Novel compounds to treat excessive water loss in states of dysfunctional vasopressin-mediated water reabsorption

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Pharma
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Track 1

SUMMARY

Diabetes insipidus is characterized by excessive water loss of up to 20 l of urine per day. In this disease, water reabsorption in the renal collecting duct is decreased due to reduced accumulation of the water channel aquaporin 2 (AQP2) in the plasma membranes of principal cells, caused by dysfunctional vasopressin-mediated signaling.
The team led by Dr. Klussmann has shown in vitro and in preliminary analyses of human patients that an antifungal drug promotes water reabsorption via AQP2. Now the team aims to develop new proprietary compounds with better ADME-Tox properties.
Despite the medical burden, there is currently no efficient treatment for excessive water loss and many patients could benefit from the development of a pharmacological intervention.

PROJECT ACHIEVEMENTS DURING & AFTER SPARK

- Synthesis of a library of compounds
- *In vitro* functional studies with library of compounds
- Animal studies with selected lead candidates

LONG-TERM GOALS

- Secure funding for further lead compound development
- Plan clinical phases