EUROPEAN BISPECIFIC & MULTISPECIFIC ANTIBODY CONGRESS



An interview with:
Anne Goubier, SVP, Biology, Molecular Partners

Could you give us an introduction & your background in multi-functional protein-based therapeutics?

As a veterinarian and PhD in Immunology, I started my career in a Veterinary Pharmaceutical Company (called MERIAL at that time) where I was leading the immunology lab, supporting the development of Veterinary vaccines. But I rapidly decided to dedicate my skills and time to the improvement of human health. My passion for fast moving innovation brought me to work for start-up companies, using various modalities such as vaccines, antibodies, and small molecules to fight cancer. Joining Molecular Partners was for me a unique chance to address the field of multi-specifics, which I believe can make a difference in cancer and anti-viral therapies, among other applications.

Are there particular memories or achievements you are proud of along the way?

In my career I've had the chance to work with diverse therapeutic modalities, and while I am still extremely proud to have achieved the development of a CD25 antibody to target Treg in tumours, now currently tested in the clinic, I was also concerned by the technological limitation of monotargeting agents. Imagine the potential of this CD25 antibody, already highly innovative as based on the concept of non-blocking the IL-2 signalling, if we could have made it also delivering a cytokine, for example. Today, at Molecular Partners, we can develop molecules with up to six specificities, lifting the technological limitations for multi-specific drug development. I am especially proud of our latest CD3 engager molecule, the first of its kind, as it can target simultaneously 3 tumor associated antigen for the treatment of acute myeloid leukemia (AML). Our phase I opened in December 2022 and is now recruiting patients.

What are the aspects that are drawing you to this set of modalities and inspiring you to work in the area?

> "We now have the technological knowledge to make complex molecules, what remains is to define what these molecules should target and/or what they should deliver and/or what the mode of action should be, based on our biological understanding of the disease."

These modalities allow us to match our accelerating understanding of the complexity of disease biology. Multispecifics open new avenues for the treatment of yet unsolved diseases or for broadening the protection against diseases (e.g. protection against future viral mutations).

What would you say are the most significant developments in the past few years?

Generating multispecifics have become technically easier to generate, in all therapeutic modalities. This, combined with the boom in the Omics field, opens an entirely new universe of potential therapeutic solutions.

Are there particular challenges that remain, and do you see anything emerging down the line that warrant attention?

In my opinion, the main challenge is now back to the understanding of the biology. This is something we are spending a lot of time on at MP. We now have the technological knowledge to make complex molecules, what remains is to define what these molecules should target and/or what they should deliver and/or what the mode of action should be, based on our biological understanding of the disease.

Molecular Partners leverage the DARPin platform which hosts a range of features attributing to its small size, linking capabilities, multi-specificity and low off-target effects to name a few, how is your pipeline progressing and what's in store for the company in the near future?

Our Oncology pipeline is more dynamic than ever, we have soon two DARPins in the clinic, one ensuring tumour-localised immune activation (MP0317, targeting FAP and CD40) and the other one ensuring highly specific T cell mediated killing (MP0533, engaging CD3 on T cells and targeting CD33, CD123 and CD70 on tumour cells). But besides this clinical pipeline we also have a strong research pipeline, exploiting the unique characteristics of the DARPin platform. For example, delivering radio-ligands thanks to the small size and high tumor penetration of the DARPin, or activating various type of tumor-killing immune cells in a tumour specific fashion. In parallel, building on the success of our anti-COVID DARPin, Ensovibep, we are expanding the DARPin reach to the treatment of viral diseases.

We're thrilled to welcome you as a guest speaker at the European Multispecific Antibody Congress. What are you looking forward to the most about attending the event?

A lot of discussions and brainstorming, leading to new therapeutic ideas to improve patients' lives. Also, I want to hear about people's challenges and their craziest ideas. Especially things that they think impossible or challenging to achieve with their current modalities. We have so many possible solutions to offer at MP and I would love to see if we can help others realize their visions.

As you will be presenting, could you be able to give us short preview of what you'll be covering?

I will be presenting our tumour-localised immune agonist DARPin, MP0317, by sharing our latest clinical data which support the concept of FAP-dependent CD40 activation. I will also share with you the pre-clinical and translational data package for MP0533, supporting the initiation of our phase I clinical trial in AML patients. Besides its ability to target simultaneously three tumour associated antigens, the uniqueness of MP0533 resides in the fact that we have designed it to induce T cell mediated killing, especially when the target cells express at least two of these three tumour-associated-antigens (TAAs). This ensures a high specificity for tumour cells (which express two or three TAA) versus healthy cells (which tend to express only one of these antigens at a time).

Join us at the European Bispecific & Multispecific Antibody Congress as we continue these discussions. Step into interactive discussions and engaging presentations on the key developments and opportunities in tackling the barriers in taking multispecific drugs into the next era, facilitating the prophesied 4th wave of drug discovery. Book your place now to hear from, meet, and connect with leaders from across the industry.

BOOK NOW