



An introduction to the production of mRNA and saRNA

Dr Carlo Heirman

**Process Development - Principal Scientist
eTheRNA immunotherapies NV**



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Time 4.00-5.00pm

Zoom Details

<https://uws.zoom.us/j/4738655446?pwd=U1Q2dldyQXQrVzMrUFVPUg9scWt1QT09>

Meeting ID: 473 865 5446

Password: 1980

Abstract

The vaccines that were developed to fight the COVID-19 pandemic have put RNA as a new technology in the spotlight. The speed of the development and production, and the clinical effectiveness of both Moderna and Pfizer/BioNTech vaccines exceeded all expectations. The past year has proven that vaccine production at an unprecedented scale of billions of doses is possible with RNA, more than with any other technology. Never before has a vaccine been developed, tested and approved in such a short period of time.

In this seminar we will give an insight into currently implemented methods to produce mRNA and some specific elements in the production of self-amplifying RNA.

Biography

Dr Carlo Heirman is a biologist by training, performing research on cancer vaccines for nearly 40 years. Carlo's initial focus was on B cell malignancies and led the production of antibodies and antibody fragments. He also worked on the generation of dendritic cells and developed a program for dendritic cells transection. Viral vectors work very well for the modification of mouse dendritic cells, but we needed to find a more efficient way for transfection of human monocyte derived dendritic cells. Electroporation of mRNA proved to be very efficient in both immature and mature dendritic cells. This discovery allowed us to perform several clinical trials using autologous dendritic cells, modified with mRNA. The results of these clinical trials were very promising and led to setting up eTheRNA Immunotherapies.

eTheRNA builds on over 30 years of research grade mRNA production, and more than 5 years of GMP mRNA manufacturing experience. We eTheRNA offers expertise and capability to other parties interested in having their RNA manufactured according to their needs. eTheRNA allocates part of its capacity for external parties as a contract development and manufacturing organization. All RNA production is performed at eTheRNA GMP authorized facility in Niel, Belgium.