

PhillnBioMed newsletter: January & February 2021

New positions

- [PhD Position Conceptual Approaches to Cancer](#), supervision: Thomas Pradeu, Univ. Bordeaux, France

New publications by the PhillnBiomed network members

- Dupré J., [The Metaphysics of Biology](#). Cambridge University Press, Elements in Philosophy of Biology.
- Khelfaoui M., Gingras Y., Lemoine M. & Pradeu T. (2021), [The visibility of philosophy of science in the sciences, 1980–2018](#). *Synthese*.
- Gayon J. & Pradeu T. (eds., 2021), [Textes Clés en Philosophie de la Biologie, Tome 1 : Explication biologique, hérédité, développement](#). Paris, Vrin.
- Nuño de la Rosa, L., Pavlicev, M., Etxeberria, A. (2021) Pregnant females as historical individuals: An insight from the philosophy of evo-devo, *Frontiers in Psychology*, *Frontiers in Psychology*, 11:572106. <https://doi.org/10.3389/fpsyg.2020.572106>
- Stencil A. & Suárez J. (2021), “Do somatic cells *really* sacrifice themselves? Why an appeal to coercion may be a helpful strategy in explaining the evolution of multicellularity” *Biological Theory*, in press.
- Gauld C., Lopez R., Geoffroy PA., Morin CM., Guichard K., Giroux E., Dauvilliers Y., Dumas G., Philip P., Micoulaud-Franchi JA. (2021), A systematic analysis of ICSD-3 diagnostic criteria and proposal for further structured iteration, *Sleep Medicine Reviews*, <https://doi.org/10.1016/j.smrv.2021.101439>
- Green, S. (2021). Cancer beyond genetics: On the practical implications of downward causation. In D. S. Brooks, J. DiFrisco, & W. C. Wimsatt (Eds), *Levels of Organization in the Biological Sciences* (pp. 195-213). MIT Press.
- Green, S. & Batterman, R. (2021). Making sense of top-down causation: Universality and functional equivalence in physics and biology. In Voosholz, J. & Gabriel, M. (Eds.), *Top-Down Causation and Emergence*. Springer, in press.
- Green, S., Dam, M. S. & Svendsen, M. N. (2021). Mouse avatars of human cancers: The temporality of translation in precision oncology. *History and Philosophy of the Life Sciences*, in press.
- Green, S. & Hillersdal, L. (2021). Aging biomarkers and the measurement of health and risk. *History and Philosophy of the Life Sciences*, in press.
- Tretter, F., Wolkenhauer, O., Meyer-Hermann, M., Dietrich, J. W., Green, S., Marcum, J. & Weckwerth, W. (2021). The quest for systems-theoretical medicine in the COVID-19 era. *Frontiers in Medicine*, in press.
- Plutynski, A (2021) “Is cancer a matter of luck?”. *Biology and Philosophy*. 36:3

- Plutynski, A. (2021) “Why Precision Oncology is Not Very Precise (and why we should not be surprised)” Perspectives on Personalized Medicine, Bertolaso, M. & C. Beneduce, Springer.
- Attah, N.O., M. DiMarco, & Plutynski, A. (2020) “Microbiomes: Proportional Causes in Context” (2020) *Biology and Philosophy*. 35(22) (Feb.)
- Plutynski, A. with Parke, E. (2020) “Models and theory in biology” in Kampourakis and Uller, eds. *Philosophy of Biology for Biologists*. Cambridge University Press.
- Plutynski, A. (2021) Oxford Bibliography in Philosophy of Evolutionary Biology. Oxford UK. (Online)
- Krige, J and Leonelli, S (2021) Mobilizing the Translational History of Knowledge Flows: COVID-19 and the Politics of Knowledge at the Borders. *History and Technology*. <https://doi.org/10.1080/07341512.2021.1890524>
- Tempini, N and Leonelli, S (2021) Actionable Data for Precision Oncology: Framing Trustworthy Evidence for Exploratory Research and Clinical Diagnostics. *Social Science and Medicine* doi: 10.1016/j.socscimed.2021.113760
- Leonelli, S. (2021) Data Science in Times of Pan(dem)ic. *Harvard Data Science Review* 3(1) <https://doi.org/10.1162/99608f92.fbb1bdd6> [featured article with seven discussion pieces]
- Leonelli, S. (2021) Rejoinder: The Present and Future of Data Science in Society. *Harvard Data Science Review* 3(1) <https://doi.org/10.1162/99608f92.fc216595>
- DiFrisco J. and Jaeger, J. (2021) Homology of Process: Developmental Dynamics in Comparative Biology. *Interface Focus*

Forthcoming events

- **PhillyBioMed Seminars:**
 - **25th February 2021** 4PM : Eva Jablonka (Cohn Instit. for History & Philosophy of Science, Tel Aviv Univ.) Neural Transitions in Learning and Cognition
 - **2nd March 2021** 6PM : Judith Campisi (Buck Institute for Research on Aging, California), TBA
 - **28th April 2021** 5 PM : Emanuele Ratti (Institute of Philosophy and Scientific Method, Johannes Kepler University Linz), TBA
 - **20th May 2021** 6PM : Marie I. Kaiser (Department of Philosophy at Bielefeld University, Germany) Individual-level Mechanisms in Ecology and Evolution
- Throughout March 2021 **Egenis** will host an international workshop series **Towards Responsible Data Linkage: Global Challenges for Food Security and Governance**. Registrations here: <https://www.exeter.ac.uk/idsai/plantdata/> The workshops bring together representatives of key global initiatives for plant data with scholars in the history, philosophy and social studies of plant and agricultural science, thus combining technical expertise in data governance with an in-depth understanding of local situations of data use as well as their historical, social and scientific contexts and implications.
- On April 30, May 7, and May 14 2021 the **University of Cincinnati Center for Public Engagement with Science** will host an NSF-funded online workshop about what philosophers of science have to offer public engagement with science. Workshop information and registration here: <https://ucengagingscience.org/workshop/>

- June 14-18: SMAC 2021 - [Statistics, Philosophy and Health](#). The SMAC (statistics and mathematics applied to cancerology) 2021 days will be held online from June 14 to 18, 2021.

This will be the tenth edition of the SMAC days. On this occasion, we have built a very particular program entitled "Statistics, philosophy and health". Three main topics will be addressed by statisticians and philosophers of science during this "SMAC week": Bayesianism, Agent based modeling and Causality, and, as an underlying topic, artificial intelligence. We will conclude this week by a very special round table animated by Erica Moodie.

New collaborations between scientists and philosophers

- **Jonathan Sholl** is currently involved in two collaborations involving scientists. Together with Thomas Pradeu, they will soon be submitting a philosophical paper that evaluates aspects of microbiota-cancer research and proposes a way to model the interactions involved. They were joined by two scientists from the US, Rob Knight and Greg Poore, who have provided scientific guidance throughout.
- **Jonathan Sholl** is also revising a scientific paper on the gut microbiota and nutrition (focusing on high fat diets) that was co-written with two researchers from the US, Tommy Wood and Lucy Mailing. They argue that reframing this research in terms of metabolic flexibility can better make sense of the current evidence and minimize biased interpretations.
- **Anya Plutynski** is collaborating with [Joshua Rubin](#) on a new Cambridge Elements volume on Cancer.