

# PARICALCITOL AND DIPEPTIDYL PEPETIDASE 4 (DPP4) INHIBITORS THE EFFECT ON RESISTIN IN TYPE 2 DIABETIC AND RENAL DISEASE PATIENTS

**Diabetes Mellitus (DM)** is one of the most prevalent diseases worldwide and the most common cause of renal disease. Resistin was discovered in 2001 as a link between obesity and diabetes initially, as a marker of insulin-resistance. Nevertheless, rapidly its pleiotropic effect became clear. Resistin is a adipokine expressed in macrophages and has a role in the systemic inflammation as well as in the cardiovascular disease, atherosclerosis, endothelial dysfunction, thrombosis and angiogenesis. Homeostatic model assessment insulin resistance (HOMA IR) is a method to assess beta-cell function and insulin resistance from fasting glucose and insulin or C-peptide concentration.

## Purpose

The aim of this study is to investigate the role of paricalcitol and DPP4 inhibitors in type 2 diabetic patients with renal disease attending resistin and HOMA-IR at baseline, 3 months and 6 months.

## Material and methods

A randomized study included **120 patients**, followed in diabetic nephropathy clinic.

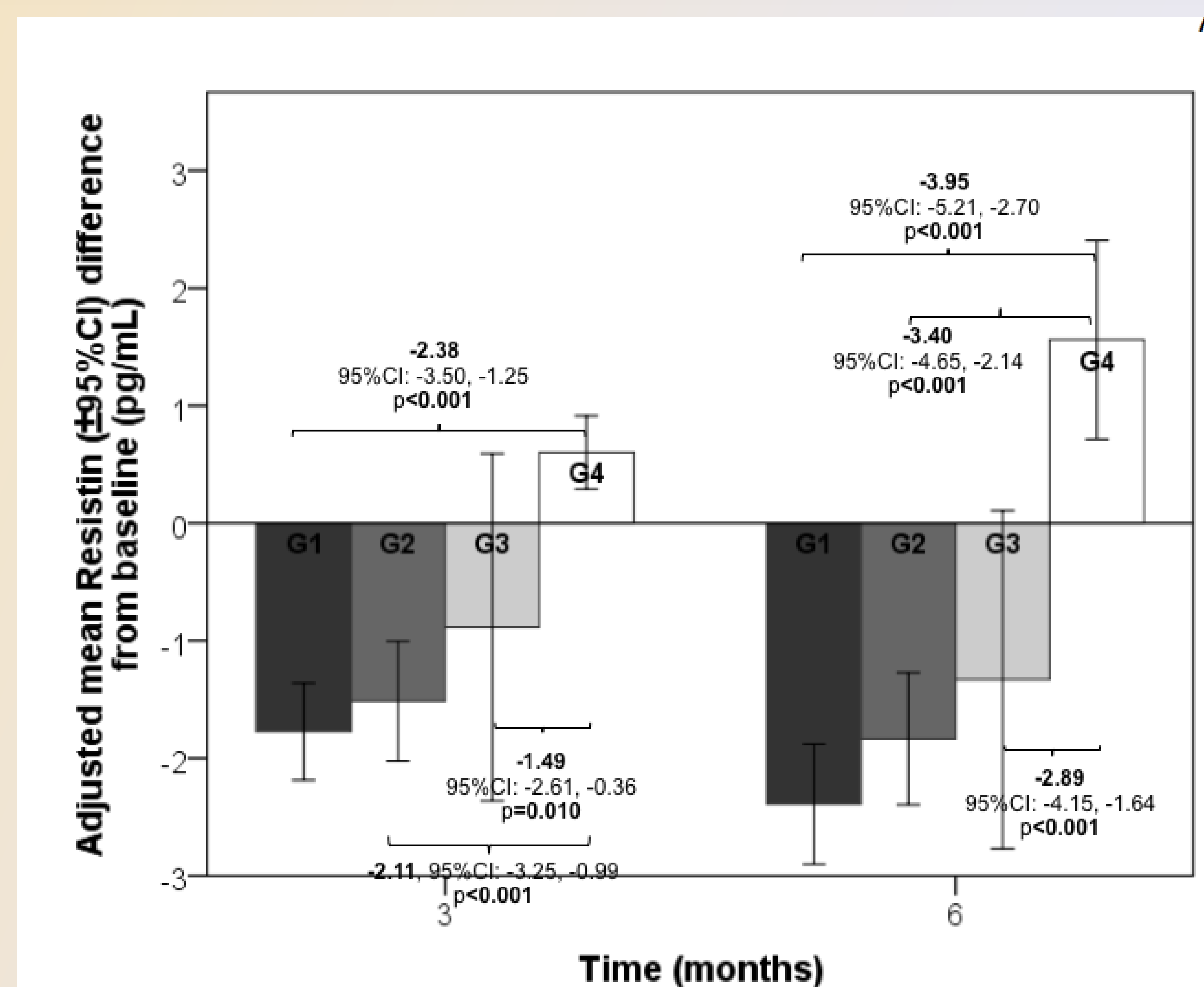
The population was divided into four groups according to the diabetic medication: **G1**= Linagliptin + gliclazide; **G2**=Paricalcitol + DPP4 inhibitors; **G3**=paricalcitol + linagliptin and **G4**= unchanged medication (gliclazide+ metformin).

Continuous variables description, ANOVA and chi-square test were used for comparison between groups. ANCOVA, LSD post-Hoc test.

## Results

The mean age of these patients, the gender and the body mass index were similar between groups. The groups presented with different time-evolution of diabetes, with G2 being the group with a shorter time-evolution diabetes 6.8 (±1.6), p=0.001 and G3 with the longer time-evolution diabetes 10.6 (±4), p=0.001, statistically significant.

	Resistin (baseline)	Resistin (3 months)	Resistin (6 months)	global p
<b>G1 Mean (±SD)</b>	6.1 (±2.7)	4.3 (±2.4)	3.7 (±1.7)	<0.001
<b>G2 Mean (±SD)</b>	6.3 (±2.8)	4.8 (±2.6)	4.5 (±2.3)	<0.001
<b>G3 Mean (±SD)</b>	5.9 (±3.0)	5.0 (±2.5)	4.6 (±2.2)	<0.001
<b>G4 Mean (±SD)</b>	4.4 (±2.2)	5.0 (±2.7)	6.0 (±2.1)	<0.001



## Conclusions

With our study we can raise the hypothesis that paricalcitol and DPP4 inhibitors are able to decrease the insulin resistance, according to our results of resistin and HOMA-IR. Beyond the action on insulin resistance, probably there are other protective roles having in account the pleiotropic effect of resistin. Further studies with more patients are highly important to confirm these result.