

# Affinity matrix for antigen-specific depletion of plasma cells secreting pathogenic autoantibodies



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## SUMMARY

Long-lived autoreactive plasma cells secreting pathogenic antibodies play a crucial role in the development of autoimmune diseases. However, they are resistant to conventional immunosuppressive drugs and therapies targeting B cells. Current therapies targeting plasma cells such as proteasome inhibitors deplete all plasma cells including those contributing to protective humoral immunity.

Therefore, the group has developed an affinity matrix technology for depletion of plasma cells based on the specificity of their secreted antibodies. The group currently validates their technology to deplete autoantibody-secreting plasma cells in a murine autoimmune model. The project recently gained interest and support by the industry.

## PROJECT ACHIEVEMENTS DURING & AFTER SPARK

- Development of an affinity matrix technology for depletion of plasma cells in an antigen-specific manner
- Winner of the Sanofi iAward 2018 & 2020
- Preclinical proof of concept by 2025