

## Pharmaceuticals / GMP

## c-di-AMP - adjuvant in different vaccines

Since 2018 ASA is working in the field of pharmaceutical compounds produced by biotechnologal means.

In this process a GMP production process for the adjuvant c-di-AMP was successfully developed. The procedure is based on the enzymatical conversion of ATP to c-di-AMP by the DNA-integrity scanning protein (DisA):

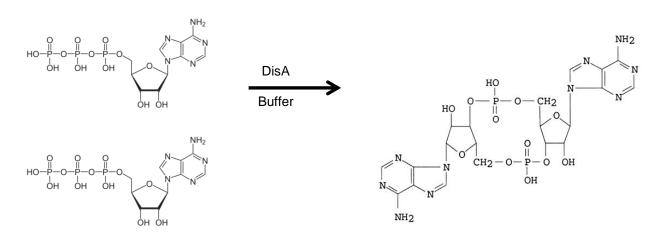


Figure: Enzymatic conversion of ATP to c-di-AMP by DisA

This adjuvant was combined in with different antigenes and tested in several toxicology studies. Since July 2023 a clinical trial phase I is running for the treatment of HPV.

## c-di-AMP

## GMP and clean room facilities

In order to be able produce the adjuvant in sufficient quantities as well as to meet the requirements for the production of drugs a clean room plant (class A - C) was installed at ASA. These facilities offer the opportunity of producing and filling c-di-AMP solutions under GMP

conditions.

The capacity of the filling plant is around 2.000 vials per week. Therefore it is also usable for the filling of other pharmaceutical products for toxicological studies and clinical trials phase I and II.

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