**Challenge of creating single-agents for the treatment of type 1 and 2 diabetes by targeting retinoid X receptor**

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It might be seen as reckless to challenge to create single-agents for the treatment of both type 1 diabetes caused by the destruction of the Langerhans β cells in pancreas by excessive autoimmunity, and type 2 diabetes caused by the obesity. However, we hypothesized that retinoid X receptor (RXR) agonists, which are researched for the treatment of type 2 diabetes, will also act as novel anti-type 1 diabetes drugs based on the regulatory T cell (Treg) inducing activity which plays a key role on the immunotolerance maintenance. RXRs function as homo- or hetero-dimers with PPARs

1 or LXRs

2, which are reported to be associated with Treg induction. Interestingly, RXR agonists can activate these hetero-dimers even by themselves (permissive mechanism)

3. Treg induction by RXR agonists, however, are little-known. Most known RXR agonists are lipophilic and have similar chemical structures. Since structurally different RXR agonists can activate these hetero-dimers differently

4, we have produced several new less lipophilic RXR agonists

5. In this symposium, Treg inducing activity and efficacy to diabetes model mice by our RXR agonists will be presented.