Q&A SESSION WITH PAUL LAMMERS

PAUL LAMMERS, President & Chief Executive Officer, **Triumvira Immunologics**

Dr. Lammers, MD, MSc, joined Triumvira Immunologics as President, CEO, and Director in January 2018. Before joining Triumvira, Dr. Lammers served as President/CEO/Director at Mirna Therapeutics, for which company he raised $160 million through venture capital and Federal and State government funding, as well as a public listing on NASDAQ. Previously, he served as President of Repros Therapeutics and also 6 years as Chief Medical Officer and Head of US Product Development for EMD Serono (Merck KgA). During his early industry tenure, Dr. Lammers also held various executive and senior management positions in clinical development, medical affairs, and regulatory affairs at both medium and large pharmaceutical companies, as well as at small public and privately held biotech companies. Dr. Lammers currently also serves on the Board of Directors of ImmunoMet, an Immuno-Oncology company in Houston, TX.

What are the latest developments at Triumvira, and what makes the company unique/why have you chosen to be part of this company?

At Triumvira we have consistently shown that our TAC T-cells show promise for the treatment of both liquid and solid tumors, either through improved safety and/or efficacy profiles. Our preclinical data has shown TAC cells outperforming CAR cells in both liquid and solid tumor models. To be able to show that in the clinical setting, in both liquid and solid tumor indications could be a game changer in this field. Personally, I looked at different technologies before deciding which company to join as President & CEO, but was really intrigued by the promise of this TAC technology, and was looking forward to the challenge of building a great team for the company, and bring the TAC technology into the clinic.

What are the challenges of collaboration in this area?

There are many companies in the engineered T-cell space, and many of those already have long term relationships and/or collaborations with large pharma/biotech companies. However, at Triumvira we see our TAC technology as the next step forward in the T-cell therapy space, a step up from CAR-T technologies given the latter's inherent challenges and limitations, and we have experienced so far a robust interest from Pharma companies that want to talk and/or evaluate our TAC T-cells in their own preclinical models, which provide a great opportunity for us to obtain independent validation of our work.

What future opportunities do you see for T-Cells for advanced haematological cancers and solid tumours?

The advent and adoption of adoptive cell therapy has opened up new treatment paradigms for difficult to treat cancers. Initially, however, only for liquid tumors, given the inherent challenges of tackling solid tumors, like accessibility, a hostile tumor micro-environment, multi-antigen driven tumors, T-cell exhaustion, etc. So, if we can show, just like in our in vivo cancer models, that TAC T-cells can effectively penetrate solid tumors, leading to tumor regression, than that would further open up the T-cell therapy space in a big way. But even in liquid tumors, if our technology shows in our clinical trials that we have a wider therapeutic index, then that would allow more patients with heme malignancies to be treated.

How do you decide what areas to work on?

Normally, this decisions would be driven by your technology's in vitro and in vivo pharmacology data and any unmet medical need you expect to address by bringing your technology to market. For Triumvira, the key short term objective is to show clinical proof of concept for the TAC technology. By making CD19 our first target of choice (and understandably, several folks have questioned that because of already CD19-targeted approved drugs as well as several CD19-CARs in development), we have selected 1) a well-validated target, 2) a validated binding domain, 3) the chance to study if some of the preclinical characteristics of the TAC T-cells, like retention of a T-cell memory phenotype and long term TAC T-cell persistence, hold up in the clinical setting, and 4) provide an opportunity to directly compare our clinical efficacy and safety data with those from Kymriah, Yescarta, and others. In parallel with demonstrating proof of concept in DLBCL we are also pursuing solid tumor indications, which have a larger unmet need and commercial opportunity.

At Triumvira you are working on developing T-Cell Antigen Coupler Technology – What makes this technology so unique?

The T-cell Antigen Coupler is also a chimeric antigen receptor, however, one that works completely different than a CAR. The TAC adopt the normal T-cell function, and thus, T-cell activation, through 1) the ability of the TAC to bind to a cancer antigen in an MHC-independent fashion, 2) then bring in the normal TCR through binding to its CD3epsilon domain, and 3) add the functionality of the CD4 co-receptor to engage with intra-cytoplasmic signalling and activation pathways.

What would you like to achieve at the Cell & Gene Therapy congress?

The opportunity to attend an excellent conference like yours gives us the chance to spread the word about the TAC technology, our platform, connect with potential industry as well as academic collaborators, and bring across our enthusiasm about why we feel that Triumvira is building to become a significant player in this growing and exciting therapeutic area.

Paul Lammers will be speaking at our annual **Cell & Gene Therapy UK Congress** on 24th of October on **"Co-Opting The Natural T-Cell Receptor: A Step Forward In Adoptive T Cell Therapy"**