Evaluate Vantage

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Novo’s $3.3bn GalXC quest

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The usually conservative group spends big on Dicerna – but others might be interested too.

Novo Nordisk’s biggest ever acquisition is a platform play. Its $3.3bn cash bid for Dicerna nets the Danish group a portfolio of RNA interference assets, but more importantly the technology behind them, which ought to let it look beyond its metabolic juggernaut semaglutide.

Novo and Dicerna are old friends, with a development deal concerning RNAi therapies using Dicerna’s proprietary GalXC technology in place since 2019. But much of Dicerna’s pipeline is entailed elsewhere, with the company collaborating with Roche, Lilly and Alexion, among others. It might, therefore, be unwise to rule out a counterbid.

There is history here. Novo was pipped once before, its €2.6bn ($3.1bn) offer for Ablynx having been scotched by a €3.9bn counterbid from Sanofi in early 2018 (*Sanofi's Ablynx buy leaves no doubt about its pipeline troubles, January 29, 2018*). Novo’s unwillingness to overpay is well-known, and might make a white-knight move more likely.

Rolling the dice

Still, at $38.25 per share Novo’s offer comes at a chunky 80% premium to Dicerna’s closing share price on Wednesday. In fact the bid is not far off from where Dicerna was trading before the nasty clinical miss with its primary hyperoxaluria candidate nedosiran (*Dicerna can’t catch up with Alnylam, August 6, 2021*).

And Novo has been getting more aggressive of late. Last year it did two of its biggest deals to date, paying $2.1bn for Corvidia Therapeutics and $1.8bn for Emisphere, a departure from its track record of small transactions for early-stage companies.

Assuming it goes ahead without incident, the Dicerna deal will allow Novo to develop precision medicines for chronic diseases such as diabetes, obesity, cardiovascular disease and Nash, using the GalXC technology. Molecules developed using this technology have a proprietary N-acetyl-D-galactosamine-mediated structure of double-stranded RNA, and are designed to bind specifically to receptors on liver cells, allowing access to the RNAi machinery within.

Novo also intends to look beyond the liver and cardiometabolic diseases, towards endocrine and bleeding disorders, with the Dicerna technology. This will rely on Dicerna’s next-gen GalXC-Plus platform, which uses alternative RNA structures and synthetic ligands to target other tissues.

But this is likely still some way off, since the first project developed under the two groups' 2019 collaboration has yet to reach the clinic. It is expected to reach this milestone next year. It is notable that many others working in the RNAi field are already pushing into later-stage trials in these cardiovascular and liver disease settings.

Pushing ahead: selected RNAi-based projects in Novo's areas of interest		
Product	**Company**	**Mechanism of Action**
ARO-APOC3	Arrowhead	ApoC 3 antisense, in phase 2 and 3 trials for dyslipidemia and familial chylomicronemia.
Pelacarsen	Novartis (from Ionis)	ApoA antisense; phase 3 trial in patients with established cardiovascular disease and elevated Lp(a) ongoing.
ARO-ANG3	Arrowhead	ANGPTL3 antisense; phase 2b ongoing
Vupanorsen	Pfizer (from Ionis)	ANGPTL3 antisense; phase 2b ongoing
AMG 890 (olpasiran)	Amgen (from Arrowhead)	ApoA RNAi therapeutic; phase 1 ongoing.
AZD8601	AstraZeneca (from Moderna)	VEGFA inhibitor; phase 1 in heart failure just completed.
ARO-HSD	Arrowhead	HSD 13 inhibitor; phase 1 trial ongoing in Nash.
JNJ-75220795	J&J (from Arrowhead)	Anti-PNPLA3 siRNA therapeutic, in phase 1 for fatty liver
Note: selected projects, list not exhaustive. Source: Evaluate Pharma, company statements.		

There is one last aspect of today's deal that is worth considering: the biodollar value of the deals with Dicerna's other partners. Under the Lilly tie-up, Dicerna – and therefore presumably now Novo – could receive up to $350m per target in development, plus commercialisation milestones and tiered royalties. Three Lilly-partnered projects are in phase 1 at the moment, and two more are preclinical.

The Roche deal, which concerns the phase 2-stage hep B candidate DCR-HBVS (RG6346), is even richer. Roche could end up paying nearly $1.5bn in milestones, with royalties on top. If Novo is extremely fortunate and DCR-HBVS goes all the way, the Dicerna buy will be a positive bargain.