PRESS RELEASE

Antion Biosciences Presents Preclinical Data at International Society of Cell & Gene Therapy (ISCT) Annual Meeting

- Data demonstrates successful silencing of five target genes using Antion’s TMG™ gene construct
- Proof of principle established for the development of an allogeneic CAR-T cell treatment for HIV

Geneva, Switzerland, 25 May 2021 - Antion Biosciences (‘Antion’ or ‘the Company’), a Swiss cell and gene engineering company developing highly innovative allogeneic therapies to cure diseases with significant unmet medical need, will be presenting preclinical data on the gene silencing capabilities of its Therapeutic MiniGene™ (TMG) construct and evidence to support the development of an allogeneic CAR T-cell therapy for HIV using its novel miCAR™ (miCAR) technology, at the International Society of Cell & Gene Therapy (ISCT) Annual Meeting, taking place 25-28 May.

Antion is presenting data from two independent studies. The first study investigated the gene silencing capabilities of Antion’s novel TMG gene construct which demonstrated simultaneous silencing of five target genes relevant to allogeneic immunotherapeutic applications. The second study demonstrated the ability to create an allogeneic CAR T-cell solution for the treatment of HIV and, using Antion’s miCAR gene constructs, demonstrated proof of principle.

Dr. Sven Kili, CEO of Antion Biosciences commented: “The data presented today provide further evidence of Antion’s highly innovative and promising approach to developing next-generation allogeneic therapies. The silencing of five separate genes without loss of efficiency is a key validator for our optimized gene-silencing construct, TMG, and provides a basis for its use in the development of allogeneic miCAR T-cell therapies.

“Current autologous CAR T-cell treatments for HIV are showing promise, however there are technical challenges with this approach. The data presented in our second poster today demonstrate that an “off the shelf” CAR T-cell therapy for the treatment of HIV can solve these challenges, paving the way to a more affordable and easily administrable therapeutic approach, thereby increasing access for this hard to treat patient population.”

Poster abstract #401: Multiplex gene silencing as a promising tool for development of next generation immune effector cell therapies

In this study, Antion’s TMG technology was used to develop a single gene construct that simultaneously silenced multiple target genes. Previously optimized single hairpin configurations against five relevant immunotherapeutic target genes were cloned into a single TMG construct. This construct was then delivered to primary T-cells via lentiviral vector transduction. Using flow cytometric assessment, Antion showed high efficiency gene silencing of all five target genes; importantly, there was negligible loss of gene silencing efficiencies when compared to single hairpin configurations. The
demonstrated silencing of these relevant receptors, namely TCR, HLA class I, PD1, TIM3 and CCR5, validate Antion’s TMG technology and provides evidence for its use in augmenting the therapeutic capabilities of immune effector cells.

**Poster abstract #506: Development of an off-the-shelf CAR T-cell therapy for HIV: A step towards a universally accessible advanced therapy**

The second study was a proof of principle study for the development of an allogeneic CAR T-cell therapy for HIV. Although CAR T-cell therapies may be promising for the treatment and potential cure of HIV, current autologous treatments in clinical development have technical challenges that would limit widespread accessibility. In this study, Antion created a bimodal gene construct using its novel miCAR platform, expressing an anti-HIV CAR and optimized microRNAs to silence CCR5, TCR and inhibitory receptors to enhance CAR T-cell persistence. The data showed efficient gene silencing and specific cytotoxicity of target cells, providing a basis for future developments of an allogeneic and universally accessible CAR-T cell therapy for the treatment of HIV.

The posters will be available after the event on the Antion website: [https://antion.ch/#/media](https://antion.ch/#/media).

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**About Antion Biosciences**

Antion Biosciences SA is a Swiss cell and gene engineering company developing highly innovative allogeneic therapies to cure diseases with significant unmet medical needs through ground-breaking cell engineering. Antion’s proprietary Therapeutic Minigene (TMG) and miCAR™ technologies allow efficient, simultaneous multi-gene silencing and gene addition in a single step enabling the creation of multimodal treatments that have the ability to substantially enhance clinical safety and efficacy. These technologies are developed using a unique Smart Data approach to construct design and optimization, ensuring maximum efficiency. Antion’s pipeline is focused on curing challenging cancer indications, HIV and sensory disorders with simple, easy to administer cell therapies. Antion has a world-class leadership team and advisors and was founded in 2016 by internationally recognized scientists and clinicians.

For more information please visit: [https://antion.ch/#/](https://antion.ch/#/)