Supplementary

An Artificial Intelligence Discovered Functional Ingredient, NRT_N0G5IJ, Derived from *Pisum sativum*, Decreases HbA1c in a Prediabetic Population.

Sweeny Chauhan, Alish Kerr, Brian Keogh, Stephanie Nolan, Rory Casey, Alessandro Adelfio, Niall Murphy, Aoife Doherty, Heidi Davis, Audrey M. Wall * and Nora Khaldi

Table S1. Baseline values for trial NCT03851666.

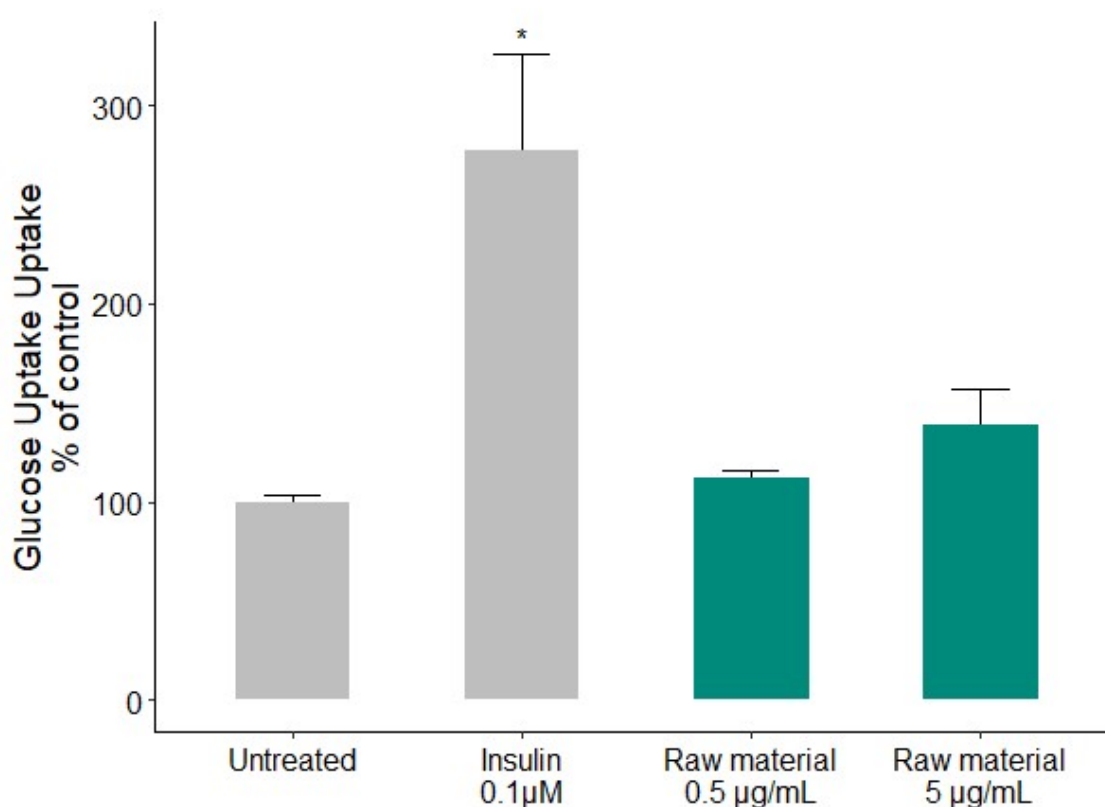|	Placebo	Rice NPN	NRT_N0G5IJ
Fasting Glucose, mmols/L Mean (SD) *Range*	6.003 (0.7672) *5.07–8.07*	5.702 (0.6538) *4.62–7.34*	5.656 (0.7141) *4.54–7.85*
Weight, kg Mean (SD) *Range*	90.61 (10.86) *70–115.3*	90.12 (16.08) *64.6–129.5*	88.82 (17.18) *59.5–123*
BMI, kg/m^2 Mean (SD) *Range*	31.14 (3.35) *24.5–34.95*	31.77 (3.32) *23.7–34.9*	30.04 (4.22) *20.8–34.78*
Fructosamine , micromol/L Mean (SD) *Range*	243.6 (25.64) *152–262*	254.9 (16.38) *219–294*	243.2 (20.28) *206–276*
OGTT, mmol/L Mean (SD) AUC values for Baseline	18.138 (4.3369)	17.980 (3.9801)	16.746 (3.1087)
Insulin, microU/mL Mean (SD) AUC values for Baseline	168.06 (102.970)	136.73 (120.724)	212.06 (161.076)

Figure S1. Effect of raw material on glucose uptake in human skeletal cells. Skeletal muscle cells were stimulated for 20 minutes with Insulin (0.1μM) or a dose of raw material (as indicated) prior to glucose uptake assessment. (Data is represented as mean ± SD; * $p < 0.05$).

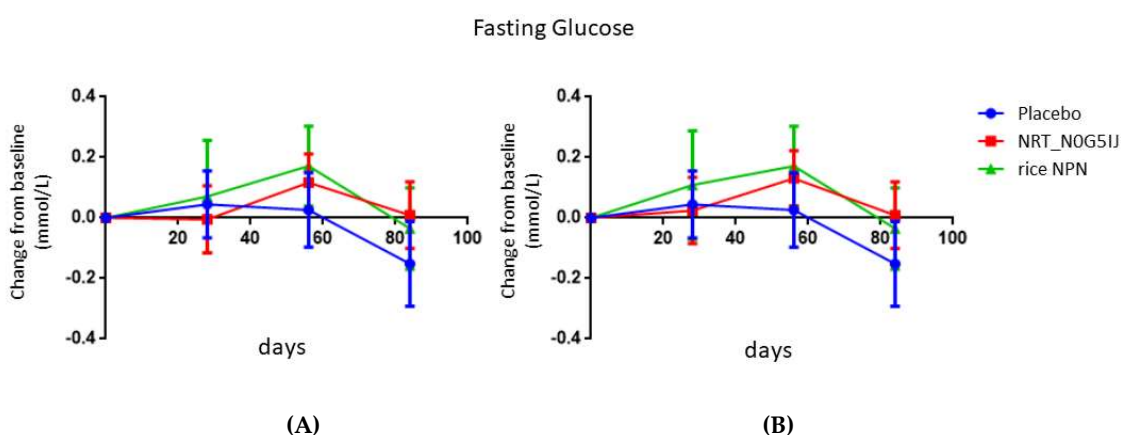**(A)**　　　　　　　　　　　　　　　　　　　**(B)**

Figure S2. Effect of NRT_N0G5IJ on fasting glucose. Change in fasting glucose during 12 weeks of consumption of either NRT_N0G5IJ, rice NPN or placebo from baseline values. Each symbol represents the mean +/- 1 x S.E.M. of at least 18 observations in **A)** per protocol and **B)** intention to treat populations.
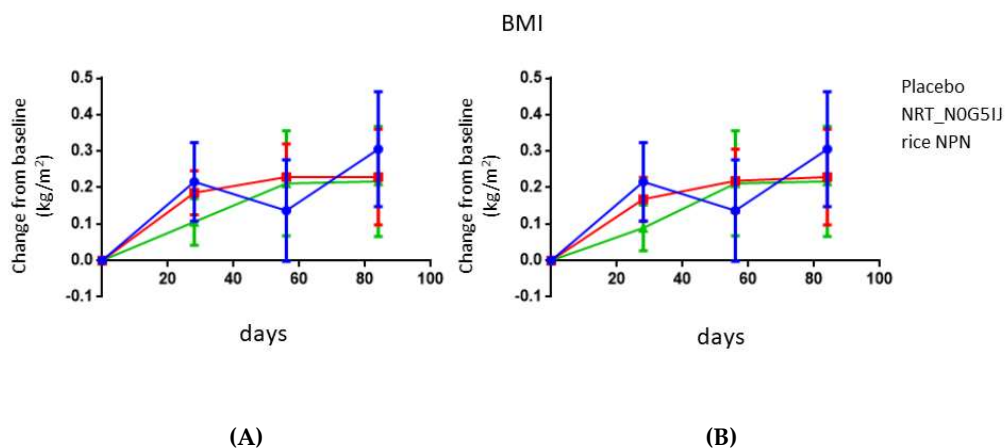
(A)   **(B)**

Figure S3. Effect of NRT_N0G5IJ on BMI. Change in BMI during 12 weeks of consumption of either NRT_N0G5IJ, rice NPN or placebo. Outliers have been removed. Each symbol represents the mean +/- 1 x S.E.M. of at least 18 observations in **A)** per protocol and **B)** intention to treat populations.

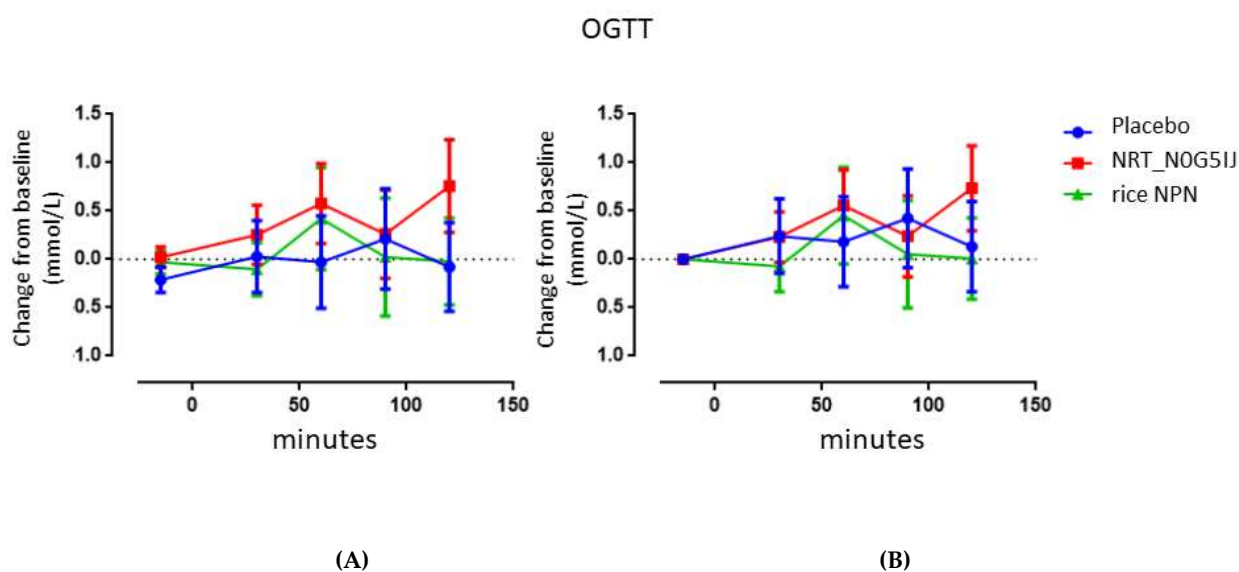**(A)**   **(B)**

Figure S4. Effect of NRT_N0G5IJ on OGTT. Change in OGTT values over 12 weeks of consumption of either NRT_N0G5IJ, rice NPN or placebo in the intention to treat population where **A)** Outliers have been removed and **B)** outliers have not been removed. The per protocol population yielded similar results. Each symbol represents the mean +/- 1 x S.E.M. of at least 19 observations.

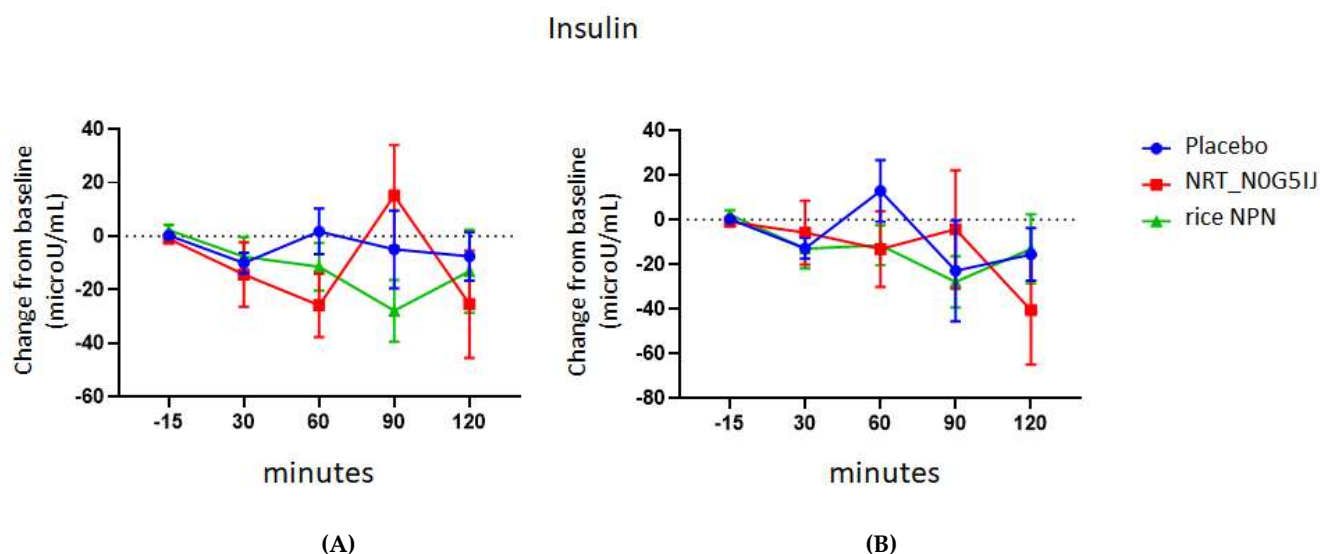**(A)**　　　　　　　　　　　　　　　**(B)**

Figure S5. Effect of NRT_N0G5IJ on Insulin. Change in insulin values over 12 weeks of consumption of either NRT_N0G5IJ, rice NPN or placebo in the intention to treat population where **A)** Outliers have been removed and **B)** outliers have not been removed. The per protocol population yielded similar results. Each symbol represents the mean +/- 1 x S.E.M. of at least 19 observations.
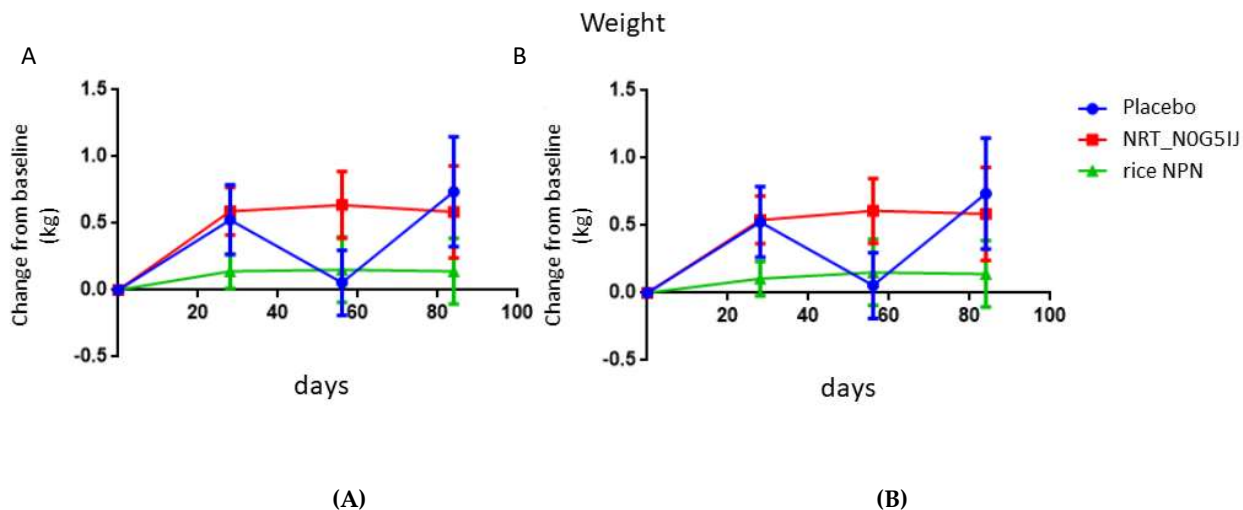

(A)　　　　　　　　　　　　　　　**(B)**

Figure S6. Effect of NRT_N0G5IJ on weight. Change in weight during 12 weeks of consumption of either NRT_N0G5IJ, rice NPN or placebo. Outliers have been removed. Each symbol represents the mean +/- 1 x S.E.M. of at least 17 observations in **A)** per protocol and **B)** intention to treat populations.

Fructosamine

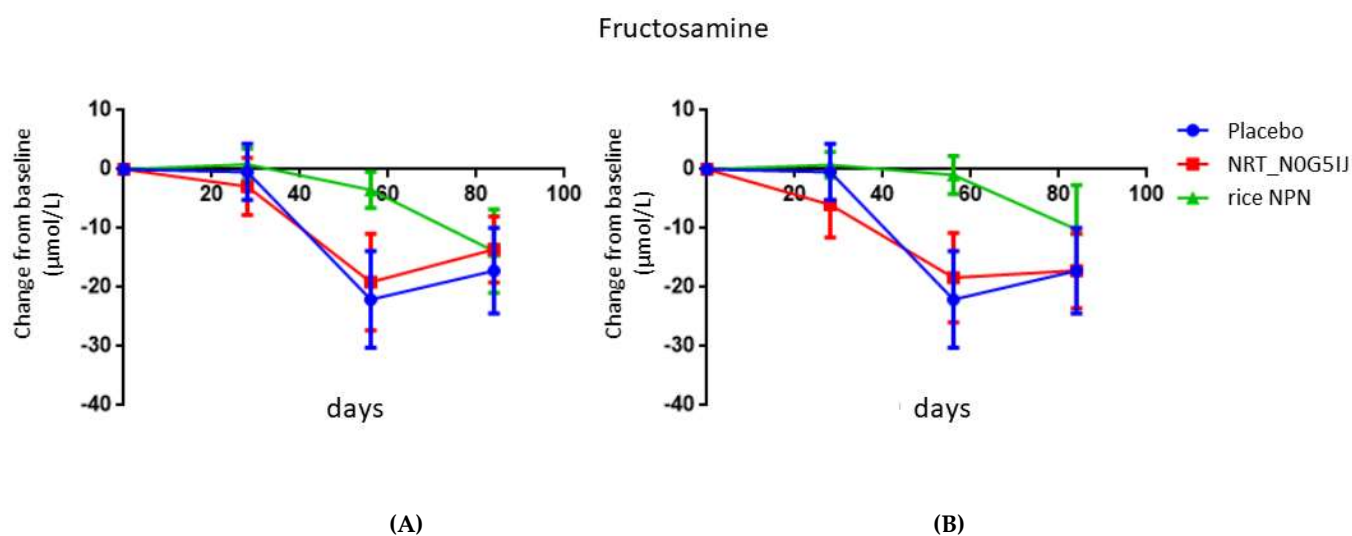**(A)**   **(B)**

Figure S7. Effect of NRT_N0G5IJ on fructosamine. Change in fructosamine during 12 weeks of consumption of either NRT_N0G5IJ, rice NPN or placebo. Outliers have been removed. Each symbol represents the mean +/- 1 x S.E.M. of at least; 13 observations in **A)** per protocol; and **B)** 15 observations in intention to treat populations.