



# CALL FOR PAPERS

Vaccination therapy utilizing in vitro transcribed synthetic mRNA (IVT RNA) is a drug format that gained high interest in the recent years due to its fundamental characteristics and opportunities connected to its usage. IVT RNA allows engineering of RNA with defined features such as targeting of certain cell compartments, steering of protein half-life, or self-replication of mRNA. Moreover, efforts to utilize formulation technology have enabled the direct application of IVT RNA harvesting its adjuvant capacity. The development of lean and robust production and purification processes allows manufacturing of GMP RNA vaccines in short time scales and with highly competitive costs.

In the field of therapeutic cancer vaccination, IVT RNA has undergone extensive preclinical investigation, has reached late stage clinical development, and is also used for actively personalized vaccination therapy. In all studies an excellent tolerability and safety profile has been observed. Beyond cancer immunotherapy, there is growing interest in the development of antiviral mRNA based vaccines and innovative concepts adopted from viruses to achieve self-amplification.

Major challenges for mRNA vaccination therapy are identification of the optimal application route, definition of ideal formulation, investigation of immunostimulatory pathways triggered by mRNA, development of potent antigen combinations, investigation of combination therapies, and tailoring of the format for personalized immunotherapy.

We solicit high quality, original research articles, and review articles centered on research and development of mRNA based vaccination therapies in the field of cancer and infectious diseases.

Potential topics include, but are not limited to:

- ▶ Clinical studies
- ▶ Mechanistic studies investigating uptake, effects on RNA sensing molecules, and translation of IVT RNA
- ▶ Studies on the utilization of RNA transfected cells for vaccination
- ▶ Preclinical efficacy studies of RNA vaccination in animal models
- ▶ Preclinical in vitro studies on RNA based expansion of human antigen specific T-cells
- ▶ Studies on the induction of humoral responses by RNA vaccination
- ▶ Studies on RNA modification or optimization for vaccination therapy
- ▶ Studies on RNA formulation for vaccination therapy
- ▶ Studies on combination therapies including RNA vaccination

Authors can submit their manuscripts via the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/jir/rnav/>.

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