic hormones that activate in a cascade, the last one being insulin, which acts directly on the liver and fat cells to tell them to store sugar, thus lowering blood sugar levels. Among these products, GLP-1 acts upstream of insulin and its analogues are now part of the therapeutic arsenal.

On the other hand, during exercise, our muscles consume blood sugar, lowering blood sugar levels. In response, the body synthesises hyperglycaemic hormones such as glucagon, which this time tells the liver and fat cells to release stored sugar into the bloodstream.

Diabetes involves constantly high blood sugar levels. There are two types of diabetes, type 1 (T1D) caused by an autoimmune disease that rapidly leads to the complete absence of insulin production by the pancreas and type 2 (T2D) caused by a poor lifestyle leading to metabolic dysfunction.

The fight against diabetes is multifaceted, with lifestyle changes being the first course of action and insulin administration being the last. Between these two options, numerous oral and injectable treatments are administered as the disease progresses. Mallya is used with injectable insulin treatments and will soon be used with injectable GLP-1 analogues, i.e. at an advanced stage of the disease.

1.3. Prevalence

According to the International Diabetes Federation, approximately 537 million adults (20–79 years old) are living with diabetes, i.e. 1 in 10 adults worldwide (or 7% of the population, including children). It is estimated that approximately 242 million adults are undiagnosed, i.e. nearly 1 in 2, most of whom reside in low-income countries. This prevalence is confirmed by observations from the CDC, which reports that 10.5% of the US population had diabetes in 2018, as well as by the OECD for Europe.

The prevalence of diabetes increases with age, from 2.2% for people aged 20-24 to nearly 24.0% for people aged 75-79 for 2021. An increasingly older population thus increases the proportion of diabetics. There is no real gender disparity, with diabetes affecting women and men equally. We observe more diabetics in urban areas (12.1%) than in rural areas (8.3%), which can be explained by a more sedentary lifestyle and an older population in urban areas.

In terms of breakdown by continent, the highest average-adjusted prevalence is in the Middle East and North Africa (18.1%) and the lowest is in Africa (5.3%). North America is at 11.9%, Asia-Pacific at 10%, South America at 8.2% and Europe at 7%.



Source: International Diabetes Federation



Source: International Diabetes Federation

Projections anticipate a prevalence of 1 in 9 adults by 2030 and 1 in 8 by 2045 (643 million and 784 million respectively). Although the prevalence of diabetes increases with age, patients are presenting younger and living longer.

Geographically, the world map on the following page shows that population growth in developing countries has a far greater impact on the incidence of diabetes than the increase in life expectancy in developed countries with +134% for Africa compared to +13% for Europe.



Source: International Diabetes Federation

1.4. Unmet needs

Diabetes cannot be cured, but it can be managed with daily treatment. As a result, patients are now looking for any strategy to reduce the burden that diabetes places on their lives. Diabetic patients have to perform several tedious, complex and error-prone tasks on a daily basis, such as checking blood sugar levels and then calculating the correct insulin dosage and injecting it. The ultimate goal is an artificial pancreas that mimics the functioning of a pancreas that releases the right amount of insulin at the right time without any human intervention.

Various systems currently exist depending on how advanced the diabetes is. The most developed system is the "Closed Loop" system, which consists of an insulin pump controlled by an algorithm that calculates the insulin dose to be administered according to the blood sugar level measured in real time using a patch. Although this system has been seen as a major advancement as it stops patients from having to carry out numerous calculations and injections, it is still quite cumbersome, especially for patients who only need a small insulin supplement and not complete insulin therapy. Many systems that are more open or less open are currently being deployed depending on the needs and wishes of the patient.

However diabetes is managed, all parties share the desire to minimise human intervention to avoid errors, which mainly include: 1) forgetting a dose (intentionally or not), 2) administration at the wrong time, often to make up for a missed dose, 3)

the incorrect dose, due to incorrect handling, 4) miscalculating the dose, as it's unintuitive. The digitalisation of diabetes, in particular the use of smartphone applications, provides patients with numerous tools for the daily management of their diabetes, such as dose reminders, calculations, reporting etc. Mallya connects the injector pen to the smartphone application by recording the injected insulin dose and time and date on the app, eliminating the need for the patient to write it in a notebook as they would have done previously to then share it with their doctor.

By increasing adherence to a treatment through its digitalisation, Biocorp has truly become a medtech company that is responding to the current and future needs of the sector. On one hand, better treatment adherence reduces costly complications for both patients and payers; on the other hand, the interconnection of the entire treatment chain leads to the customisation of medicine, which is a source of both efficiency and savings. For more information on adherence issues, please see Appendix 2.

2. Biocorp

2.1. A drug delivery specialist

Biocorp, created 18 years ago in 2004, initially specialised in plastics processing for the pharmaceutical industry, specifically in customised closure and dispensing systems for vials, which it still continues today with sales of approximately ≤ 2 million and approximately 5% growth per year.



Source: Biocorp

Ten years later, in early 2015, Biocorp launched a reusable, connected injector pen, the DataPen, which transmits the medication dose, date and time to a smartphone app. A few months later, Biocorp launched EasyLog, the first connected device inspired by the DataPen and compatible with the disposable pens made by pharmaceutical companies. Mallya was therefore born, but under a different name.

A first partnership was formed with a big insulin brand in 2016 and then EasyLog obtained its CE mark in 2017. Partnerships and distribution agreements were established with software companies between 2018 and 2019 in order to integrate the data collected.

2019 was a prolific year for Biocorp, which renamed its device to Mallya and obtained its CE IIb mark straight afterwards. The CE marking of medical devices ranges from I for low risk (crutches, gloves) to III for high risk (breast implants, heart pump). Mallya monitors the administration of biological fluids in a patient, so it has the same mark as a dialysis machine. Finally, the year ended with the signing of the first agreement with an injector pen manufacturer, Sanofi, which agreed to market Mallya for its SoloStar disposable pens worldwide. This exclusive agreement was solidified by an initial upfront payment of \notin 4 million in 2019 followed by \notin 12 million in milestone payments and first orders starting in 2022.

Since Mallya's technology is compatible with most disposable pens, Roche and Biocorp signed an agreement for pharmacy distribution in France in 2020. This means that any patient could get a Mallya for themselves, which would be connected to Roche Diabetes Care's Accu-Chek digital ecosystem (blood glucose meter, application etc.). Mallya is now officially on the market, while partnerships with applications continue, notably with Diabeloop, a major company offering a "Closed Loop" system for T1D patients on an insulin pump. The purpose of this partnership is to include Mallya readings in the closed loop when administering additional insulin via disposable pens.

Recently, Novo Nordisk and Biocorp have teamed up to adapt Mallya to FlexTouch disposable pens. This is a strategic deal as it was signed with the largest provider of injectable diabetes medications, even though it is not exclusive. Similarly, Sanofi and Roche have joined forces around Mallya to simplify diabetes management. These alliances among drug, medical device and software companies demonstrate the industry's direction towards the digital integration of pathology into a data ecosystem aimed at improving patients' lives.

Since diabetes has long since been managed by patients themselves, it is the first disease to benefit from Point of Care and is the main focus for Biocorp in the short term. However, the company also has prospects in growth hormone and, more generally, in connected drug delivery. Biocorp offers medical devices called "Smart Devices" that bring the healthcare sector into the digital age.

Mallya is not Biocorp's only connected device. The company, which specialises in high-precision drug delivery, is researching connected syringes (<u>Injay</u>) and sensors for Ventolin inhalers (Inspair) based on the same concept as Mallya.

2.2. Mallya's business model

With Mallya, Biocorp has become part of P4 modern medicine, i.e. Predictive, Preventive, Personalised and Participative. This new form of medicine aims to be connected and hyper-reactive to improve its efficiency while reducing its burden on both patients and payers.

Mallya is an "add-on" device, meaning it is dependent on another device. In this case, Mallya is attached to disposable injector pens that don't have the connected component that Mallya provides. Each brand of pen is different and Mallya comes in as many versions as there are products. To date, two of the three industry leaders have called on Biocorp to distribute Mallya with their pens. A first exclusive deal was signed for Sanofi's SoloStar disposable pen and a second non-exclusive deal was recently signed with Novo Nordisk for the FlexTouch. Lilly is developing its own "caps" that can be adapted to its Tempo pens, a modified version of the current KwikPen.

The injector pen market is highly concentrated, which allows Mallya to cover almost the entire market with only three clients in return for a strong commercial dependence. It should be noted that patients can acquire Mallya from pharmacies, although the market is moving towards the distribution of Mallya by pen manufacturers. Catching patients who are just starting insulin treatment is essential to pharmaceutical companies that will provide their treatment for several years, and the sale of accessories that improve their daily lives offers a competitive advantage.

Excluding revenue from pharmacy sales, which we believe will be negligible, Mallya's sales are expected to be high and recurring, as they will mostly result from multi-year contracts with these few large pharmaceutical companies. Although these contracts only cover three clients, they enable Biocorp to reach a global market without investing in a sales force or marketing. Biocorp is therefore only focusing on managing its production, with the pharmaceutical companies providing market access.

The cost structure is therefore relatively limited, close to €10 million since 2017, although there was a significant increase in HR positions, from 46 employees at the end of 2017 to 72 at the end of 2021. This increase is mainly due to hiring engineer required for Mallya's development. We understand that new recruitment is still planned for R&D in order to expand the product portfolio, but it is mainly expected in industrialisation and production to support the increase in volumes.

Raw material costs, which until now covered plastics processing at a stable amount of approximately €200,000 per year, are expected to increase with the manufacture of Mallya. Other OPEX include external R&D, sales expenses and overhead expenses. Stable sales expenses at approximately €300,000 annually relate to Biocorp's visibility



at various diabetes and health tech trade shows. R&D costs are growing and include all certification and consulting procedures.



Source: Biocorp

Biocorp has a factory in Auvergne, which produces 30 million units in plastics. The production capacity for Mallya is expected to increase to 2.5 million units within five years. Beyond a certain volume, we understand that subcontracting the production in agreement with the pharmaceutical companies is already being considered, which would follow the logic of a reduced cost structure that capitalises on partners, allowing for high profitability.

2.3. Mallya's competitors

Lots of products are emerging around the digitisation of diabetes, particularly focusing on connected pens. The first connected pen, InPen, was launched in 2017 by Companion Medical, a company acquired by Medtronic in 2020. Since then, pharmaceutical companies have started offering their reusable pens with a connected component, but that is not feasible for disposable pens, which need a smart pen cap, like Mallya, in order to be connected. Competitors include the Gocap developed by Common Sensing. Bigfoot acquired Common Sensing's intellectual property in 2021 and integrated the Gocap into a comprehensive real-time diabetes monitoring kit. Another example is Clipsulin by Diabnext, which was acquired by the American company Glooko in March 2022. Finally, other solutions like Timesulin or Dukada Trio are simple caps that incorporate a timer, while the Spanish Insuclock comes closest to Mallya.

Biocorp's recent multi-year and non-exclusive partnerships with pharmaceutical companies stay away from merger deals with one of them or a connected company for now. Biocorp prefers to build partnerships and maintain its autonomy in the short-to medium-term. Currently, Biocorp is a real commercial company and not an R&D company aiming to merge with a larger company. Thus, with Mallya's R&D complete, the product certified and the contracts in place, the first upfront and milestone payments were received in 2020/2021. 2022 and the following years will see the first deliveries and therefore the first regular revenues, which we believe will move Biocorp into sustainable profitability.

The diabetes ecosystem that we will study in the next section can be viewed from two perspectives. On the one hand, the segmentation between drugs and medical devices. The drug industry is dominated by a few pharmaceutical companies, while the medical device industry is more segmented and accessible to innovative challengers like Biocorp. On the other hand, the division of the role of prescriber between the practitioner and patient. As this condition is chronic and requires a high degree of autonomy from patients in their treatment, the medical devices available to them are increasingly user friendly and are now akin to consumer products. There are many advertisements in the media directed at patients, as they have the freedom to choose from a range of devices validated by medical professionals and health authorities.

2.4. Biocorp's growth drivers

Injector pens are not only for diabetes. More generally, hormone administration is usually done intramuscularly with a disposable pen. This is the case for growth hormone, for which Biocorp has just received €3 million in financing from Merck spread over 2022 and 2023, as well as for gonadotropins (FSH/LH) indicated in female fertility, for which Biocorp hopes to see the first revenues within the next three years. For diabetes, the injection of GLP-1 analogue, upstream of insulin in the therapeutic cascade, is the closest development opportunity. Although treatment is limited to a single weekly injection and is therefore much less restrictive than taking insulin, there still seems to be a lack of patient adherence. We therefore believe that it is in pharmaceutical companies' best interest to integrate this therapy into their monitoring ecosystem using Mallya.

3. The diabetes treatment ecosystem

Diabetes management centres on prevention, treatment and medical devices. Prevention consists of improving the patient's lifestyle in terms of both diet and physical activity. Treatment involves the administration of oral or injectable antidiabetic drugs. Finally, medical devices include anything used to administer and monitor treatment.

It should be noted that, like many chronic diseases, the management of diabetes is multi-therapeutic with drug escalation as the disease progresses. The evolution towards digital technology brings multi-monitoring of treatment as well as the patient's vital signs. Mallya does not take more measurements but digitalises those previously taken by hand. The complexity of the therapeutic response is one of the reasons why what Mallya offers is so appealing.

3.1. Treatments

3.1.1 Oral antidiabetic drugs

Once diagnosed, the treatment of type 2 diabetes is progressive and starts with firstline oral monotherapy, the role of which is to decrease the insulin resistance of cells, i.e. to improve their insulin sensitivity; the cells then become more effective for a same level of insulin. These are metformin treatments (Glucophage, Stagid), which belong to the biguanide family. These drugs are now widely prescribed with generic drugs.

If glycaemic targets are not reached, dual and then triple oral therapy will be deployed at different stages of the metabolic cascade using various drugs.

Sulphonylureas (Amaryl, Daonil) and glinides (Novonorm), also called insulin secretors, increase insulin secretion by the pancreas with the side effect of the risk of overloading the body with insulin, leading to hypoglycaemia that can result in loss of consciousness. This excess insulin can also result in too much sugar being stored, leading to unwanted weight gain.

Glucosidase inhibitors (Acarbose) slow down the transformation of slow-acting sugars ingested during a meal into fast-acting sugars. Slow-acting sugars include starch from the diet as well as glycogen, which is the stored form of glucose in our liver and muscles.

Gliptins are DPP-4 inhibitors (Galvus), which slow down the breakdown of GLP-1 when sugar is ingested, thus inducing insulin secretion. This is a glucose-dependent strategy that allows for better control of the side effects of sulphonamides.

Gliflozins (Forxiga, Jardiance), the last class of inhibitors, are directed against SGLT2 and thus prevent the reabsorption of glucose in the kidneys, which favours its excretion through the urine, without impacting the pancreas.

3.1.2 Injectable antidiabetic drugs (insulin and GLP1)

The oral therapies discussed above can act more or less directly on insulin production. However, in cases of severe insufficiency, direct administration of insulin is necessary. This administration is carried out using disposable or reusable injection pens of insulin. The insulin varies from more to less rapid and is administered at different frequencies. Because insulin treatment is continued for the whole of a patient's life, pharmaceutical companies fight to attract new diabetics and supply them with a complete offering; the inclusion of an add-on such as Mallya that connects the insulin pen to a smartphone could be a real advantage.

There are several types of insulins. The most rapid-acting have an immediate action as early as 15 minutes after injection for an effectiveness of 2 to 4 hours. In contrast, ultra-long acting insulins act 6 hours after injection and last up to 36 hours. T1D patients need both slow-acting insulin to maintain a standard insulin level and rapidacting insulin in case of a blood sugar spike, as these patients are completely unable to produce insulin. Conversely, T2D patients are mainly treated with slow-acting insulin that supports the patient's own insulin. Slow-acting insulin is administered daily, while rapid-acting insulin is administered before or after a meal.

Alongside insulin as an injectable therapy, GLP-1 analogues are a newer class of drugs and are used in combination with insulin or alone. GLP-1 analogues act at two levels during a meal. They stimulate insulin biosynthesis following an increase in blood sugar (glucose-dependent action) and they slow down the secretion of glucagon, which is the hormone that produces the opposite effect of insulin. This delays gastric emptying and increases the feeling of fullness.

The main advantage of GLP-1 is that it does not cause hypoglycaemia and also promotes weight loss, unlike insulin. In addition, the administration of GLP-1 analogue is less restrictive than the administration of insulin because it is injected weekly in most cases. It is also administered using injection pens.

3.2. Medical devices

When a patient starts insulin therapy, they need equipment for personal use that is both medically effective and easy to use. Devices for administering and monitoring treatment also allow treatment to be digitalised and are increasingly interoperable. As such, Mallya is compatible with many injector pens and smartphone applications.

3.2.1 Insulin administration: Pens and pumps

The main device available to patients is the injector pen, either disposable or refillable with a cartridge. At each injection, the patient must write down the date, time and administered dose in a notebook. This notebook is then shared with a doctor. Taking notes every day is tedious and it is exactly this step of diabetes management that the Mallya device is used for with disposable pens; refillable pens are already equipped with a data transmission device.

While injector pens are by far the most widely used administration method, there is another form of insulin administration. This is done via a pump placed directly onto the patient which contains a several-day supply of insulin, enabling the necessary dose of insulin to be delivered at the correct time.

3.2.2 Blood sugar measurement: Blood sugar meter and CGM

To monitor blood sugar, it must be measured regularly: at least 4 times a day for T1D patients, and from 2 weekly measurements for oral treatments to 4 daily measurements for T2D patients receiving insulin therapy. Blood sugar is measured using a blood sugar meter and test strips; the patient places a drop of blood taken with a self-pricker and gets the result immediately.

The new generations of blood sugar meters are sensor-based and therefore do not require pricking. They are permanently placed on the patient to continuously monitor blood sugar levels. These are CGMs (continuous glucose monitors), such as the Abbott FreeStyle. Whether they use a test strip or sensor, blood sugar meters are becoming increasingly connected, particularly to patients' smartphone applications, but also to other devices as well as to doctors.

3.2.3 Applications

New to the diabetes management ecosystem, smartphone applications such as Diabeloop, MySugr or Gluci-Chek aim to improve the daily life of patients. The notebooks once used to record blood sugar levels, meals and insulin administration have been replaced by these applications in which the patient can choose to manually record this information or connect the application to devices such as blood sugar meters and pens.

If the patient uses an insulin pump, the app would be connected to all the medical devices and would automatically control the doses delivered by the pump based on the continuous glucose meter readings. Another advantage of the applications is that information shared with practitioners allows them to monitor treatment more closely and in real time.

3.3. The treatment pipeline

In terms of treatment, the main drug candidates cover the areas already discussed (insulin, GLP-1, DPP-4, SGLT2 etc.). As we will see in the next chapter, GLP-1s are growing rapidly and rank behind insulin use. Mallya's deployment of GLP-1 pens is at an advanced stage of R&D at Biocorp. Alongside GLP-1, GIP is an incretin with the same functions that is now also targeted by new treatments; Lilly's Mounjaro acts on the receptors of both of these hormones and was just given the green light by the FDA in May 2022.

A second area of innovation is the administration method of insulin and incretins. Until now, the most common administration method has been intramuscular injection via a pen injector, however the biotech company Oramed is currently evaluating the oral administration of insulin in a phase 3 trial and Lilly is studying the oral administration of a GLP-1 analogue in a phase 2 trial.

If administration changed from injectable to oral, Mallya would become obsolete. However, although revolutionary, oral administration of these hormones currently faces many challenges that will not be resolved in the short term. Therefore, we do not view this potential development as a threat to Mallya in the short to medium term. For example, the French health authorities recently denied marketing authorisation for the oral administration of GLP-1 analogues on the grounds that bioassimilation by this route was very low and therefore required too large of a dose.

Aside from any ongoing studies, many routes of administration have been considered. Examples include a patch that diffuses insulin through the skin, a needle-free insulin injection via a microchannel created by high-pressure, propelled CO2 (Biojector) and inhalable insulin (projects abandoned by Pfizer, Novo and Sanofi). Currently, the main rival to the pen is the insulin pump, but we do not consider this a head-on alternative as each device targets patients at different stages of the disease.

Most of the ongoing studies are being conducted by Novo, Lilly and a few biotechs, with Sanofi announcing its withdrawal from diabetes R&D in 2019.

3.4. Momentum in medical devices

For the time being, the medical device market is very fragmented, but it is nevertheless centred on digitalisation with companies such as Medtronic, Roche, LifeScan and now Biocorp. Patients can now choose to obtain each tool themselves (blood sugar sensor and patches, insulin dose calculation and reporting app, Mallya etc.) or to use an integrated solution that includes all devices.

We are seeing this ecosystem grow with new companies and new products like Mallya, and we expect the sector to become concentrated with companies offering a complete turnkey solution to patients, always with the aim of reducing the burden of diabetes on patients' daily lives.

Remember that Mallya is a small add-on device that offers a connected component to a disposable device that does not have one. Mallya's success is therefore closely linked to the sales of disposable insulin pens for diabetes. In the next chapter, we will discuss the market for this condition and more specifically the market for injectable pens.

4. Diabetes market

The market for oral and injectable diabetes treatments shares the same growth drivers as the pharmaceutical market as a whole. On the one hand, the ageing of populations in developed countries is leading to a higher prevalence of many diseases. The elderly are demanding more care, medications and medical devices, and for longer periods of time. On the other hand, in developing countries, access to care, linked to rising incomes, is rising sharply and is mainly being observed in Asia and Africa.

Finally, the sedentary lifestyles of people in both developed and developing countries is leading to numerous chronic diseases. A sedentary lifestyle favours poor health caused by an excess of calories in the diet, especially from processed foods, and a lack of exercise.

Built on structural trends, the healthcare market is one of the most regulated, which makes it subject to many specific risks. The pressure comes mainly from the public authorities. Healthcare costs are steadily rising, encouraging both authorities and payers (insurance companies) to put pressure on the prices of pharmaceutical companies. Among the measures available to governments, a lower reimbursement rate may motivate pharmaceutical companies to adjust their prices. Authorities can also arbitrarily set or change the price of a drug.

On a purely regulatory level, personal data protection laws add technical constraints to the development of connected medicine, which is at the heart of Biocorp's strategy. However, it should be highlighted that the authorities have been in favour of the development of connected medicine for several years, for example through the European Commission's Horizon 2020 plan.

According to the International Diabetes Federation, the total expenditure related to diabetes reached \$966 billion in 2021. Just looking at the pharmaceutical market, AstraZeneca estimates it at \$114 billion, while the leader, Novo Nordisk, claims a 30.1% market share with sales of \$18 billion in the diabetes segment, which corresponds to a market of \$60 billion. These discrepancies in market quantification can be explained by the many co-morbidities associated with diabetes, sometimes including treatments for its complications such as hypertension. Looking at the breakdown of sales of the major pharmaceutical companies involved in diabetes treatment, developed countries dominate the market with the US leading followed by Europe, China and the rest of the world.

4.1. Sales per treatment

We are using the figure of \$60 billion for the antidiabetic drug market, confirmed by IQVIA, which estimates it at \$50 billion for the ten main countries alone. Note that we have calculated \$42 billion from data from the six large pharmaceutical companies (Novo, Lilly, Sanofi, Astra, Merck and Novartis), the delta being spread over other companies, including manufacturers of generics and biosimilars. This market is divided into three treatment categories: insulin, GLP-1 analogues and oral antidiabetic drugs.

The insulin market, which is very mature, is dominated by three companies in developed countries (Novo, Lilly and Sanofi), followed very far behind by several small laboratories that are very active in developing countries such as India and China, where they account for nearly one third of sales. The GLP-1 market is relatively new and is attracting new competitors, as it still has a promising reservoir of innovation, particularly with regard to its oral administration. Finally, the last segment is the most fragmented and includes mainly oral antidiabetic drugs, most of which are generics.

We expect growth for all treatments as the prevalence of diabetes increases in the population, but at different rates. Front-line oral therapies are expected to grow only slightly, while insulin is already starting to lose market share to GLP-1 analogues. The latter are used as an alternative to insulin therapy when oral treatments are no longer sufficient to control diabetes. As a reminder, compatibility between Mallya and GLP-1 injector pens is already in advanced development and is one of Biocorp's medium-term growth drivers.



Source: IQVIA & Portzamparc

4.2. Sales by geographical area

The largest market by far is in North America, which accounts for more than half of spending on injectables, followed by Europe and the rest of the world dominated by Asia, particularly China. The breakdown by geographical area is expected to remain virtually stable in the future. It is likely that the US share will decline slightly due to price pressure policies, while the improved accessibility of treatments in China will increase its importance.

Distribution of the injectables market worldwide



Source: IQVIA & Portzamparc

4.3. Sales of injectable pens

There are two types of injectable pens, disposable ones and reusable ones that are refilled with cartridges. According to the SNDS (*Système National des Données de Santé* — French national health data system), approximately 90% of insulin units sold in France are in the form of disposable pens. GLP-1 is currently only available in a disposable pen. The administration method that underlies Mallya's sales is therefore currently ultra-dominant.

Disposable pens are easier to use because they save the patient from having to store and replace insulin cartridges, which can be cumbersome. Disposable pens also require less care and attention because they are replaced once a month at most.

In terms of volume, Novo Nordisk sells approximately 1 billion insulin pens per year and Sanofi sells approximately 300 million.

4.4. Injectable pen manufacturers

The pharmaceutical companies that produce insulin and GLP-1 analogues are also manufacturers of injectable pens. This highly concentrated market is dominated by an oligopoly of three companies. Novo Nordisk is the world leader in diabetes management with \$17.3 billion of revenue from the condition in 2021 (80% of its sales). It is followed by Lilly (\$13.2 billion, 47% of sales in 2021) and Sanofi (\$5.2 billion, 12% of sales in 2021).

These three pharmaceutical companies each offer a reusable pen and a disposable pen for the administration of different insulins. Some versions of pens, like the Junior KwikPen, are made for children and are not yet compatible with Mallya. Novo Nordisk's current FlexPen is compatible with Mallya available at pharmacies, and a partnership was announced in September 2021 to equip the new FlexTouch pens with Mallya.

Overview of insulin injector pens								
Manufacturer	Novo Nordisk	Lilly	Sanofi					
Reusable pen	NovoPen	HumaPen	ClickStar					
Disposable pen	FlexPen/FlexTouch	KwikPen	SoloStar					
Biocorp-manufacturer deal	× / ✓	×	V					
Mallya compatible	v / v	\checkmark	V					
Mallya available in pharmacies via Roche	 / × 	\checkmark	V					

Source: Biocorp & Portzamparc

An unexpected but significant player, Walmart, entered the market in the summer of 2021 by distributing half-price insulin in partnership with Novo Nordisk. The injectable pen used is the FlexPen and is therefore compatible with Mallya even though it is not involved in the Biocorp/Novo Nordisk deal.

GLP-1 analogues (the market in which AstraZeneca is also present) are only administered using disposable pens, often derived from those used for insulin.

4.5. The future of pens

In 2016, the FDA approved the first connected reusable insulin pen. This pen, developed by Companion Medical, and which connects to a smartphone app, was approved for use with two rapid-acting insulins: Humalog and Novolog. Since then, the trend has been to digitalise this segment and integrate it into the digital ecosystem of diabetes management. Reusable pens have their own systems, while disposable pens can now be paired with Mallya.

All injection pens are being digitalised and we do not anticipate any change in the ratio between disposable and reusable insulin pens. However, we must take into account the increasingly frequent use of GLP-1, which can currently only be administered with disposable pens.

5. Change of scale approaching

Approximately 537 million adults are currently living with diabetes and only 55% of them are diagnosed, which represents 295 million people according to the International Diabetes Federation's 2021 Atlas.

Because this condition is progressive, most patients start with oral therapy combined with lifestyle changes, which can be sufficient to significantly slow its progression. In a 2016 study published by the American Diabetes Association, it was estimated that about 31% of diabetics in the US were on insulin. By extrapolating this ratio (31%) to the number of diabetics diagnosed worldwide (295 million), we calculate approximately 92 million people on insulin therapy worldwide.

At the same time, Biocorp estimates that the number of disposable insulin pen users is 60 million and they represent 80% of the pen market, meaning the number of patients on insulin therapy via injector pen is approximately 75 million. The 17 million difference between these two values (92 million and 75 million) represents the approximately 18% of insulin-dependent patients treated by other means, including insulin pumps or syringes.

Since Biocorp is already in the commercial phase, our modelling focuses on Mallya orders, production capacities as well as sponsorship milestones.

5.1. Up to 1 million Mallya by 2026

Eric Dessertenne, CEO of Biocorp, stated in an interview with ZoneBourse on 10 May 2022 that the company plans to deliver 50,000 units of Mallya in 2022 and then increase its production to 1 million in 2026. With an average price of approximately €50, we see falling to €35 due to the rise in volumes, this is by far the main growth driver for the next few years, representing 80% of our 2026 sales. We estimate that about 90% of the volume will focus on diabetes and 10% on other therapeutic areas depending on the progress of ongoing deals on growth hormone and female fertility. In the long term, we understand that management is considering a production of around 2.5 million units per year, which implies significant growth potential beyond 2026, in line with the scope of the potential market.

In plastics processing, a high-margin sector, we expect relatively low growth compared to Mallya, of approximately 5% per year, as Biocorp has recognised know-how and loyal clients in this field. At the intersection of this historical activity and Mallya, Biocorp is also investing in other connected devices (Inspair, Injay) for which we expect the first significant sales by 2026.

Finally, as Biocorp remains an innovation-driven company, we expect the company to continue with intense R&D in partnership with leading pharmaceutical companies to connect Mallya to more devices, which would result in a steady stream of sponsorship revenue.

5.2. Expected net profitability > 20%

We expect an 60% gross margin on Mallya, as the COGS is relatively small since it consists of a small electronic module encased in a thumb-sized hard plastic shell. Rather than a cost problem, the challenge related to the components in the current context is having sufficient supply to keep up with the expected high production rate. If this is a limiting factor, we believe that the strong confidence in sales provided by the partners will allow Biocorp to position itself very early on with its suppliers, which will help mitigate this challenge.

The high gross margin suggests that profitability will be high, given a fixed cost structure that we believe will remain very controlled. Biocorp has been a subcontractor in the pharmaceutical industry for many years, and its contacts are

already established. Therefore, its sales force does not need to be excessive and is particularly focused on various trade shows.

As detailed below, we expect an EBITDA of approximately 40% and an EBIT close to 30% in the medium term, for a net profitability above 20%.

5.3. PZP 2026 scenario

We are confident that Biocorp will be able to meet its sales targets based on the fact that:

- The company has already demonstrated its ability to produce tens of millions of units through its plastics processing business, so 1.5 million units of Mallya in 2026 seems largely attainable.
- Although no minimum quantity is stipulated in the contracts signed with the big pharmaceutical companies, we assume that all available production will be sold, as the demand for equipment is strong from all of the companies. As the complications of non-adherence to diabetes treatments lead to high additional costs for payers, it is in the interest of pharmaceutical companies to demonstrate that they are doing everything possible to increase adherence to their treatments. Therefore, savings generated by pharmaceutical companies on complications at the end of the line allow them to better negotiate the selling price of their insulin with payers.
- Our epidemiological analysis confirms the number of 60 million disposable insulin pen users and projects it at 65 million by 2026. Thus, with an estimated lifespan of two years for each Mallya before it needs to be replaced, a sales volume of 1.4 million units at this time corresponds to a market share of only 2.1%. Considering that the exclusive deal with Sanofi alone allows us to address a 25% market share of the insulin market, this level of penetration seems largely credible.

Below the top line, our main assumptions are described below:

- We estimate COGS at 40%, which we will readjust, if necessary, as sales progress.
- We believe that external expenses will grow more slowly than sales, as they are mainly composed of fixed costs.
- We have included around ten hires in 2022 and another ten spread over 2023 and 2024, with a slight decrease in the average cost initially (hires mainly linked to production vs. strong presence of R&D profiles previously).
- An increase in D&A due to investments in production capacity (€1.8 million of "exceptional" CAPEX over 2022 and 2023)
- Finally, as Biocorp has loss carryforwards, we anticipate a full effective corporate tax rate of 25% from 2027 onwards.

PZP summary scenario for 2022-2026										
In € millions	2022p	2023p	2024p	2025p	2026p					
Plastics processing sales	1,9	2,0	2,2	2,3	2,4					
% of sales	15,2%	10,0%	6,2%	4,6%	3,7%					
Martha and the construction		10.0	05.4	07.0	40.0					
Mallya diabetes sales	2,5	13,6	25,4	37,2	49,0					
% of sales	19,6%	66,5%	12,0%	/3,9%	74,0%					
Mallva sales (other)	0.0	0.0	21	39	56					
% of sales	0.0%	0.0%	-,- 6.0%	7 7%	8.5%					
, og sales	0,070	0,070	0,070	,,,,,	0,070					
Other connected sales	0,0	0,0	0,6	2,0	4,1					
% of sales	0,0%	0,0%	1,7%	3,9%	6,3%					
Milestones	8,3	4,8	5,0	5,0	5,0					
% of sales	65,2%	23,5%	14,2%	9,9%	7,6%					
70711 04150	407		05.0	50.0						
TOTAL SALES	12,7	20,4	35,3	50,3	66,2					
% change	24,5%	60,3%	12,8%	42,6%	31,6%					
COGS	-11	-59	-11 9	-181	-24 9					
External expenses	-41	-4.4	-4.8	-53	-5.8					
Employee expenses	-54	-60	-64	-6.8	-7 1					
Taxes and duties	-03	-0.4	-0.7	-1.0	-13					
	0,0	0,1	0,7	1,0	1,0					
EBITDA	1,8	3,7	11,5	19,1	27,1					
% of sales	14,3%	18,0%	32,5%	38,1%	40,9%					
DAP	-0,8	-1,1	-3,0	-4,3	-5,1					
% of sales	- <i>6,5%</i>	-5,4%	-8,4%	-8,6%	-7,7%					
EBIT	1,0	2,6	8,5	14,8	22,0					
% of sales	7,9%	12,6%	24,1%	29,5%	33,2%					
	10		0.5	110						
EBI	1,0	2,6	8,5	14,8	22,0					
% of sales	7,8%	12,5%	24,0%	29,4%	33,2%					
Corporate tax	• •	• •	• •	. –						
(excluding research tax credit)	0,0	-0,2	-0,9	-1,7	-4,6					
% EBIT	0,0%	7,6%	11,0%	11,7%	20,9%					
Net income (incl. CIR)	1,3	2,7	7,8	13,4	17,7					
% of sales	10,1%	13,0%	22,2%	26,6%	26,7%					

Source: Portzamparc

6. Valuation: TP €43.8

We consider the DCF valuation as the most appropriate method of valuing Biocorp according to the strong commercial development expected over many years, on which partnerships bring great visibility.

- Recovery of our 2022-2026 scenario then convergence to 2% perpetual • growth. This makes us anticipate double-digit growth throughout the decade, a realistic trajectory in terms of the immense addressable need;
- Normative operating margin of 23% (30% normative EBITDA) including with • caution, a decline from the projected level in 2026;
- Discount rate of 9.51% corresponding exclusively to the cost of equity, . without debt;
- The terminal value is calculated using the discounted perpetual annuity . method from the normative FCF.

Discounted free cash flow											
Exercice		2022	2023	2024	2025	2026	2027	2028	2029	2030	normatif
Sales		12,7	20,4	35,3	50,3	66,2	83,2	99,6	113,4	122,4	124,8
var n/n-1		24,5%	60,3%	72,8%	42,6%	31,6%	25,7%	19,8%	13,8%	7,9%	2,0%
Op. Income		1,3	2,9	8,8	15,1	22,3	26,2	29,3	30,9	30,8	28,7
in % of sales		10,2%	14,0%	24,9%	30,1%	33,7%	31,5%	29,4%	27,3%	25,1%	23,0%
Tax rates		0,0%	6,8%	10,6%	11,4%	20,6%	25,0%	25,0%	25,0%	25,0%	25,0%
Op. Income after taxes		1,3	2,7	7,9	13,4	17,7	19,7	22,0	23,2	23,1	21,5
Depreciation and amortization		0,8	1,1	3,0	4,3	5,1	5,8	7,0	7,9	8,6	8,7
in % of sales		6,5%	5,4%	8,4%	8,6%	7,7%	7,0%	7,0%	7,0%	7,0%	7,0%
Net investments		-1,0	-3,5	-2,5	-3,0	-4,0	-5,2	-6,4	-7,5	-8,3	-8,7
in % of sales		7,9%	17,1%	7,1%	6,0%	6,0%	6,2%	6,4%	6,6%	6,8%	7,0%
WCR change		-1,1	-1,2	-2,5	-2,6	-2,7	-2,9	-2,8	-2,3	-1,3	-0,4
Free Cash Flow		0,0	-0,9	5,9	12,2	16,1	17,4	19,8	21,4	22,0	21,1
Discount rate	9,51%										
Discounted Free Cash Flows		0,0	-0,8	4,7	8,8	10,7	10,5	10,9	10,7	10,1	8,9
Forecast duration (years)	9,56										
Sum FCF discounted	74,4										
Discounted terminal value	120,3										
+ Financial assets - provisions	0,6										
- Net debt end 2021	-2,1										
+ Cash dilutive instruments	0,0										
Total value (€m)	193,2										
Diluted number of shares (in m)	4,4										
Value / Share (€)	43,8										
Source: Portzamparc											

Valuation sensitivity												
Normative ERITA margin												
		Normative EBITA margin										
		21,0%	22,0%	23,0%	24,0%	25,0%						
	9,0%	44,3	45,9	47,5	49,2	50,8						
	9,3%	42,5	44,0	45,6	47,2	48,7						
WACC	9,5%	40,8	42,3	43,8	45,3	46,8						
	9,8%	39,3	40,7	42,1	43,5	44,9						
	10,0%	37,8	39,2	40,5	41,9	43,2						

		Growth rate to infinity								
		1,0%	1,5%	2,0%	2,5%	3,0%				
	9,0%	46,9	47,2	47,5	47,9	48,2				
	9,3%	45,0	45,3	45,6	45,9	46,2				
WACC	9,5%	43,2	43,5	43,8	44,1	44,4				
	9,8%	41,6	41,8	42,1	42,4	42,6				
	10,0%	40,0	40,3	40,5	40,8	41,0				

Source: Portzamparc

7. Appendices

7.1. The disease

7.1.1 Diabetes, insulin and glucagon

Diabetes is a disease with various causes that leads to a prolonged elevation in blood sugar levels. There are 2+1 types of diabetes. Type 1 is caused by an autoimmune disease that destroys the cells that produce insulin, while type 2 is caused by an overly sedentary lifestyle that makes our bodies resistant to insulin, which is correctly produced. The final type is gestational diabetes in pregnant women.

After a meal is eaten, nutrients enter the bloodstream and are distributed to our various organs to be either stored or used. These nutrients include sugars such as sucrose or fructose that are transformed by our body into glucose, which is the sugar absorbed by our body. For example, our brain consumes 5 grams of glucose per hour, the equivalent of one sugar cube.

Therefore, in the time between glucose entering the bloodstream and it being distributed to the organs, blood sugar levels increase and activate a whole metabolic cascade, which leads to the synthesis of insulin by the beta cells in the pancreas. This insulin released into the bloodstream helps glucose enter our cells, thereby lowering the sugar level to its "basal" level of about 1 gram per litre of blood, the amount needed for the body to function normally.

In a person with diabetes, the glucose level remains high for a long time, which is called hyperglycaemia. In type 1 diabetes, the pancreas does not produce enough, and then does not produce any insulin as the disease progresses, while in type 2 diabetes, insulin is more or less correctly secreted by the pancreas but does not sufficiently stimulate glucose penetration into the cells. As a result, cells no longer have the energy they need to function properly.

The central regulator of blood sugar is insulin, a hormone that immediately causes blood sugar levels to drop. Conversely, when the body needs more sugar, for example during exercise, glucagon has the opposite effect and causes sugar to leave the cells and enter the bloodstream. Glucagon is also synthesised by the pancreas, by alpha cells. The body initially stores sugar as glycogen in the liver so that it is immediately accessible in the event of exercise, it then stores it in the form of adipose tissue (also known as fat) in the hips or the abdominal belt.





Source: Centre Européen d'Etude du Diabète (European diabetes study centre)

7.1.2 Type 1: Autoimmune disease

Type 1 diabetes accounts for 10% of diabetes. It is an autoimmune disease in which some of our white blood cells (T cells) do not recognise pancreatic beta cells. The lymphocytes therefore consider them to be foreign and gradually attack them until they are all destroyed. This disease leads to a chronic insulin deficiency, which is very well managed these days by daily administration of exogenous insulin, however it is not curable.

The symptoms of the disease appear when most of the beta cells have been destroyed and the pancreas is unable to produce the amount of insulin needed to lower blood sugar. This occurs in childhood (T1D was once known as "juvenile diabetes"). This autoimmune disease is detectable by the presence of autoantibodies in the patient's blood.

The causes of type 1 diabetes are mainly genetic and probably environmental. Multiple genetic variations have been identified in our immune system that cause T cells to treat cells as the "enemy". Over the past 20 years, we have also seen a continuous increase of type 1 diabetes cases potentially explained by the interaction of our genome with the environment (food, exposure to toxins or viruses etc.).

7.1.3 Type 2: Metabolic disorder

Type 2 diabetes accounts for 90% of cases. It is a disease mainly linked to sedentary lifestyle and an unhealthy diet. Reducing sugar intake and increasing physical activity activates the metabolic pathway that consumes sugar and spares the pathway that stores it. In addition to this change in lifestyle, there are many treatments that act at various levels and ultimately impact the amount of insulin that regulates blood sugar.

Type 2 diabetes is asymptomatic for a long time. During this time, blood sugar levels increase progressively without the patient feeling any effect. This is called prediabetes. Patients either discover they have diabetes too late, when symptoms appear, on average 5 to 10 years after metabolic dysfunction starts, or during a blood test, which is why regular check-ups are important. It should also be noted that type 2 diabetes, previously diagnosed in adults around the age of 40, is increasingly being diagnosed in children.

The main cause of type 2 diabetes is a sedentary lifestyle. Our bodies need a small amount of sugar but we often get too much from our diets. This causes our bodies to over-stress the anabolic pathway (storage of nutrients) to the detriment of the catabolic pathway (consumption of nutrients). First, this exhausts the cells that accumulate the excess sugar (liver, fat cells), this is insulin resistance, then the pancreas, which is constantly called upon to produce insulin, no longer performs this function properly, this is insulinopenia. Finally, there are also certain genetic predispositions that favour the onset of Type 2 diabetes.

7.1.4 Diabetes complications

Constant hyperglycaemia primarily affects the cardiovascular system, which is constantly subjected to high blood sugar levels. The risk of stroke and atherosclerosis (deposits in the arteries) is therefore increased, while the risk of myocardial infarction is multiplied by 3 to 5.

Damage to blood vessels reduces their effectiveness and many organs stop receiving a proper blood supply. Arteritis of the lower limbs, due to cholesterol deposits in the arteries preventing their oxygenation, may lead to their amputation. The retina and kidneys are also affected, progressively leading to blindness and kidney failure requiring dialysis treatment. Finally, the brain receives an insufficient blood supply, leading to slow neurodegeneration.

Diabetes has many co-morbidities such as obesity or hypertension. The disease itself is also a co-morbidity as it is estimated that 10% of people infected with COVID-19 in France at the beginning of the epidemic were diabetic, even though they only represent approximately 5% of the population.

7.2. Adherence

7.2.1 Fight against non-adherence

Non-adherence to a treatment is a major barrier to its effectiveness. This is common for treatments of chronic diseases that span several years, such as diabetes. According to a study by Pierre Fabre, it appears that only 1 in 2 patients are adhering to their treatment after two years, especially in diabetes. According to the Ile de France ARS (*Agence Régionale de Santé* — regional health agency), diabetic treatment adherence is 62% at best for patients aged 63 to 75 and decreases with the age of the patient. There are many causes of non-adherence and they can lead to severe consequences for both the patient's quality of life and for the payers, both public and private.

7.2.2 Causes of non-adherence

There are two main factors behind non-adherence: the patient and the treatment. Does the patient understand their treatment and the risks of not adhering to it? Patient understanding of the treatment leads to adherence. Besides the patient, the treatment itself may be responsible for non-adherence. The side effects (hypoglycaemia, redness at insulin injection sites), the cumbersome and repetitive administration and the price are the primary causes of non-adherence.

In diabetes, medication is not the only treatment; lifestyle changes are also a part of treatment. It has been observed that non-adherence to physical activity and a healthy diet leads to non-adherence to medication. Similarly, many medications prescribed for diabetes do not directly treat the disease but prevent its complications; the patient is not necessarily aware of the progressive nature of the disease and therefore does not see the advantages of taking these medications.

7.2.3 The consequences of non-adherence

The consequences are dire for diabetic patients who do not adhere to their treatment. Their prognosis is directly influenced by adherence. As adherence decreases, the risk of complications increases. Conversely, good blood sugar management with a drop of only 1% in glycated haemoglobin (one of the blood sugar measurements) drastically reduces the risk of complications: -43% risk of amputation, -37% risk of kidney or eye disease, -21% risk of death, -16% risk of heart failure and -12% risk of stroke.

In socio-economic terms, the OECD estimates that the cost of diabetes complications is approximately €90 billion in Europe. These serious complications requiring hospital care have a catastrophic impact on public health budgets, which are already under a lot of pressure. Likewise, as with any chronic disease, diabetics are more prone to depression and to discrimination during recruitment (for example, until recently, a person with diabetes could not be a police officer or a ticket inspector for the SNCF [*Société Nationale des Chemins de Fer français* — the French state-owned railway company]). In terms of France, in its report on people treated for diabetes in 2019, the Assurance Maladie indicated that 83% of the 4 million people with diabetes were treated for a long-term illness with an average annual expenditure per person estimated at €2,160. Thus, the annual cost of diabetes for France is €8 billion.

The graph below shows the proportion of diabetics with at least one condition. We note that 30% of diabetics have a cardiovascular/neurovascular disease, while diabetic patients frequently suffer from polypathology.



Source: Assurance Maladie, France, October 2021

P&L Account	17	18	19	20	21	22e	23e	24e
Sales	2.3	3.9	8.4	8.5	10.2	12.7	20.4	35.3
chge y/y-1	-21.3%	67.6%	+/++	0.1%	20.9%	24.5%	60.3%	72.8%
organic chge	-21.3%	67.6%	117.1%	0.1%	20.9%	24.5%	60.3%	72.8%
EBITDA	-4.6	-4.3	1.6	-0.9	0.9	1.8	3.7	11.5
Underlying EBIT	-7.8	-5.3	0.9	-1.6	0.1	1.0	2.6	8.5
chge v/y-1	-/	/-	-/+	+/-	-/+	+/++	+/++	+/++
EBIT	-7.9	-5.4	1.0	-1.3	0.2	1.0	2.6	8.5
RCAI	-7.9	-5.6	0.8	-1.5	0.1	1.0	2.6	8.5
Tax Rate	0.4	0.3	0.2	0.3	0.2	0.3	0.1	-0.6
Declared Group Net income	-7.5	-5.3	1.0	-1.2	0.3	1.3	2.7	7.8
Restated Group Net income	-7.5	-5.3	1.0	-1.2	0.3	1.3	2.7	7.8
chge y/y-1	-/	/-	-/+	+/-	-/+	+/++	+/++	+/++
AACR Sales 2019 / 2023e	24.7%							
Gross Margin (%)	33.7%	16.7%	9.6%	7.5%	7.9%	5.7%	2.9%	1.7%
Operating Margin (%)	ns	ns	11.3%	-15.8%	1.8%	7.9%	12.6%	24.1%
Net margin (%)	ns	ns	11.4%	-14.7%	2.9%	10.1%	13.0%	22.2%
Tax Rate (%)	4.7%	5.9%	-20.2%	16.8%	-205.5%	-30.3%	-4.1%	7.5%
Cost of personnel / Sales (%)	146.7%	97.1%	41.6%	52.5%	49.4%	42.4%	29.4%	18.3%
Sales/employees (K€)	48	85	184	146	157	-	-	-
chge y/y-1	-/+	74.9%	+/++	-20.6%	<i>7.9%</i>	-	-	-
Avg nb of staff	48	46	46	58	65	-	-	-
chge y/y-1	-/+	-4.2%	0.0%	26.1%	12.1%	-	-	-
Balance Sheet	17	18	19	20	21	22 e	23e	24e
Equity value (group's share)	-13	-1.8	0.0	2.8	31	4.4	71	14.9
Net Financial Debt	3.0	3.8	1.8	0.7	21	21	3.0	-2.8
Other	0.6	0.0	0.0	-0.4	0.0	0.0	0.0	0.0
Invested Canital	2.4	1.9	1.9	3.1	5.2	6.5	10.1	12.0
Net Fixed Assets	2.2	1.6	2.0	3.9	4.2	4.3	6.7	6.3
o/w goodwill				-		-	-	-
o/w financial assets	0.3	0.2	0.4	0.5	0.6	0.6	0.6	0.6
WCR	0.4	0.5	0.2	-0.2	1.6	2.7	3.9	6.3
Capital employed	2.4	1.9	1.9	3.1	5.2	6.5	10.1	12.0
Gearing (%)	-237.2%	-207.5%	5794.1%	23.6%	67.2%	47.6%	43.1%	-18.9%
WCR/Sales (%)	18.0%	13.8%	3.0%	-2.8%	15.2%	21.0%	19.0%	18.0%
Net Financial Debt/EBITDA (x)	ns	ns	1.2	ns	2.3	1.2	0.8	ns
ROE (%)	ns	ns	ns	ns	9.4%	29.2%	37.6%	52.6%
ROACE (%) after normative tax	ns	ns	50.4%	ns	4.5%	17.2%	28.9%	68.6%
Cash Flow statement	17	18	19	20	21	22 e	23 e	24e
Cash Flow	-4.2	-4.3	1.6	-0.6	1.1	2.1	3.8	10.8
Change in WCR	0.2	-0.8	0.3	0.4	-1.5	-1.1	-1.2	-2.5
Capital expenditures	-0.9	-0.4	-1.0	-2.4	-1.0	-1.0	-3.5	-2.5
% of Sales	40.8%	10.5%	11.5%	28.7%	9.8%	7.9%	17.1%	7.1%
Free Cash Flow	-5.0	-5.5	0.9	-2.6	-1.5	0.0	-0.9	5.9
Asset disposal	0.3	0.3	0.5	2.3	2.1	0.0	0.0	0.0
Financial Investments	-0.3	-0.4	-0.5	-2.4	-2.1	0.0	0.0	0.0
Dividends	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Capital increase	0.0	4.7	0.9	4.0	0.0	0.0	0.0	0.0
Other	-0.1	0.1	0.1	-0.2	0.0	0.0	0.0	0.0
Change in Net Financial Debt	5.0	0.8	-1.9	-1.2	1.4	0.0	0.9	-5.9
Net Financial Debt	3.0	3.8	1.8	0.7	2.1	2.1	3.0	-2.8







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Data per Share	17	18	19	20	21	22 e	23 e	24e
EPS	-2.21	-1.32	0.23	-0.28	0.07	0.30	0.61	1.80
chge y/y-1	-/	/-	-/+	+/-	-/+	+/++	+/++	+/++
CFPS	-1.2	-1.1	0.4	-0.1	0.2	0.5	0.9	2.5
NAPS	-0.4	-0.5	0.0	0.7	0.7	1.0	1.6	3.4
Net Dividend (distributed v+1)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pavout (%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
AACR EPS 2019 / 2023e	27.4%							
AACR CFPS 2019 / 2023e	22.4%							
Valuation	17	18	19	20	21	22 e	23 e	24 e
PER (x)	ns	ns	48.4	ns	ns	ns	52.2	177
PCF (x)	ns	ns	29.1	ns	ns	ns	ns	12.8
PNAV (x)	ns	ns	 ns	ns	ns	ns	19.6	93
FV/Sales(x)	15.4	10.9	57	11 1	12.0	11.0	6.9	3.8
EV/ERITDA(x)	10.4 ne	10.5 ne		ne	ne	ne	0.5 ne	11.8
EV/EBIT (x)	ne	ne	ne	ne	ne	ne	ne	15.9
Eree Cash Flow Vield (%)	-15 1%	-1/ 2%	2.0%	-2.8%	-1 2%	0.0%	-0.7%	10.5
Viold (%)	13.1%	14.276	2.0%	2.0%	0.0%	0.0%	0.7%	4.2%
Market Cap (ME)	0.0%	20.0 %	0.0%	0.0%	10.0%	1207	1207	1207
Enterprise Value (EV)	33.1	30.9	40.5	93.0	121.1	130.7	141.0	130./
Peteroneo Price (EV)	33.0 80	42.4	47.5	33./ 21 E	/ .12 27 0	140.3 21 0	141.Z 21 0	133.3 21 0
Nh of charges (Mic)	3.0	9.0	4 1 4 7	ZI.3	4.202	31.0	31.0	31.0
NO OJ SITATES (MIO)	3.390	4.033	4.147	4.302	4.302	4.302	4.362	4.362
Restated ND OJ Shares (MIO)	3.390	4.033	4.147	4.362	4.362	4.362	4.362	4.362
% allution	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Listing Date	1//0//2015							
Aujusteu Listing Price	5.8€							
Intermediate Data	17	18	19	20	21	22	23	24
Q1 Sales	-	-	-	-	-	-	-	-
Q2 Sales	-	-	-	-	-	-	-	-
H1 Sales	1.1	2.0	5.2	3.8	3.6			
H1 EBIT	-2.8	-2.8	1.2	-1.0	-1.3			
H1 restated Net result Group share	-2.7	-2.7	1.2	-0.8	-1.2			
H1 Operating Margin	ns	ns	22.9%	-25.2%	-37.0%			
H1 Net Margin	ns	ns	23.6%	-20.4%	-34.1%			
Q3 Sales			-	-	-	-	-	-
04 Sales			-	-	-	-	-	-
H2 Sales	1.3	1.9	3.2	4.6	6.6			
H2 EBIT	-5.1	-2.6	-0.2	-0.4	1.5			
H2 restated Net result Group share	-4.8	-2.6	-0.3	-0.5	1.5			
H2 Operating Margin	ns	ns	-7.6%	-8.1%	22.9%			
H2 Net Margin	ns	ns	-8.7%	-10.0%	22.9%			
Growth Bata (1/1/-1)								
QI Salas	-	-	-	-	-	-	-	-
V2 Sales	-	-	-	-	-	-	-	-
VS Sales			-	-	-	-	-	-
V4 Sales	22.20/	02.00/	-	-	- 	-	-	-
TI Sales	-33.3%	03.0%	+/++	-27.4%	-5./%			
	-7.2%	53.9%	65.8%	45.2%	42./%			
	-/	-/	-/+	+/-	-/			
HZ EBII	-/	/-	/-	-/	-/+			





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	ESG Criteria	L		
ENVIRONMENT	2019	2020	2021	Comments
Carbon footprint				
GHG emissions in ktegCO2 (Scope 1 and 2) / Sales (€m)	NA	NA	NA	
CO2 emissions offsetting policy	ND	ND	ND	
Positive environmental impact identified	No	No	No	
Environmental Policy				
Publication of an environmental report	No	No	No	
Fines/environmental litigation over the last 3 years	No	No	No	
14001 certification	No	No	No	
SOCIAL	2019	2020	2021	Comments
Promoting diversity				
Share of women in company	35%	37%	38%	
Equal pay index women/men	NA	NA	NA	
Action plan for equal opportunities and diversity	ND	ND	ND	
Share of the disabled	NA	NA	NA	
Training				
Part of employees who received training during the last year	NA	NA	NA	
Recruitment & Attraction				
Employment turnover rate	NA	NA	NA	
Certification Great place to work	ND	ND	ND	
Working conditions				
Presence of an HRD on the steering committee	No	No	No	
Encouraging employee shareholding	No	No	No	
Number of shares held by employees	NA	NA	NA	
Absenteeism rate	NA	NA	NA	
Workplace accident frequency rate	NA	NA	NA	
GOVERNANCE & SHAREHOLDING	2019	2020	2021	Comments
Compliance with the Afep-Medef code	Yes	Yes	Yes	
Composition of governance bodies				
Separation of the functions of Chairman and Chief Executive Officer	Yes	Yes	Yes	
Number of members of the Board of Directors	5	5	5	
of which independent	2	2	2	
of which women	0	0	0	
Employee representative on the Board of Directors	No	No	No	
Attendance of Board members	NA	NA	90%	
Audit Committee	No	No	No	
Risk Committee	No	No	No	
Risk Committee: a section dedicated to cybersecurity	No	No	No	
CSR Committee	No	No	No	
Respect of minority shareholders				
Double/multiple voting rights	Yes	Yes	Yes	
Weight of the main shareholder	65%	62%	63%	Gardette Family
Executive compensation				
Transparency on the CEO's remuneration	ND	ND	ND	
Statement of the CEO's remuneration	ND	ND	ND	
Compensation of the CEO linked to CSR performance criteria	ND	ND	ND	
Fairness ratio	NA	NA	NA	
EXTERNAL STAKEHOLDERS	2019	2020	2021	Comments
Implementation of an ethics charter with its suppliers				
	ND	ND	ND	
Implementation of customer satisfaction indicators	ND ND	ND ND	ND ND	

Disclosure

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Rating and Target price history http://www.midcaps.portzamparc.fr/wp-content/fileadmin/pubt/avertissements.pdf

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STRONG BUY (1): Expected return in excess of +15%

BUY (2): Expected return of between +5% and +15%

HOLD (3): Expected return of between -5% and +5%

REDUCE (4): Expected return of between -5% and -15%

SELL (5): Expected return of less than -15% or poor visibility on the fundamentals of the company.

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Ratings applied to the issuer in the past 12 months

The following table shows the changes of rating and target price made by the financial analysis department of Portzamparc over a 12-month period.

Recommendations are updated either when a comment is made in connection with an official or legal publication, or when an exceptional event occurs (external growth, significant agreements).

Date	Analyst	Target Price	Closing Price	Old Recommendation	New Recommendation
10/06/2022 8:30	Clément Bassat	€43.8	€28.6		STRONG BUY (1)

Potential conflicts of interest for PORTZAMPARC

Company	Potential conflicts of interest
Biocorp	6

1. Portzamparc holds or controls 5% or more of the issuer's share capital;

2. The issuer, or its main shareholders, hold or control, directly or indirectly, 5% or more of Portzamparc's share capital;

3. Portzamparc has been lead manager or co-lead manager in a public offering of financial instruments of the issuer in the past 12 months;

4. Portzamparc is market maker for the financial instruments of the issuer;

5. Portzamparc has entered into a liquidity agreement with the issuer;

6. Portzamparc and the issuer have signed an analysis service agreement whereby Portzamparc has undertaken to produce and disseminate investment research on the issuer;

7. Portzamparc has received payment from the issuer in consideration for the provision of investment services or financial advisory services in the last 12 months;

8. The author of this document or any person who has assisted in its preparation (or a member of their household), and any person who, while not involved in the preparation of the report, has had, or can be reasonably assumed to have had, access to material elements of this document prior to its dissemination, holds a net or short position representing more than 0.5% of the issuer's share capital;

9. The rating published in this document has been disclosed to the issuer prior to publication and dissemination and subsequently amended prior to its dissemination.

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