

Warp Speed keeps on giving



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The latest Covid-19 vaccine award sees Glaxo and Sanofi score a \$2.1bn windfall from the US government.

Any fears that [US Project Warp Speed had snubbed Glaxosmithkline and Sanofi](#) were dispelled today. The companies – two of the world’s most important vaccine makers – revealed an award of up to \$2.1bn for the development of a still unnamed Covid-19 product and delivery of an initial 100 million doses.

This brings to over \$8bn the amount that Warp Speed, a partnership between the US Department of Health and Human Services, the FDA, the NIH, Barda and the Department of Defense, has committed towards vaccines against the coronavirus. Only three of the projects have generated human data, and two are not yet even in the clinic.

That should change soon, however. The Glaxo/Sanofi project is slated to start clinical trials in the second half of the year, a timeline the companies updated today: a phase I/II study will begin in September, followed by a pivotal trial by the end of 2020, and possible US approval “in the first half of 2021”.

And, while up to half of the \$2.1bn award is pegged to the delivery of 100 million doses, and thus will not be paid until development is complete and the vaccine is manufactured, there is also an option for the US government to buy another 500 million doses later.

Selected vaccines in development for Covid-19

Company/org	Vaccine	Type	Detail	US Warp Speed financing	
				Development	Dose orders
Moderna/NIAID	mRNA-1273	mRNA	Ph1 data reported; ph3 under way	Up to \$955m	-
Cansino Biologics	Ad5-nCoV	Adenovirus type 5	Ph1 data reported	-	-
Inovio	INO-4800	DNA	Immune responses claimed in ph1	-	-
Biontech/Pfizer	BNT162b1	mRNA (modRNA)	Ph1 data reported	-	\$1.95bn (100m doses)
Biontech/Pfizer	BNT162b2	mRNA (modRNA)	Tolerability better than BNT162b1; ph3 protocol open		
Astrazeneca/ Uni of Oxford	AZD1222	Chimp adenovirus	Ph1 data reported; phase 3 Auf 2020	\$1.20bn (300m doses; split not specified)	
Novavax	NVX-CoV2373	Nanoparticle	Ph1 data due Aug 2020	Up to \$1.60bn (100m doses; split not specified)	
Dynavax/Clover/GSK	SCB-2019	Trimerised fusion	Ph1 data possible Aug 2020	-	-
Curevac	CVnCoV	mRNA	Ph1 started Jun 2020	-	-
Zydus Cadila	ZyCoV-D	DNA	Ph1 started Jul 2020	-	-
GSK/Medicago (M Tanabe)	?	Coronavirus-like particles	Ph1 started Jul 2020	-	-
Johnson & Johnson	Ad26.COVS-2	Adenovirus type 26	Ph1 started Jul 2020; ph3 Sep 2020	\$456m	-
IMV	DPX-COVID-19	Peptide	Ph1 starting "summer" 2020	-	-
Arcturus	LUNAR-COV19	mRNA	Ph1 starting "as soon as possible"	-	-
Merck & Co (ex Themis)	V591	Measles virus vector	Ph1 starting Q3 2020	-	-
GSK/Sanofi	?	S-protein antigen	Ph1 starting Sep 2020; ph3 end 2020	\$1.10bn*	\$1.00bn (100m doses)
Translate Bio/Sanofi	?	mRNA	Ph1 starting Q4 2020	-	-
Merck & Co/lavi	V590	rVSV	Ph1 starting in 2020	\$38m	-

*Source: WHO list, EvaluatePharma & company statements. *Award is for up to \$2.1bn, "more than half" of which is for development.*

The Glaxo/Sanofi vaccine project has yet to be named, but it is known to be based on recombinant protein technology. Sanofi has a separate tie-up with Translate Bio covering an mRNA vaccine, and this is expected to enter phase I studies by the end of the year.

Also yet to generate clinical data are two other major Warp Speed funding recipients: Johnson & Johnson's adenovirus-based project coded Ad26.COVS-2, and Novavax's nanoparticle vaccine NVX-CoV2373. First human data from the latter, due in early August, now comprise one of the most eagerly awaited events for Covid-19 vaccine watchers.

Johnson & Johnson, meanwhile, yesterday confirmed that Ad26.COV2-S had [entered phase I/IIa](#), and should move into phase III in September. This 30,000-subject study will comprise part of a pivotal effort that could see [180,000 people enrolled into trials of six Covid-19 vaccines by the end of this year](#).

Merck & Co

And a separate global vaccine player, Merck & Co, today provided some more information on two vaccines it is developing against the coronavirus.

V590, a recombinant vesicular stomatitis virus project in collaboration with IAVI, and V591, based on a measles virus vector technology and acquired along with Themis in May, should both be in the clinic this year. It seems that the Themis project is slightly further ahead in development, though it is the IAVI asset that is the [beneficiary of a small BARDA award](#) of \$38m.

The Glaxo/Sanofi vaccine also started out with a relatively small grant from the US government, namely \$31m in April. Given that the budget for Project Warp Speed has never been disclosed, and neither has the number of possible beneficiaries, further awards are possible.