Captor Therapeutics

Skok w obszar CNS zwiększa wartość pipeline

Kupuj
(Poprzednia: Kupuj)

Cena docelowa: 232,5 PLN
Potencjał wzrostu: +37%

Od początku 2022 roku Captor Therapeutics intnsywnie realizował założeni rozwoju pipeline. W projekcie CT-01 Spółka ujawniła cele molekularne projektu (białka GSPT1 i SALL4) oraz przedstawiła dane *in vivo* wskazujące na skuteczną indukcję apoptozy celu molekularnego skutkującą regresją komórek nowotworowych w modelach zwierzęcych. Odczyty z badań „*proof-of-concept*" projektu CT-03 wykazały, że wiodący związek powoduje wydajną degradację białka MCL-1 w zwierzęcych modelach nowotorów, prowadząc do zmniejszenia lub całkowitej regresji guza. W naszej ocenie, solidne dane naukowe potwierdziły kompetencje badawcze I otworzyły możliwości partneringowe Captor. Partnerstwo z Ono Pharmaceutical znacznie rozszerza zakres prac badawczo-rozwojowych i zapewnia kolejny silny strumień finansowania badań. Naszym zdaniem Captor ma przed sobą jeszcze ważny okres kolejnego newsflow'u. Zakładamy, że najbardziej oczekiwanymi informacjami w ciągu najbliższych miesięcy będą: kolejne dane z rozwoju projektów CT-01 i CT-03 fazy IND-enabling studies, dane z badań *in vivo* w projekcie CT-02, ujawnienie celów molekularnych w projektach CT-02 oraz CT-04. Zakładamy również możliwość zawarcia kolejnych umów współprac badawczych w 2023 roku. Aktualizując dane R&D projektów CTX oraz dodając nowy project współpracy badawczej z Ono Pharmaceutical, podwyższamy wycenę akcji Captor TP12M do 232,5 PLN/ akcję z rekomendacją „Kupuj" (upside 37%).

Nowa ransakcja ziększa wartość pipeline Captor. 14 listopada 2022 r. Captor Therapeutics i jedna z największych japońskich firm biotechnologicznych Ono Pharmaceutical ogłosiły zawarcie umowy o wyłącznej współpracy w celu opracowania małych cząsteczek zdolnych do degradacji wspólnie uzgodnionego celu molekularnego, w obszarze chorób ośrodkowego układu nerwowego (ang. CNS). Umowa obejmuje wszystkie wskazania chorobowe spowodowane przez cel molekularny oraz nieograniczony terytorialny zakres współpracy. W naszej ocenie zawarta umowa jest szczególnie korzystna dla CTX ze względu na kompetencje biznesowe i komercjalizacyjne Ono Pharmaceutical. W ramach współpracy CTX wejdzie w nowy obszar terapeutyczny na drodze rozwoju nowego projektu bez ponoszenia kosztów własnych i rozwinie dodatkowe kompetencje w wykorzystaniu platformy technologicznej w obszarze leków dedykowanych CNS. Współpraca zapewni również stabilny strumień finansowania CTX na drodze płatności kamieni milowych od Ono, może zaowocować również zawarciem kolejnych umów współpracy.

Pierwsza płatność dla CTX w terminie 30 dni od zawarcia umowy, kolejne płatności uzależnione są od realizacji celów badawczych. Zgodnie z umową Captor otrzyma pierwszą płatność po zawarciu umowy (płatność z góry, upfront) w ciągu 30 dni, Spółce przysługiwać będzie również refundacja prac badawczo-rozwojowych oraz płatności po zrealizowaniu kolejnych kamieni milowych – o łącznej wartości do 197mln EUR. Captor będzie również otrzymywał tantiemy z tytułu potencjalnej sprzedaży rynkowej leków (royalties). W naszych założeniach wycenowych zakładamy, że Captor może otrzymać ok. 2-3 mln EUR płatności upfront. Jako kolejne najbliższe płatności zakładamy, że CTX otrzyma milestony za selekcję związku wiodącego (zakładamy timing na koniec 2023 roku) oraz selekcję kandydatów do badań przedklinicznych (zakładamy termin 2025). Łącznie, w okresie 2023-2025 zakładamy otrzymanie płatności w kwocie 5mln EUR.

Wejście w nowy obszar terapeutyczny chorób CNS o dużych niezaspokojonych potrzebach medycznych. Captor i Ono Pharmaceutical zawarły umowę partnerską w celu opracowania małych cząsteczek (w naszych założeniach klejów molekularnych) zdolnych do degradacji celu molekularnego do leczenia chorób ośrodkowego układu nerwowego (CNS). W ramach współpracy CTX zapewni Ono dostęp do biblioteki opracowanych degradatorów oraz przystąpi do prac nad optymalizacją struktur i właściwości wybranych związków. W oparciu o platformę technologiczną CTX OptigradeTM obie firmy będą opracowywać związki mające zastosowanie przede wszystkim w dziedzinie chorób neurodegeneracyjnych, na które obecnie nie ma skutecznej terapii. Naszym zdaniem możliwe wskazania terapeutyczne mogą objąć chorobę Alzheimera, Parkinsona lub inne pokrewne choroby z dysfunkcjami neurodegeneracyjnymi. Captor będzie odpowiedzialny za wczesny rozwój projektu (Drug Discovery, etap przedkliniczny), celem Ono będzie rozwój kliniczny i komercjalizacja projektu.

Wysoka watość współpracy dla projektu wczesnej fazy. W naszych poprzednich raportach Captor, przedstawialiśmy założenia łącznych płatności partneringowych dla projektów R&D w przedziale od ok. 63mln EUR (dla projektu współpracy z Sosei Heptares, zawartego na etapie Drug Discovery) do ok. 330mln EUR (dla potencjalnego partneringu dla projektu CT-03, który w naszych założeniach może zostać zawarty na etapie badań klinicznych I fazy w 2024 r.). Wartość kontraktu Ono jest powyżej naszego średniego przedziału płatności zakładanego dla wszystkich projektów CTX i ponad dwukrotnie wyższa niż nasze założenia dla projektów wczesnej fazy (Drug Discovery). Wartość współpracy Captor z Ono oceniamy jako pozytywną, chociaż brak informacji o płatności upfront i wysokości royalties jest elementem ryzyka wycenowego. W naszych prognozach zakładamy, że pierwsza wpłata za CTX może wynieść około 1-2% wartości kontraktu (założenie oparte na porównywalnych transakcjach dla projektów na wczesnym etapie, w tym Nurix i Sanofi, Nurix i Gilead, Jiangsu i Incyte, oraz ostatnia transakcja Ryvu i Exelixis). Zakładamy również, że innowacyjny obszar terapii opartych na TPD może przesądzić o atrakcyjnym poziomie tantiem, pomimo wczesnej fazy rozwoju projektu (zakładamy royalties na poziomie 10%).

Kolejne umowy partnerskie możliwe w 2023r. Projekty badawczo-rozwojowe Captor przebiegają obecnie zgodnie z harmonogramem. Naszym zdaniem jedyny wyjątek może dotyczyć projektu CT-03, w którym Captor wcześniej informował o możliwych opóźnieniach z powodu braku dostępności bloków syntezy chemicznej (raport bieżący Captor opublikowany w maju 2022 r.). CTX podtrzymuje plany wdrożenia projektów do etapu badań na pacjentach w 2023 roku. Spółka widzi rosnące zainteresowanie technologią TPD ze strony koncernów Big Pharmy, co może wpłynąć na zawieranie kolejnych umów o współpracy badawczej lub sprzedaż własnych projektów w nadchodzących miesiącach.

Ważny newslow ciągle w grze. Naszym zdaniem Captor ma przed sobą miesiące z ważnym okresem newsflow'owym. Najbardziej oczekiwane informacje w nadchodzących miesiącach w naszej ocenie obejmą rozwój projektów CT-01 i CT-03 z etapu badań IND-enabling studies (dane toksykologiczne i farmakologiczne z timingiem w 1H23), dane z badań *in vivo* w projekcie CT-02 (1Q23) oraz możliwe ujawnienie celów molekularnych w projektach CT-02 (1Q23) i CT-04 (23-3Q23). Zakładamy również możliwość zawarcia kolejnych umów współprac w 2H23.

Impakt wycenowy. Podpisanie umowy partnerskiej z Ono Pharmaceutical umożliwia wprowadzenie nowego projektu do pipeline CTX. W naszych założeniach modelowych szacujemy wycenę projektu na 82mln PLN (18,8 PLN/akcję) przy łącznej wycenie akcji CTX 12M TP na 232,5 PLN/akcję (+37% wzrost). W naszej wycenie umieściliśmy kilka aktualizacji, w tym zaktualizowane dane dot. statusu projektów R&D.

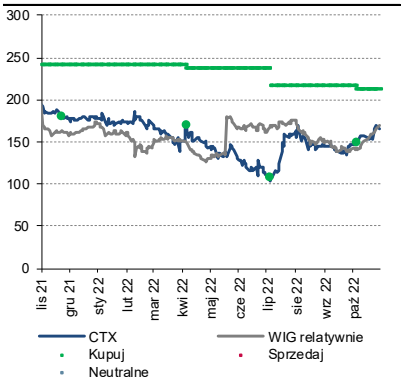
Czynniki ryzyka. Do najważniejszych czynników ryzyka należą: **1)** rezygnacja z dotychczasowych umów partneringowych lub brak podpisania kolejnych umów, **2)** niepowodzenie w rozwoju nowych projektów lekowych, **3)** brak dofinansowania kolejnych projektów lub ograniczona dostępność dofinansowania, **4)** wzrost w konkurencji. Bardziej szczegółowy opis znajduje się na stronie 25.

DANE SPÓŁKI

Ticker	CTX
Sektor	Biotech & MedTech
Kurs (PLN)	170
52 tyg. min/max (PLN)	102,5 / 193,98
średnioważona liczba akcji (mln szt.)	3,3
Kapitalizacja (mln PLN)	554
Free-float	47,6%
Śr. obroty 3M (mln PLN)	0,11

Zmiana kursu	1M	3M	1Y
	15,3%	6,6%	-10,5%

KURS NA TLE WIG



HISTORIA REKOMENDACJI

	Data	Wycena
Kupuj	20.10.2022	214
Kupuj	20.07.2022	218
Kupuj	20.04.2022	239
Kupuj	08.12.2021	243
Kupuj	20.10.2021	243
Kupuj	20.07.2021	234

AKCJONARIAT

	Udział %
Michał Walczak	22,0%
Paweł Holstinghausen Holsten	14,2%
Sylvain Cottens	8,2%
NN OFE	8,0%
Pozostali	47,6%

WAŻNE DATY

Raport 3Q22	24.11.2022

ANALITYK

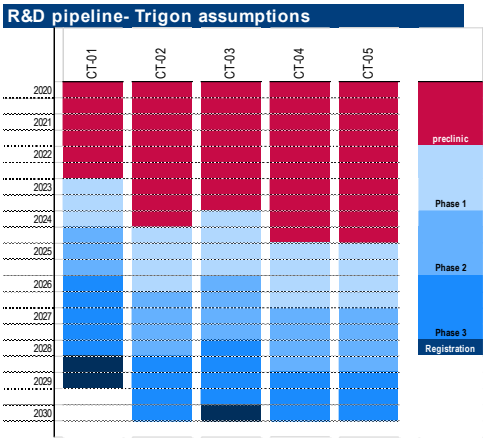
Katarzyna Kosiorek

Captor Therapeutics

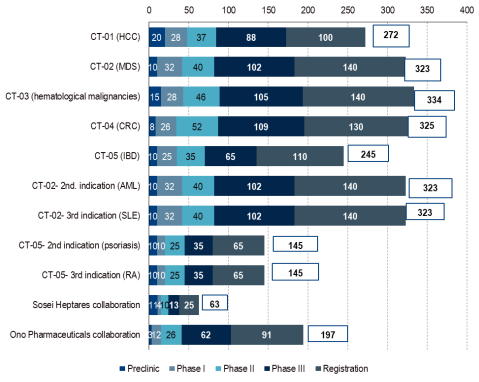
Bloomberg ticker	CTX PW
Recommendation	**Buy**
Target Price (PLN)	**232,5**
Current price (PLN)	**166**
Upside	**37%**
Previous recommendation	Buy
Previous target price (PLN)	213,4
Number of shares (m)	4,59
Market Cap (mPLN)	835
EV (mPLN)	725

Katarzyna Kosiorek

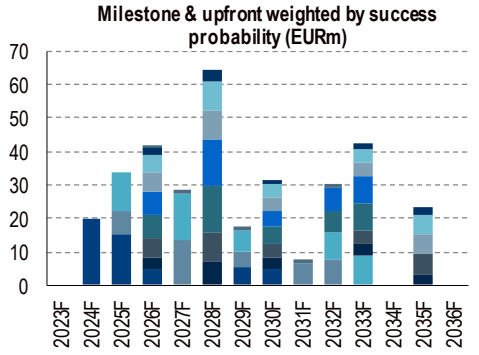
R&D pipeline- Trigon assumptions



Partnering transaction values



Partnering values weightes by success probability



MARKET RATIOS	2020	2021	2022F	2023F	2024F
P/E (x)	-	-	-	-	-
P/E adj. (x)	-	-	-	-	-
P/BV (x)	-831,3	6,7	12,3	17,0	578,9
EV/EBITDA (x)	-	-	-	-	-
EV/EBITDA adj. (x)	-	-	-	-	-
EV/Sales (x)	-	181,9	33,3	30,4	63,5
FCF Yield (%)	0,0%	-2,8%	-1,1%	-2,6%	-4,2%
DY (%)	0,0%	0,0%	0,0%	0,0%	0,0%

RATIOS	2020	2021	2022F	2023F	2024F
EPS (PLN)	-3,5	-9,1	-9,2	-10,5	-13,3
EPS adj. (PLN)	-3,5	-9,1	-9,2	-10,5	-13,3
DPS (PLN)	0,0	0,0	0,0	0,0	0,0
BVPS (PLN)	0,3	34,6	18,9	13,7	0,4
Number of shares (m)	3,6	3,6	4,6	3,6	3,6
Market Cap (mPLN)	835	835	1 067	835	835
EV (mPLN)	836	725	1 012	827	889

P&L (mPLN)	2020	2021	2022F	2023F	2024F
Sales	**0,0**	**4,0**	**23,4**	**27,2**	**14,0**
COGS	12,2	35,9	65,5	63,8	59,5
Gross profit	--	--	--	--	--
EBITDA	**-5,6**	**-24,5**	**-34,9**	**-27,3**	**-36,0**
EBITDA adj.	**-5,6**	**-24,5**	**-34,9**	**-27,3**	**-36,0**
D&A	6,6	7,4	7,2	9,3	9,5
EBIT	-12,2	-31,9	-42,1	-36,6	-45,5
Gross profit	-12,7	-32,8	-42,3	-37,6	-47,6
Minority interest	0,0	0,0	0,0	0,0	0,0
Net profit	-12,7	-32,8	-42,3	-37,6	-47,6
Net profit adj.	**-12,7**	**-32,8**	**-42,3**	**-37,6**	**-47,6**

CASH FLOW STATEMENT (mPLN)	2020	2021	2022F	2023F	2024F
Cash flow from operations	**-0,6**	**-28,8**	**-31,1**	**-28,4**	**-43,1**
Cash flow from investing	**-0,2**	**-5,1**	**-19,2**	**-7,0**	**-8,0**
CAPEX	0,2	5,1	19,4	7,0	8,0
Cash flow from financing	**-0,9**	**140,9**	**-0,1**	**-0,2**	**25,4**
Dividend	0,0	0,0	0,0	0,0	0,0
FCF	-0,4	-23,6	-11,7	-21,4	-35,1
Net cash flow	-1,7	107,0	-50,4	-35,7	-25,7

BALANCE SHEET (mPLN)	2020	2021	2022F	2023F	2024F
ASSETS	**25,8**	**143,3**	**106,3**	**80,6**	**69,1**
PPE	12,2	12,2	12,6	14,4	24,4
Goodwill	0,0	0,0	0,0	0,0	0,0
Intangible assets	0,1	0,2	0,1	0,1	0,1
Cash and equivalents	10,7	117,6	67,2	31,6	5,8
EQUITY AND LIABILITIES	**25,8**	**143,3**	**106,3**	**80,6**	**69,1**
Equity	-1,0	124,1	86,7	49,0	1,4
Minority shareholders capital	0,0	0,0	0,0	0,0	0,0
Interest-bearing liabilities	12,4	8,2	12,0	24,0	60,0
Net debt	1,8	-109,4	-55,2	-7,6	54,2
Net working capital	-1,4	9,1	3,9	3,9	3,9

OPERATING INDICATORS	2020	2021	2022F	2023F	2024F
Sales growth (%)	-	-	-	-	-
EPS adj. growth (%)	-	-	-	-	-
Gross profit margin (%)	-	-	-	-	-
EBITDA adj. margin (%)	-	-	-	-	-
Operating profit margin (%)	-	-	-	-	-
Net profit adj. margin (%)	-	-	-	-	-
ROE (%)	-	-	-	-	-
ROA (%)	-	-	-	-	-
CAPEX/Sales (%)	-	-	-	-	-
CAPEX/D&A (x)	-	-	-	-	-
Net debt/Equity	-	-	-	-	-
Net debt/EBITDA (x)	-	-	-	-	-
Cash conversion cycle (days)	-	-	-	-	-
Inventory turnover (days)	-	-	-	-	-
Receivables turnover (days)	-	-	-	-	-
Liabilities turnover (days)	-	-	-	-	-

Source: Company (historical data), Trigon Brokerage House (forecasts)

Investment theses update

New partnering transaction boosting the value of Captor pipeline. On November 14, 2022. Captor Therapeutics and one of the biggest Japan's biotechs Ono Pharmaceutical announced an exclusive collaboration agreement to develop small molecules capable of degrading a mutually agreed molecular target, primarily in the field of central nervous diseases (CNS). The agreement covers all human disease indications caused by the molecular target and unlimited territorial scope of cooperation. In our opinion, the concluded agreement is valuable for CTX especially for business and commercialization abilities of Ono Pharmaceutical. In collaboration process CTX will launch into new therapeutic areas by the new project development without its own costs and will develop additional expertise in applying its TPD platform to CNS drugs. The collaboration will also improve CTX's financial position and may result in obtaining further financing of milestones payments from Ono and subsequent projects commercialisations.

Entering new therapeutic area of CNS diseases with high unmet medical needs. Captor and Ono Pharmaceutical have entered into an partnering agreement to develop small molecules (in our assumptions molecular glues) capable of degrading a molecular target for the treatment of central nervous system (CNS) diseases based on the CTX OptigradeTM technology platform. As part of the cooperation, CTX will provide to Ono access to the library of developed degraders and will proceed work on structures and properties optimization for the selected compounds. The aim of the cooperation is the development of compounds applicable primarily in the field of neurodegenerative diseases, for which there is currently no effective therapy. In our opinion, possible therapeutic indications may be related to Alzheimer's, Parkinson's or other related neurodegenerative disfunctions. Captor will be responsible for the early project development (Drug Discovery, pre-clinical stage), Ono's goal will be clinical development and commercialization of the project.

Ono Pharmaceutical– one of the biggest innovative Japan's biotech with 11.8bln USD Market Cap. Ono Pharmaceutical (TYO: 4528, NASDAQ:OPHLY) is one of the largest pharmaceutical companies in Japan with a capitalization of approximately USD 11.8 billion. The company focuses its activity in the areas of oncology, autoimmune diseases, nervous system and other selected areas (including gynaecology, diabetology, cardiology, pulmonology). It has over 40 registered drugs sold globally and on selected markets, as well as a rich history of cooperation with the largest Big Pharma entities (including BMS, Novartis, Amgen, AstraZeneca, Gilead, Pfizer, Merck). The company employs over 1,700 employees, revenues in 2021. amounted to USD 2.9 billion with a net profit of approximately USD 540 million. With partnering agreement, Captor has entered into an agreement with one of the Top50 largest global pharmaceutical companies, implementing the business assumptions announced during the IPO and confirming its competence in the development of compounds in the technology of targeted protein degradation thanks to the use of the innovative OptigradeTM technological platform. In our opinion, the concluded agreement is particularly beneficial due to the innovative potential of business partner that will enable CTX to enter new therapeutic areas and may result in the conclusion of additional cooperation agreements by identifying novel degraders targeting CNS-related proteins.

First payment for CTX under 30 days from contract conclusion, next payments will depend on research goals achievement. Under the cooperation agreement, Captor will receive first payment upon conclusion of the contract (up-front payment) within 30 days, Captor will be also eligible to R&D works reimbursement and additional payments after completing subsequent milestones - with a total value of up to EUR 197m. Captor will also receive a royalties payments from the potential drug market sales. Ono, on the other hand, will receive the exclusive right to license the further development and commercialization of the drug candidate. In our valuation assumptions, we believe that CTX may receive approx. EUR 2-3m for the upfront payment (that will recognized within 30 days from contract conclusion) and will be entitled to receive further payments for the lead compound selection (we assume the timing for the end of 2023) and the preclinical candidate selection (we assume the timing for 2025) with the additional 2023-2025 milestone payments at approx. EUR 5 million.

Possibility of intensive project development without negative impact on CTX pipeline. The molecular target being the subject of cooperation is well validated scientifically, but so far its therapeutic use has been limited due to the limitations of conventional forms of therapy (e.g. lack of permeability of the blood-brain barrier for antibodies, high toxicity for small inhibitors). The CTX's high-throughput engine of OptigradeTM platform with the scientific validation of the molecular target should be an advantage in efficient project development. The novel research cooperation will not affect the development of other projects in the CTX pipeline. Ono's experience in the development of new drugs may be a factor supporting the CTX's competences in the development of its own projects.

Next partnering agreements possible in 2023. The Captor's R&D projects are currently proceeding according to schedules. In our opinion, the only exception can be related to CT-03 project, in which Captor has previously informed about possible delays due to unavailability of chemical synthesis blocks (Captor current report published in May 2022). CTX maintains plans to implement projects to the stage of research on patients in 2023. The company sees growing interest in the TPD technology on the part of Pharma concerns, which may influence the conclusion of further research cooperation agreements or the sale of own projects in the coming months.

Partnering parameters vs Trigon's assumptions. In our previous valuation reports for Captor, we presented assumptions of the total partnering payments from approx. EUR 63m (for the project of cooperation with Sosei Heptares, concluded at the Drug Discovery stage) to approx. EUR 330m (for CT-03 project partnering that in our assumptions may be concluded at the stage of phase I clinical trials in 2024). The value of the Ono contract is above the our average payment range assumed for all CTX projects and more than twice as high as our assumptions for early-stage projects. We consider the value of Captor's partnering with Ono as positive, although the lack of information regarding upfront payments and the royalties rate makes the valuation approach difficult. In our forecasts, we assume that the first payment for CTX can ranged about 1-2% of the total contract value (the assumption is based on comparable partnering transactions for early-stage projects, including Nurix and Sanofi, Nurix and Gilead, Jiangsu and Incyte, or the last transaction of Ryvu and Exelixis). We also assume that the innovative landscape of TPD-based therapies may determine the attractive level of royalties, despite the early stage of the project development (we assume royalties at the level of 10%).

Valuation impact. The signing of the partnering agreement with Ono Pharmaceutical enables the introduction of a new project to the CTX pipeline. In our model assumptions we see the project valuation at PLN 82m (18.8 PLN/share) with a total CTX's 12M TP share valuation at 232.5 PLN/share (+36% upside).

CTX: the sum of the parts (SOTP) method valuation.

	Valuation			Valuation (PLNm)*			Valuation* (%)		
	mPLN	PLN/share	%	Deal value	Royalties	TV	Deal value	Royalties	TV
CT-01 (HCC)	161,2	37,0	16%	129,5	24,9	6,7	13%	2%	1%
CT-02 (MDS, AML, SLE)	229,6	52,7	23%	209,3	15,2	5,1	21%	2%	1%
CT-03 (hematological malignancies)	237,5	54,5	24%	94,2	108,8	34,4	9%	11%	3%
CT-04 (CRC)	38,3	8,8	4%	34,6	2,7	1,1	3%	0%	0%
CT-05 (IBD)	233,4	53,5	23%	133,9	71,0	28,5	13%	7%	3%
Sosei Heptares collaboration	17,9	4,1	2%	17,2	0,5	0,2	2%	0%	0%
Ono Pharmaceuticals collaboration	86,6	19,9	9%	21,9	50,6	12,1	2%	5%	1%
R&D pipeline valuation	**1004**	**230**	**100%**	**641**	**274**	**88**	**64%**	**27%**	**9%**
R&D costs	-210,0								
Net cash (2Q22)	87,1								
CTX equity valuation PLNm	**882**								
CTX share valuation PLN/share	**202,2**								
TP 12M = 232,5 PLN/share									

** valuation without R&D costs;*

Source: Trigon Brokerage House

Risk factors. The most important risk factors include: 1) resignation from current partnering agreements or failure to sign further contracts, 2) failure in the development of new drug projects, 3) failure to obtain subsidies for further projects or limited availability of grants, 4) increase in competition on research platforms. A more detailed description is on page 25.

Valuation

MAIN ASSUMPTIONS:

1) The presented valuation of Captor Therapeutics R&D pipeline is based on the rNPV method (risk-weighted net present value), which is the basic method of valuation of biotechnology companies in the initial stage of development. This method is a modification of the DCF valuation by the probability of the success of the molecule's transition to the next phase of research, and ultimately also registration;

2) The forecast period we have adopted is 2023-2043.

3) The valuation takes into account 5 projects from the Captor's R&D portfolio, based on the criterion of project advancement or the likelihood of signing a partnering agreement:

   a) **CT-01** – a drug candidate in the treatment of hepatocellular carcinoma, allowing for an elimination of cancer stem cells by an induced degradation of an oncogenic transcription factor (class: molecular glue);

   b) **CT-02** – a ligand-class compound of ligases with a potential use in the treatment of autoimmune diseases and blood cancers (class: molecular glue);

   c) **CT-03** – development of the first-in-the-class low molecular weight compound targeting Bcl-2 family protein degradation in haematological cancer treatment (class: BID)

   d) **CT-04** – development of the first-in-the-class drug candidate, a small molecule degrader, in colorectal cancer treatment (class: BID)

   e) **CT-05** – development of a drug candidate in the targeted protein degradation technology for the treatment of inflammatory bowel disease (IBD), psoriasis and RA (class: BID)

   f) **Project of cooperation with Sosei Heptares** - a project involving the development of drugs targeting the degradation of GPCR protein receptors in the indication of inflammatory diseases of the digestive system, including inflammatory bowel disease (IBD).

   g) **Project of cooperation with Ono Pharmaceuticals Heptares** - a project involving the development of drugs targeting the degradation of proteins in the indication of neurodegenerative diseases (CNS). In our valuation we adopted Anlheimer's, Parkinson's and other neurodegenerative diseases as a primary therapeutic indication.

4) The final valuation is the sum of the partial valuations (SOTP) for primary therapeutic objectives: CT-01: hepatocellular carcinoma; CT-02: myelodysplastic syndrome (MDS); CT-03: haematological cancers (multiple myeloma, leukemia, lymphomas); CT-04: CRC; CT-05: IBD, psoriasis, RA; partnering with Sosei Heptares (IBD); partnering with Ono Pharmaceuticals (CNS).

5) The presented likelihoods of success are grounded in the data published in scientific literature and industry reports (Cancer Drugs Are The Least Likely to Receive FDA Approval, www.fortune.com, May 2016 (clinical development) Nature Drug Reviews 2010, 2013 (pre-clinical phase));

6) We assume signing partnership agreements of disclosed CTX's projects at the stage of preclinical or Phase I development. From the moment of signing the partnering, we assume that the partner takes over the further development of the project and Captor does not bear any further costs of the project development. In collaboration agreements with Sosei Heptares and Ono Pharmaceuticals we also assume, that drug candidates developed in cooperation with Captor will enter further partnering licencing with Big

Pharma Players. For that purpose, we assume Captor's IP rights to the project developed with SOsei Heptares on 35%, in collaboration with Ono we assume partnering payments with EUR 197m and distribution of profits from the market sale of drugs in the form of CTX share at 3% (see valuation assumptions).

7) We assume that the costs of further R&D and clinical trials will be financed from our own funds, partnering payments and subsidies received. By the end of 2021, the Company received PLN ca. 91.5m of public subsidies under the ongoing development programs (remaining part is ca. PLN 84m). When proceeding with the development of projects, we assume that about 65% of further R&D costs will be covered by subsidies, with the rest supplemented by our own funds raised from the issue.

8) We assume CTX costs for the development of R&D projects within the framework of the distinguished therapeutic goals at the level of PLN 205m. In our forecasts, we adopted higher own costs of CT-04 project due to Captor's resignation of NCBR grant continuation (published in CTX's current report in October 2022).

9) When forecasting the potential sales of drugs developed by CTX after commercialization, we use sales statistics already available on the therapy market and data on their sales and / or market forecasts for the development of sales of new forms of therapy. We forecast sales until 2041.

10) We assume that the projects developed by CTX are protected by patents. The period of patent protection for a drug is 20 years from the moment of submitting the application for registration;

11) We assume the parameters of partnering contracts (upfront payment, biodollar value) at the level of 50% of the median value of comparable transactions in a given therapeutic area (discount to comparable transactions)

12) EUR / PLN exchange rate 4.8; EUR / USD for the purposes of determining the size of the market adopted at 0.98;

13) A risk premium specific to research projects was included in the probability of completing individual phases of clinical trials and reflected in the FCF calculation. The weighted average cost of capital of the Company (discount rate) was adopted at the level of 15% (assumption based on the analysis of companies from the biotechnology sector, New York Stern Database 2020);

14) Effective tax rate at the level of 19%;

15) The growth rate after the forecast period is -10% (patent cliff effect);

CTX: valuation assumptions.

Project	Preclinic	Phase I	Phase II	Phase III	Registration	Sales / royalties	Market size 2022 (EURm)	Market size at registration (EURm)	Market share (%)	Peak sales EURm
CT-01 (HCC)	Therapeutic area: hepatocellular carcinoma (oncology)									
phase duration (years)	0	1	1	3	1					
end of phase development	2023	2024	2025	2028	2029	2030				2035
upfront payment & milestone (EURm)	20	28	37	88	100	10,0%	783	3997	15,0%	1047
probability of success (%)*	85,0%	62,8%	24,6%	45,0%	82,4%			CAGR**		CAGR***
cum. probability of success. (%)	85%	53%	13%	6%	5%			17,7%		11,8%
CT-02 (MDS)	Therapeutic area: MDS (oncology)									
phase duration (years)	0	2	2	2	1					
end of phase development	2024	2026	2028	2030	2031	2032				2037
upfront payment & milestone (EURm)	10	32	40	102	140	7,5%	1423	3176	3,0%	114
probability of success (%)*	65,0%	61,8%	28,7%	52,6%	86,4%			CAGR**		CAGR***
cum. probability of success. (%)	70%	43%	12%	7%	6%			5,5%		3,7%
CT-03 (hematological malignancies)	Therapeutic area: hematological malignancies (oncology)									
phase duration (years)	0	2	2	3	1					
end of phase development	2024	2026	2028	2031	2032	2033				2038
upfront payment & milestone (EURm)	15	28	46	105	140	7,5%	52346	266224	3,0%	11272
probability of success (%)*	80,0%	61,8%	28,7%	52,6%	86,4%			CAGR**		CAGR***
cum. probability of success. (%)	80%	49%	14%	7%	6%			10,7%		7,1%
CT-04 (CRC)	Therapeutic area: CRC (oncology)									
phase duration (years)	0	2	2	3	2					
end of phase development	2025	2027	2029	2032	2034	2035				2040
upfront payment & milestone (EURm)	8	26	52	109	130	7,5%	9264	21543	3,0%	757
probability of success (%)*	50,0%	62,8%	24,6%	45,0%	82,4%			CAGR**		CAGR***
cum. probability of success. (%)	50%	31%	8%	3%	3%			4,8%		3,2%
Captor's IP share	90%	90%	90%	90%	90%					
CT-05 (IBD)	Therapeutic area: IBD (autoimmunology/inflammatory)									
phase duration (years)	0	2	2	3	2					
end of phase development	2025	2027	2029	2032	2034	2035				2040
upfront payment & milestone (EURm)	10	25	35	65	110	7,5%	13405	19145	1,0%	205
probability of success (%)*	55,0%	63,0%	31,7%	58,0%	83,0%			CAGR**		CAGR***
cum. probability of success. (%)	55%	35%	11%	6%	5%			2,0%		1,3%
CT-02- 2nd. indication (AML)	Therapeutic area: AML (oncology)									
phase duration (years)	0	2	2	2	1					
end of phase development	2025	2027	2029	2031	2032	2033				2038
upfront payment & milestone (EURm)	10	32	40	102	140	7,5%	1314	11309	10,0%	1788
probability of success (%)*	70,0%	61,8%	28,7%	52,6%	86,4%			CAGR**		CAGR***
cum. probability of success. (%)	70%	43%	12%	7%	6%			14,4%		9,6%
CT-02- 3rd indication (SLE)	Therapeutic area: SLE (autoimmunology/inflammatory)									
phase duration (years)	0	2	2	2	1					
end of phase development	2025	2027	2029	2031	2032	2033				2038
upfront payment & milestone (EURm)	10	32	40	102	140	7,5%	162	463	15,0%	87
probability of success (%)*	70,0%	61,8%	28,7%	52,6%	86,4%			CAGR**		CAGR***
cum. probability of success. (%)	70%	43%	12%	7%	6%			6,8%		4,5%
CT-05- 2nd indication (psoriasis)	Therapeutic area: psoriasis (autoimmunology/inflammatory)									
phase duration (years)	0	2	2	3	2					
end of phase development	2025	2027	2029	2032	2034	2035				2040
upfront payment & milestone (EURm)	10	25	35	65	110	7,5%	15863	58307	10,0%	7442
probability of success (%)*	55,0%	63,0%	31,7%	58,0%	83,0%			CAGR**		CAGR***
cum. probability of success. (%)	55%	35%	11%	6%	5%			7,5%		5,0%
CT-05- 3rd indication (RA)	Therapeutic area: RA (autoimmunology/inflammatory)									
phase duration (years)	0	2	2	3	2					
end of phase development	2025	2027	2029	2032	2034	2035				2040
upfront payment & milestone (EURm)	10	25	35	65	110	7,5%	20151	34306	10,0%	3788
probability of success (%)*	55,0%	63,0%	31,7%	58,0%	83,0%			CAGR**		CAGR***
cum. probability of success. (%)	55%	35%	11%	6%	5%			3,0%		2,0%
Sosei Heptares collaboration	Therapeutic area- IBD (autoimmunology/inflammatory)									
phase duration (years)	0	2	2	3	2					
end of phase development	2025	2027	2029	2032	2034	2035				2040
upfront payment & milestone (EURm)	11	28	39	72	120	7,5%	13405	19145	1,0%	205
probability of success (%)*	55,0%	63,0%	31,7%	58,0%	83,0%			CAGR**		CAGR***
cum. probability of success. (%)	55%	35%	11%	6%	5%			2,0%		1,3%
Captor's IP share	35%	35%	35%	35%	35%					
Ono Pharmaceuticals collaboration	Therapeutic area- CNS (neurology)									
phase duration (years)	0	1	2	2	1					
end of phase development	2025	2026	2028	2030	2031	2032				2037
upfront payment & milestone (EURm)	3	12	26	62	91	10,0%	42790	118058	3,0%	4449
probability of success (%)*	50,0%	55,0%	29,0%	55,0%	87,0%			CAGR**		CAGR***
cum. probability of success. (%)	50%	28%	8%	4%	4%			7,0%		4,7%
Captor's IP share	100%	100%	100%	100%	100%					

** source: Cancer Drugs Are The Least Likely to Receive FDA Approval, www.fortune.com, maj 2016; ** CAGR for period from 2022 to registration; *** CAGR in period from registration to peak sales*

Source: Trigon Brokerage House

Valuation. The presented valuation of Captor Therapeutics is based on the rNPV (risk-weighted net present value) method, which is the primary method of valuation of biotechnology companies developing innovative drug projects. This method is a modification of the DCF valuation by the probability of the success of the molecule's transition to the next phase of research, and ultimately also registration. Based on the rNPV method, we value the CTX's shares of 12M TP at PLN 232.5 / share (+ 37% upside).

Trigon's Captor Therapeutics valuation.

	Valuation			Valuation (PLNm)*			Valuation* (%)		
	mPLN	PLN/share	%	Deal value	Royalties	TV	Deal value	Royalties	TV
CT-01 (HCC)	161,2	37,0	16%	129,5	24,9	6,7	13%	2%	1%
CT-02 (MDS, AML, SLE)	229,6	52,7	23%	209,3	15,2	5,1	21%	2%	1%
CT-03 (hematological malignancies)	237,5	54,5	24%	94,2	108,8	34,4	9%	11%	3%
CT-04 (CRC)	38,3	8,8	4%	34,6	2,7	1,1	3%	0%	0%
CT-05 (IBD)	233,4	53,5	23%	133,9	71,0	28,5	13%	7%	3%
Sosei Heptares collaboration	17,9	4,1	2%	17,2	0,5	0,2	2%	0%	0%
Ono Pharmaceuticals collaboration	86,6	19,9	9%	21,9	50,6	12,1	2%	5%	1%
R&D pipeline valuation	**1004**	**230**	**100%**	**641**	**274**	**88**	**64%**	**27%**	**9%**
R&D costs	-210,0								
Net cash (2Q22)	87,1								
CTX equity valuation PLNm	**882**								
CTX share valuation PLN/share	**202,2**								
TP 12M = 232,5 PLN/share									

** valuation without R&D costs;*

Source: Trigon Brokerage House

VALUATION SENSITIVITY ANALYSIS

In the analysis of the sensitivity of Captor's valuation, we distinguished key elements of the valuation of innovative drug projects, the change of which may significantly affect the valuation of the company's shares. These elements include: **1)** change in the value of a partnering transaction; **2)** change in the probability of success in completing clinical trials; **3)** change in the level of royalties from the sale of drugs; **4)** changing the level of potential market share and **5)** extending the duration of individual phases of clinical trials.

CTX: valuation sensitivity analysis.

Base assumptions		CT-01	CT-02	CT-03	CT-04	CT-05	P. Sosei	P. Ono Pharm	TOTAL
Biodollar value		272	970	334	325	735	269	195	
Cum. clinical succes rate		5%	6%	6%	3%	5%	5%	4%	
Royalties		10%	8%	8%	8%	8%	8%	10%	
Market share		15%	3%	3%	3%	1%	1%	3%	
Preclinic end		2023	2024	2024	2025	20258	2024	2025	
Base valuation (without R&D costs)									
Deal value		130	209	94	35	134	17	23	642
Royalties		25	15	109	3	71	1	52	275
TV		7	5	34	1	28	0	12	88
TOTAL		**161**	**230**	**237**	**38**	**233**	**18**	**87**	**1004**
Valuation change									
Deal value	-10%	-13	-21	-9	-3	-13	-2	-2	-64
Clinical succes rate change	-1 p.p.	-9	-10	-26	-3	-25	-2	-8	-75
Royalties	-1%	-19	-45	-60	-13	-22	-19	-29	-177
Market share	-1%	-18,0	-44	-77	-13	-60	-19	-30	-232
Preclinic end	+1 year	-27	-73	-81	-21	-93	-20	-48	-316
Sensitivity analysis								0	
Deal value		-8%	-9%	-4%	-9%	-6%	-1%	-3%	-6%
Clinical succes rate change		-6%	-4%	-11%	-9%	-11%	-1%	-9%	-7%
Royalties		-12%	-19%	-25%	-33%	-10%	-11%	-33%	-18%
Market share		-11%	-19%	-32%	-35%	-26%	-11%	-35%	-23%
Preclinic end		-17%	-32%	-34%	-55%	-40%	-11%	-55%	-31%

Source: Trigon Brokerage House

CT-01

Basic assumptions:

1) **Primary therapeutic objective:** hepatocellular carcinoma

2) **Additional therapeutic indication**: –

3) **Current status of the project:** project at the IND-enabling studies stage; preclinic

4) **Date of first PCT patent application:** 2020

5) **Market size in 2022**: hepatocellular carcinoma (HCC): EUR 783m *(source: MarketDataForecast.com; Transparency Research.com)*

6) **CAGR (%) of the market**: 1) in the pre-registration period: 17.7%; 2) between registration and peak sales: 11.8% (assumption of a decline resulting from the introduction of new forms of treatment; own assumption)

7) **Peak sales**: HCC: 15% market share achieved 5 years after the registration (assumption based on sales forecasts and market shares in 2015–2020 for oncological drugs, source: GlobalData)

8) **Clinical trials – assumptions**: standard course of clinical trials for newly designed molecule in oncological indication (solid tumour)

9) **The duration of each phase and the probability of success in that phase:** 1) pre-clinical development: Nature Drugs Review 2013; 2) clinical development: Cancer Drugs Are The Least Likely to Receive FDA Approval, www.fortune.com, May 2016

Assumptions for valuation: CT-01in hepatocellular carcinoma (HCC)

CT-01 (HCC)	Year	Upfront payment & milestone (mEUR)		cum. probability of success	probability of success
Preclinic phase	2023	20	7%	85%	85%
Phase I	2024	28	10%	53%	63%
Phase II	2025	37	13%	13%	25%
Phase III	2028	88	32%	6%	45%
Registration	2029	100	37%	5%	82%
Sales (1 year after registration)	2030				
Deal size (mEUR)		**272**	**100%**		
Market value in 2022 (mEUR)	**783**				
CAGR between 2019 and registration (%)	17,7%				
CAGR between registraton and peak sales (%)	11,8%				
Peak sales (rok) - 5 year after registration	**2035**				
Market share (%)	15,0%	Deal value	Royalties	TV	
Royalties	**10,0%**	80%	15%	4%	
rNPV	**161,2**	129,5	24,9	6,7	

Source: Trigon Brokerage House

rNPV valuation: CT-01

CT-01 (HCC)	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F	2035F	2036F	2037F	2038F	2039F	2040F	2041F	2042F	2043F
milestone	20,0	28,0	36,7	0,0	0,0	87,5	100,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Market size (EURm)	922	1 085	1 277	1 503	1 769	2 083	2 451	2 885	3 226	3 606	4 032	4 507	5 039	5 634	6 299	7 042	7 873	8 802	9 841	11 002	12 300
y/y		17,7%	17,7%	17,7%	17,7%	17,7%	17,7%	17,7%	11,8%	11,8%	11,8%	11,8%	11,8%	11,8%	11,8%	11,8%	11,8%	11,8%	11,8%	11,8%	11,8%
Market share (%)	0%	0%	0%	0%	0%	0%	0%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
peak sales curve	0%	0%	0%	0%	0%	0%	0%	10%	25%	50%	75%	90%	100%	100%	100%	100%	100%	100%	100%	100%	100%
sales (EURm)	0	0	0	0	0	0	0	43	121	270	454	608	756	845	945	1056	1181	1320	1476	1650	1845
Royalties	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	10,0%	10,0%	10,0%	10,0%	10,0%	10,0%	10,0%	10,0%	10,0%	10,0%	10,0%	10,0%	10,0%	10,0%
Royalties (EURm)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	4,3	12,1	27,0	45,4	60,8	75,6	84,5	94,5	105,6	118,1	132,0	147,6	165,0	184,5
TOTAL	**20,0**	**28,0**	**36,7**	**0,0**	**0,0**	**87,5**	**100,0**	**4,3**	**12,1**	**27,0**	**45,4**	**60,8**	**75,6**	**84,5**	**94,5**	**105,6**	**118,1**	**132,0**	**147,6**	**165,0**	**184,5**
probability	85%	53%	13%	13%	13%	6%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
milestone	17,0	14,9	4,8	0,0	0,0	5,2	4,9	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Royalties (EURm)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,2	0,6	1,3	2,2	3,0	3,7	4,1	4,6	5,1	5,8	6,4	7,2	8,0	9,0
TOTAL	**17,0**	**14,9**	**4,8**	**0,0**	**0,0**	**5,2**	**4,9**	**0,2**	**0,6**	**1,3**	**2,2**	**3,0**	**3,7**	**4,1**	**4,6**	**5,1**	**5,8**	**6,4**	**7,2**	**8,0**	**9,0**
Total (PLNm)	81,6	71,7	23,1	0,0	0,0	24,8	23,4	1,0	2,8	6,3	10,6	14,2	17,7	19,8	22,1	24,7	27,6	30,9	34,5	38,6	43,1
Tax	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%
FCF (PLNm)	66,1	58,1	18,7	0,0	0,0	20,1	18,9	0,8	2,3	5,1	8,6	11,5	14,3	16,0	17,9	20,0	22,4	25,0	27,9	31,2	34,9
discount rate	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%
discount factor	0,87	0,76	0,66	0,57	0,50	0,43	0,38	0,33	0,28	0,25	0,21	0,19	0,16	0,14	0,12	0,11	0,09	0,08	0,07	0,06	0,05
DFCF	57,5	43,9	12,3	0,0	0,0	8,7	7,1	0,3	0,7	1,3	1,8	2,2	2,3	2,3	2,2	2,1	2,1	2,0	2,0	1,9	1,9
DFCF sum (mln PLN)	**154,5**																				
growth rate in TV	-10%																				
Residual value (TV)	125,7																				
Present TV	**6,7**																				
Valuation (PLNm)	**161,2**																				

Source: Trigon Brokerage House

CT-02

Basic assumptions:

1) **Primary therapeutic objective**: haematological cancers (myelodysplastic syndrome (MDS))
2) **Additional therapeutic indications**: AML, SLE
3) **Current status of the project:** project at the stage of lead optimization; Drug Discovery phase
4) **Date of first PCT patent application:** 11.2019
5) **Market size in 2022**: MDS: EUR 1.423bln *(source: MarketWatch.com)*
6) **CAGR (%) of the market**: 1) in the pre-registration period: 5.5%; 2) between registration and peak sales: 3.7% (assumption of a decline resulting from the introduction of new forms of treatment; own assumption)
7) **Peak sales**: 3% market share achieved 5 years after the registration (assumption based on sales forecasts and market shares in 2015–2020 for oncological drugs, source: GlobalData)
8) **Clinical trials – assumptions**: standard course of clinical trials for newly designed molecule in oncological indication (haematological cancers)
9) **The duration of each phase and the probability of success in that phase:** 1) pre-clinical development: Nature Drugs Review 2013; 2) clinical development: Cancer Drugs Are The Least Likely to Receive FDA Approval, www.fortune.com, May 2016

Assumptions for valuation: CT-02 in myelodysplastic syndrome (MDS), acute myeloid leukemia (AML) and systemic lupus erythematosus (SLE)

CT-02 (MDS)	Year	Upfront payment & milestone (mEUR)		cum. probability of success	probability of success
Preclinic phase	2024	10	3%	70%	65%
Phase I	2026	32	10%	43%	62%
Phase II	2028	40	12%	12%	29%
Phase III	2030	102	31%	7%	53%
Registration	2031	140	43%	6%	86%
Sales (1 year after registration)	2032				
Deal size (mEUR)		**323**	**100%**		
Market value in 2022 (mEUR)	**1 423**				
CAGR between 2019 and registration (%)	6%				
CAGR between registraton and peak sales (%)	4%				
Peak sales (rok) - 5 year after registration	**2037**				
Market share (%)	3,0%	Deal value	Royalties	TV	
Royalties	**7,5%**	98%	2%	0%	
rNPV	**78,2**	76,4	1,5	0,3	

CT-02- 2nd. indication (AML)	Year	Upfront payment & milestone (mEUR)		cum. probability of success	probability of success
Preclinic phase	2025	10	3%	70%	70%
Phase I	2027	32	10%	43%	62%
Phase II	2029	40	12%	12%	29%
Phase III	2031	102	31%	7%	53%
Registration	2032	140	43%	6%	86%
Sales (1 year after registration)	2033				
Deal size (mEUR)		**323**	**100%**		
Market value in 2022 (mEUR)	**1 314**				
CAGR between 2019 and registration (%)	14,4%				
CAGR between registraton and peak sales (%)	9,6%				
Peak sales (rok) - 5 year after registration	**2038**				
Market share (%)	10,0%	Deal value	Royalties	TV	
Royalties	**7,5%**	79%	15%	5%	
rNPV	**83,8**	66,5	12,8	4,5	

CT-02- 3rd indication (SLE)	Year	Upfront payment & milestone (mEUR)		cum. probability of success	probability of success
Preclinic phase	2025	10	3%	70%	70%
Phase I	2027	32	10%	43%	62%
Phase II	2029	40	12%	12%	29%
Phase III	2031	102	31%	7%	53%
Registration	2032	140	43%	6%	86%
Sales (1 year after registration)	2033				
Deal size (mEUR)		**323**	**100%**		
Market value in 2022 (mEUR)	**162**				
CAGR between 2019 and registration (%)	6,8%				
CAGR between registraton and peak sales (%)	4,5%				
Peak sales (rok) - 5 year after registration	**2038**				
Market share (%)	15,0%	Deal value	Royalties	TV	
Royalties	**7,5%**	98%	1%	0%	
rNPV	**67,6**	66,5	0,9	0,2	

Source: Trigon Brokerage House

rNPV valuation: CT-02

CT-02 (MDS)	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F	2035F	2036F	2037F	2038F	2039F	2040F	2041F	2042F	2043F
milestone	0,0	10,0	0,0	31,5	0,0	40,3	0,0	101,5	140,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Market size (EURm)	1 501	1 584	1 671	1 763	1 859	1 962	2 070	2 183	2 304	2 430	2 519	2 612	2 707	2 807	2 910	3 016	3 127	3 242	3 360	3 484	3 611
y/y		5,5%	5,5%	5,5%	5,5%	5,5%	5,5%	5,5%	5,5%	5,5%	3,7%	3,7%	3,7%	3,7%	3,7%	3,7%	3,7%	3,7%	3,7%	3,7%	3,7%
Market share (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
peak sales curve	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	25%	50%	65%	90%	100%	100%	100%	100%	100%	100%	100%
sales (EURm)	0	0	0	0	0	0	0	0	0	7	19	39	53	76	87	90	94	97	101	105	108
Royalties	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%
Royalties (EURm)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,5	1,4	2,9	4,0	5,7	6,5	6,8	7,0	7,3	7,6	7,8	8,1
TOTAL	**0,0**	**10,0**	**0,0**	**31,5**	**0,0**	**40,3**	**0,0**	**101,5**	**140,0**	**0,5**	**1,4**	**2,9**	**4,0**	**5,7**	**6,5**	**6,8**	**7,0**	**7,3**	**7,6**	**7,8**	**8,1**
probability	0%	70%	70%	43%	43%	12%	12%	7%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
milestone	0,0	7,0	0,0	13,6	0,0	5,0	0,0	6,6	7,9	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Royalties (EURm)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,2	0,2	0,3	0,4	0,4	0,4	0,4	0,4	0,4	0,5
TOTAL	**0,0**	**7,0**	**0,0**	**13,6**	**0,0**	**5,0**	**0,0**	**6,6**	**7,9**	**0,0**	**0,1**	**0,2**	**0,2**	**0,3**	**0,4**	**0,4**	**0,4**	**0,4**	**0,4**	**0,4**	**0,5**
Total (PLNm)	0,0	33,6	0,0	65,4	0,0	24,0	0,0	31,8	37,9	0,1	0,4	0,8	1,1	1,5	1,8	1,8	1,9	2,0	2,0	2,1	2,2
Tax	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%
FCF (PLNm)	0,0	27,2	0,0	53,0	0,0	19,4	0,0	25,8	30,7	0,1	0,3	0,6	0,9	1,2	1,4	1,5	1,5	1,6	1,7	1,7	1,8
discount rate	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%
discount factor	0,87	0,76	0,66	0,57	0,50	0,43	0,38	0,33	0,28	0,25	0,21	0,19	0,16	0,14	0,12	0,11	0,09	0,08	0,07	0,06	0,05
DFCF	0,0	20,6	0,0	30,3	0,0	8,4	0,0	8,4	8,7	0,0	0,1	0,1	0,1	0,2	0,2	0,2	0,1	0,1	0,1	0,1	0,1
DFCF sum (mln PLN)	**77,9**																				
growth rate in TV	-10%																				
Residual value (TV)	6,4																				
Present TV	**0,3**																				
Valuation (PLNm)	**78,2**																				

CT-02- 2nd. indication (AML)	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F	2035F	2036F	2037F	2038F	2039F	2040F	2041F	2042F	2043F
milestone	0,0	0,0	10,0	0,0	31,5	0,0	40,3	0,0	101,5	140,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Market size (EURm)	1 503	1 720	1 967	2 251	2 575	2 946	3 370	3 855	4 410	5 045	5 772	6 326	6 933	7 598	8 328	9 127	10 004	10 964	12 017	13 170	14 434
y/y		14,4%	14,4%	14,4%	14,4%	14,4%	14,4%	14,4%	14,4%	14,4%	14,4%	9,6%	9,6%	9,6%	9,6%	9,6%	9,6%	9,6%	9,6%	9,6%	9,6%
Market share (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%	10%
peak sales curve	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	25%	40%	75%	90%	100%	100%	100%	100%	100%	100%
sales (EURm)	0	0	0	0	0	0	0	0	0	0	58	158	277	570	750	913	1000	1096	1202	1317	1443
Royalties	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%
Royalties (EURm)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	4,3	11,9	20,8	42,7	56,2	68,5	75,0	82,2	90,1	98,8	108,3
TOTAL	**0,0**	**0,0**	**10,0**	**0,0**	**31,5**	**0,0**	**40,3**	**0,0**	**101,5**	**140,0**	**4,3**	**11,9**	**20,8**	**42,7**	**56,2**	**68,5**	**75,0**	**82,2**	**90,1**	**98,8**	**108,3**
probability	0%	0%	70%	70%	43%	43%	12%	12%	7%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
milestone	0,0	0,0	7,0	0,0	13,6	0,0	5,0	0,0	6,6	7,9	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Royalties (EURm)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,2	0,7	1,2	2,4	3,2	3,9	4,2	4,6	5,1	5,6	6,1
TOTAL	**0,0**	**0,0**	**7,0**	**0,0**	**13,6**	**0,0**	**5,0**	**0,0**	**6,6**	**7,9**	**0,2**	**0,7**	**1,2**	**2,4**	**3,2**	**3,9**	**4,2**	**4,6**	**5,1**	**5,6**	**6,1**
Total (PLNm)	0,0	0,0	33,6	0,0	65,4	0,0	24,0	0,0	31,8	37,9	1,2	3,2	5,6	11,6	15,2	18,5	20,3	22,3	24,4	26,8	29,3
Tax	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%
FCF (PLNm)	0,0	0,0	27,2	0,0	53,0	0,0	19,4	0,0	25,8	30,7	0,9	2,6	4,6	9,4	12,3	15,0	16,5	18,0	19,8	21,7	23,7
discount rate	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%
discount factor	0,87	0,76	0,66	0,57	0,50	0,43	0,38	0,33	0,28	0,25	0,21	0,19	0,16	0,14	0,12	0,11	0,09	0,08	0,07	0,06	0,05
DFCF	0,0	0,0	17,9	0,0	26,3	0,0	7,3	0,0	7,3	7,6	0,2	0,5	0,7	1,3	1,5	1,6	1,5	1,5	1,4	1,3	1,3
DFCF sum (mln PLN)	**79,3**																				
growth rate in TV	-10%																				
Residual value (TV)	85,5																				
Present TV	**4,5**																				
Valuation (PLNm)	**83,8**																				

CT-02- 3rd indication (SLE)	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F	2035F	2036F	2037F	2038F	2039F	2040F	2041F	2042F	2043F
milestone	0,0	0,0	10,0	0,0	31,5	0,0	40,3	0,0	101,5	140,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Market size (EURm)	173	184	197	210	224	240	256	273	292	312	333	348	364	381	398	416	435	454	475	496	519
y/y		6,8%	6,8%	6,8%	6,8%	6,8%	6,8%	6,8%	6,8%	6,8%	6,8%	4,5%	4,5%	4,5%	4,5%	4,5%	4,5%	4,5%	4,5%	4,5%	4,5%
Market share (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%	15%
peak sales curve	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	25%	50%	75%	90%	100%	100%	100%	100%	100%	100%
sales (EURm)	0	0	0	0	0	0	0	0	0	0	5	13	27	43	54	62	65	68	71	74	78
Royalties	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%
Royalties (EURm)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,4	1,0	2,0	3,2	4,0	4,7	4,9	5,1	5,3	5,6	5,8
TOTAL	**0,0**	**0,0**	**10,0**	**0,0**	**31,5**	**0,0**	**40,3**	**0,0**	**101,5**	**140,0**	**0,4**	**1,0**	**2,0**	**3,2**	**4,0**	**4,7**	**4,9**	**5,1**	**5,3**	**5,6**	**5,8**
probability	0%	0%	70%	70%	43%	43%	12%	12%	7%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
milestone	0,0	0,0	7,0	0,0	13,6	0,0	5,0	0,0	6,6	7,9	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Royalties (EURm)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,1	0,2	0,2	0,3	0,3	0,3	0,3	0,3	0,3
TOTAL	**0,0**	**0,0**	**7,0**	**0,0**	**13,6**	**0,0**	**5,0**	**0,0**	**6,6**	**7,9**	**0,0**	**0,1**	**0,1**	**0,2**	**0,2**	**0,3**	**0,3**	**0,3**	**0,3**	**0,3**	**0,3**
Total (PLNm)	0,0	0,0	33,6	0,0	65,4	0,0	24,0	0,0	31,8	37,9	0,1	0,3	0,6	0,9	1,1	1,3	1,3	1,4	1,4	1,5	1,6
Tax	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%
FCF (PLNm)	0,0	0,0	27,2	0,0	53,0	0,0	19,4	0,0	25,8	30,7	0,1	0,2	0,4	0,7	0,9	1,0	1,1	1,1	1,2	1,2	1,3
discount rate	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%
discount factor	0,87	0,76	0,66	0,57	0,50	0,43	0,38	0,33	0,28	0,25	0,21	0,19	0,16	0,14	0,12	0,11	0,09	0,08	0,07	0,06	0,05
DFCF	0,0	0,0	17,9	0,0	26,3	0,0	7,3	0,0	7,3	7,6	0,0	0,0	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1	0,1
DFCF sum (mln PLN)	**67,3**																				
growth rate in TV	-10%																				
Residual value (TV)	4,6																				
Present TV	**0,2**																				
Valuation (PLNm)	**67,6**																				

Source: Trigon Brokerage House

CT-03

Basic assumptions:

1) **Primary therapeutic objective:** hematological cancers

2) **Additional therapeutic indications**: –

3) **Current status of the project:** project at the IND-enabling studies stage, preclinic

4) **Date of first PCT patent application:** –

5) **Market size in 2022**: hematological cancer: EUR 52.345bln *(source: MarketWatch.com)*

6) **CAGR (%) of the market**: 1) in the pre-registration period: 10.7%; 2) between registration and peak sales: 7.1% (assumption of a decline resulting from the introduction of new forms of treatment; own assumption)

7) **Peak sales**: haematological cancers: 3% market share achieved 5 years after the registration (assumption based on sales forecasts and market shares in 2015–2020 for oncological drugs, source: GlobalData)

8) **Clinical trials – assumptions**: standard course of clinical trials for newly designed molecule in oncological indication (haematological cancers)

9) **The duration of each phase and the probability of success in that phase:** 1) pre-clinical development: Nature Drugs Review 2013; 2) clinical development: Cancer Drugs Are The Least Likely to Receive FDA Approval, www.fortune.com, May 2016

Assumptions for valuation: CT-03 in hematological malignancies

CT-03 (hematological malignancies)	Year	Upfront payment & milestone (mEUR)		cum. probability of success	probability of success
Preclinic phase	2024	15	4%	80%	80%
Phase I	2026	28	8%	49%	62%
Phase II	2028	46	14%	14%	29%
Phase III	2031	105	31%	7%	53%
Registration	2032	140	42%	6%	86%
Sales (1 year after registration)	2033				
Deal size (mEUR)		**334**	**100%**		
Market value in 2022 (mEUR)	**52 346**				
CAGR between 2019 and registration (%)	10,7%				
CAGR between registraton and peak sales (%)	7,1%				
Peak sales (rok) - 5 year after registration	**2038**				
Market share (%)	3,0%	Deal value	Royalties	TV	
Royalties	**7,5%**	40%	46%	14%	
rNPV	**237,5**	94,2	108,8	34,4	

Source: Trigon Brokerage House

rNPV valuation: CT-03

CT-03 (hematological malignancies)	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F	2035F	2036F	2037F	2038F	2039F	2040F	2041F	2042F	2043F
milestone	0,0	15,0	0,0	28,0	0,0	45,5	0,0	0,0	105,0	140,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Market size (EURm)	57 947	64 148	71 011	78 610	87 021	96 332	106 640	118 050	130 682	144 664	160 144	171 567	183 806	196 917	210 964	226 013	242 135	259 407	277 911	297 736	318 974
y/y		10,7%	10,7%	10,7%	10,7%	10,7%	10,7%	10,7%	10,7%	10,7%	10,7%	7,1%	7,1%	7,1%	7,1%	7,1%	7,1%	7,1%	7,1%	7,1%	7,1%
Market share (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
peak sales curve	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	25%	50%	75%	90%	100%	100%	100%	100%	100%	100%
sales (EURm)	0	0	0	0	0	0	0	0	0	0	480	1287	2757	4431	5696	6780	7264	7782	8337	8932	9569
Royalties	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%
Royalties (EURm)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	36,0	96,5	206,8	332,3	427,2	508,5	544,8	583,7	625,3	669,9	717,7
TOTAL	**0,0**	**15,0**	**0,0**	**28,0**	**0,0**	**45,5**	**0,0**	**0,0**	**105,0**	**140,0**	**36,0**	**96,5**	**206,8**	**332,3**	**427,2**	**508,5**	**544,8**	**583,7**	**625,3**	**669,9**	**717,7**
probability	0%	80%	80%	49%	49%	14%	14%	14%	7%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%	6%
milestone	0,0	12,0	0,0	13,8	0,0	6,5	0,0	0,0	7,8	9,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Royalties (EURm)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	2,3	6,2	13,3	21,4	27,5	32,8	35,1	37,6	40,3	43,2	46,3
TOTAL	**0,0**	**12,0**	**0,0**	**13,8**	**0,0**	**6,5**	**0,0**	**0,0**	**7,8**	**9,0**	**2,3**	**6,2**	**13,3**	**21,4**	**27,5**	**32,8**	**35,1**	**37,6**	**40,3**	**43,2**	**46,3**
Total (PLNm)	0,0	57,6	0,0	66,4	0,0	31,0	0,0	0,0	37,6	43,3	11,2	29,9	64,0	102,9	132,2	157,4	168,6	180,7	193,5	207,4	222,1
Tax	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%
FCF (PLNm)	0,0	46,7	0,0	53,8	0,0	25,1	0,0	0,0	30,5	35,1	9,0	24,2	51,8	83,3	107,1	127,5	136,6	146,3	156,8	168,0	179,9
discount rate	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%
discount factor	0,87	0,76	0,66	0,57	0,50	0,43	0,38	0,33	0,28	0,25	0,21	0,19	0,16	0,14	0,12	0,11	0,09	0,08	0,07	0,06	0,05
DFCF	0,0	35,3	0,0	30,8	0,0	10,9	0,0	0,0	8,7	8,7	1,9	4,5	8,4	11,8	13,2	13,6	12,7	11,8	11,0	10,3	9,6
DFCF sum (mln PLN)	**203,0**																				
growth rate in TV	-10%																				
Residual value (TV)	647,8																				
Present TV	**34,4**																				
Valuation (PLNm)	**237,5**																				

Source: Trigon Brokerage House

CT-04

Basic assumptions:

1) **Primary therapeutic objective:** colorectal cancer

2) **Captor's share in partnering payment except royalties: 90%** (10% belongs to key Captor's shareholders, more detailed description of the intellectual property division can be found in the CT-04 project description section)

3) **Current status of the project:** project at the lead optimization stage, Drug Discovery phase

4) **Date of first PCT patent application:** –

5) **Market size in 2022**: colorectal cancer (CRC): EUR 9.264bln *(source: Globenewswire.com)*

6) **CAGR (%) of the market**: 1) in the pre-registration period: 4.8%; 2) between registration and peak sales: 3.2% (assumption of a decline resulting from the introduction of new forms of treatment; own assumption)

7) **Peak sales**: CRC: 3% market share achieved 5 years after registration (assumption based on sales forecasts and market shares in 2013–2025 for CRC drugs, source: Global Data)

8) **Clinical trials – assumptions**: standard course of clinical trials for newly designed molecule in oncological indication (solid tumour)

9) **The duration of each phase and the probability of success in that phase:** 1) pre-clinical development: Nature Drugs Review 2013; 2) clinical development: Cancer Drugs Are The Least Likely to Receive FDA Approval, www.fortune.com, May 2016

Assumptions for valuation: CT-04 in colorectal cancer (CRC)

CT-04 (CRC)	Year	Upfront payment & milestone (mEUR)		cum. probability of success	probability of success
Preclinic phase	2025	8	2%	50%	50%
Phase I	2027	26	8%	31%	63%
Phase II	2029	52	16%	8%	25%
Phase III	2032	109	33%	3%	45%
Registration	2034	130	40%	3%	82%
Sales (1 year after registration)	2035				
Deal size (mEUR)		**325**	**100%**		
Captor's IP share	**90%**				
Market value in 2022 (mEUR)	**9 264**				
CAGR between 2019 and registration (%)	4,8%				
CAGR between registraton and peak sales (%)	3,2%				
Peak sales (rok) - 5 year after registration	**2040**				
Market share (%)	3,0%	Deal value	Royalties	TV	
Royalties	**7,5%**	90%	7%	3%	
rNPV	**38,3**	34,6	2,7	1,1	

Source: Trigon Brokerage House

rNPV valuation: CT-04

CT-04 (CRC)	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F	2035F	2036F	2037F	2038F	2039F	2040F	2041F	2042F	2043F
milestone	0,0	0,0	8,0	0,0	26,3	0,0	52,5	0,0	0,0	108,8	0,0	130,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Capor's IP share	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%	90%
Market size (EURm)	9 709	10 175	10 663	11 175	11 711	12 273	12 862	13 480	14 127	14 805	15 516	16 260	17 041	17 586	18 149	18 730	19 329	19 948	20 586	21 245	21 924
y/y		4,8%	4,8%	4,8%	4,8%	4,8%	4,8%	4,8%	4,8%	4,8%	4,8%	4,8%	4,8%	3,2%	3,2%	3,2%	3,2%	3,2%	3,2%	3,2%	3,2%
Market share (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%
peak sales curve	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	25%	50%	75%	90%	100%	100%	100%	100%
sales (EURm)	0	0	0	0	0	0	0	0	0	0	0	0	51	132	272	421	522	598	618	637	658
Royalties	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%
Royalties (EURm)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	3,8	9,9	20,4	31,6	39,1	44,9	46,3	47,8	49,3
TOTAL	**0,0**	**0,0**	**7,2**	**0,0**	**23,6**	**0,0**	**47,2**	**0,0**	**0,0**	**97,9**	**0,0**	**117,0**	**3,8**	**9,9**	**20,4**	**31,6**	**39,1**	**44,9**	**46,3**	**47,8**	**49,3**
probability	0%	0%	50%	50%	31%	31%	8%	8%	8%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
milestone	0,0	0,0	3,6	0,0	7,4	0,0	3,6	0,0	0,0	3,4	0,0	3,4	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Royalties (EURm)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,3	0,6	0,9	1,1	1,3	1,3	1,4	1,4
TOTAL	**0,0**	**0,0**	**3,6**	**0,0**	**7,4**	**0,0**	**3,6**	**0,0**	**0,0**	**3,4**	**0,0**	**3,4**	**0,1**	**0,3**	**0,6**	**0,9**	**1,1**	**1,3**	**1,3**	**1,4**	**1,4**
Total (PLNm)	0,0	0,0	17,3	0,0	35,6	0,0	17,5	0,0	0,0	16,3	0,0	16,1	0,5	1,4	2,8	4,3	5,4	6,2	6,4	6,6	6,8
Tax	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%
FCF (PLNm)	0,0	0,0	14,0	0,0	28,8	0,0	14,2	0,0	0,0	13,2	0,0	13,0	0,4	1,1	2,3	3,5	4,4	5,0	5,2	5,3	5,5
discount rate	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%
discount factor	0,87	0,76	0,66	0,57	0,50	0,43	0,38	0,33	0,28	0,25	0,21	0,19	0,16	0,14	0,12	0,11	0,09	0,08	0,07	0,06	0,05
DFCF	0,0	0,0	9,2	0,0	14,3	0,0	5,3	0,0	0,0	3,3	0,0	2,4	0,1	0,2	0,3	0,4	0,4	0,4	0,4	0,3	0,3
DFCF sum (mln PLN)	**37,2**																				
growth rate in TV	-10%																				
Residual value (TV)	19,8																				
Present TV	**1,1**																				
Valuation (PLNm)	**38,3**																				

Source: Trigon Brokerage House

CT-05

Basic assumptions:

1) **Primary therapeutic indication:** inflammatory bowel disease
2) **Additional therapeutic indication**: psoriasis, rheumatoid arthritis
3) **Current status of the project:** project at the stage of structure expansion for lead selection (*hit -to-lead)*, Drug Discovery phase
4) **Market size in 2022**: inflammatory bowel disease (IBD): EUR 13.405bln *(source: MarketWatch.com)*
5) **CAGR (%) of the market**: 1) in the pre-registration period: 2.0%; 2) between registration and peak sales: 1.3% (assumption of a decline resulting from the introduction of new forms of treatment; own assumption)
6) **Peak sales**: autoimmune diseases: 1% market share achieved 5 years after the registration (assumption based on the market shares in 2014–2016 for RA drugs, source: Yahoo Finance)
7) **Clinical trials – assumptions**: standard course of clinical trials for newly designed molecule in the indication of autoimmune diseases.
8) **The duration of each phase and the probability of success in that phase:** 1) pre-clinical development: Nature Drugs Review 2013; 2) clinical development: Cancer Drugs Are The Least Likely to Receive FDA Approval, www.fortune.com, May 2016

Assumptions for valuation: CT-05 in inflammatory bowel disease (IBD), psoriasis and rheumatoid arthritis (RA)

CT-05 (IBD)	Year	Upfront payment & milestone (mEUR)		cum. probability of success	probability of success
Preclinic phase		10	4%	55%	55%
Phase I	2027	25	10%	35%	63%
Phase II	2029	35	14%	11%	32%
Phase III	2032	65	27%	6%	58%
Registration	2034	110	45%	5%	83%
Sales (1 year after registration)	2035				
Deal size (mEUR)		**245**	**100%**		
Market value in 2022 (mEUR)	**13 405**				
CAGR between 2019 and registration (%)	2,0%				
CAGR between registraton and peak sales (%)	1,3%				
Peak sales (rok) - 5 year after registration	**2040**				
Market share (%)	1,0%	Deal value	Royalties	TV	
Royalties	**7,5%**	95%	3%	1%	
rNPV	**46,7**	44,6	1,5	0,6	

CT-05- 2nd indication (psoriasis)	Year	Upfront payment & milestone (mEUR)		cum. probability of success	probability of success
Preclinic phase	2025	10	4%	55%	55%
Phase I	2027	25	10%	35%	63%
Phase II	2029	35	14%	11%	32%
Phase III	2032	65	27%	6%	58%
Registration	2034	110	45%	5%	83%
Sales (1 year after registration)	2035				
Deal size (mEUR)		**245**	**100%**		
Market value in 2022 (mEUR)	**15 863**				
CAGR between 2019 and registration (%)	7,5%				
CAGR between registraton and peak sales (%)	5,0%				
Peak sales (rok) - 5 year after registration	**2040**				
Market share (%)	10,0%	Deal value	Royalties	TV	
Royalties	**7,5%**	43%	40%	17%	
rNPV	**104,7**	44,6	42,4	17,7	

CT-05- 3rd indication (RA)	Year	Upfront payment & milestone (mEUR)		cum. probability of success	probability of success
Preclinic phase	2025	10	4%	55%	55%
Phase I	2027	25	10%	35%	63%
Phase II	2029	35	14%	11%	32%
Phase III	2032	65	27%	6%	58%
Registration	2034	110	45%	5%	83%
Sales (1 year after registration)	2035				
Deal size (mEUR)		**245**	**100%**		
Market value in 2022 (mEUR)	**20 151**				
CAGR between 2019 and registration (%)	3,0%				
CAGR between registraton and peak sales (%)	2,0%				
Peak sales (rok) - 5 year after registration	**2040**				
Market share (%)	10,0%	Deal value	Royalties	TV	
Royalties	**7,5%**	54%	33%	12%	
rNPV	**81,9**	44,6	27,0	10,2	

Source: Trigon Brokerage House

rNPV valuation: CT-05

CT-05 (IBD)	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F	2035F	2036F	2037F	2038F	2039F	2040F	2041F	2042F	2043F
milestone	0,0	0,0	10,0	0,0	25,0	0,0	35,0	0,0	0,0	65,0	0,0	110,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Market size (EURm)	13 673	13 946	14 225	14 510	14 800	15 096	15 398	15 706	16 020	16 340	16 667	17 001	17 341	17 572	17 806	18 043	18 284	18 528	18 775	19 025	19 279
y/y		2,0%	2,0%	2,0%	2,0%	2,0%	2,0%	2,0%	2,0%	2,0%	2,0%	2,0%	2,0%	1,3%	1,3%	1,3%	1,3%	1,3%	1,3%	1,3%	1,3%
Market share (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%
peak sales curve	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	25%	50%	75%	90%	100%	100%	100%	100%
sales (EURm)	0	0	0	0	0	0	0	0	0	0	0	0	17	44	89	135	165	185	188	190	193
Royalties	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%
Royalties (EURm)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	1,3	3,3	6,7	10,1	12,3	13,9	14,1	14,3	14,5
TOTAL	**0,0**	**0,0**	**10,0**	**0,0**	**25,0**	**0,0**	**35,0**	**0,0**	**0,0**	**65,0**	**0,0**	**110,0**	**1,3**	**3,3**	**6,7**	**10,1**	**12,3**	**13,9**	**14,1**	**14,3**	**14,5**
probability	0%	0%	55%	55%	35%	35%	11%	11%	11%	6%	6%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
milestone	0,0	0,0	5,5	0,0	8,7	0,0	3,8	0,0	0,0	4,1	0,0	5,8	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Royalties (EURm)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,2	0,4	0,5	0,7	0,7	0,7	0,8	0,8
TOTAL	**0,0**	**0,0**	**5,5**	**0,0**	**8,7**	**0,0**	**3,8**	**0,0**	**0,0**	**4,1**	**0,0**	**5,8**	**0,1**	**0,2**	**0,4**	**0,5**	**0,7**	**0,7**	**0,7**	**0,8**	**0,8**
Total (PLNm)	0,0	0,0	26,4	0,0	41,6	0,0	18,5	0,0	0,0	19,9	0,0	27,9	0,3	0,8	1,7	2,6	3,1	3,5	3,6	3,6	3,7
Tax	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%
FCF (PLNm)	0,0	0,0	21,4	0,0	33,7	0,0	14,9	0,0	0,0	16,1	0,0	22,6	0,3	0,7	1,4	2,1	2,5	2,9	2,9	2,9	3,0
discount rate	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%
discount factor	0,87	0,76	0,66	0,57	0,50	0,43	0,38	0,33	0,28	0,25	0,21	0,19	0,16	0,14	0,12	0,11	0,09	0,08	0,07	0,06	0,05
DFCF	0,0	0,0	14,1	0,0	16,7	0,0	5,6	0,0	0,0	4,0	0,0	4,2	0,0	0,1	0,2	0,2	0,2	0,2	0,2	0,2	0,2
DFCF sum (mln PLN)	**46,2**																				
growth rate in TV	-10%																				
Residual value (TV)	10,7																				
Present TV	**0,6**																				
Valuation (PLNm)	**46,7**																				

CT-05- 2nd indication (psoriasis)	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F	2035F	2036F	2037F	2038F	2039F	2040F	2041F	2042F	2043F
milestone	0,0	0,0	10,0	0,0	25,0	0,0	35,0	0,0	0,0	65,0	0,0	110,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Market size (EURm)	17 052	18 331	19 706	21 184	22 773	24 481	26 317	28 290	30 412	32 693	35 145	37 781	40 615	42 645	44 778	47 016	49 367	51 836	54 427	57 149	60 006
y/y		7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	5,0%	5,0%	5,0%	5,0%	5,0%	5,0%	5,0%	5,0%
Market share (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	10%	10%	10%	10%	10%	10%	10%	10%
peak sales curve	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	25%	50%	75%	90%	100%	100%	100%	100%
sales (EURm)	0	0	0	0	0	0	0	0	0	0	0	0	406	1066	2239	3526	4443	5184	5443	5715	6001
Royalties	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%
Royalties (EURm)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	30,5	80,0	167,9	264,5	333,2	388,8	408,2	428,6	450,0
TOTAL	**0,0**	**0,0**	**10,0**	**0,0**	**25,0**	**0,0**	**35,0**	**0,0**	**0,0**	**65,0**	**0,0**	**110,0**	**30,5**	**80,0**	**167,9**	**264,5**	**333,2**	**388,8**	**408,2**	**428,6**	**450,0**
probability	0%	0%	55%	0%	35%	0%	11%	0%	0%	6%	0%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
milestone	0,0	0,0	5,5	0,0	8,7	0,0	3,8	0,0	0,0	4,1	0,0	5,8	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Royalties (EURm)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	1,6	4,2	8,9	14,0	17,6	20,6	21,6	22,7	23,8
TOTAL	**0,0**	**0,0**	**5,5**	**0,0**	**8,7**	**0,0**	**3,8**	**0,0**	**0,0**	**4,1**	**0,0**	**5,8**	**1,6**	**4,2**	**8,9**	**14,0**	**17,6**	**20,6**	**21,6**	**22,7**	**23,8**
Total (PLNm)	0,0	0,0	26,4	0,0	41,6	0,0	18,5	0,0	0,0	19,9	0,0	27,9	7,7	20,3	42,6	67,1	84,6	98,7	103,6	108,8	114,2
Tax	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%
FCF (PLNm)	0,0	0,0	21,4	0,0	33,7	0,0	14,9	0,0	0,0	16,1	0,0	22,6	6,3	16,4	34,5	54,4	68,5	79,9	83,9	88,1	92,5
discount rate	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%
discount factor	0,87	0,76	0,66	0,57	0,50	0,43	0,38	0,33	0,28	0,25	0,21	0,19	0,16	0,14	0,12	0,11	0,09	0,08	0,07	0,06	0,05
DFCF	0,0	0,0	14,1	0,0	16,7	0,0	5,6	0,0	0,0	4,0	0,0	4,2	1,0	2,3	4,2	5,8	6,4	6,5	5,9	5,4	4,9
DFCF sum (mln PLN)	**87,0**																				
growth rate in TV	-10%																				
Residual value (TV)	333,1																				
Present TV	**17,7**																				
Valuation (PLNm)	**104,7**																				

CT-05- 3rd indication (RA)	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F	2035F	2036F	2037F	2038F	2039F	2040F	2041F	2042F	2043F
milestone	0,0	0,0	10,0	0,0	25,0	0,0	35,0	0,0	0,0	65,0	0,0	110,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Market size (EURm)	20 756	21 378	22 020	22 680	23 361	24 062	24 783	25 527	26 293	27 082	27 894	28 731	29 593	30 185	30 788	31 404	32 032	32 673	33 326	33 993	34 673
y/y		3,0%	3,0%	3,0%	3,0%	3,0%	3,0%	3,0%	3,0%	3,0%	3,0%	3,0%	3,0%	2,0%	2,0%	2,0%	2,0%	2,0%	2,0%	2,0%	2,0%
Market share (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	10%	10%	10%	10%	10%	10%	10%	10%
peak sales curve	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	25%	50%	75%	90%	100%	100%	100%	100%
sales (EURm)	0	0	0	0	0	0	0	0	0	0	0	0	296	755	1539	2355	2883	3267	3333	3399	3467
Royalties	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%
Royalties (EURm)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	22,2	56,6	115,5	176,6	216,2	245,0	249,9	254,9	260,0
TOTAL	**0,0**	**0,0**	**10,0**	**0,0**	**25,0**	**0,0**	**35,0**	**0,0**	**0,0**	**65,0**	**0,0**	**110,0**	**22,2**	**56,6**	**115,5**	**176,6**	**216,2**	**245,0**	**249,9**	**254,9**	**260,0**
probability	0%	0%	55%	0%	35%	0%	11%	0%	0%	6%	0%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
milestone	0,0	0,0	5,5	0,0	8,7	0,0	3,8	0,0	0,0	4,1	0,0	5,8	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Royalties (EURm)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	1,2	3,0	6,1	9,3	11,4	13,0	13,2	13,5	13,8
TOTAL	**0,0**	**0,0**	**5,5**	**0,0**	**8,7**	**0,0**	**3,8**	**0,0**	**0,0**	**4,1**	**0,0**	**5,8**	**1,2**	**3,0**	**6,1**	**9,3**	**11,4**	**13,0**	**13,2**	**13,5**	**13,8**
Total (PLNm)	0,0	0,0	26,4	0,0	41,6	0,0	18,5	0,0	0,0	19,9	0,0	27,9	5,6	14,4	29,3	44,8	54,9	62,2	63,4	64,7	66,0
Tax	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%
FCF (PLNm)	0,0	0,0	21,4	0,0	33,7	0,0	14,9	0,0	0,0	16,1	0,0	22,6	4,6	11,6	23,7	36,3	44,5	50,4	51,4	52,4	53,5
discount rate	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%
discount factor	0,87	0,76	0,66	0,57	0,50	0,43	0,38	0,33	0,28	0,25	0,21	0,19	0,16	0,14	0,12	0,11	0,09	0,08	0,07	0,06	0,05
DFCF	0,0	0,0	14,1	0,0	16,7	0,0	5,6	0,0	0,0	4,0	0,0	4,2	0,7	1,6	2,9	3,9	4,1	4,1	3,6	3,2	2,8
DFCF sum (mln PLN)	**71,7**																				
growth rate in TV	-10%																				
Residual value (TV)	192,5																				
Present TV	**10,2**																				
Valuation (PLNm)	**81,9**																				

Source: Trigon Brokerage House

COOPERATION WITH SOSEI HEPTARES:

Basic assumptions:

1) **Therapeutic indication:** inflammatory bowel disease (IBD)

2) **Current Project Status:** project at the stage of early Drug Discovery phase

3) **Project IP share for Captor:** 35% (65% Sosei Heptares)

4) **Market size in 2022:** inflammatory bowel disease (IBD): EUR 13.405bln (source: MarketWatch.com)

5) **CAGR (%) of the market:** 1) in the period to registration: 2.0%; 2) in the period of registration - peak sales: 1.3% (assumption of decline resulting from the introduction of new forms of therapy; own assumption).

6) **Peak sales: Autoimmune diseases:** 1% of market shares achieved 5 years after registration (assumption based on and market shares in 2014-2016 for drugs in RA therapy, source: Yahoo Finance)

7) **Clinical trials -** assumptions: standard course of clinical trials for a newly designed molecule in the indication of autoimmune diseases.

8) **The duration of each phase and the probability of success in that phase:** 1) preclinical development: Nature Drugs Review 2013; 2) clinical development: Cancer Drugs Are The Least Likely to Receive FDA Approval, www.fortune.com, May 2016;

Assumptions for valuation of the cooperation project with Sosei Heptares

Sosei Heptares collaboration	Year	Upfront payment & milestone (mEUR)		cum. probability of success	probability of success
Preclinic phase	2025	11	4%	55%	55%
Phase I	2027	28	10%	35%	63%
Phase II	2029	39	14%	11%	32%
Phase III	2034	72	27%	6%	58%
Registration	2034	120	45%	5%	83%
Sales (1 year after registration)	2035				
Deal size (mEUR)		**269**	**100%**		
Market value in 2022 (mEUR)	**13 405**				
CAGR between 2019 and registration (%)	2,0%				
CAGR between registraton and peak sales (%)	1,3%				
Peak sales (rok) - 5 year after registration	**205**				
Market share (%)	1,0%	Deal value	Royalties	TV	
Royalties	**7,5%**	96%	3%	1%	
rNPV	**17,9**	17,2	0,5	0,2	

Source: Trigon Brokerage House

rNPV valuation: CT-he cooperation project with Sosei Heptares

Sosei Heptares collaboration	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F	2035F	2036F	2037F	2038F	2039F	2040F	2041F	2042F	2043F
milestone	0,0	0,0	11,0	0,0	27,5	0,0	38,5	0,0	0,0	71,5	0,0	120,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Market size (EURm)	13 673	13 946	14 225	14 510	14 800	15 096	15 398	15 706	16 020	16 340	16 667	17 001	17 341	17 572	17 806	18 043	18 284	18 528	18 775	19 025	19 279
y/y		2,0%	2,0%	2,0%	2,0%	2,0%	2,0%	2,0%	2,0%	2,0%	2,0%	2,0%	2,0%	1,3%	1,3%	1,3%	1,3%	1,3%	1,3%	1,3%	1,3%
Market share (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%
peak sales curve	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	25%	50%	75%	90%	100%	100%	100%	100%
sales (EURm)	0	0	0	0	0	0	0	0	0	0	0	0	17	44	89	135	165	185	188	190	193
Royalties	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%	7,5%
Royalties (EURm)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	1,3	3,3	6,7	10,1	12,3	13,9	14,1	14,3	14,5
TOTAL	**0,0**	**0,0**	**11,0**	**0,0**	**27,5**	**0,0**	**38,5**	**0,0**	**0,0**	**71,5**	**0,0**	**120,0**	**1,3**	**3,3**	**6,7**	**10,1**	**12,3**	**13,9**	**14,1**	**14,3**	**14,5**
probability	0%	0%	55%	0%	35%	0%	11%	0%	0%	6%	0%	5%	5%	5%	5%	5%	5%	5%	5%	5%	5%
milestone	0,0	0,0	6,1	0,0	9,5	0,0	4,2	0,0	0,0	4,6	0,0	6,3	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Royalties (EURm)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,1	0,2	0,4	0,5	0,7	0,7	0,7	0,8	0,8
TOTAL	**0,0**	**0,0**	**6,1**	**0,0**	**9,5**	**0,0**	**4,2**	**0,0**	**0,0**	**4,6**	**0,0**	**6,3**	**0,1**	**0,2**	**0,4**	**0,5**	**0,7**	**0,7**	**0,7**	**0,8**	**0,8**
Total (PLNm)	0,0	0,0	29,0	0,0	45,7	0,0	20,3	0,0	0,0	21,9	0,0	30,5	0,3	0,8	1,7	2,6	3,1	3,5	3,6	3,6	3,7
Captor's share	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%	35%
Tax	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%
FCF (PLNm)	0,0	0,0	8,2	0,0	13,0	0,0	5,8	0,0	0,0	6,2	0,0	8,6	0,1	0,2	0,5	0,7	0,9	1,0	1,0	1,0	1,0
discount rate	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%
discount factor	0,87	0,76	0,66	0,57	0,50	0,43	0,38	0,33	0,28	0,25	0,21	0,19	0,16	0,14	0,12	0,11	0,09	0,08	0,07	0,06	0,05
DFCF	0,0	0,0	5,4	0,0	6,4	0,0	2,2	0,0	0,0	1,5	0,0	1,6	0,0	0,0	0,1	0,1	0,1	0,1	0,1	0,1	0,1
DFCF sum (mln PLN)	**17,7**																				
growth rate in TV	-10%																				
Residual value (TV)	3,7																				
Present TV	**0,2**																				
Valuation (PLNm)	**17,9**																				

COOPERATION WITH ONO PHARMACEUTICALS:

Basic assumptions:

1) **Therapeutic indication:** neurodegenerative diseases

2) **Current Project Status:** project at the stage of early Drug Discovery phase

3) **Market size in 2022:** neurodegenerative diseases: EUR 42.790bln (source: FutureMarketInsights.com)

4) **CAGR (%) of the market:** 1) in the period to registration: 7.0%; 2) in the period of registration - peak sales: 4.7% (assumption of decline resulting from the introduction of new forms of therapy; own assumption).

5) **Peak sales: Autoimmune diseases:** 3% of market shares achieved 5 years after registration (assumption based on and market shares in 2014-2016 for drugs in RA therapy, source: Yahoo Finance)

6) **Clinical trials -** assumptions: standard course of clinical trials for a newly designed molecule in the indication of neurological diseases.

7) **The duration of each phase and the probability of success in that phase:** 1) preclinical development: Nature Drugs Review 2013; 2) clinical development: Cancer Drugs Are The Least Likely to Receive FDA Approval, www.fortune.com, May 2016;

Assumptions for valuation of the cooperation project with Ono Pharmaceutical

Ono Pharmaceuticals collaboration	Year	Upfront payment & milestone (mEUR)		cum. probability of success	probability of success
Preclinic phase	2025	6	2%	50%	50%
Phase I	2026	12	4%	28%	55%
Phase II	2028	26	10%	8%	29%
Phase III	2030	62	23%	4%	55%
Registration	2031	91	34%	4%	87%
Sales (1 year after registration)	2032				
Deal size (mEUR)		**197**	**100%**		
Market value in 2022 (mEUR)	**0**				
CAGR between 2019 and registration (%)	0,0%				
CAGR between registraton and peak sales (%)	0,0%				
Peak sales (rok) - 5 year after registration	**0**				
Market share (%)	0,0%	Deal value	Royalties	TV	
Royalties	**0,0%**	29%	57%	14%	
rNPV	**88,3**	25,6	50,6	12,1	

Source: Trigon Brokerage House

rNPV valuation: the cooperation project with Ono Pharmaceutical.

Ono Pharmaceuticals collaboration	2023F	2024F	2025F	2026F	2027F	2028F	2029F	2030F	2031F	2032F	2033F	2034F	2035F	2036F	2037F	2038F	2039F	2040F	2041F	2042F	2043F
milestone	2,0	0,0	3,0	11,8	0,0	26,0	0,0	62,4	90,9	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Market size (EURm)	45 785	48 990	52 419	56 088	60 015	64 216	68 711	73 520	78 667	84 174	90 066	94 269	98 668	103 273	108 092	113 136	118 416	123 942	129 726	135 780	142 116
y/y		7,0%	7,0%	7,0%	7,0%	7,0%	7,0%	7,0%	7,0%	7,0%	7,0%	4,7%	4,7%	4,7%	4,7%	4,7%	4,7%	4,7%	4,7%	4,7%	4,7%
Market share (%)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%	3%
peak sales curve	0%	0%	0%	0%	0%	0%	0%	0%	0%	10%	30%	60%	80%	90%	100%	100%	100%	100%	100%	100%	100%
sales (EURm)	0	0	0	0	0	0	0	0	0	0	811	1697	2368	2788	3243	3394	3552	3718	3892	4073	4263
Royalties	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	0,0%	10,0%	10,0%	10,0%	10,0%	10,0%	10,0%	10,0%	10,0%	10,0%	10,0%	10,0%	10,0%
Royalties (EURm)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	81,1	169,7	236,8	278,8	324,3	339,4	355,2	371,8	389,2	407,3	426,3
TOTAL	**2,0**	**0,0**	**3,0**	**11,8**	**0,0**	**26,0**	**0,0**	**62,4**	**90,9**	**0,0**	**81,1**	**169,7**	**236,8**	**278,8**	**324,3**	**339,4**	**355,2**	**371,8**	**389,2**	**407,3**	**426,3**
probability	0%	0%	50%	28%	0%	8%	0%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%	4%
milestone	0,0	0,0	1,5	3,3	0,0	2,1	0,0	2,7	3,5	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0
Royalties (EURm)	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	3,1	6,5	9,0	10,6	12,4	13,0	13,6	14,2	14,9	15,5	16,3
TOTAL	**0,0**	**0,0**	**1,5**	**3,3**	**0,0**	**2,1**	**0,0**	**2,7**	**3,5**	**0,0**	**3,1**	**6,5**	**9,0**	**10,6**	**12,4**	**13,0**	**13,6**	**14,2**	**14,9**	**15,5**	**16,3**
Total (PLNm)	0,0	0,0	7,2	15,6	0,0	9,9	0,0	13,1	16,6	0,0	14,8	31,1	43,4	51,1	59,4	62,2	65,1	68,1	71,3	74,6	78,1
Captor's share	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Tax	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%	19%
FCF (PLNm)	0,0	0,0	5,8	12,6	0,0	8,1	0,0	10,6	13,5	0,0	12,0	25,2	35,1	41,4	48,1	50,4	52,7	55,2	57,7	60,4	63,3
discount rate	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%	15,0%
discount factor	0,87	0,76	0,66	0,57	0,50	0,43	0,38	0,33	0,28	0,25	0,21	0,19	0,16	0,14	0,12	0,11	0,09	0,08	0,07	0,06	0,05
DFCF	0,0	0,0	3,8	7,2	0,0	3,5	0,0	3,5	3,8	0,0	2,6	4,7	5,7	5,8	5,9	5,4	4,9	4,5	4,1	3,7	3,4
DFCF sum (mln PLN)	**72,5**																				
growth rate in TV	-10%																				
Residual value (TV)	227,7																				
Present TV	**12,1**																				
Valuation (PLNm)	**84,6**																				

VALUATION ASSUMPTIONS

The main objective of Captor Therapeutics activity is to discover and develop innovative drugs, hence in our financial assumptions we refer mainly to elements related to project development and potential sales of registered products. We distinguished key assumptions regarding all of the biotechnological projects subject to analysis, including: **1)** identification and development forecast of markets for main and additional therapeutic areas; **2)** peak sales values and timing; **3)** estimation of the probability of successfully proceeding to subsequent clinical trial phases; **4)** estimated market shares; and **5)** potential parameters of partnering transactions (upfront payment, milestones, royalties).

Assumptions concerning the development of target sales markets. Based on the analysis of market reports, our assumptions include data pertaining to the actual sizes and forecasts for growth of the markets on which sales of the developed compounds will be allowed. Target sales markets included hepatocellular carcinoma - HCC (CT-01), haematological cancers including myelodspastic syndromes - MDS, acute myeloid leukemia - AML and immunological diseases - systemic lupus erythematosus (CT-02), haematological cancers (leukemia, lymphoma, myeloma) (CT-03), colorectal cancer - CRC (CT-04) and inflammatory bowel disease (IBD, psoriasis, rheumatoid arthritis (RA) (CT-05) and neurodegenerative diseases (CNS). The data were retrieved from global databases (EuroStat, GlobalData, Biocentury.org) and market reports describing the treatment markets for specific disease groups (TrasnparencyMarketResearch.com; MarketWatch.com; Globenewswire.com). The forecasts for individual markets cover the years 2019–2037 and take into account two phases that vary in terms of growth dynamics: **1)** from 2022 until the moment of registration; and **2)** from the moment of registration until 2043. In the period from the moment of registration until peak sales are achieved, we assumed a growth dynamics in line with the CAGR values presented in market reports (HCC, MDS, haematological cancers, CDC, IBD, RA, psoriasis), which are reduced in the following periods in the forecasts due to the introduction of new forms of treatment. For CT-01 and CT-05 projects, the target therapeutic indications include HCC, IBD for which no efficient or patient-convenient forms of treatment are currently available. Thus, the forecasts could assume a dynamic market development after the introduction of new, effective forms of treatment, however, in order to provide a safety buffer for the forecasts, in our model we have adopted the values presented in the market reports related to therapeutic indications.

Assumptions concerning peak sales. For all the projects subject to analysis, we assumed that peak sales will be achieved after five years from the moment of registration. This is a conservative approach compared to the examples of drugs that achieve peak sales within 1–3 years after registration presented below. The projected peak sales values for the base valuation are as follows: **1)** EUR 783m for CT-01 for HCC treatment; **2)** EUR 114m for CT-02 for MDS treatment; **3)** EUR 11.3bn for CT-03 for haematological cancers; **4)** EUR 757m for CT-04 for CRC treatment; **5)** EUR 205m for CT-05 for IBD treatment; **6)** EUR 205m for project related to collaboration with Sosei Heptares and **7)** EUR 4.4bln for project in cooperation with Ono Pharmaceutical. In the additional indications, the peak sales values are respectively: **1)** EUR 1.8bln for CT-02 in AML; **2)** EUR 87m for CT-02 in SLE; **3)** EUR 7.4bn for CT-05 in psoriasis and **4)** EUR 3.8bln for CT-05 in RA.

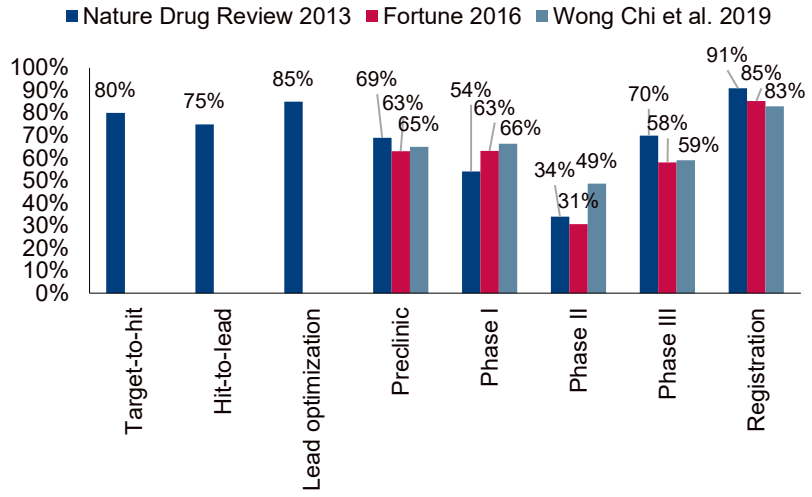
Time structure of achieving peak sales

	2030F	2031F	2032F	2033F	2034F	2035F	2036F	2037F	2038F	2039F	2040F	2041F	2042F	2043F
CT-01 (HCC)	10%	25%	50%	75%	90%	100%	100%	100%	100%	100%	100%	100%	100%	100%
CT-02 (MDS)	0%	0%	10%	25%	50%	65%	90%	100%	100%	100%	100%	100%	100%	100%
CT-03 (hematological malignancies)	0%	0%	0%	10%	25%	50%	75%	90%	100%	100%	100%	100%	100%	100%
CT-04 (CRC)	0%	0%	0%	0%	0%	10%	25%	50%	75%	90%	100%	100%	100%	100%
CT-05 (IBD)	0%	0%	0%	0%	0%	10%	25%	50%	75%	90%	100%	100%	100%	100%
CT-02- 2nd. indication (AML)	0%	0%	0%	10%	25%	40%	75%	90%	100%	100%	100%	100%	100%	100%
CT-02- 3rd indication (SLE)	0%	0%	0%	10%	25%	50%	75%	90%	100%	100%	100%	100%	100%	100%
CT-05- 2nd indication (psoriasis)	0%	0%	0%	0%	0%	10%	25%	50%	75%	90%	100%	100%	100%	100%
CT-05- 3rd indication (RA)	0%	0%	0%	0%	0%	10%	25%	50%	75%	90%	100%	100%	100%	100%
Sosei Heptares collaboration	0%	0%	0%	0%	0%	10%	25%	50%	75%	90%	100%	100%	100%	100%
Ono Pharmaceuticals collaboration	0%	0%	10%	30%	60%	80%	90%	100%	100%	100%	100%	100%	100%	100%

Source: Trigon Brokerage House

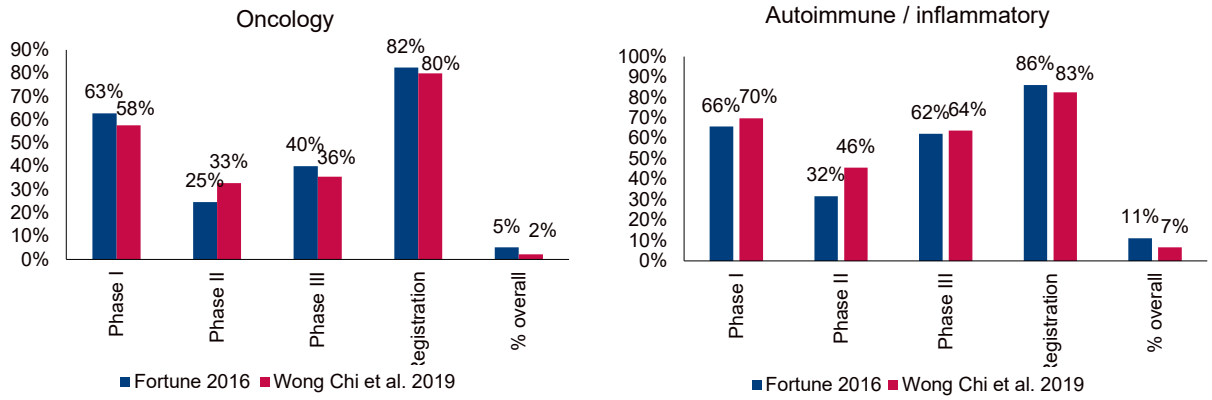
Likelihood of success in clinical trials. We used data published in scientific literature and industry reports (Cancer Drugs Are The Least Likely to Receive FDA Approval, www.fortune.com, May 2016 , Nature Drug Reviews 2010, 2013). In our assumptions, we adopted a standard course of clinical trials in oncological or autoimmune indications for all Captor's projects.

The likelihood of clinical trial phase success published in literature.



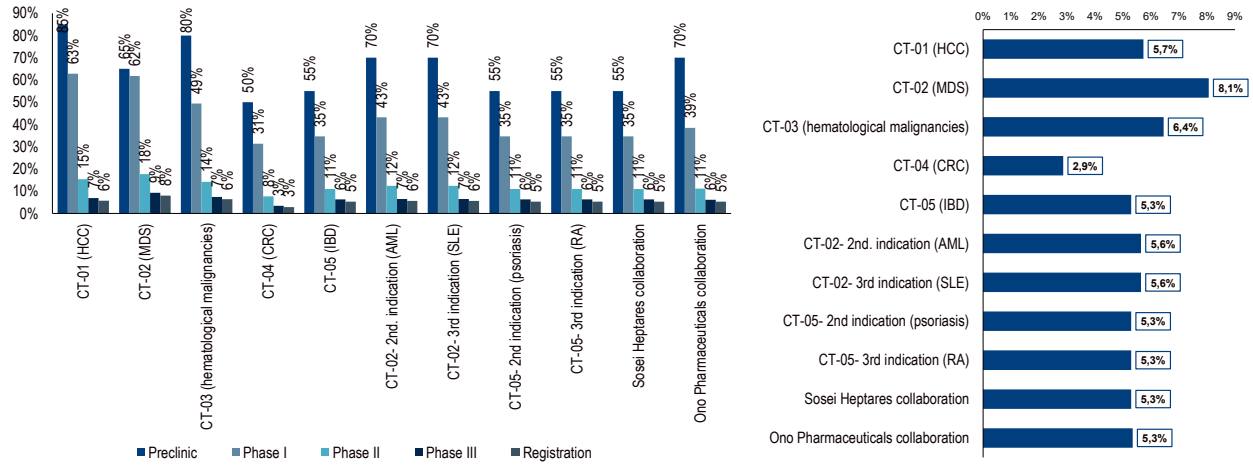
Source: Trigon Brokerage House, Nature Drugs Review 2013, Fortune 2016; Wong Chi et all 2019

Likelihood of transition to the next clinical trial phases in the field of oncology and autoimmune diseases.



Source: Trigon Brokerage House, Nature Drugs Review 2013, Fortune 2016; Wong Chi et all 2019

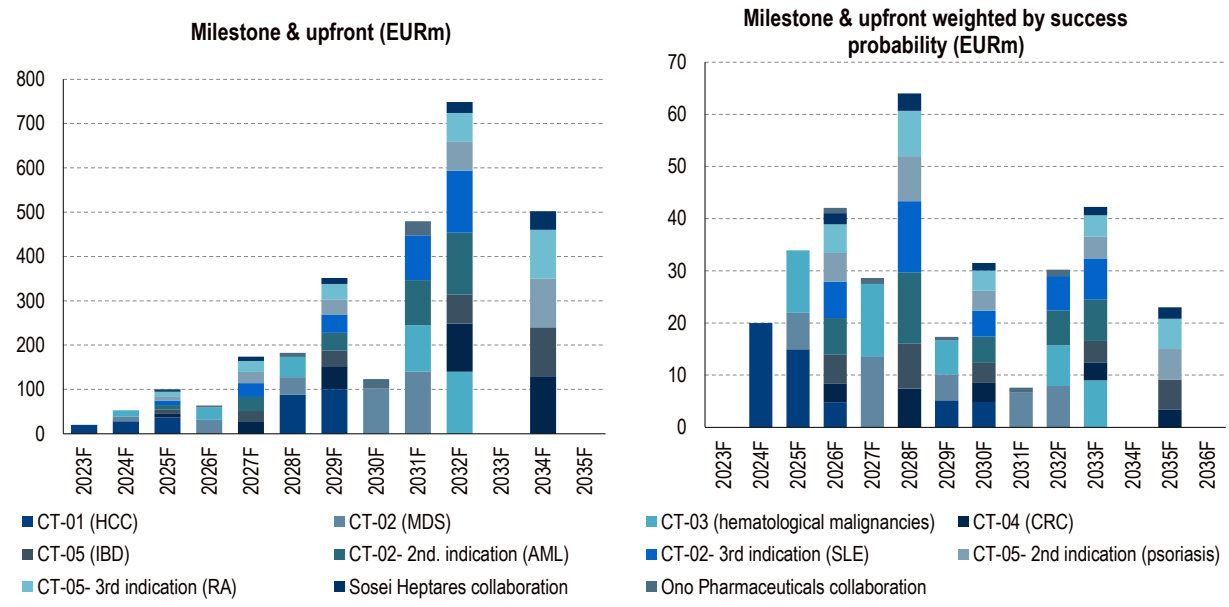
Cumulative likelihood of transition to a given trial phase and likelihood of the drug marketing



Source: Trigon Brokerage House, Nature Drugs Review, Fortune.com.

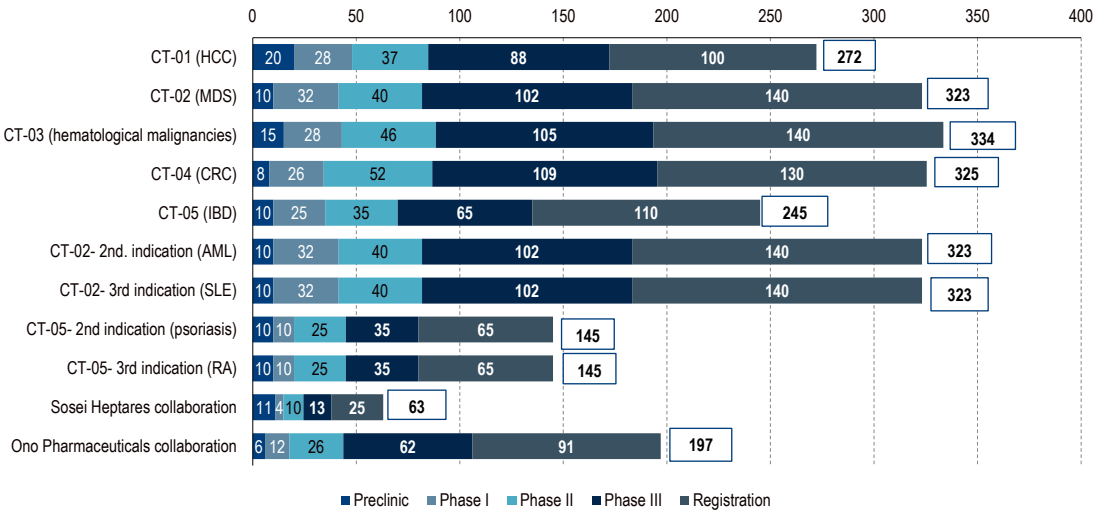
Potential parameters of partnering deals. Our assumptions regarding the potential parameters of partnering agreements (upfront payment, milestones and royalties) were based on a comparison of the parameters of reference transactions concluded on the global pharmaceutical market in 2011-2021. For each molecule that is the subject of the transaction, we identified deal value, upfront payment amount and milestones. The compared transactions were divided according to the criterion of the clinical trial phase in which the contract was concluded, and for each of the separated groups, median values of biodollar value, upfront payment and milestones were determined. For each of the analyzed molecules, a separate subset of transactions was distinguished that concerned the most similar therapeutic area and the mechanism of action of the licensed compounds. On the basis of these subsets, we determined the reference values of transaction parameters at 50% of the values of the determined medians for each phase of clinical trials (see Annexes section).

Forecast upfront payments and milestones broken down by individual molecules



Source: Trigon Brokerage House, Nature Drugs Review, Fortune.com.

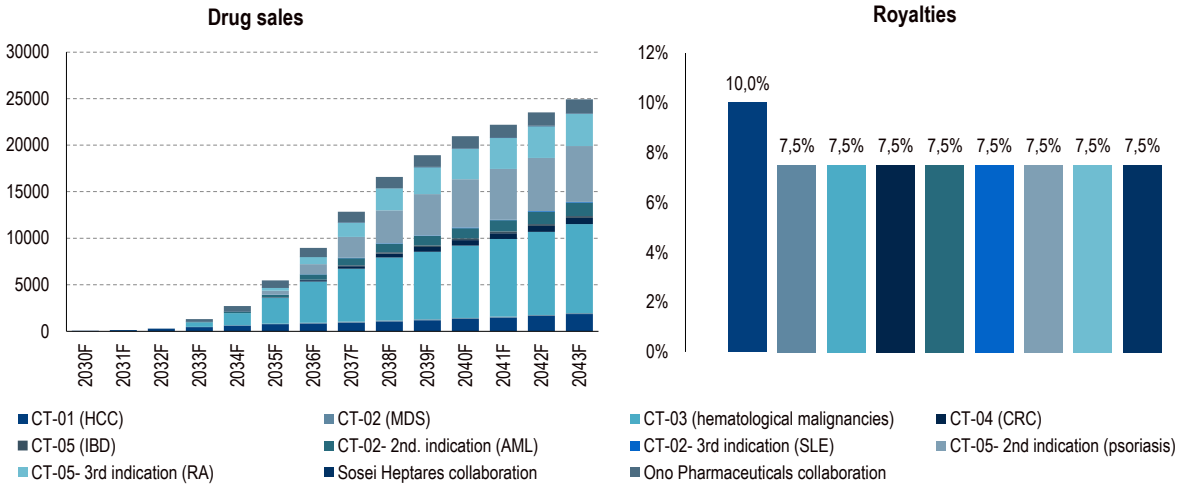
Revenues on upfront payments/milestones for transitioning to a given phase (EUR m), Biodollar value presented in frames.



Source: Trigon Brokerage House, Evaluate Pharma, Fierce Biotech, GlobalData, Biocentury.org

Assumption about the value of royalties. Assumptions about potential royalties were based on benchmark transaction parameters, and for the most part safe assumptions were made of single-digit - low double-digit royalties. For Galapgos and Merck collaborative projects, very early stages of development were assumed to be low single-digit royalties.

Estimated sales levels and royalties of projects developed by CTX.



Source: Trigon Brokerage House

Assumption of estimated market shares and sales levels. The estimated market shares were determined by comparing the sales levels of drugs with an innovative mechanism of action, introduced in therapeutic areas analogous to the areas selected by Captor Therapeutics.

Historical sales levels and forecasts for the development of sales of drugs introduced in AML and CLL therapy.

AML and CLL drug sales								
			2018	2019	2020	2021F	2022F	2023F	2024F
Company	Drug	Registration	mln USD						
Roche	Rituxan	1997	5191	5000	4000	3200	2250	1688	1266
Roche	Gazyva	2013	390	490	588	706	811	933	1026
ABBV	Imbruvica	2016	3590	4200	4500	4800	5100	5400	5734
Roche/ABBV	Venclexta	2016	344	700	1300	2100	2400	2500	2766
GILD	Zydelig	2014	133	100	85	70	70	70	70
JNJ	Imbruvica	2013	2615	2800	3000	3200	3400	3600	3823
	suma		12263	13290	13473	14076	14031	14191	14685

AML and CLL drug sales								
		2018	2019	2020	2021F	2022F	2023F	2024F
Company	Drug	Registration	% market share					
Roche	Rituxan	1997	42%	38%	30%	23%	16%	12%	9%
Roche	Gazyva	2013	3%	4%	4%	5%	6%	7%	7%
ABBV	Imbruvica	2016	29%	32%	33%	34%	36%	38%	39%
Roche/ABBV	Venclexta	2016	3%	5%	10%	15%	17%	18%	19%
GILD	Zydelig	2014	1%	1%	1%	0%	0%	0%	0%
JNJ	Imbruvica	2013	21%	21%	22%	23%	24%	25%	26%

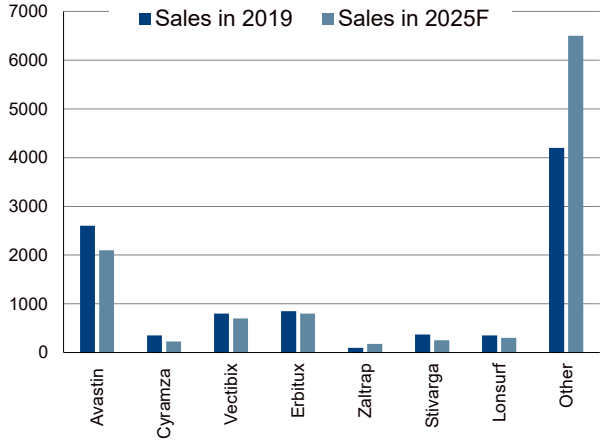
Source: company data, GlobalData, Statista.com, Trigon DM

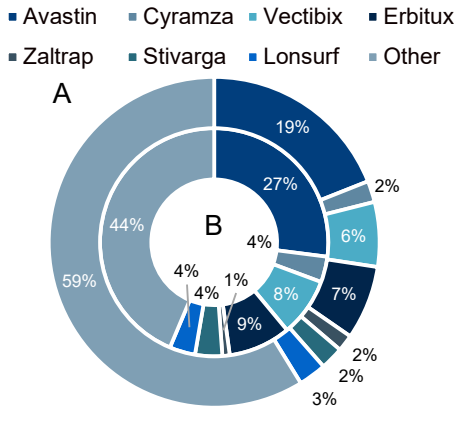
In the case of the CTX's project targeting hematooncological indications, drugs used in the AML therapy were compared. For proects targeting solid tumors, registered drugs in CRC, TNBC and NSCLC were analyzed. For most of the analyzed projects, we assumed safe, single-digit values of potential market shares, ranging from 1% to 5%.

Sales and market shares of drugs in the area of colorectal cancer (CRC) in 2019. (B) and a forecast of sales and market shares changes until 2025. (A)

Drug	Therapeutic area	Registration	Sales in 2013	Market share in 2013	Sales in 2019	Market share in 2019	Sales in 2025F	Market share 2025F
		year	USDm	%	USDm	%	USDm	%
Avastin	CRC, SCLC, inne	2004	6700	66%	2600	27%	2100	19%
Cyramza	CRC, HCC, NSCLC	2015	-	-	350	4%	230	2%
Vectibix	CRC	2006	566	6%	800	8%	700	6%
Erbitux	CRC, head&neck cancer	2004	1870	19%	850	9%	800	7%
Zaltrap	CRC	2012	67	1%	100	1%	180	2%
Stivarga	CRC, liver cancer	2012	25	0%	370	4%	250	2%
Lonsurf	CRC	2014	-	-	350	4%	300	3%
Other	CRC		870	9%	4200	44%	6500	59%

Source: GlobalData

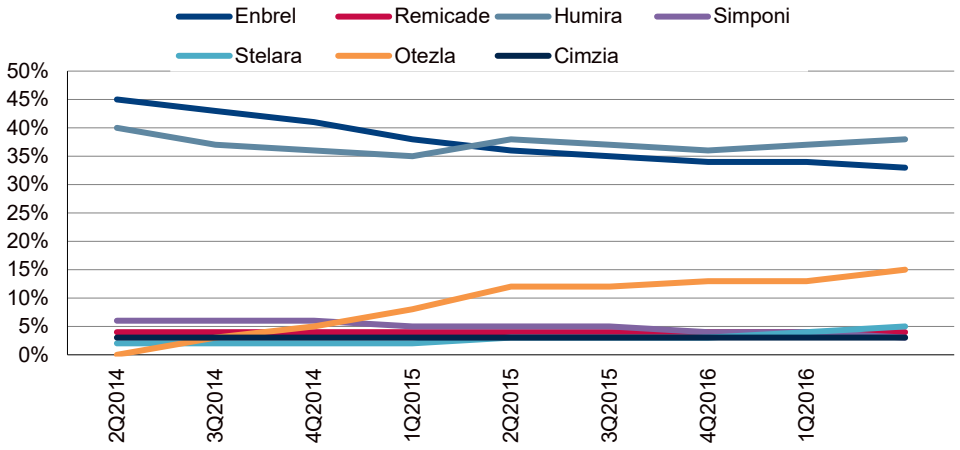




Source: GlobalData

Historical market shares of drugs offered in the area of RA.

Drug	Market share								
	1Q2014	2Q2014	3Q2014	4Q2014	1Q2015	2Q2015	3Q2015	4Q2016	1Q2016
Enbrel	45%	43%	41%	38%	36%	35%	34%	34%	33%
Remicade	4%	4%	4%	4%	4%	4%	4%	4%	4%
Humira	40%	37%	36%	35%	38%	37%	36%	37%	38%
Simponi	6%	6%	6%	5%	5%	5%	4%	4%	3%
Stelara	2%	2%	2%	2%	3%	3%	3%	4%	5%
Otezla	0	3%	5%	8%	12%	12%	13%	13%	15%
Cimzia	3%	3%	3%	3%	3%	3%	3%	3%	3%



Source: GlobalData

Risk factors

Among the main risk factors for the valuation recommendation of Captor Therapeutics, we identify elements directly related to the development of innovative drug projects, i.e. the risk of project development failure, time delays in completing individual stages of their development and risks related to concluding partnering deals (no contracts for projects or termination of existing cooperation agreements). Among the other factors, we identify risks related to increased competition, reduced availability or the need to return received subsidies, loss of academic staff, legal risks related to the ownership of IP rights and macroeconomic risks.

Risk of failure of new drug development projects. The implementation of drug development projects is associated with a high level of risk of failure. The risk is further increased with the development of new-in-class drugs whose mechanisms of action focus on novel molecular targets, which are largely poorly characterized in the scientific literature. Depending on the therapeutic area, the cumulative probability of passing Phase I clinical trials to drug registration is 5% to 12%, except for rare diseases indications for which the probability is 25% (Fortune, 2016). Due to the plan for the commercialization of molecules in the second phase of clinical trials, the greatest risk of completing the development of projects before obtaining registration of the medicinal product will be transferred to the entity that will acquire the rights to the program. However, the risk of failing the programs before reaching the final stage of commercialization of the projects developed by Captor Therapeutics cannot be excluded.

Risk of not selecting drug candidates. The R&D projects developed by the Company are at the stage of drug discovery where work is carried out to select and optimise lead compounds from which the Company hopes to select in the future drug candidates to be implemented in clinical trials. Due to the early stage of research, the risk that the compounds being developed may not be effective in the treatment of selected therapeutic indications cannot be excluded.

The risk of delays in new drug development projects. The implementation of drug development projects based on new molecular targets is a complex research task which, apart from the elements of drug substance design, also requires a lot of basic research to characterize the molecular target. The development of a drug for which there are no comparable compounds operating on the global pharmaceutical market may involve a longer process of optimizing the pharmacological form, the production process and the planning and implementation of clinical trials in relation to well-known medicinal substances. For this reason, delays in the pre-clinical and clinical stages of the research cannot be ruled out in the projects developed by the Company.

Risk related to the lack of own laboratory space. The Company lease about 1,000m^2 of laboratory space in the Wrocław Technology Park. The premises leased are equipped with appropriate laboratory apparatus adapted to the research work, and the Company owns the laboratory equipment necessary to perform the research. There is a risk that the lessor will not decide to renew the lease agreements with the Company after their termination or will increase the rent, which could result in the need to search for a new research location and delay the current work.

Risk of an increased competition. The Company's projects compete with other players present on the international pharmaceutical market. Most of the molecules developed by the Company are based on the innovative TPD technology and undisclosed, selectively chosen molecular targets, which translates into minimising the risk associated with the earlier registration of drugs with identical mechanism of action. Competition therefore consists in developing drugs for the same diseases with a different mechanism of action, which will respond to an unmet for now medical need arising from diseases.

The risk of a decrease in the availability of grants. Grants are a key source of financing for research works carried out by the Company. The Company's contracted financing of R&D projects from grants amounts to over PLN 92 million, the main source of which were EU and national funds. Reducing the amount of funds allocated to subsidies from national or EU funds,

as well as changing the terms of their granting or increasing competition from entities applying for subsidies may adversely affect the amount of funds obtained by the Company and thus delay the implementation of projects.

Risk of grants return. In connection with the conducted R&D projects, the Company uses subsidies granted as part of domestic and foreign funds. In the event of failure to meet the requirements contained in the grant agreement, there may be a risk of ordering the return of part or all of the grant with interest. Possible ordering to return all or part of the granted subsidy may result in the loss of funds, in the worst case - preventing the development of further R&D projects. In April 2022, Captor has returned PLN 3.89m due to irregularities found by the auditors in the settlement of eligible costs incurred as part of the implementation of EU projects

The risk of remuneration payment in the case of key Captor employees cooperation termination. Under the license agreements concluded with Mr. Michał Walczak and Mr. Sylvain Cottens regarding the CT-04 project, in the event of termination of cooperation agreements, Captor will be obliged to pay remuneration in the amount of PLN 1m to Michał Walczak and Sylvain Cottens (each separately). If above-mentioned employees would not be able to continue the CT-04 project development, due to objective and unforeseeable circumstances (e.g. disease or death), and this situation will occur before the pre-clinical stage of selecting clinical candidates, Captor will be obliged to pay remuneration to mentioned employees in the amount of PLN 10m (to each employee separately).

Risk related to the intellectual property protection. Captor's strategy consists in patenting its projects at a late stage, which minimizes the risk of the disclosure of molecular targets and emergence of competition, as well as lowers costs and provides a longer IP protection for its projects. On the other hand, such a procedure poses a risk that the treatment solution for a particular therapeutic indication will be discovered or developed earlier by an entity other than Captor, making it impossible to register a patent. Also after patent protection has been granted, it may be invalidated for various reasons, which in extreme cases may prevent the Company from obtaining some or all of the revenues related to a given project, despite its considerably advanced stage and costs incurred. At the time of publication of the report, Captor has filed 4 patent applications for key pipeline designs: CT-01, CT-02 and two applications for LiLis™ ligand ligands.

Risk of share supply. There is a risk of share supply from Company shareholders, including minority shareholders, who currently hold 25.6/18.9% of the capital/votes. There is also a risk of capital dilution from the stock issue under the established incentive scheme.

Currency risk. The Company bears the costs of research in Poland and abroad and therefore incurs expenses denominated in PLN as well as in foreign currencies. In particular, the Company settles accounts with some of the service providers providing the Company with services related to research in foreign currencies, hence it cannot be excluded that with an unfavorable PLN/EUR or PLN/USD exchange rate the costs of such services, when converted into PLN, will increase due to changes in exchange rates. Unfavourable exchange rate changes may increase the Company's financial expenditure on research programmes.

Risk of downward partnering trends in biotechnology. The current macroeconomic environment positively impacts the number of partnering transactions, especially in the area of TPD technology (cf. list of partnering transactions). If there are tendencies of reducing R&D investments from the global pharmaceutical companies, availability of financing in the from of partnering agreements may decline. Consequently, such risk may translate into a drop in interest in innovative projects of the Company or lower values of the obtained parameters of potential partnering agreements.

Appendix

PARTNERING TRANSACTIONS (AML, MDS)

Date	Seller	Buyer	Project	Project description	Therapeutic Area	Biodollar value	Upfront payment [mln USD]	Milestones	Royalties
Drug Discovery & Preclinic									
2020Q2	Kymera	Sanofi	multi-program collaboration	small-molecule IRAK4 protein degraders	immune-inflammatory disease	2 000	150	1 850	undisclosed
2020Q2	Vividion Therapeutics	Roche	proteomics screening platform	proteomics screening platform and small molecule library to find E3 ligases, a class of proteins that are involved in the breakdown of proteins in cells that have become damaged or are no longer needed	cancer and immunology	b.d.	135	b.d.	undisclosed
2020Q2	Arrakis Therapeutics	Roche	Small molecule platform	Multi-Target Program Utilizing RNA-Targeted Small Molecule Drug Discovery Platform	cancer and immunology	b.d.	190	b.d.	undisclosed
2020Q1	Nurix	Sanofi	collaboration on targeted protein degradation therapies	DNA-encoded libraries and E3 ligases to create small molecules designed to induce degradation	cancer and other diseases	2 500	55	2 400	undisclosed
2019Q2	Nurix	Gilead	collaboration on targeted protein degradation therapies	pipeline of innovative targeted protein degradation drugs	cancer and other diseases	2 300	45	2 200	undisclosed
2019Q2	Kymera Therapeutics	Vertex	Collaboration on drug development of targeted protein degradation and Pegasus™ drug discovery platform	evelopment collaboration to advance small molecule protein degraders against multiple targets.	cancer and other diseases	1 100	70	1 000	undisclosed
2019Q2	Avinas	Bayer	PROTAC technology platform	exploration of novel molecular target space to address weeds, insects and/or diseases that threaten crops worldwide	other	685	18	200	undisclosed
2019Q1	C4 Therapeutics	Biogen	C4T's novel protein degradation platform	strategic collaboration to investigate the use of C4T's novel protein degradation platform to discover and develop potential new treatments for neurological conditions	Parkinsons, Alzheimer disease	415	b.d.	b.d.	undisclosed
2019Q1	C4 Therapeutics	Roche	C4T's novel protein degradation platform	strategic collaboration to investigate the use of C4T's novel protein degradation platform to discover and develop potential new treatments for neurological conditions	cancer and other diseases	900	b.d.	b.d.	undisclosed
2018Q1	Avinas	Merck	PROTAC drug portfolio	yet-to-be-discovered small molecule drugs that act by TPD technology	Cancer, Alheimer, inflammatory	830	125	706	undisclosed
2017Q3	Avinas	Genentech	PROTAC technology	Avinas' protein degradation technology against additional disease targets.	cancer and other diseases	650	b.d.	b.d.	undisclosed
2017Q3	IFM Therapeutics	BMS	STING and NRLP3 programs	molecules enhancing natural immune processes for treating cancer	cancer	b.d.	300	b.d.	undisclosed
2017Q1	Domain	Merck	Platforma czastek	Antagonista adenozyny	cancer and immunology	257	70	180	single-digit
2016Q4	Sorrento	Senier Enter	anti PD-1 inhibitor	anti PD-1 inhibitor	cancer	816	28	750	single-digit
2016Q4	Dong A ST	AbbVie	MER-TKI kinase inhibitor	kinase inhibitor	cancer and immunology	485	40	445	single-digit
2016Q2	Esuherai	Pieris Pharmaceuticals	ENUM 3884	anti-PD-1 mAB	cancer and immunology	200	1	100	single-digit
2016Q1	Symphogen	Baxalta	platforma 6 czasteczek	checkpoint inhibitor	cancer and immunology	1 600	175	1 425	single-digit
2016Q1	BluePrint Medicines	Roche	BLU-285, BLU-554	small-molecule kinase inhibitor	certain gastrointestinal tumors	193	9	184	undisclosed
2015Q4	Palobiopharma	Novartis	PBF-509	adenosine antagonist	non-small cell lung cancer	n/a	15	n/a	double-digit
2015Q3	Xencor	Amgen	XmAb14045, XmAb13676	anti-cancer cell bispecific antibody	solid cancer	1 740	45	1 695	undisclosed
2015Q3	Heptares Therapeutics	AstraZeneca	HTL-1071	adenosine antagonist	cancer and immunology	510	10	500	double-digit
2015Q2	Curadev	Roche	IDO1/TDO inhibitor	IDO1/TDO inhibitor	cancer and immunology	530	25	505	single-digit
2015Q1	Rigel	BSM	TGF-β inhibitor	TGF-β inhibitor	metastatic cancer	309	30	279	single-digit
2014Q4	NewLink Genetics	Roche	NLG919	IDO inhibitor	solid tumors or hematological malignancies	1 000	150	850	undisclosed
2011Q4	Hutchison Pharma	AstraZeneca	volitinib (HMPL-504)	kinase inhibitor	cancer and immunology	120	20	100	double-digit
2015	Aduro Biotech	Janssen	ADU-214	anti-cancer bacterial vaccine	solid cancer	787	30	750	double-digit
2016	Array Biopharma	AstraZeneca	small-molecule kinase inhibitor	small-molecule kinase inhibitor	cancer and immunology	b.d.	27		double-digit
Phase I									
2018Q3	Revolution Medicines	Sanofi	RMC-4630			600	50	500	double-digit
2017Q4	MacroGenics	Incyte	MGA012	checkpoint inhibitor	Oncology	900	150	330	double-digit
2017Q4	Incyte Corp	MacroGenics Inc	retifanlimab	Programmed Cell Death Protein 1 (PD1 or CD279 or PDCD1) Antagonist	Oncology	915	150	750	undisclosed
2017Q3	Immunogene	Jazz Pharmaceuticals	IMGN779, IMGN632	anti-CD123 antibody drug conjugate	hematopoietic cancer	50	38	13	single-digit
2017Q2	Calithera	Incyte	CB-1158	small-molecule arginine inhibitor	cancer and immunology	700	53	430	double-digit
2016Q4	Infinity Pharmaceuticals	Mundipharm	IPI-145	PI3K kinase inhibitor	leukemias	500	40	450	single-digit
2016Q2	CytomX	Abbvie		anti-CD71 antibody drug conjugate	solid tumors or hematological malignancies	490	30	460	undisclosed
2015Q4	Les Laboratoires Servier SAS	Cellectis SA	ALLO-501, ALLO-501A, UCART-19	CAR-T	Oncology	1442.1	66.1	1376	undisclosed
2015Q3	FivePrime	BSM	FPA008	anti- CSF1R receptor mAB	solid tumors or hematological malignancies	2 283	350	1 800	undisclosed
2015Q2	Innate Pharma	AstraZeneca	IPH2201	checkpoint inhibitor(anti-NKG2A)	solid tumors or hematological malignancies	1 025	250	925	double-digit
2015Q1	Eisai	Epizyme	EPZ-6438	lisine methyltransferase inhibitor	multiple lymphomas	70	40	30	single-digit
2013Q3	Sareum Holdings	CRT Pioneer Fund	PNT737	Chk1 inhibitor	multiple cancers	12	7	5	single-digit
2012Q4	AstraZeneca Plc	Ionis Pharmaceuticals Inc	AZD-4785, danvatirsen sodium	GTPase KRas inhibitor	Oncology	781	31	750	undisclosed
2012Q3	Baxter International Inc		opposetib sodium	PI3K kinase inhibitor	Oncology	1170	50	1120	undisclosed
2012Q2	Celgene Corp	Epizyme Inc	EPZ-0047777, pinometostat, Small Molecules to Inhibit HMT for Oncology	Histone Lysine N Methyltransferase H3 Lysine 79 Inhibitor	Oncology	855	78	777	undisclosed
2011Q4	Athersys Inc, Fast Forward LLC	Multistem	Multistem	Multistem	Oncology	0.64	0	0	undisclosed
2011Q3	Bristol-Myers Squibb Co	Innate Pharma SA	lirilumab	Killer Cell Immunoglobulin Like Receptor 2DL1 antagonist	Oncology	465	35	430	undisclosed
2011Q3	Accelleron Pharma Inc, Celgene Corp		luspatercept	Growth/Differentiation Factor 11 Inhibitor	Hematological Disorders; Oncology	242.5	25	662.5	undisclosed
2011Q3	Array BioPharma Inc, Genentech USA Inc		GDC-0425, GDC-0575	Serine/Threonine Protein Kinase Chk1 Inhibitor	Oncology	408	28	380	undisclosed
2010Q4	Novartis AG	ImmunoGen Inc	LOP-628	Cadherin 3 Inhibitor	Oncology	1294	45	1235.5	undisclosed
2008Q3	Bristol-Myers Squibb Co, PDL BioPharma Inc		elotuzumab, PDL-241	Cytotoxic T- SLAM Family Member 7	Immunology; Oncology	460	30	680	undisclosed
2006Q3	Infinity Pharmaceuticals Inc, Medimmune LLC (inactive)		IPI-493, retaspimycin hydrochloride	Heat Shock Protein 90 (HSP90) Inhibitor	Oncology	500	70	430	undisclosed
2018	Viralytics	Merck	Cavatak	oncolytic virus - Coxsackievirus Type A21	Oncology	1 600	394	1 206	double-digit
2016	Immunomanics	Seattle Genetics	IMMU-132	Antibody Drug Conjugate	Oncology	2 000	250	1 700	double-digit
2013	Daiichi Sankyo Co Ltd	AnQule Inc	mirsimetib mesylate	RAC Kinase Inhibitor	Oncology	265	10	255	undisclosed

Source: companies, Evaluate Pharma, Fierce Biotech, GlobalData, Biocentury.org

Date	Seller	Buyer	Project	Project description	Therapeutic Area	Biodollar value	Upfront payment [mln USD]	Milestones	Royalties
Phase II									
2020Q2	Zai Lab Ltd	Regeneron Pharmaceuti	odronextamab	CD3 Agonist	Oncology	190	30	160	double-digit
2019Q4	Agenus Inc	UroGen Pharma Ltd	zalifrelimab	Cytotoxic T Lymphocyte Protein 4 Agonist	Oncology	210	10	200	double-digit
2019Q3	Chimerix Inc	Cantex Pharmaceuticals	dociparstat sodium	High Mobility Group Protein B1 Inhibitor	Oncology	617,5	30	587,5	undisclosed
2019Q2	Cytovant Sciences HK Ltd	MediGene AG	CVTDC-01	Cytotoxic To Cells Expressing Melanoma Antigen	Oncology	1010	10	1000	single-digit
2018Q2	ArQule	Basilea	ARQ 087	multi-kinase inhibitor with potent pan-FGFR activity	Oncology	336	10	326	n/a
2017Q3	Loxo	Bayer	LOXO-101; LOXO-195	TRK kinase inhibitor	genetically defined cancers	575	200	400	double-digit
2017Q3	Keytruda	Merck	Lynparza & Selumetinib	poli(ADP-ribose) polymerase inhibitor	ovarian cancer	5 000	73	3 075	n/a
2017Q1	Immunomedix	Seattle Genetics	IMMU-132	ADC (antibody-drug conjugate)	solid tumor cancers	1 700	250	1 450	single-digit
2016Q3	OncoImmune	Pfizer	ONC-392	anti-CTLA4 mAB	acute GvHD, AML, LSCs	250	250	n/a	double-digit
2015Q2	Boehringer Ingelheim	Hanmi Pharmaceutical Co	HM61713	EFGR inhibitor	lung cancer	730	50	680	undisclosed
2015Q2	Innate Pharma	AstraZeneca	IPH2201	checkpoint inhibitor (anti-NKG2A)	solid tumors or hematological malignancies	1 025	250	925	undisclosed
2014Q4	Janssen Biotech Inc	Halozyme Therapeutics	daratumumab + hyaluronidase (human recombinant)	Ribose Hydrolase 1 Agonist	Oncology	581	15	566	undisclosed
2014Q1	FivePrime	BSM	nivolumab	checkpoint inhibitor (anti-PD-1)	myleoma, lung cancer	1 738	350	1 388	undisclosed
2013Q3	Merc Co	AtraZeneca	MK-1775	WEE1 kinase inhibitor	ovarian cancer	n/a	50	n/a	undisclosed
2012Q3	Janssen Biotech Inc	Genmab AS	daratumumab	ADP Ribose Hydrolase 1 inhibitor	Oncology	1210	135	1000	undisclosed
2011Q4	Janssen Biotech Inc	Pharmacyclics LLC	ibrutinib	Tyrosine Protein Kinase BTK Inhibitor	Gastrointestinal; Immunology; Infectious Disease; Oncology	975	150	825	undisclosed
2009Q4	Eli Lilly and Co	Incyte Corp	baricitinib; ruxolitinib phosphate	Tyrosine Protein Kinase JAK1 Inhibitor	many indications	690	125	565	undisclosed
2009Q3	Bayer HealthCare Pharmaceuticals	Algeta ASA (Inactive)	radium Ra 223 dichloride	radium Ra 223 dichloride	Oncology	796,78	60,00	736,00	undisclosed
2018	Pfizer Inc	GlycoMimetics Inc	rivipansel sodium	E Selectin Inhibitor	Cardiovascular; Oncology	342,5	22,5	320	undisclosed
2018	Almirall SA	Athenex Inc	tirbanibulin mesylate	Tubulin Inhibitor	Dermatology; Gastrointestinal; Immunology; Oncology	275	55	220	undisclosed
2017	Genentech USA Inc	Lumos Pharma Inc	navoximod	Indoleamine 2,3 Dioxygenase 1 Inhibitor	Oncology	1150	150	1000	undisclosed
2014	Immunomedics Inc	Takeda GmbH	veltuzumab	anti-CD20 mAB	Hematological Disorders; Immunology; Oncology	620	40	580	undisclosed
Phase III									
2018Q2	Eisai Co.	Merck	lenvatinib mesylate	tyrosine kinase inhibitor	Oncology	5 760	300	1 485	undisclosed
2015Q3	Biomarin	Mediviation	Talazoparib	PARP inhibitor	breast cancer	410	160	350	double-digit
2015	AstraZeneca	Celigene	MEDI4736	anti- PD-L1	blood cancers	450	450	n/a	double-digit
2014Q3	Infinity Pharma	Abbott	IPI-145 - Duvelisib	PI3K-delta; PI3K-gamma kinase inhibitor	blood cancers	680	275	405	double-digit
2012Q2	Tesaro	Janssen Biotech	niraparib	PARP inhibitor	prostate cancer	450	35	415	undisclosed
2016	Baxalta Inc	CTI BioPharma Corp	pacritinib	Interleukin 1 Receptor Associated Kinase 1 Inhibitor	Immunology; Infectious Disease; Oncology	362	60	302	undisclosed
2014	Merck & Co Inc	Ariad Pharmaceuticals I	ridaforolimus	mTOR Inhibitor	Oncology	692,5	125	567	undisclosed
2013	AstraZeneca Plc	Rigel Pharmaceuticals I	fostamatinib disodium	SYK kinase inhibitor	Oncology	1245	100	1145	undisclosed
2005Q1	Pfizer Inc	Coley Pharmaceutical G	agatolimod sodium	Toll Like Receptor 9 (CD289 or TLR9) Agonist	Oncology	505	50	455	undisclosed
2015Q2	Celgene Corp; MedImmune Ltd (Ina	AnorMED, Inc. (Inactive)	durvalumab	Programmed Cell Death 1 Ligand 1 (PD L1 or B7 Homolog 1 or CD274) Inhibitor	Oncology	450	450	0	undisclosed
2015	Ariad Pharmaceuticals Inc; Merck &	AnorMED, Inc. (Inactive)	ridaforolimus	Serine/Threonine Protein Kinase mTOR Inhibitor	Oncology	564	50	514	undisclosed
2015	Exelixis Inc; Sanofi	AnorMED, Inc. (Inactive)	Cabometyx	Angiopoietin 1 Receptor Inhibitor	Oncology	1525	140	1385	undisclosed
2008Q4	Bristol-Myers Squibb Co; Exelixis I	AnorMED, Inc. (Inactive)	Cabometyx; cabozantinib s-malate	Angiopoietin 1 Receptor Inhibitor	Oncology	1150	195	910	undisclosed
2009Q4	Novartis AG	Incyte Corp	capmatinib hydrochloride; ruxolitinib phosphate	Hepatocyte Growth Factor Receptor Inhibitor	Oncology	1644,5	150	1260	undisclosed
Submission									
2020Q1	Incyte Corp	MorphoSys AG	tafasitamab	anti-CD19 mAB	Oncology	2000	750	1100	single-digit
2019Q4	Recordati SpA	Novartis AG	osilodrostat phosphate; pasireotide; pasireotide LAR	Somatostatin Receptor (SSTR) Agonist	many indications incl. Oncology	390	390	0	undisclosed
2018Q3	Swedish Orphan Biovitrum AB	Light Chain Bioscience	emapalumab; NI-1801; TG-1801	anti-CD19 mAB	Hematological Disorders;	449,8785	49,98	0	undisclosed
2017Q1	Merck & Co Inc	Bristol-Myers Squibb Co	pembrolizumab	(PD1 or CD279 or PDCD1) Antagonist	Hematological Disorders;	625	625	0	undisclosed
2016Q4	Takeda Pharmaceutical Co Ltd	Teva Pharmaceutical Ind	ixazomib citrate	Proteasome Inhibitor	Hematological Disorders;	300	150	150	undisclosed
2016Q4	Boryung Pharmaceutical Co Ltd	Pharma Mar SA	plitidepsin	Elongation Factor 1 Alpha 2 Inhibitor	Infectious Disease;	1,0104	0,5	0,5	undisclosed
2016Q3	Zai Lab Ltd	Tesaro Inc	niraparib	Polymerase 1 Inhibitor	Oncology	54,5	15	39,5	undisclosed
2016Q1	Ipsen SA	Exelixis Inc	Cabometyx; cabozantinib s-malate	Angiopoietin 1 Receptor Inhibitor	Hematological Disorders;	1088,7	210	878,7	single-digit
2015Q1	Teva Pharmaceutical Industries Ltd	Eagle Pharmaceuticals I	Bendeka	DNA Synthesis Inhibitor	Oncology	112,75	31,75	80,75	undisclosed
2014Q4	Five Prime Therapeutics Inc	BMS	cabiralizumab; nivolumab	Macrophage Colony Stimulating Factor 1 Receptor Antagonist	Hematological Disorders;	1737,5	350	1387,5	undisclosed
2012Q3	Zhejiang Hisun Pharmaceutical Co	Pfizer	bleomycin; dactinomycin; epirubicin	DNA Directed RNA Polymerase Inhibitor	Oncology; Respiratory	295	295	0	undisclosed
2008Q3	Swedish Orphan Biovitrum AB	Amgen	ancestim; palifermin	FGFR2 Antagonist	Hematological Disorders;	130	130	0	undisclosed
2004Q2	BioMarin Pharmaceutical Inc	Medicis Pharmaceutical	prednisolone sodium phosphate	Glucocorticoid Receptor Agonist	many indications incl.	93	93	0	undisclosed
2013	Amgen Inc	Kyowa Kirin Co Ltd	mogamulizumab	anti- CD194 mAB	Central Nervous System;	520	100	420	undisclosed
					median	**619**			

Source: companies, Evaluate Pharma, Fierce Biotech, GlobalData, Biocentury.org,

PARTNERING TRANSACTIONS (SOLID TUMORS)

Date	Seller	Buyer	Project	Project description	Therapeutic Area	Biodollar value [mln USD]	Upfront [mln USD]	Milestones [mln USD]	Royalties [mln USD]
Drug Discovery & Preclinic									
2020Q2	Kymera	Sanofi	multi-program collaboration	small-molecule IRAK4 protein degraders	immune-inflammatory disease	2 000	150	1 850	n/a
2020Q2	Vividion Therapeutics	Roche	proteomics screening platform	proteomics screening platform and small molecule library to find E3 ligases, a class of proteins that are involved in the breakdown of proteins in cells that have become damaged or are no longer needed.	cancer and immunology	n/a	135	n/a	n/a
2020Q2	Arrakis Therapeutics	Roche	Small molecule platform	Multi-Target Program Utilizing RNA-Targeted Small Molecule Drug Discovery Platform	cancer and immunology	n/a	190	n/a	n/a
2020Q1	Nurix	Sanofi	collaboration on targeted protein degradation therapies	DNA-encoded libraries and E3 ligases to create small molecules designed to induce degradation	cancer and other diseases	2 500	55	2 400	n/a
2019Q2	Nurix	Gilead	collaboration on targeted protein degradation therapies	pipeline of innovative targeted protein degradation drugs	cancer and other diseases	2 300	45	2 200	n/a
2019Q2	Kymera Therapeutics	Vertex	Collaboration in drug development of targeted protein degradation and Pegasus™ drug discovery platform	evelopment collaboration to advance small molecule protein degraders against multiple targets.	cancer and other diseases	1 100	70	1 000	n/a
2019Q2	Arvinas	Bayer	PROTAC technology platform	exploration of novel molecular target space to address weeds, insects and/or diseases that threaten crops worldwide	other	685	18	200	n/a
2019Q1	C4 Therapeutics	Biogen	C4T's novel protein degradation platform	strategic collaboration to investigate the use of C4T's novel protein degradation platform to discover and develop potential new treatments for neurological conditions	Parkinsons, Alzheimer disease	415	n/a	n/a	n/a
2019Q1	C4 Therapeutics	Roche	C4T's novel protein degradation platform	strategic collaboration to investigate the use of C4T's novel protein degradation platform to discover and develop potential new treatments for neurological conditions	cancer and other diseases	900	n/a	n/a	n/a
2018Q1	Arvinas	Merck	PROTAC drug portfolio	yet-to-be-discovered small molecule drugs that act by TPD technology	Cancer, Alheimer, inflammatory	830	125	706	n/a
2017Q3	Arvinas	Genentech	PROTAC technology	Arvinas' protein degradation technology against additional disease targets.	cancer and other diseases	650	n/a	n/a	n/a
2017Q3	IFM Therapeutics	BMS	STING and NRLP3 programs	molecules enhancing natural immune processes for treatig cancer	cancer	n/a	300	n/a	n/a
2017Q1	Domain	Merck	platform	adenosie antagonist	cancer and immunology	257	70	180	single-digit
2016Q4	Sorrento	Servier Enter	anti PD-1 inhibitor	anti PD-1 inhibitor	cancer	816	28	750	single-digit
2016Q4	Dong-A ST	AbbVie	MER-TKI kinase inhibitor	kinaze inhibitor	cancer and immunology	485	40	445	single-digit
2016Q2	Enumeral	Pieris Pharmaceuticals	ENUM 3884	anti-PD-1 mAB	cancer and immunology	200	1	100	single-digit
2016Q1	Symphogen	Baxalta	platforma 6 czasteczek	checkpoint inhibitor	cancer and immunology	1 600	175	1 425	single-digit
2016Q1	BluePrint Medicines	Roche	BLU-285; BLU-554	small-molecule kinase inhibitor	certain gastrointestinal tumors	193	9	184	n/a
2015Q4	Palobiopharma	Novartis	PBF-509	adenosine antagonist	non-small cell lung cancer	n/a	15	n/a	double-digit
2015Q3	Xencor	Amgen	XmAb14045, XmAb13676	anti-cancer cell bispecific antibody	solid cancer	1 740	45	1 695	n/a
2015Q3	Heptares Therapeutics	AstraZeneca	HTL-1071	adenosine antagonist	cancer and immunology	510	10	500	double-digit
2015Q2	Curadev	Roche	IDO1/TDO inhibitor	IDO1/TDO inhibitor	cancer and immunology	530	25	505	single-digit
2015Q1	Rigel	BSM	TGF-β inhibitor	TGF-β inhibitor	metastatic cancer	309	30	279	single-digit
2014Q4	NewLink Genetics	Roche	NLG919	IDO inhibitor	solid tumors or hematological malignancies	1 000	150	850	n/a
2011Q4	Hutchison Pharma	AstraZeneca	volitinib (HMPL-504)	kinase inhibitor	cancer and immunology	120	20	100	double-digit
2015	Aduro Biotech	Janssen	ADU-214	anti-cancer bacterial vaccine	solid cancer	787	30	750	double-digit
2016	Array Biopharma	AstraZeneca	small-molecule kinase inhibitor	small-molecule kinase inhibitor	cancer and immunology	n/a	27		
Phase I									
2016	Immunomenics	Seattle Genetics	IMMU-132	Antibody Drug Conjugate	Oncology	2 000	250	1 700	double-digit
2005	ArQule Inc	Daiichi Sankyo Co Ltd	miransertib mesylate	kinase inhibitor	Hematological Disorders; Non Malig	265	10	255	n/a
2005Q3	Takeda Pharmaceutic	Merck KGaA	matuzumab	EGFR Antagonist	Oncology	72,216	72,23	0	n/a
2005Q4	Regeneron Pharmace	Sanofi	ziv-aflibercept	Placenta Growth Factor Inhibitor	Metabolic Disorders; Oncology	25	25	0	n/a
2009Q1	Onyx Pharmaceutical	S*BIO Pte Ltd	CT-1578; pacritinib	IRAK1 Inhibitor	Immunology; Infectious Disease;	550	25	525	single-digit
2012Q3	Astex	Janssen Pharmaceutica	JNJ42756493	Fibroblast Growth Factor Receptor (FGFR) kinase inhibitor	multiple cancers	500	40	460	double-digit
2012Q4	VentiRx Pharmaceutic	Celgene Corp;	motolimod	Toll Like Receptor 8 (CD288 or TLR8) Agonist	Oncology	35	35	0	n/a
2012Q4	n/a	Sumitomo Dainippon Pha	napabucasin	STAT3 Inhibitor	Oncology	170	15	155	n/a
2012Q4	Ionis Pharmaceuticals	AstraZeneca Plc	AZD-4785; danvatirsen sodium	KRas Inhibitor	Oncology	781	31	750	double-digit
2014Q4	Array BioPharma Inc	Cascadian Therapeutics I	tucatinib	ERBB 2 Inhibitor	Oncology	300	20	280	single-digit
2015Q2	Array BioPharma Inc;	Cascadian Therapeutics I	tucatinib	ERBB 2 Inhibitor	Oncology	10	10	280	n/a
2015Q3	FivePrime	BSM	FPA008	anti-CSF1R mAB	Oncology	2 283	350	1 800	n/a
2016Q2	CytomX	Abbvie	anti- CD71 ADC	anti- CD71 ADC	solid and hematologic cancer	490	30	460	n/a
2016Q2	4SC AG	Link Health Group	4SC-205	KIF11 Inhibitor	Oncology	84,5363	84,54	0	n/a
2017Q1	Hanmi Pharmaceutica	Genentech USA Inc	belvarafenib	Proto Oncogene c RAF Inhibitor	Oncology	910	80	830	single-digit
2017Q2	Calithera	Incyte	CB-1158	small-molecule arginine inhibitor	cancer and immunology	700	53	430	double-digit
2017Q3	Harbin Gloria Pharma	Arcus Biosciences Inc	GLS-010	Programmed Cell Death Protein 1 (PD1 or CD279 or PDCD1) Antagonist	Oncology	816	18,5	797,5	n/a
2017Q4	MacroGenics	Incyte	MGA012	checkpoint inhibitor	multiple cancers	900	150	330	double-digit
2017Q4	Loxo	Bayer	LOXO-101; LOXO-195	kinase inhibitor	cancer and immunology	575	200	375	n/a
2017Q4	MacroGenics Inc	Incyte Corp	retifanlimab	Programmed Cell Death Protein 1 (PD1 or CD279 or PDCD1) Antagonist	Oncology	915	150	750	n/a
2017Q4	ArQule Inc	Kyowa Kirin Co Ltd	tivantinib	Proto Oncogene c Met Inhibitor	Oncology	123	30	93	n/a
2018Q3	Revolution Medicines	Sanofi	RMC-4630	RMC-4630	Oncology	600	50	500	double-digit
2018Q4	MacroGenics Inc	Zai Lab Ltd	margetuximab; Monoclonal Antibody for Oncol	Kinase ERBB 2 Antagonist	Oncology	165	25	140	n/a
2018Q4	Zymeworks Inc	BeiGene (Beijing) Co Ltd	zanidatamab; ZW-49	Kinase ERBB 2 Antagonist	Oncology	430	40	390	double-digit

Source: companies, Evaluate Pharma, Fierce Biotech, GlobalData, Biocentury.org,

Date	Seller	Buyer	Project	Project description	Therapeutic Area	Biodollar value	Upfront	Milestones	Royalties
						[mln USD]			
Phase II									
2020Q3	Arcus Biosciences Inc	Gilead Sciences Inc	AB-154; AB-610; AB-680; AB-928; Drug for Or	Adenosine Receptor A2a inhibitor	Oncology	2100	375	1725	n/a
2019Q4	RAPT Therapeutics Inc	Hanmi Pharmaceuticals Co Ltd	FLX-475	C-C Chemokine Receptor Type 4 (K5-5 or CD194 or CCR4) Antagonist	Oncology	118	10	108	n/a
2019Q1	GlaxoSmithKline Plc;	Merck KGaA	bintrafusp alfa	PD L1 Inhibitor	Infectious Disease; Oncology	4233,503	343,26	3890,26	double-digit
2017Q3	Loxo	Bayer	LOXO-101; LOXO-195	TRK kinase inhibitor	patients with genetically defined can	575	200	400	double-digit
2017Q3	Keytruda	Merck	Lynparza & Selumetinib	poli(ADP-ribose) polymerase inhibitor	ovarian cancer	5 000	73	3 075	double-digit
2017Q1	Immunomedix	Seattle Genetics	IMMU-132	ADC (antibody-drug conjugate)	solid tumor cancers	1 700	250	1 450	n/a
2015Q2	Boehringer Ingelheim	Hanmi Pharmaceutical Co	HM61713	EFGR inhibitor	lung cancer	730	50	680	single-digit
2015Q2	Innate Pharma	AstraZeneca	IPH2201	checkpoint inhibitor (anti-NKG2A)	solid tumors or hematological malig	1 025	250	925	double-digit
2015Q2	Innate Pharma SA	AstraZeneca Plc	durvalumab + monalizumab; monalizumab	NK Cell Receptor Inhibitor	Immunology; Infectious Disease; On	1375	250	925	n/a
2015Q1	Syndax Pharmaceuticals Inc	Kyowa Kirin Co Ltd	entinostat	Histone Deacetylase 1 Inhibitor	Oncology	100	25	75	single-digit
2014Q1	FivePrime	BSM	nivolumab	checkpoint inhibitor (anti-PD-1)	myeloma, lung cancer	1 738	350	1 388	n/a
2013Q3	Merc Co	AtraZeneca	MK-1775	WEE1 kinase inhibitor	ovarian cancer	n/a	50	n/a	single-digit
2013Q3	Merck & Co Inc	AstraZeneca Plc	adavosertib; adavosertib + durvalumab	PD L1 Inhibitor	Oncology	50	50	0	n/a
2011Q4	Pharmacyclics LLC	Janssen Biotech Inc	ibrutinib	Tyrosine Protein Kinase BTK Inhibitor	Oncology	975	150	825	double-digit
2011Q4	Merck Serono SA	Ono Pharmaceutical Co Ltd	tecemotide	tecemotide	Oncology	6,65	6,65	0	n/a
2011Q2	PharmaEngine Inc	Merrimack Pharmaceuticals Inc	irinotecan hydrochloride	DNA Topoisomerase I Inhibitor	Oncology	266,5	10	210	n/a
2011Q2	4SC AG	Yakult Honsha Co Ltd	resminostat	Histone Deacetylase 1 Inhibitor	Oncology	192,56	8,69	183,87	single-digit
2009Q4	Incyte Corp	Eli Lilly and Co	baricitinib; ruxolitinib phosphate	Tyrosine Protein Kinase JAK1 Inhibitor	Cancer	690	125	565	single-digit
2008Q4	ArQule Inc	Daiichi Sankyo Co Ltd	tivantinib	Hepatocyte Growth Factor Receptor Inhibitor	Oncology	620	60	0	single-digit
2008Q1	Amgen Inc	Takeda Pharmaceutical Co Ltd	motesanib diphosphate	Mast/Stem Cell Growth Factor Receptor Kit Inhibitor	Oncology	358	303	55	double-digit
2004Q2	AnorMED, Inc. (Inactive)	Poniard Pharmaceuticals, Inc. (In	picoplatin	DNA Synthesis Inhibitor	Oncology	17	10	5	n/a
2004Q2	Mologen AG	Pharma	lefitolimod	Toll Like Receptor 9 (CD289 or TLR9) Agonist	Oncology	123,899	5,88	117,9	n/a
2004Q2	Immunomedics Inc	Seagen Inc	sacituzumab govitecan	Tumor Associated Calcium Signal Transducer 2 inhibitor	Oncology	2000	250	1700	double-digit
2004Q2	Symphogen A/S	Merck KGaA	(futuximab + modotuximab)	EGFR Antagonist	Oncology	621,7794	25,13	597	single-digit
2004Q2	Merrimack Pharmaceuticals Inc	Sanofi	seribantumab	Kinase ERBB 3 Antagonist	Oncology	530	60	470	single-digit
2004Q2	BioInvent International AB	F. Hoffmann-La Roche Ltd	THR-317	Placenta Growth Factor Inhibitor	Oncology	694,431	77,16	694,43	double-digit
2004Q2	Celyad Oncology	Ono Pharmaceutical Co Ltd	CYAD-01; CYAD-101	Killer Cell	Oncology	311,5	12,5	299	single-digit
2019Q1	Daiichi Sankyo Co Ltd	AstraZeneca Plc	trastuzumab deruxtecan	Kinase ERBB 2 inhibitor	Musculoskeletal Disorders; Oncolog	6900	1350	5550	n/a
2015Q2	MedImmune Ltd (Inactive)	Celgene Corp	durvalumab	PD L1 Inhibitor	Oncology	450	450	0	n/a
2008Q4	Exelixis Inc	Bristol-Myers Squibb Co	Cabometyx; cabozantinib s-malate	Angiopoietin 1 Receptor Inhibitor	Oncology	1150	195	910	n/a
Phase III									
2015Q3	Biomarin	Medivation	Talazoparib	PARP inhibitor	breast cancer	410	160	350	double-digit
2019Q3	Lupin Ltd	Boehringer Ingelheim International	LNP-3794	MEK Kinase Inhibitor	Oncology	720	20	700	n/a
2019Q1	Daiichi Sankyo Co Ltd	AstraZeneca Plc	trastuzumab deruxtecan	Kinase ERBB 2 inhibitor	Musculoskeletal Disorders; Oncolog	6900	1350	5550	n/a
2015Q3	Mabtech Ltd	Sorrento Therapeutics Inc	basiliximab biobetter; cetuximab biobetter; inf	EGFR Inhibitor	Dermatology; Immunology; Oncolog	200	10	150	n/a
2015Q2	MedImmune Ltd (Inactive)	Celgene Corp	durvalumab	PD L1 Inhibitor	Oncology	450	450	0	n/a
2015Q1	Can-Fite BioPharma Ltd	Cipher Pharmaceuticals Inc	piclidenoson	Adenosine Receptor A3 (ADORA3) Agonist	many indications	2,907	1,31	1,6	n/a
2014Q3	Infinity Pharma	Abbott	IPI-145 - Duvelisib	PI3K-delta PI3K-gamma inhibitor	blood cancers	680	275	405	double-digit
2014Q3	Merrimack Pharmaceuticals Inc	Baxter International Inc	irinotecan hydrochloride	DNA Topoisomerase I Inhibitor	Oncology	970	100	870	n/a
2014Q3	PharmaEngine Inc	Merrimack Pharmaceuticals Inc	irinotecan hydrochloride	DNA Topoisomerase I Inhibitor	Oncology	266,5	10	218,5	9%
2012Q2	Tesaro	Janssen Biotech	niraparib	PARP inhibitor	prostate cancer	450	35	415	n/a
2011Q1	AVEO Pharmaceuticals Inc	Astellas Pharma Inc	tivozanib hydrochloride	Vascular Endothelial Growth Factor Receptor 1 Inhibitor	Oncology; Ophthalmology; n/a	1480	125	1355	n/a
2009Q4	Spectrum Pharmaceuticals Inc	Nippon Kayaku Co Ltd	apaziquone	DNA Synthesis Inhibitor	Mouth and Dental Disorders; Oncolo	151	15	136	double-digit
2009Q4	Incyte Corp	Novartis AG	capmatinib hydrochloride; ruxolitinib phosphat	Hepatocyte Growth Factor Receptor Inhibitor	Dermatology; Gastrointestinal; Onc	1644,5	150	1260	double-digit
2008Q4	Exelixis Inc	Bristol-Myers Squibb Co	Cabometyx; cabozantinib s-malate	Angiopoietin 1 Receptor Inhibitor	Non Malignant Disorders; Oncology	1150	195	910	n/a
2008Q4	Spectrum Pharmaceuticals Inc	Allergan Inc	apaziquone	DNA Synthesis Inhibitor	Mouth and Dental Disorders; Oncolo	345,5	41,5	304	n/a
2008Q4	Spectrum Pharmaceuticals Inc	Allergan Sales LLC	apaziquone	DNA Synthesis Inhibitor	Mouth and Dental Disorders; Oncolo	41,5	41,5	0	n/a
2004Q3	Medarex Inc	Pfizer Inc	tremelimumab	Cytotoxic T Lymphocyte Protein 4 Antagonist	Infectious Disease; Oncology	510	110	400	n/a
2014	Pharma Mar SA	Chugai Pharmaceutical Co Ltd	lurbinectedin	RNA Polymerase II Inhibitor	Oncology	138,4769	31,33	104,42	n/a
2017	CTI BioPharma Corp	Baxalta Inc	pacritinib	Interleukin 1 Receptor Associated Kinase 1 IRAK1 inhibitor	Immunology; Infectious Disease; On	362	60	302	n/a
2009	Exelixis Inc;	Sanofi	Cabometyx; cabozantinib s-malate	Angiopoietin 1 Receptor Inhibitor	Genito Urinary System; Oncology	15,25	140	1000	n/a
2015	AstraZeneca	Celligene	MEDI4736	inhibitor PD-L1	blood cancers	450	450	n/a	double-digit
Submission									
2020Q3	Arcus Biosciences Inc;	Gilead Sciences Inc	AB-154; AB-610; AB-680; AB-928; Drug for Or	5' Nucleotidase Inhibitor	Oncology	2100	375	1725	n/a
2020Q3	Seagen Inc	Merck & Co Inc	tucatinib	Kinase ERBB 2 Inhibitor	Oncology	275	125	65	n/a
2019Q1	Puma Biotechnology Inc	Pierre Fabre Medicament SA	neratinib	EGFR Inhibitor	Gastrointestinal; Oncology	352	60	285	n/a
2018Q1	Puma Biotechnology Inc	Pint Pharma International SA	neratinib	EGFR Inhibitor	Gastrointestinal; Oncology	34,5	10	24,5	n/a
2017Q1	Ono Pharmaceutical Co Ltd	Merck & Co Inc	pembrolizumab	Programmed Cell Death Protein 1 (PD1 or CD279 or PDCD1) Antagonist	Infectious Disease; Oncology; Resp	625	625	0	n/a
2016Q1	Exelixis Inc	Ipsen SA	Cabometyx; cabozantinib s-malate	Angiopoietin 1 Receptor Inhibitor	Genito Urinary System; Oncology	1088,7	210	878,7	double-digit
2015Q2	Taiho Pharmaceutical Co Ltd	Les Laboratoires Servier SAS	(tipiracil hydrochloride + trifluridine)	DNA Synthesis Inhibitor	Oncology	130	130	0	n/a
2014Q4	Five Prime Therapeutics Inc	Bristol-Myers Squibb Co	cabiralizumab; nivolumab	Macrophage Colony Stimulating Factor 1 Receptor Antagonist	Genetic Disorders; Immunology; On	1737,5	350	1387,5	n/a
2009Q3	OSI Pharmaceuticals, Inc. (Inactive)	AVEO Pharmaceuticals Inc	erlotinib hydrochloride	EGFR Inhibitor	Gastrointestinal; Oncology	20	20	0	n/a
2009Q3	Abraxis BioScience Inc;	AstraZeneca Luxembourg SA	paclitaxel albumin bound	Tubulin Inhibitor	Cardiovascular; Oncology	200	200	0	n/a
2009Q3	Taiho Pharmaceutical Co Ltd	Sanofi	(gimeracil + oteracil + tegafur)	Dihydropyrimidine Dehydrogenase [NADP(+)] Inhibitor	Oncology	295	0	295	n/a
						550			

Source: companies, Evaluate Pharma, Fierce Biotech, GlobalData, Biocentury.org,

Glossary

Term	Definition
ADME	studies covering aspects of drug metabolism in the body (Absorption, Distribution, Metabolism and Excretion), performed at each stage of drug development to characterize the molecules in detail before starting clinical trials
activator	subtance enabling or increasing the rate of a chemical reaction
ADCC	antibody dependent cellular cytotoxicity
AML	acute myleoid leukemia
angiogenesis	the process of formation of capillaries that supply blood
autoimmune disease	autoimmune diseases, otherwise known as autoimmune diseases, are diseases that result from an error in the immune system
best-in-class drug	the drug is the best in a given group of therapeutic compounds, with a unique mechanism of action determining the greatest therapeutic benefit
BID	bifunctional degrader, a compound that has a functional group that recognizes a pathogenic protein and a functional group that recognizes a ubiquitin ligase. Binding of the POI by BID allows for the attachment of ubiquitin and directing the POI to degradation in the proteasome
biodollar value	value of the partering contract, estimated as the sum of undiscounted payments possible to obtain
biological drug	The drug is closely related to biologically active molecules naturally occurring in the human body, acting by influencing the mechanisms mediated by them.
biosimilar drug	a product that is developed in a similar way to an already registered, existing reference biological drug
celebron	a protein included in the E3 ligase complex, influencing its activity
chemotherapy	a method of therapy that uses synthetic chemicals to combat microbial, parasitic diseases and cancer
CMC	complement-mediated cytotoxicity
CRBN	Cereblon protein, a protein included in the E3 ligase complex, influencing its activity
CRC	colorectal Cancer
degrader	molecule that attaches to a cellular protein and causes its degradation
degron	a signal element driving protein to be degraded
drug candidate	A molecule with proven safety and therapeutic efficacy, prepared for introduction to clinical trials
Drug Discovery process	the process of discovering new drugs, including the identification of a compound that interacts with a selected molecular target and its optimization.
DUB	deubiquitinases, enzymes that detach ubiquitin from proteins targeted for degradation in the proteasome.
E1 ligase	ubiquitin activating enzyme
E2 ligase	ubiquitin binding enzyme
E3 ligase	ubiquitin ligase, an enzyme that binds ubiquitin to a cell proteino
EMA	European Medicines Agency
ENDTAC	ENDTAC (ENDosome TArgeting Chimera). Proof-of-concept technology that uses endosomes for cellular protein degradation.
FDA	Food and Drug Administration
first-in-class	a drug with a new mechanism of action in a given group of therapeutic compounds.
gene therapy	treatment by introducing foreign nucleic acids (DNA or RNA) into cells.
generic drug	a product that is developed in a similar way to an already registered, existing on the reference market.
GMP	Good Manufacturing Practice - a set of standards used in industrial production, especially in the pharmaceutical, food and other areas of economic activity.
HCC	hepatocellularcarcinoma
HyT	Hydrophobic tagging- a protein degradation technique in which a hydrophobic tag is attached to the POI. The POI associated with the tag is recognized as a protein with the wrong spatial structure and is directed to the cellular degradation process.
IAP	Protein Apoptosis Inhibitors (IAPs) are a family of proteins that partially act by inhibiting caspases (enzymes from the group of cysteine proteases that degrade cellular proteins when activated by apoptotic signals).
IBD	inflammatory bowel disease
IMID	an immunomodulatory drug, for example, thalidomide
immunotherapy	a field of medicine that uses techniques to modify the functioning of the immune system.
in vitro study	the study of the effect of a compound on orans (heart, trachea, stomach, intestines), tissues or individual cells isolated from the animal organism.
in vivo study	the study is carried out on a living organism, most often in an animal system
inhibitor	substancja zatrzymująca lub zmniejszająca szybkość reakcji chemicznej.
innovative drug	A drug with a unique mechanism, patent protected in terms of formula and manufacturing process. Usually, it is a medicine containing an active substance or a mixture of active substances that have not been previously authorized in a given country.

source: Trigon Brokerage House

Glossary—continuation

Term	Definition
iRNA	RNA interference, a method of silencing the reading of genetic information
Lenalidomide	thalidomide derivative, an IMID class drug
ligand	a molecule in complex (complex) compounds that is attached directly to the central compound called the core of the complex.
ligase	an enzyme that catalyses the formation of chemical bonds between molecules
LiLys™	a ligase ligand library developed by Captor Therapeutics. Ligands of ligases are chemical compounds, the binding of which activates cell ligases.
lisosome	a cellular organelle, digesting proteins inside the cell
LYTAC	LYTAC (Lysosome Targeting Chimeras). Targeted degradation technology where pathogenic extracellular proteins are incorporated into endosomal degradation.
macroautophagy	the process of decomposition of chemical compounds, cell fragments and cell organelles by the cell
MDS	myleodysplastic syndrome
milestones	fee for the implementation of a milestone in project development
molecular glue	Low molecular weight chemical compounds that, upon binding to a target protein (POI), allow the initiation of an interaction between the POI and the ubiquitin E3 ligase and ultimately cellular degradation of the POI.
molecular target	a molecule in a living organism that interacts with a drug and the result of this interaction is the desired therapeutic effect
monoclonal antibody (mAB)	antibodies produced from B lymphocytes that specifically recognize one type of antigen
neosubstrate	ubiquitin ligase complex with a chemical compound (e.g. molecular glue) that can attach to new molecular targets not normally recognized by the ligase
Obteron ®	technology analogous to PROTAC, including direct degraders of selected molecular targets. Direct degraders activate natural ligases, induce ubiquitilation of the POI, as a consequence of which the pathogenic protein is degraded.
p53	a transcription factor with tumor suppressor (silencing) properties
pharmacovigilance	proces safety assesment by monitoring adverse effects of medicinal products.
POI	Protein of Intrest- protein selected as a molecular target
PROTAC	PROteolysis TArgeting Chimera- a small molecule composed of two active domains and a linker capable of removing certain undesirable proteins
proteasome	protein macromolecular enzyme aggregate that degrades ubiquitin-marked proteins
proteolytic complex	a complex of cellular proteins carrying out the process of protein degradation
proteome	the set of proteins present in the cell at a given moment, the protein equivalent of the genome.
RA	rheumatoid arthritis
regulatory protein	a protein that attaches to other proteins, causing them to activate or lose their activity
royalties	a contractual fee determined as a percentage or amount based on the levels of sales
selective drug	The compound that binds selectively to a molecular target, which results in increasing the therapeutic effect and minimizing potential side effects.
SLE	systemic lupus erythematosus
small molecule drug	A drug of low molecular weight, mostly produced by chemical synthesis.
Talidomide	an IMID drug, the first identified drug in the class of molecular glues
targeted protein degradation	targeted protein degradation (TPD) is a method that uses small molecule chemical compounds to engage the body's natural processes to remove pathogenic proteins
targeted therapy	a type of therapy that focuses on compounds that interact with a molecular target whose disorder is identified with the development of a given disease.
technological platform	an innovative research toll that enables identification and development of novel drugs in the selected research areas
transription factor	DNA binding protein to a specific place or region where it regulates the process of transcription (reading genetic information)
ubiquitin ligase	or E3 ligase, an enzyme that binds ubiquitin to a cellular protein
ubiquitine	a small molecule protein that is present in all eukaryotic cells and plays a key role in the labeling of proteins (ubiquitination) that are expected to be degraded by the cell in the proteasome.
UCH	Ubiquitin carboxy-terminal hydrolase; type of deubiquitinase enzyme
upfront payment	initial payment, usually related to the reimbursement of costs incurred as a result of project development to the commercialization stage
USP	Universal Stress Protein, a protein secreted under stressful conditions for the cell, allowing the activation of mechanisms enabling the cell's survival
VHL	von-Hippel-Lindau (VHL) protein , element of E3 ligase complex
zinc finger	a type of protein domain found in DNA binding proteins and directly involved in the binding of a nucleic acid molecule by the protein.

source: Trigon Brokerage House

Income statement (PLNm)

	2019	2020	2021	2022F	2024F	2024F
Revenues	**0,0**	**0,0**	**4,0**	**23,4**	**27,2**	**14,0**
Revenues from R&D services	0,0	0,0	4,0	13,8	17,6	14,0
Revenues from R&D partnering transactions	0,0	0,0	0,0	9,6	9,6	0,0
Profit from sales	0,0	0,0	3,2	13,8	17,6	14,0
Operating costs	23,8	33,5	54,0	77,8	93,9	94,0
Other operating profits	16,0	21,6	24,6	21,9	39,8	34,6
Other operating costs	0,0	0,4	5,8	0,0	0,0	0,0
EBITDA	**-3,4**	**-5,6**	**-24,5**	**-34,9**	**-27,3**	**-36,0**
EBITDA adj.	**-3,4**	**-5,6**	**-24,5**	**-34,9**	**-27,3**	**-36,0**
Amortization	4,5	6,6	7,4	7,2	9,3	9,5
EBIT	**-7,9**	**-12,2**	**-31,9**	**-42,1**	**-36,6**	**-45,5**
Financial net	-0,5	-0,3	-0,8	0,1	0,0	0,0
Gross profit	**-8,3**	**-12,7**	**-32,8**	**-42,3**	**-37,6**	**-47,6**
Income tax	0,0	0,0	0,0	0,0	0,0	0,0
Minority interest	0,0	0,0	0,0	0,0	0,0	0,0
Net profit	**-8,3**	**-12,7**	**-32,8**	**-42,3**	**-37,6**	**-47,6**
Net profit adj.	**-8,3**	**-12,7**	**-32,8**	**-42,3**	**-37,6**	**-47,6**
EBITDA adj. margin	-	-	-	-	-	-
EBIT margin	-	-	-	-	-	-
net profit adj. margin	-	-	-	-	-	-
sales growth y/y	-	-	-	488%	-	-
EBITDA adj. growth y/y	-	-	-	-	-	-
EBIT growth y/y	-	-	-	-	-	-
net profit adj. growth y/y	-	-	-	-	-	-

Source: the company (historical data), Trigon Brokerage House (forecasts)

	2Q21	3Q21	4Q21	1Q22	2Q22	3Q22F
Revenues	**1,0**	**1,3**	**n.a.**	**1,0**	**1,2**	**1,0**
Revenues from R&D services	1,0	1,3	n.a.	1,0	1,2	1,0
Revenues from R&D partnering transactions	0,0	0,0	n.a.	0,0	0,0	0,0
Profit from sales	1,0	0,8	n.a.	0,8	0,9	1,6
Operating costs	12,1	15,4	n.a.	16,3	17,8	16,9
Other operating profits	5,3	5,8	n.a.	4,7	6,9	5,2
Other operating costs	1,1	0,0	n.a.	0,0	0,0	0,0
EBITDA	**-5,1**	**-6,9**	**n.a.**	**-8,9**	**-8,1**	**-8,4**
EBITDA adj.	**-5,1**	**-6,9**	**n.a.**	**-8,9**	**-8,1**	**-8,4**
Amortization	1,9	1,9	n.a.	1,9	1,9	1,7
EBIT	**-6,9**	**-8,8**	**n.a.**	**-10,9**	**-10,0**	**-10,2**
Financial net	-0,6	-0,1	n.a.	0,0	0,1	0,0
Gross profit	**-7,5**	**-8,9**	**n.a.**	**-11,0**	**-9,9**	**-10,3**
Income tax	0,0	0,0	n.a.	0,0	0,0	0,0
Minority interest	0,0	0,0	n.a.	0,0	0,0	0,0
Net profit	**-7,5**	**-8,9**	**n.a.**	**-11,0**	**-9,9**	**-10,3**
Net profit adj.	**-7,5**	**-8,9**	**n.a.**	**-11,0**	**-9,9**	**-10,3**

Source: the company (historical data), Trigon Brokerage House (forecasts)

Balance (PLN m)

	2019	2020	2021	2022F	2024F	2024F
Fixed assets	**10,6**	**12,5**	**13,0**	**14,8**	**24,8**	**33,9**
Tangible fixed assets	10,4	12,2	12,6	14,4	24,4	33,5
Intangible assets	0,1	0,1	0,2	0,1	0,1	0,1
Company's value	0,0	0,0	0,0	0,0	0,0	0,0
Long-term receivables	0,0	0,0	0,1	0,1	0,1	0,1
Long-term investments	0,0	0,0	0,0	0,0	0,0	0,0
Other	-	-	-	-	-	-
Current assets	**14,7**	**13,2**	**130,2**	**91,5**	**55,9**	**35,1**
Inventory	0,0	0,0	2,0	0,0	0,0	0,0
Trade receivables	1,9	1,8	11,7	9,4	9,4	9,4
Other	0,0	0,0	0,0	0,0	0,0	0,0
Cash	12,3	10,7	117,6	67,2	31,6	5,8
Assets	**25,3**	**25,8**	**143,3**	**106,3**	**80,6**	**69,1**
Equity	**4,3**	**-1,0**	**124,1**	**86,7**	**49,0**	**1,4**
Share capital	0,4	0,4	0,4	0,4	0,4	0,4
Other	12,2	11,3	145,3	128,6	128,6	128,6
Net profit (loss)	-8,3	-12,7	-21,7	-42,3	-80,0	-127,6
Minority capital	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**	**0,0**
Long-term liabilities	**5,8**	**6,8**	**3,0**	**3,3**	**6,5**	**16,1**
Interest-bearing liabilities	5,7	6,7	2,9	3,2	6,4	16,1
Other	0,1	0,1	0,0	0,0	0,0	0,0
Short-term liabilities	**15,2**	**20,0**	**16,2**	**16,4**	**25,1**	**51,5**
Interest-bearing liabilities	4,6	5,7	5,2	8,8	17,6	43,9
Trade liabilities	3,0	3,2	4,6	5,5	5,5	5,5
Other	7,7	11,1	6,4	2,1	2,0	2,1
Liabilities	**25,3**	**25,8**	**143,3**	**106,3**	**80,6**	**69,1**
Net working capital	-1,1	-1,4	9,1	3,9	3,9	3,9
Net debt	-2,1	1,8	-109,4	-55,2	-7,6	54,2
Net debt adj.	-2,1	1,8	-109,4	-55,2	-7,6	54,2

Cash Flow (PLNm)

	2019	2020	2021	2022F	2024F	2024F
Cash flows from operating activities	**4,4**	**-0,6**	**-28,8**	**-31,1**	**-28,4**	**-43,1**
Net profit (loss)	-8,3	-12,7	-32,8	-42,3	-37,6	-47,6
Amortization	4,5	6,6	7,4	7,2	9,3	9,5
Changes in working capital	0,7	1,7	-18,8	3,2	-0,1	0,0
Inventory changes	-	-	-	-	-	-
Trade receivables change	0,5	1,7	-10,0	2,1	0,0	0,0
Trade liabilities change	0,2	0,0	-8,8	1,1	-0,1	0,0
Other	7,5	3,8	15,4	0,9	0,0	-5,0
Cash flows from investment activities	**-0,2**	**-0,2**	**-5,1**	**-19,2**	**-7,0**	**-8,0**
CAPEX	0,2	0,2	5,1	19,4	7,0	8,0
Other	-0,5	-0,4	-10,3	-38,6	-14,0	-16,0
Cash flows from financial activities	**5,7**	**-0,9**	**140,9**	**-0,1**	**-0,2**	**25,4**
Interest-bearing liabilities change	0,0	0,0	0,0	6,7	12,0	36,0
Revenues from shares emission	10,2	5,6	148,2	0,0	0,0	0,0
Dividend	0,0	0,0	0,0	0,0	0,0	0,0
Other	-4,5	-6,5	-7,4	-6,8	-12,2	-10,6
Net cash flows	9,9	-1,7	107,0	-50,4	-35,7	-25,7
Cash opening balance	2,4	12,3	10,7	117,6	67,2	31,6
Closing balance of cash	12,3	10,7	117,6	67,2	31,6	5,8

Source: the company (historical data), Trigon Brokerage House (forecasts)

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Definitions

capitalisation – market price multiplied by the number of a company’s shares
free float (%) – a percentage of a company’s shares held by shareholders with less than 5% shareholding reduced by treasury shares held by the company
min/max 52 wks – minimum/maximum share price within the last 52 weeks
average turnover – average volume of share trading within the last month

EBIT – operating profit
EBITDA – operating profit increased by depreciation and amortisation
adjusted profit – net profit adjusted for one-off items
CF – cash flow
capex – sum of investment expenditures on fixed assets
OCF – cash generated through the operational activities of the company
FCF – cash generated by the company after taking into account outflows to support operations and retained capital

ROA – rate of return on assets
ROE – rate of return on equity
NWC – net working capital
Cash conversion cycle –period from the moment of expenditure of cash for the purchase of production factors until the moment of receipt of cash revenues from the sale of manufactured goods or services.

Gross profit margin – a ratio of gross profit to net revenue
EBITDA margin – a ratio of sum of operating profit and depreciation/amortisation to net revenue
EBIT margin – a ratio of operating profit to net revenue
net margin – a ratio of net profit to net revenue

EPS – earnings per share
DPS – dividends per share
P/E – a ratio of market price to earnings per share
P/BV – a ratio of market price to book value per share
EV/EBITDA – a company's EV to EBITDA ratio
EV – sum of a company's current capitalisation and net debt
DY – dividend yield, dividend paid to share price ratio

RFR - risk-free rate
WACC - weighted average cost of capital

ISSUER – Captor Therapeutics S.A.

Recommendations of the Brokerage House
BUY – we expect that the rate of return on an investment will be at least 10%
NEUTRAL – we expect the price of an investment to be relatively stable, optionally it will increase no greater than 10%
SELL – we expect that an investment will make a loss greater than 0%
Recommendation prepared by: Katarzyna Kosiorek

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