2nd International E-Conference on

CANCER SCIENCE AND THERAPY

August 23-24, 2021 | Webinar

Sophia N. Karagiannis

King's College London, UK

IgE Immunotherapy and mechanisms of activating the tumour microenvironment

In several models and functional studies interrogating specimens from patients with solid tumours, we report that anti-tumour IgE class antibodies can restrict cancer growth by immune effector mechanisms known to be employed by this antibody class against parasites. Recombinant IgE antibodies focused against tumour-associated antigens potentiated activation of monocytes and recruitment of stimulated macrophages into the tumour microenvironment and promoted a proinflammatory macrophage phenotype. In this talk I will discuss the pre-clinical development of a first-in-class IgE and the mechanisms by which IgE can reconfigure the tumour microenvironment and activate previously-untapped immune mechanisms against tumours.

Biography:

Sophia Karagiannis heads a cancer antibody discovery team focused on designing novel agents for skin, ovarian and breast cancers and striving to understand the cross-talk between patient immune cells and cancer. Major research streams in the Karagiannis laboratory include: a) dissecting B cell and antibody responses and understanding how these are modulated by the tumour microenvironment; b) interrogating the humoral response to discover potential biomarkers for stratification and to inform patient-focused treatments; c) designing Fc-modified antibodies with enhanced effector functions; d) elucidating the mechanisms of action of antibodies engineered with modified Fc regions and of different isotypes, namely IgG1, IgG4 and IgE, in disease-relevant models. Her group are the first to design and translate an IgE class antibody recognizing a cancer antigen to a Phase I clinical trial in patients with solid tumours.