General data	
PPP number	**AF-16505**
Title	**Anabolic properties of plant based proteins**
Theme	**Healthy and Safe**
Executing research organisation(s)	**Maastricht University, Wageningen University (as TIFN research partners)**
Project leader research (name + email address)	**Luc van Loon (l.vanloon@maastrichtuniversity.nl)**
Coordinator (on behalf of private parties)	**Chair Project Council: Kathy Greaves (Kellogg)**
Contact person of government	
Starting date	**1-4-2017**
Final date	**1-9-2019**

Brief description content/aim PPP

Our muscles are composed of proteins, comprising amino acids as their building blocks. By sufficient protein intake in our daily nutrition the amino acids level is adequate to enable muscle building. This is essential to keep our muscles in a healthy condition, for recovery after exercise, and to maintain our muscle mass and muscle strength for performing our daily activities. The kind of protein that is consumed is also important, however, little is yet known regarding the significance of plant proteins in muscle building.

Results

What is the matter?
At a global level, over 50% of our daily protein intake is derived from plant sources like cereal products. Furthermore, plant proteins are the major protein sources in developmental countries. Until now, it is known that different protein sources exert different effects regarding our muscle building. In general, it is assumed that plant proteins have less potential to stimulate muscle growth compared to animal proteins like derived from milk, meat and eggs. Hoever, it is largely unknown to what extent plant proteins really can promote our muscular development.

What does the project contribute?
The research aim is assessing to what extent plant protein consumption promotes muscle buiding, i.e. muscle protein synthesis, in comparison to ingestion of protein from animal origin, by analyzing the rate of muscle protein sysnthesis after protein intake.

What does the project deliver?
It is expected that this research will yield new insights in the potential role of plant proteins in the maintenance and development of our muscles. Additionally, the project wants to demonstrate whether plant based proteins are different from animal proteins in this respect.

What are the effects of its delivery?
World-wide, 1 billion people have a deficit in their protein intake. Moreover, it is expected that global population will rise to about 9.6 billion people within 30 years. This population growth will ask for a substantial increase in protein production, which cannot be sustained by protein production based on animal sources - milk, meat, eggs - alone. Therefore, it is of importance to

develop new strategies for a sustainable supply of consumable proteins, to maintain and promote the health and function of our muscular system.

Number of delivered products in 2017 (give titles and/or description of products, or a link to the products on public websites)			
Scientific articles	Reports	Articles professional in journals	Lectures/workshops
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Annex: Titles of deliverables or a link to products on a public website