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Dear editors,

Please find attached with this cover letter our manuscript for ‘Toward an observatory of the evolution of COVID-19 Vaccines Trials through phylomemy reconstruction’, a contribution co-written with David Chavalarias, Alexandre Delanoë, Gabriel Ferrand, Sarah Cohen-Boulakia, Philippe Ravaud and Isabelle Boutron. Our contribution is an interdisciplinary collaboration between epidemiologists, data integration and Complex Systems researchers. It aims at synthesizing the overwhelming amount of information about current COVID-19 research by applying a new text mining approach: the phylomemy reconstruction process, a method for reconstructing the dynamics of knowledge. We here choose to interpret the results from the point of view of epidemiologists to foster the use of such methods to a non-technical audience. We thus reconstruct the evolution of 1,794 COVID-19 vaccines trials descriptions extracted from the COVID-NMA database, a large database of all clinical trials assessing any vaccines for preventing COVID-19 (see covid-nma.com). We explore their collective structure along with their semantic dynamics. We map the continuous progress of the main COVID-19 vaccine platforms from their early-stage trials in February 2020 to their most recent combinations driven by the rise of emerging research questions: variants of concern, third dose issues, heterologous vaccinations, etc. This paper brings insights for the global coordination between research teams especially in crisis situations. We here call for a worldwide observatory for monitoring the dynamics of clinical trials.

Our work is already available as a preprint <https://hal.archives-ouvertes.fr/CURIE/hal-03500847v1>

Regards,
Quentin Lobbé