



# The Impact of Plant-Based Proteins on Markers of Gut Health

## Aim

The PANProtein studies focus on colonic protein fermentation and its effect on gut microbiota composition, gut markers and related metabolites.

The overall aim is to determine modulating factors of protein digestibility, to investigate nutrient interactions regarding fermentation processes in the colon and to understand metabolic mechanisms.

## Long-Term Goal

The studies are conducted within the scope of the PAN Sweden Research Centre. This inter-disciplinary and inter-sectoral research centre targets current global challenges and the goals of the Agenda 2030.

With the newly gained knowledge the long-term goal is to create sustainable produced products which will be the consumer's preferred choice.

More info:



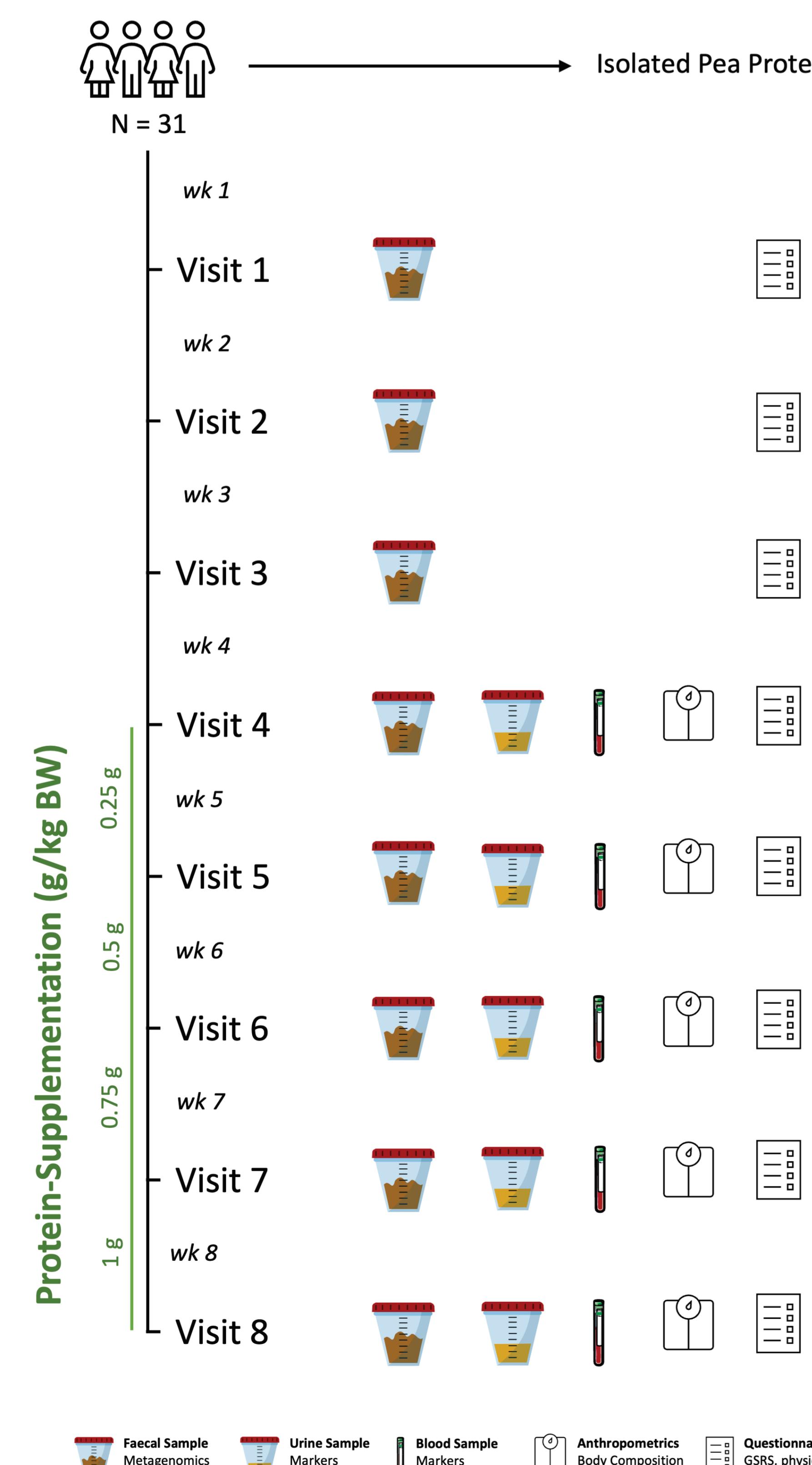
## Background

Plant protein was shown to have a lower impact on the climate in comparison to animal protein which launched a transition towards a plant-based diet in our society.

Plant protein sources contain a variety of different vitamins, minerals and dietary fibre which have been linked to positive health outcomes. However, protein quality and digestibility are lower in comparison to animal-based protein due to lower biological availability, lack of several essential amino acids and the presence of anti nutritional factors.

Additionally, detailed scientific knowledge about health effects of e.g. proteolytic fermentation in the colon is still scarce.

### PANProtein Study 1 – What is the ideal amount of protein for a dietary intervention study?



### Preliminary results from PANProtein Study 1 were used to design PANProtein Study 2

Effect of increasing protein amounts on compliance → negatively correlated  
Preliminary results from analyses of protein fermentation metabolites in faecal samples → increase in valerate, isovalerate and isobutyrate excretion after two weeks of protein supplementation  
Preliminary results after two weeks were not significant but the amount of 0.5 g/kg BW was chosen for reasons of compliance

### PANProtein Study 2 – What is the ideal duration for a dietary intervention study?

