

News & views

that optimize specific antitumour activities. Furthermore, this knowledge would help us to understand whether subsets of B cells perform separate tasks, or if there is crosstalk between subsets. For example, can the same B cell both produce a tumour-specific antibody and present antigens to T cells? Some of these studies can be done in human tumours, but in-depth mechanistic studies will require physiologically relevant models that contain naturally occurring TLS.

With regard to clinical implications, the current studies suggest that therapeutics to enhance B-cell responses should be prioritized as a complement to T-cell-mediated immunotherapies. Researchers should now ask whether B cells could be engineered to target specific tumour antigens, similar to

current efforts to engineer antigen-targeting T cells. More generally, could immunotherapies be improved by inducing B cells to form in TLS after a person has received T-cell-based immunotherapy?

Overall, the current studies should act as a springboard for future mechanistic studies of B cells and TLS in cancer. Understanding how current therapies can be combined with approaches to harness B cells and TLS will be crucial for the development of effective B-cell-specific immunotherapies.

Tullia C. Bruno is in the Department of Immunology, University of Pittsburgh, Pittsburgh, Pennsylvania 15215, USA, and at the UPMC Hillman Cancer Centre, Pittsburgh. e-mail: tbruno@pitt.edu

1. Brahmer, J. R. et al. *J. Clin. Oncol.* **28**, 3167–3175 (2010).
2. Cabrita, R. et al. *Nature* **577**, 561–565 (2020).
3. Petitprez, F. et al. *Nature* **577**, 556–560 (2020).
4. Helmink, B. A. et al. *Nature* **577**, 549–555 (2020).
5. Shimabukuro-Vornhagen, A. et al. *Oncotarget* **5**, 4651–4664 (2014).
6. Germain, C. et al. *Am. J. Respir. Crit. Care Med.* **189**, 832–844 (2014).
7. Shalapour, S. et al. *Nature* **521**, 94–98 (2015).
8. DeFalco, J. et al. *Clin. Immunol.* **187**, 37–45 (2018).
9. Bruno, T. C. et al. *Cancer Immunol. Res.* **5**, 898–907 (2017).
10. Kessel, A. et al. *Autoimmun. Rev.* **11**, 670–677 (2012).
11. Khan, A. R. et al. *Nature Commun.* **6**, 5997 (2015).
12. Sautès-Fridman, C., Petitprez, F., Calderaro, J. & Fridman, W. H. *Nature Rev. Cancer* **19**, 307–325 (2019).
13. Affara, N. I. et al. *Cancer Cell* **25**, 809–821 (2014).
14. Shalapour, S. et al. *Nature* **551**, 340–345 (2017).
15. Ammirante, M. et al. *Nature* **464**, 302–305 (2010).

This article was published online on 15 January 2020.



WALTERSTEIN/GETTY

Invasive plants versus herbivores

The population of large animals in the Gorongosa National Park collapsed during the Mozambican civil war (1977–92), and led to encroachment of the invasive shrub *Mimosa pigra*. Writing in *Nature Ecology & Evolution*, Guyton et al. report that Gorongosa's repopulation with large herbivores has reduced the abundance of mimosa to pre-war levels (J. A. Guyton et al. *Nature Ecol. Evol.* <http://doi.org/djff>; 2020).

By analysing faecal samples from Gorongosa's five main ruminant herbivores, including waterbuck (*Kobus ellipsiprymnus*; pictured), the authors found that mimosa was the main component of the diets of these

species in 2013–18. They also found that the shrub's density and biomass were greater in fenced enclosures that excluded herbivores than in unfenced areas.

The authors therefore conclude that the burgeoning populations of native large herbivores are consuming mimosa, and have thereby conferred resistance to its invasion in just ten years. The findings suggest that rewilding is a potentially useful strategy for reversing a common form of environmental degradation in Africa's protected areas. **Andrew Mitchinson**

This article was published online on 16 January 2020.