Welcome!
REMD-477, a Human Glucagon Receptor (GCGR) Antibody, Reduces Daily Insulin Requirements and Improves Glycemic Control in People with Type 1 Diabetes

Jeremy Pettus, MD
University of California, San Diego

Jeremy Pettus¹, Dominic Reeds², Tricia Santos Cavaiola¹, Schafer Boeder¹, Michelle Levin¹, Edda Cava¹, Dung Thai³,⁴, Jim Shi³,⁴, Hai Yan³,⁴, Edgar Bautista³, John McMillan³, Robert R. Henry¹, Samuel Klein²

¹University of California San Diego, CA, ²Washington University School of Medicine, St. Louis, MO, ³REMD Biotherapeutics, Camarillo, CA, ⁴Beijing Cosci-REMD, Beijing, China
Disclosures

• Jeremy Pettus, MD
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Background

- REMD-477 is a human antibody that blocks glucagon receptor signaling and reduces hepatic glucose output
- Weekly GCGR antibody treatment dose dependently lowers blood glucose in STZ mice without insulin administration

Hypothesis and Study Design

**Hypothesis**: A single SC dose (70 mg) of REMD-477 will reduce total daily insulin requirements needed to maintain targeted glycemic control in people with Type 1 diabetes

- Double-blind, placebo-controlled trial
- Patients with T1DM using insulin pump and fasting plasma C-peptide <0.2 ng/mL
REMD-477 Decreased Daily Insulin Requirements (Inpatient Days 3 & 4 vs Day 1)

Absolute Change in Daily Insulin Dose (IU/day)

- Placebo: Day 3: Δ=-9.2 IU*, Day 4: Δ=-12.1 IU*
- REMD-477: Day 3: Δ=-2.4 IU, Day 4: Δ=-7.3 IU

Percent Change in Daily Insulin Dose

- Placebo: Day 3: Δ=-21%*, Day 4: Δ=-26%*
- REMD-477: Day 3: Δ=-5%, Day 4: Δ=-14%
REMD-477 Decreased Average Daily Blood Glucose Concentrations

Average Glucose (mg/dL)

-14 to -1 6 to 12 13 to 19 20 to 26

Days

Data are mean ± SE

* p<0.001
† p<0.05
¥ p>0.05
Effect of REMD-477 on Outpatient Glycemic Control

![Bar chart showing the effect of REMD-477 on glycemic control over different days.](image)

T = Target (70-180 mg/dL); H = High (>180 mg/dL); L = Low (<70 mg/dL)

- Days -14 to -1: Placebo 62±3, REMD-477 63±3
- Days 6 to 12: Placebo 56±4, REMD-477 71±3
- Days 13 to 19: Placebo 57±5, REMD-477 70±5
- Days 20 to 26: Placebo 56±4, REMD-477 68±5

* p=0.001 vs placebo
† p<0.05 vs placebo

Δ=15%
Conclusion

• The results of this study support the long-standing theory that blocking glucagon action can have significant clinical impact in patients with Type 1 diabetes
• Glucagon receptor blockade with REMD-477 improves glycemic control and reduces insulin requirements in patients with type 1 diabetes
• A 12-week multiple dose study to evaluate the effects of REMD-477 on glycemic control and daily insulin use in patients with Type 1 diabetes is being initiated
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