ROYAL SOCIETY OF CHEMISTRY
NEW JOURNAL
RSC Sustainability
GOLD OPEN ACCESS
Dedicated to sustainable chemistry and new solutions
For an open, green and inclusive future
rsc.li/RSCSus
Fundamental questions
Elemental answers
Registered charity number: 207890

**Showcasing research from Dr. Hui-Kang Liu's laboratory, Division of Basic Chinese Medicine, National Research Institute of Chinese Medicine (NRICM), Ministry of Health and Welfare, Taipei, Taiwan.**

Consumption of carotenoid-rich *Momordica cochinchinensis* (Gac) aril improves glycemic control in type 2 diabetic mice partially through taste receptor type 1 mediated glucagon-like peptide 1 secretion

Incretin-based therapy effectively treats metabolic diseases. This study demonstrates that the aril of indigenous *Momordica cochinchinensis* (Gac fruit) stimulates glucagon-like peptide-1 (GLP-1) secretion. Carotenoids, especially beta-carotene, appear as the main active components in Gac aril, enhancing GLP-1 secretion *via* the sweet taste receptor. In a type 2 diabetic mouse model, Gac aril consumption significantly improved glycemic control and beta-cell function. In conclusion, Gac aril may offer health benefits for managing type 2 diabetes, partly by boosting endogenous GLP-1 levels.

## As featured in:

See Hui-Kang Liu *et al.*, *Food Funct.*, 2024, **15**, 11415.

ROYAL SOCIETY OF CHEMISTRY

rsc.li/food-function

Registered charity number: 207890