



Pasture-Raised

ADVANTAGE  
NEW ZEALAND

Kaylene Larking, Meat Industry Association



# mia

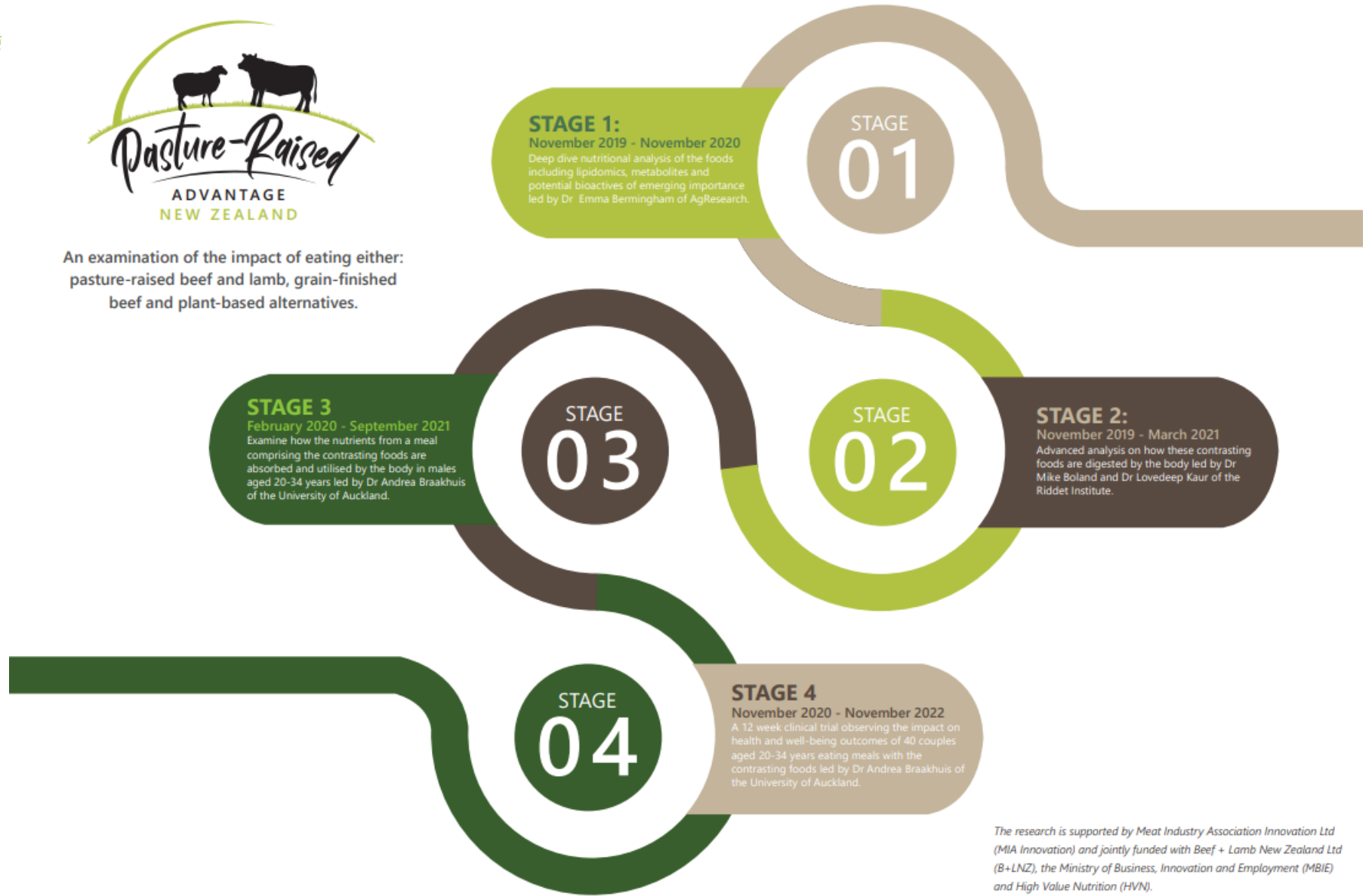
Meat Industry Association

beef+lamb  
new zealand





An examination of the impact of eating either:  
pasture-raised beef and lamb, grain-finished  
beef and plant-based alternatives.



**STAGE 1:**  
November 2019 - November 2020  
Deep dive nutritional analysis of the foods including lipidomics, metabolites and potential bioactives of emerging importance led by Dr. Emma Bermingham of AgResearch.

**STAGE 2:**  
November 2019 - March 2021  
Advanced analysis on how these contrasting foods are digested by the body led by Dr Mike Boland and Dr Lovedeep Kaur of the Riddet Institute.

**STAGE 3**  
February 2020 - September 2021  
Examine how the nutrients from a meal comprising the contrasting foods are absorbed and utilised by the body in males aged 20-34 years led by Dr Andrea Braakhuis of the University of Auckland.

**STAGE 4**  
November 2020 - November 2022  
A 12 week clinical trial observing the impact on health and well-being outcomes of 40 couples aged 20-34 years eating meals with the contrasting foods led by Dr Andrea Braakhuis of the University of Auckland.

*The research is supported by Meat Industry Association Innovation Ltd (MIA Innovation) and jointly funded with Beef + Lamb New Zealand Ltd (B+LNZ), the Ministry of Business, Innovation and Employment (MBIE) and High Value Nutrition (HVN).*



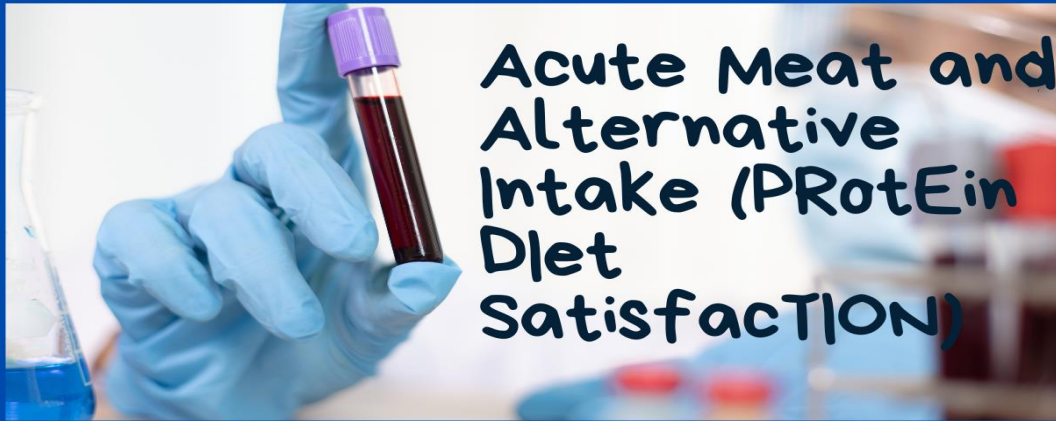


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NEW ZEALAND

Andrea Braakhuis, University of Auckland





# Acute Meat and Alternative Intake (PROtein Diet Satisfaction)

## Measures

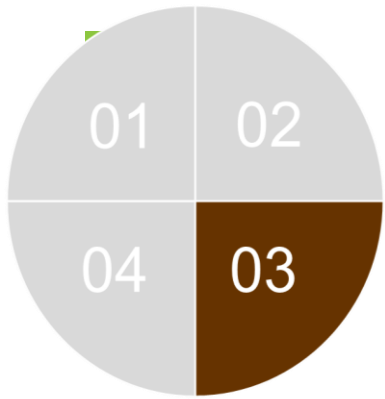
- Glucose/Insulin
- Chylomicron fatty acids
- Plasma amino acids
- Plasma neurotransmitters
- Inflammatory markers

## Aim

- To determine the acute nutritional effects of iso-caloric, blinded meals containing a plant-based meat alternative or pasture-raised-beef or lamb and grain-finished beef

- Study registered at [ClinicalTrials.gov](https://clinicaltrials.gov) / NCT04545398
- Ethics approved by the Ministry of Health, Health and Disability Ethics Committee (Ref: 19/STH/226)





# Methods



30 men (20-34 years) per treatment  
BMI  $\leq$  30

Pasture-raised beef

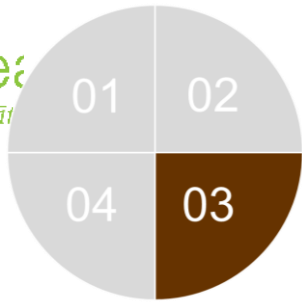
Grain-finished beef

Pasture-raised lamb

Plant-based meat analogue



Overnight fast 0 30 60 90 120 180 240 mins post meal



# Blinded Study?



**Grain finished beef consistently scored the highest of visual appeal, smell, taste, and overall palatability whereas the plant-based meat analogue scored lowest**

- **Did participants know what they were given?**
  - 93% guessed correctly when given Beyond Burger™
  - 40% guessed correctly when given Grain-fed beef
  - 23% guessed correctly when given Pasture-raised beef
  - 27% guessed correctly when given Lamb






ORIGINAL RESEARCH

Protein, Carbohydrate, and Fat Metabolism



## Plasma Amino Acid Appearance and Status of Appetite Following a Single Meal of Red Meat or a Plant-Based Meat Analog: A Randomized Crossover Clinical Trial

Toan Pham,<sup>1,2</sup>  Scott Knowles,<sup>3</sup> Emma Bermingham,<sup>3</sup> Julie Brown,<sup>1</sup> Rina Hannaford,<sup>4</sup> David Cameron-Smith,<sup>5,6</sup> and Andrea Braakhuis<sup>1</sup>

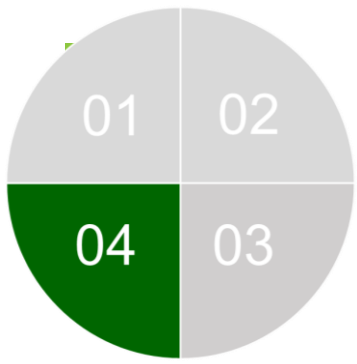
<sup>1</sup>Discipline of Nutrition, School of Medical Sciences, Faculty of Medical and Health Sciences, The University of Auckland, Auckland, New Zealand; <sup>2</sup>Auckland Bioengineering Institute, The University of Auckland, Auckland, New Zealand; <sup>3</sup>Smart Foods Innovation Centre of Excellence, AgResearch Ltd, Palmerston North, New Zealand; <sup>4</sup>Bioinformatics and Statistics Team, AgResearch Ltd, Palmerston North, New Zealand; <sup>5</sup>College of Engineering, Science and Environment, The University of Newcastle, Newcastle, Australia; and <sup>6</sup>College of Health, Medicine and Wellbeing, The University of Newcastle, Newcastle, Australia

### ABSTRACT

**Background:** Red meat is a nutrient-dense food and a dietary staple. A new generation of plant-based meat analogs (PBMA) have been designed to mimic the experience of eating meat, but there is limited evidence about their digestive efficacy and nutritional quality.

**Objectives:** We compared the postprandial digestive response of a single meal containing meat commercially raised in New Zealand, including





# Sustained Well-Being Benefits of Beef Consumption



## PREDITION Trial (PRotEin Diet SatisfacTION)

**Flexitarian:**  
vegetable-based with  
meat 3 x per week



20 household units  
20-34 years of age



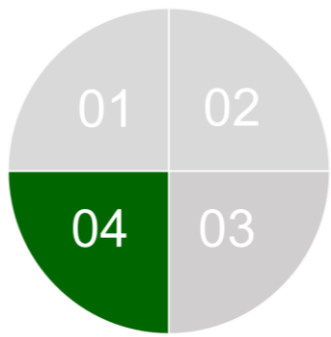
**Ovo-lacto  
Vegetarian:**  
vegetable-based  
with meat-  
alternatives 3x per  
week



20 household units  
20-34 years of age







# Sustained Well-Being Benefits of Beef Consumption



- Study registered at [ClinicalTrials.gov / NCT04869163](https://clinicaltrials.gov/ct2/show/study/NCT04869163)
- Ethics approved by the Ministry of Health, Health and Disability Ethics Committee (Ref: 20/STH/157)



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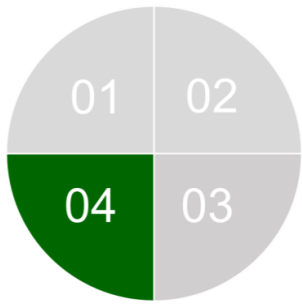
weeks



10

weeks





Published on 21.12.2021 in Vol 10, No 12 (2021): December

📌 Preprints (earlier versions) of this paper are available at <https://preprints.jmir.org/preprint/30909>, first published June 03, 2021.



## A Modern Flexitarian Dietary Intervention Incorporating Web-Based Nutrition Education in Healthy Young Adults: Protocol for a Randomized Controlled Trial

Andrea Braakhuis <sup>1</sup> ; Nicola Gillies <sup>1</sup> ; Anna Worthington <sup>1</sup> ; Scott Knowles <sup>2</sup> ; Tamlin Conner <sup>3</sup> ; Rajshri Roy <sup>1</sup> ; Toan Pham <sup>1</sup> ; Emma Bermingham <sup>2</sup> ; David Cameron-Smith <sup>4</sup>

Article

Authors

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Metrics

- [Abstract](#)
- Introduction

### Abstract

Background:



PRE

[What is this?](#)

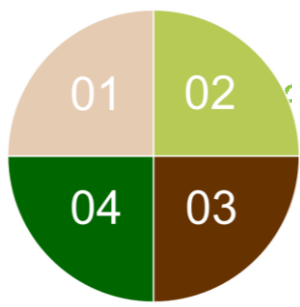
### Citation

Please cite as:

Braakhuis A, Gillies N, Worthington A, Knowles S, Conner T, Roy R, Pham T, Bermingham E, Cameron-Smith D  
A Modern Flexitarian Dietary Intervention Incorporating Web-Based Nutrition Education in Healthy Young Adults: Protocol for a Randomized Controlled Trial  
JMIR Res Protoc 2021;10(12):e30909  
doi: [10.2196/30909](https://doi.org/10.2196/30909)  
PMID: [34931994](https://pubmed.ncbi.nlm.nih.gov/34931994/)

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# Pasture-raised advantage



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**University of Otago:** Tamlin Connor



**Newcastle University, Australia:** David Cameron Smith

# Our industry partners

