hardman&co

Pharmaceuticals & Biotech

Source: Eikon Thomson Reuters

Market data

EPIC/TKR	SAR
Price (p)	0.61
12m High (p)	1.20
12m Low (p)	0.17
Shares (m)	2,645
Mkt Cap (£m)	16.1
EV (£m)	14.7
Free Float*	97%
Market	AIM

**As defined by AIM Rule 26*

Description

Sareum is a virtual drug discovery and development company with programs in oncology and inflammatory disorders. Sareum uses collaborators and contract research organisations to progress its programs and then out-licensing them at the pre-clinical or early clinical stage

Company information

CEO	Tim Mitchell
CSO	John Reader
Chairman	Stephen Parker
	01223 497700
	www.sareum.com

Key shareholders

Directors	3.24%
John Reader	1.64%
Tim Mitchell	1.60%

Events

Sept-2016	Phase I CT (Chk1)
Oct-2016	FY results
7-9 Nov	BIO-Europe
29-Nov 2-Dec	AACR-NCI-EORTCt

Analysts

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Sareum

Chk1 Licensing agreement with ProNAi

Sareum is a specialist small molecule drug discovery and development company with programs in oncology and inflammatory disorders. Sareum is virtual, using collaborators and contract research organisations to progress its programs and then out-licensing them in return for up-front payments, future milestones and long-term sales royalties. Sareum, together with its partner CRT Pioneer Fund, has announced the exclusive licence and worldwide rights for its Chk1 pre-clinical cancer candidate CCT245737 (renamed PNT737) to ProNAi Therapeutics Inc, for $7m upfront, plus a total of $321.5m potential milestones, and sales royalties.

- **Licensing agreement**: Sareum and its co-investment partner, the CRT Pioneer Fund, has entered into an agreement with ProNAi Therapeutics (NASDAQ: DNAI) for a potential of $328.5m (plus sales royalties) for the exclusive licence and worldwide rights for Sareum's Chk1 inhibitor CCT245737 (renamed PNT737).

- **Chk1 inhibitor:** Chk1 inhibitors carry considerable potential to sensitise cancer cells to therapies targeted to damaging DNA and potentiate the action of the anti-metabolite drugs and DNA alkylating agents from the cisplatin family. They also have the potential to treat certain cancer types as a single agent therapy.

- **ProNAi Therapeutics:** ProNAi is a NASDAQ listed clinical stage drug development company advancing small molecule in oncology. ProNAi is focussing in building up a broad and diverse pipeline by acquiring assets in pre-clinical development with the ultimate aim to be first-in-class or best-in-class.

- **Risks:** Clearly not without financial risk: a clinical pipeline with traditionally high attrition rates and funding needs The Company operates in a market dominated by larger competitors, but there is clear precedent that pharma/biotech are willing to pay high prices for the right preclinical/clinical assets.

- **Investment summary:** The deal changes the outlook of Sareum. Not only it does remove the ongoing cost of the clinical trial (£300k to be returned) but also generates an upfront income of $1.9m/£1.4m and the potential for future milestones and royalties. The company will use this new resource to enhance its remaining pipeline.

Financial summary and valuation

Year end June (£m)	2013	2014	2015	2016E	2017E
Sales	0.00	0.00	0.00	0.00	0.00
Other revenues	0.00	0.15	0.15	0.00	1.40
Underlying EBIT	-0.60	-0.83	-1.27	-1.59	0.48
Reported EBIT	-0.61	-0.84	-1.31	-1.60	0.46
Underlying PBT	0.60	-0.83	-1.40	-1.58	0.48
Statutory PBT	0.60	-0.84	-1.44	-1.60	0.47
Underlying EPS (p)	-0.04	-0.05	-0.06	-0.06	0.02
Statutory EPS (p)	0.04	-0.05	-0.06	-0.06	0.02
Net (debt)/cash	0.42	0.70	1.48	1.10	2.15
Capital increase	0.49	2.04	1.36	1.03	0.00
P/E (x)	-	-	-	-	-
EV/sales (x)	-	-	-	-	-

Source: Hardman & Co Research

Chk1 inhibitor CCT245737/PNT737

CCT245737 (renamed PNT737) is a highly selective, orally bioavailable, small molecule inhibitor of Chk1. PNT737 was originally developed in a research collaboration between the Institute of Cancer Research, London (ICR), Sareum Limited and Cancer Research Technology (CRT). The Programme was licensed to the CRT Pioneer Fund (CPF) in September 2013 and a development partnership with Sareum was formed to progress the candidate drug through clinical trials, with Sareum owning 27.5% of the asset.

Sareum and its co-investment partner, the CRT Pioneer Fund, have entered into an agreement with ProNAi Therapeutics (NASDAQ: DNAI) for the exclusive licence and worldwide rights for CPF/Sareum's Chk1 inhibitor CCT245737 (renamed PNT737).

Licensing agreement with ProNAi Therapeutics

Under the terms of the agreement, ProNAi has agreed to pay the Sareum/CPF partnership an upfront payment of $7.0m and potential additional payments upon achievement of certain development, regulatory and commercial milestones of up to $321.5m. In addition, the partnership will be entitled to receive high single to low double digit royalties on net sales.

Under the existing agreements with Cancer Research Technology and the CRT Pioneer Fund, Sareum is entitled to 27.5% of these payments, as described in the following table.

Agreement's terms

	Agreement	Sareum entitlement
Upfront payment	$7.0 million	$1.9 million
Potential milestones	Development, regulatory and commercial milestones of up to $321.5 million	Development, regulatory and commercial milestones of up to $88.4 million
Royalties	Single to low double digit royalties	27.5% share of any sales royalties

Source: Company announcement

In addition, ProNAi will take charge of the funding of the two Phase I clinical trials currently running at the Royal Marsden NHS Foundation Trust with PNT737. Therefore, the remaining balance unspent from the current phase I (estimated at ca.£300k out of a total of £800k) committed by Sareum in December 2015, will be returned to the Company.

Checkpoint kinase 1 (Chk1)

Cancerous cells tolerate substantially greater levels of DNA damage than would be acceptable in healthy cells. Cancer cells survive and replicate despite accumulating DNA damage *via* an over-reliance on certain components of the DNA Damage Repair (DDR) network, including Chk1. As such, inhibition of Chk1 by PNT737 may be selectively lethal to these cancer cells and of potential benefit in the treatment of certain cancers.

Chk1 inhibitors carry considerable potential to sensitise cancer cells to therapies targeted at damaging DNA and potentiating the action of anti-metabolite drugs, such as gemcitabine and cytarabine, and DNA alkylating agents from the cisplatin family. They are hypothesised to have a synergistic effect, the cytotoxic drugs causing the DNA damage and the Chk1 inhibitors preventing any repairs, thereby boosting chemotherapy-induced tumour cell death.

In patients already undergoing cancer chemotherapy, but beginning to show signs of a slowdown in the tumour regression rate, Chk1 therapy could be used to re-invigorate the response. This may be due to the viable Chk1 kinase enzyme working to repair the tumour's damaged DNA and, therefore, undoing the intended work of the chemotherapy or radiotherapy. Additionally, it is thought that some cancers might be amenable to treatment with a Chk1 inhibitor without the need for chemotherapy.

Phase I clinical trials

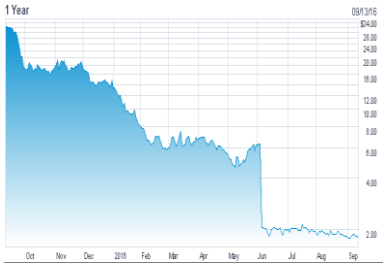
Two phase I proof of concept clinical trials, led by The Institute of Cancer Research (ICR) and the Royal Marsden NHS Foundation Trust, have been recently initiated:

- PNT737 as a single agent monotherapy study
- PNT737 in combination with DNA-targeting chemotherapies

In addition to the Phase I, ProNAi is aiming to explore biomarkers to PNT737 that may facilitate patient selection and to identify additional therapeutic combination strategies. ProNAi plans to expand the development of the product candidate into the United States with the expectation of filing an Investigational New Drug (IND) application in the second half of 2017.

ProNAi Therapeutics

1yr DNAI share price



Source: NASDAQ:

ProNAi Therapeutics is a NASDAQ listed (DNAI) listed clinical stage drug development company advancing small molecule drugs in oncology. Its headquarters are based in Vancouver, Canada and Brisbane, California. ProNAi's strategic focus is on building up a broad and diverse pipeline by acquiring assets in pre-clinical development, with the ultimate aim of being first-in-class or fast follower/best-in-class.

Pipeline

In addition to PNT737, ProNAi is advancing PNT141, a potent, selective and orally bioavailable small molecule inhibitor of the Cdc7 kinase. Cdc7 is a key regulator of both DNA replication and DNA damage response (DDR), that has the potential to treat a broad range of tumour types. PNT141 is undergoing preclinical development with the aim of starting the clinical studies in 2H 2017. ProNAi acquired the exclusive licence for this programme from Carna Biosciences in May 2016.

In June 2016, ProNAi announced the suspension of one of its most advanced programmes, for the treatment of relapsed or refractory diffuse large B-cell lymphoma (DLBCL). The drug candidate, PNT2258, is based on a proprietary therapeutic platform using lipid nanoparticle for the delivery of a single stranded DNAi (PNT100) designed to bind to the BCL2 oncogene. In a Phase II clinical trial, PNT2258 showed only modest efficacy as a monotherapy. This important drawback led ProNAi to a strategic change to its pipeline with acquisitions of exclusive licences in new therapeutic targets in oncology.

The Company is well funded with $130m of cash and zero debt at 30th June 2016. Therefore, it has the necessary resources to fund the development programme of PNT737.

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