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ImmunoQure AG announces publication in leading scientific journal of findings that demonstrate autoantibody responses against multiple proteins in APS-1/APECED patients

Düsseldorf, Germany August 16, 2017. ImmunoQure AG, a biotechnology company focused on the development of autoantibodies as therapeutics to treat human diseases today announced the publication of data in the leading scientific journal *Frontiers in Immunology*.

ImmunoQure's focus is the identification and development of autoantibodies derived from an ultra rare patient population with an autoimmune disorder called autoimmune polyendocrine syndrome type 1 (APS1 or APECED). APS-1 patients have a mutation in the AIRE gene which is involved in controlling central tolerance – a key mechanism used by the human immune system to filter out immune cells that have the potential to target the body's own proteins ("self proteins") rather than those which are not ("non-self proteins") e.g., from infectious agents such as bacteria or viruses.

In the publication, an international consortium of scientists including ImmunoQure scientists and their collaborators in leading academic institutions in Estonia, Italy, Finland and the UK undertook a broad protein array approach to assess autoantibody repertoire in APS-1/APECED patients. The results show that in addition to shared autoantigen reactivities, APS-1/APECED patients display high inter-individual variation in their autoantigen profiles, which collectively are enriched in evolutionarily conserved, cytosolic and nuclear phosphoproteins. The APS-1/APECED autoantigens have two major origins; proteins expressed in thymic medullary epithelial cells and proteins expressed in lymphoid cells. These findings support the hypothesis that specific protein properties strongly contribute to the etiology of B cell autoimmunity.

Publication :

Fishman, D., et al., Autoantibody Repertoire in APECED Patients Targets Two Distinct Subgroups of Proteins. *Front. Immunol.* 8, 976. (2017)
<https://doi.org/10.3389/fimmu.2017.00976>

About ImmunoQure AG

ImmunoQure was founded by a consortium of leading researchers from the Universities of Tartu (Estonia), Helsinki (Finland), King's College, London (UK), the APECED patient support charity APECED Ry and HS LifeSciences GmbH, Düsseldorf, (Germany). ImmunoQure is financed by QureInvest II (SCS) SICAR, a specialist European life sciences entrepreneurial investment fund advised by HS LifeSciences GmbH.
