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Curevac muddies the Moderna/Arbutus waters further



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The markets try to figure out who really benefits from last week's patent decision over a key mRNA technology.

It took Arbutus and Moderna almost 24 hours to comment publicly on the relevance of Thursday's legal bust-up, which saw the former prevail in a patent ruling that could threaten the latter's Covid-19 vaccine. Neither company looks to have covered itself in glory. The entry of Curevac into the fray complicates things further still.

Arbutus admitted that it had actually signed away much of the relevant rights two years ago, and its stock lost 20%. Moderna, meanwhile, claimed that its tech was in fact "not covered by the Arbutus patents". In that case why did it initiate the legal action against Arbutus to begin with? And is Curevac in the clear?

The German group revealed its hand in a [filing with the US SEC for a proposed \\$100m flotation](#). In the document Curevac spelled out its reliance on a lipid nanoparticle (LNP) technology developed by Acuitas, a private Canadian company with links to Alnylam, by way of a 2016 tie-up for which it pays an annual \$1.1m maintenance fee.

Acuitas is at the centre of the dispute between Moderna and Arbutus, and is also the source of LNPs used by Biontech/Pfizer. The remarkable upshot of all this is that three of the major mRNA Covid-19 vaccine competitors might all in some way rely on the LNP technology in question.

Longstanding aggression

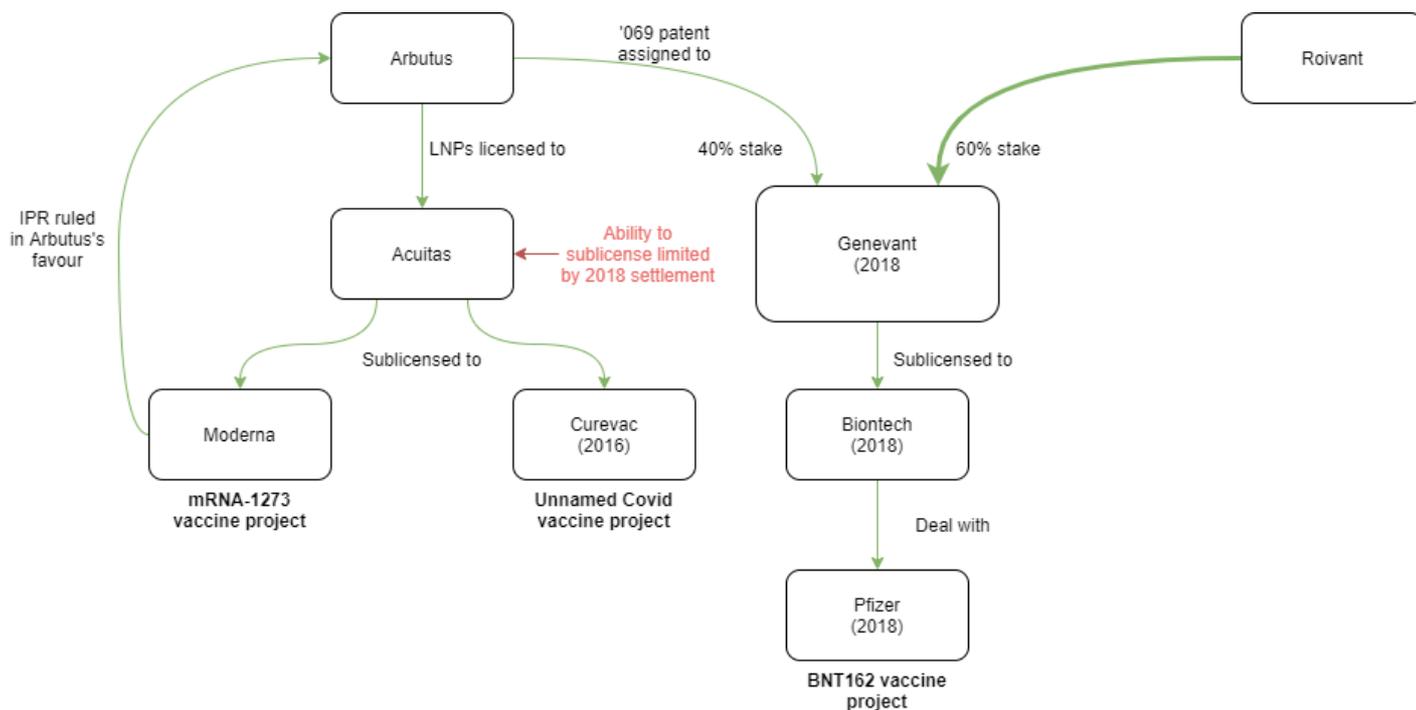
[Moderna says](#) it had challenged three relevant Arbutus patents "in response to the longstanding aggressive posture taken by Arbutus". It also claims that its own LNP technology has advanced beyond what the Arbutus patents describe, perhaps implying that it has largely re-engineered its mRNA approach over the past two years.

[Arbutus's statement](#), meanwhile, should not have come as a surprise to any investors who had been paying close attention. For the sake of clarity, Arbutus might have won the legal decision, but it spells out that it has at most a 40% interest in the patent in question, US no 8,058,069.

This is because in 2018 it spun rights to the LNP technology that did not relate to hepatitis B into Genevant, a venture with Vivek Ramaswamy's holding company, Roivant Sciences ([The Covid-19 vaccine battle just got](#)

interesting, July 24, 2020). Back then no one was thinking about Covid-19, and Arbutus's key focus was hepatitis B; the venture is 60%-owned by Roivant.

And, for Arbutus investors, it gets worse: Genevant subsequently issued convertible debt, and if this is paid off in new equity Arbutus's shareholders "will be significantly diluted". Arbutus says it is, however, entitled to a low single-digit royalty on sales of products derived from the '069 patent now held by Genevant.



So, with Moderna stock down on Friday, and Arbutus coming off its Thursday blip, who could win here? Clearly Genevant's majority owner, Mr Ramaswamy, now looks to have had remarkable foresight.

Curevac has so far not been implicated in legal action, so it must be assumed that any rights Acuitas granted it to the '069 patent stand. And the same goes for Biontech/Pfizer, which in 2018 struck a licensing deal with Genevant that today looks like the key to the puzzle.

Crucially, Biontech/Pfizer's BNT162b1 and Moderna's mRNA-1273 are fierce rivals, so in purely business terms it is in the interests of one to stop the other. But this is Covid-19, a global emergency, where the optics of a move that threatens to delay the availability of a vaccine would be disastrous.

A plain royalty looks to be the simplest answer. If Arbutus investors today look to have lost out, the real winners will emerge later.