

Review of: "The COVID 19 vaccine patent race"

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The article provides an interesting overview of the development of mRNA based vaccine technology and the related patents. The writing is mainly descriptive, at times quite technical, but overall informative. The author concludes with some concerns about the future development of the vaccine which, albeit justified, are only partially supported by the article's content. In my view, the role of patents in stimulating R&D in this specific context would require some additional considerations:

- As discussed in Dosi (2021) – and indirectly mentioned in the article addressed by this review - most of the knowledge related to mRNA based vaccine technology was generated by public institutes, as is often the case with basic research. This aspect should be taken into account when thinking of the private costs associated with vaccine development. Also, vaccines can be subject to subsidies and advance purchase agreements by governments, which improve the risk/reward trade-off of these projects vis á vis other drugs (Veugelers, 2021).

- During the pandemic, we saw how (possible) regulations and social pressure to facilitate diffusion can also influence the way companies use and enforce their IPRs. Specifically, these elements can undermine the legitimacy of a patent and/or the ability of companies to enforce it. One of the reasons why no legal conflict has emerged so far, might be the potential to invoke compulsory licensing or patent waivers. In fact, during the Covid-19 emergency we witnessed companies introducing temporary patent pledges (Moderna) and no-profit pledges (AstraZeneca).

- Looking ahead, Veugelers (2021) provides interesting reflections on how the roadmap for further mRNA development requires public and private intervention. To safeguard both private incentives and social gains (through broad and fair access to vaccines), the government should propose conditions on vaccines' patents and public funding deals only ex-ante as part of a comprehensive policy package. For example, the government could make public funding available only if the recipient accepts shorter IP protection periods.

To conclude, while patent protection is important to ensure private returns, the incentive mechanisms behind the development of mRNA vaccine technology are rather complex. It would therefore be interesting to think of how and to which extent the negative effects of non-patentability could be mitigated in this case.

References:

Dosi, G. (2021). Policy lessons from medical responses to the COVID-19 crisis. *Intereconomics*, 56(6), 337-340.

Veugelers, R. (2021). mRNA vaccines: A lucky shot?. *Working paper* 13/2021, Bruegel.