

This is an Open Access document downloaded from ORCA, Cardiff University's institutional repository: <https://orca.cardiff.ac.uk/id/eprint/163453/>

This is the author's version of a work that was submitted to / accepted for publication.

Citation for final published version:

Gallimore, Awen and Tournier, Cathy 2023. Immuno-oncology. *Essays in Biochemistry* 67 (6) , p. 903. 10.1042/EBC20230071

Publishers page: <http://dx.doi.org/10.1042/EBC20230071>

Please note:

Changes made as a result of publishing processes such as copy-editing, formatting and page numbers may not be reflected in this version. For the definitive version of this publication, please refer to the published source. You are advised to consult the publisher's version if you wish to cite this paper.

This version is being made available in accordance with publisher policies. See <http://orca.cf.ac.uk/policies.html> for usage policies. Copyright and moral rights for publications made available in ORCA are retained by the copyright holders.



# Immuno-Oncology

## **Abstract**

Today, it is accepted that the ability to evade the attention of the immune system is an essential hallmark of cancer. Critically, as tumours progress, cancer cells can protect themselves from the immune system's natural ability to fight the disease. This observation has led to an explosion of basic research to discover how to restore anti-tumour immunity for advancing cancer treatment. Clinical successes have been achieved following the approval of checkpoint inhibitor therapy to effectively prolong the life of many cancer patients with malignant disease.

However, despite impressive survival gains, there is still a high variability of responses between different types of cancer and many patients still fail to respond. The disappointing findings that have been documented over the many clinical trials performed so far coincide with a much more complex view of immuno-oncology that has emerged from technological advances in functional fluorescent imaging techniques, high throughput RNA sequencing and single-cell mass cytometry.

The themed topic 'Immuno-Oncology' captures the contemporary understanding that individual tumours comprise remarkable mixtures of immune cell populations that actively contribute to neoplastic growth, invasion and metastasis through reciprocal and dynamic interactions with cancer cells. In the context of this new knowledge, the reviews discuss novel ideas of therapeutic opportunities for cancer. We would like to thank the authors for their excellent contributions.

## **Keywords:**

Immunotherapies, immune checkpoint, immunopeptidomics, macrophages, neutrophils, cGAS-STING

## **Grant funding**

CT: Worldwide Cancer Research (#15-1283)

AG: Cancer Research UK (DRCRPG-NOV21/1000003)