

34th Euro-Global Summit on **Cancer Therapy & Radiation Oncology**
&
6th International Conference on **Big Data Analysis and Data Mining**
&
13th International Conference on **Orthopedics, Arthroplasty and Rheumatology**
July 25-27, 2019 London, UK

Demonstration of bystander killing with GCV-preloaded HSV-TK gene modified tumour cells: An improvement for cancer therapeutic

Jehad Zweiri

University of Liverpool-Medical School, UK

It is well established that GCV causes bone-marrow toxicity in CMV-infected patients, particularly on the neutrophil lineage. Therefore it may also induce T cell immunosuppression, although this does not appear to have been directly investigated. If GCV does have such a side-effect it may reduce the efficiency of the immunological component of the bystander effect induced by HSV-TK/GCV. The rationale for the studies described here was to devise a strategy whereby the TK+ve tumour cells would be exposed to GCV *in vitro*, in order to pre-load the tumour cells with GCV, wash the excess GCV away and then inject the cells for study of their *in vivo* bystander effect. It is also possible that the intravenous administration of GCV does not allow the achievement of a therapeutically high enough dose at the site of injection of TK+ve cells (e.g. in the peritoneum). By contrast, the pre-loading of the TK+ve tumour cells with GCV may ensure that the cells have received the required dose of GCV. This may reduce the possible immuno toxic effects of GCV. This in turn may enhance the systemic immune mediated anti-tumour efficacy of treatment with HSV-TK expressing tumour cells.

Biography

Jehad Zweiri is a Lecturer in Cancer studies at the University of Liverpool Medical School. He has received his Bachelor's degree from the University of Jordan in 1990; Master's degree from London School of Hygiene and Tropical Medicine/University of London, and PhD degree from Kings College Medical School/University of London, in the field of Immune Gene Therapy of Cancer under the supervision of Professor Farzin Farzaneh in 2000. He then started his work as a Postdoctoral Associate in the Department of Immunology and Medicine at the University of Liverpool in 2002. He was appointed as a Lecturer in the University of Liverpool Medical School in 2010 and he is currently a Fellow of the British Higher Education Academy since 2012.

jehad.zweiri@liverpool.ac.uk

Notes: