

## VACCINATIONS ON THE SAME ARM

You know those ideas that are so simple and obvious that you immediately say, “Why didn’t I think of that?” This is one of them. And yet, behind the simplicity is a tour-de-force Cell-level study.

Dhenni et al.<sup>1</sup> reveal that where you get your vaccine booster actually matters—specifically, getting it in the same arm as the first dose leads to a faster and stronger immune response. In mice and humans, they show that memory B cells residing in the draining lymph node (dLN) re-enter germinal centers and mount a more potent response when the booster is given in the same location. This is driven by subcapsular sinus macrophages (SSMs), which “remember” the initial antigen encounter and help re-activate memory B cells more efficiently.

The study combines elegant mouse models, intravital imaging, single-cell transcriptomics, and human data from BNT162b2 (Pfizer) vaccine recipients. In humans, same-arm boosting led to an earlier peak in neutralizing antibodies and broader B cell clonal expansion—within 5–7 days instead of 4 weeks.

It’s not just about the idea. It’s about doing the work to prove it.

Comment in Nature<sup>2</sup>

1. [https://www.cell.com/cell/fulltext/S0092-8674\(25\)00407-6](https://www.cell.com/cell/fulltext/S0092-8674(25)00407-6)
2. <https://www.nature.com/articles/d41586-025-01326-2>