

Adres retourzending formulier:
- Rijksdienst voor Ondernemend Nederland
- t.a.v. COST National Coordinator
- Postbus 93144
- 2509 AC Den Haag
- The Netherlands
- Telefoon: +31 88 6025258
- E-mail: cost@rvo.nl

COST-formulier voor aanmelding deelname (*Application form for participation in COST*)

(de vragen kunnen op een apart vel worden beantwoord)

(*answers to the questions may be provided on a separate sheet of paper*)

1. Nummer en titel van de COST-actie
(*Number and title of the COST Action*)

MITOEAGLE: Mitochondrial mapping: Evolution - Age - Gender – Lifestyle OC-2015-2-19984

2. Geef een korte samenvatting (maximaal 1 A4) in het Engels van de bijdrage die u aan deze actie wilt leveren. U dient hierbij aan te geven welk lopend of gepland onderzoek u bij deze actie zou willen onderbrengen, wat de financiële omvang van dit onderzoek is en het aantal mensen dat bij de COST-actie betrokken zal zijn.
(*Please give a brief summary (no more than 1 A4 sheet) in English of your intended contribution to this Action. Please state what current or planned study you would like to incorporate into this Action, the financial scope of this study and the number of individuals that will be involved in the COST Action*)

I am full professor in Human and Animal Physiology of Wageningen University. My group does molecular physiological research on nutritional improvement of metabolic health. We are experienced in dietary intervention studies in cells, rodent models and humans, in the physiological assessment as well as in the molecular analysis of such studies. We particularly have the physiological and molecular tools and expertise available to assess substrate and energy metabolism and mitochondrial functions. We have a full range of equipment to assess energy metabolism, ranging from indirect calorimetry for humans and rodents (exposure to normal air and hypoxia) and to equipment to analyse mitochondrial function at the cell level (Oroboros, Seahorse, BD pathway). We are furthermore fully equipped for state-of-the-art biochemical, cellular, molecular biological, and microscopical analyses. In particular we have a whole genome microarray analysis pipeline, including the necessary bioinformatical analysis. In this COST action we are particularly interested in linking molecular data with mitochondrial readouts. We work on adipose tissue, muscle and blood cells, i.e. across the different working groups of the action. We have several PhD students working on the analysis of mitochondrial function in cells, humans and rodents and this action will help to provide their projects with an international dimension. I expect 3 staff members and 5 current PhD students as well as master students to be involved in the action

3. Geef kort aan waarom deze actie belangrijk is, vanuit Nederlands en/of Europees oogpunt.
(*Please indicate briefly why this Action is significant, from a Dutch and/or European point of view*)

Mitochondria are cellular organelles with an essential role in body energy (ATP) production. Not only this, but mitochondria also are a hub in substrate metabolism, perform essential metabolic steps in heme and iron-sulphur cluster biosynthesis, mediate oxidative signalling, are the main procurers of reactive oxygen species, control programmed cell death and have a central role in immune signalling. In view of these many functions it is easy to see that well-functioning mitochondria are essential for good health. It is known that mitochondrial function decreases with age and is compromised in obesity, diabetes and many other metabolic diseases. It is still very challenging to assess mitochondrial functions in vivo. This COST Action will bring a variety of mitochondrial expertise together, from all over Europe, thus providing the critical mass that is needed to come to improved analysis of mitochondrial functioning (in all its facets) and to improved and integrated interpretation of data related to mitochondrial functioning. This is an important step forwards in order to obtain solid evidence on how mitochondrial dysfunction contributes to age and diet related disease, which in turn will provide the targets for interventions that can help to restore mitochondrial functioning and improve human (and animal) health.

4. Welk onderzoek, gerelateerd aan het onderwerp van deze actie, vindt reeds plaats in Nederland?
(*What research, related to the subject of this Action, is already being conducted in the Netherlands?*)

I have a substantial network in the mitochondrial field both as coordinator of past COST Action Mitofood (Mitochondria, bioactive food components and human health) and as a long term scientist in the mitochondrial field. Important groups in the Netherlands working on mitochondria (in addition to our own group) are Werner Koopman/ Jan Smeitink (Radboud University, Nijmegen), Patrick Schrauwen/Joris Hoeks (Maastricht University), Ron Wanders (University of Amsterdam), we collaborate with these groups.

5. Welke partijen in Nederland kunnen mogelijk geïnteresseerd zijn in de resultaten van deze COST-actie (met het oog op eventuele verspreiding, toepassing of exploitatie van deze resultaten)?

(Which parties in the Netherlands could be interested in the outcome of this COST Action (with a view to dissemination, application or exploitation of the results?))

This Action may be particularly important for the food industry (e.g. Nutricia Research and Friesland Campina) and Top-Institute Food and Nutrition (TIFN) that recently obtained funding for a research program on mitochondria and aging. We participate in this program with an NWO funded project.

6. Welke universiteiten, instituten en bedrijven zullen deelnemen en hoe zal de Nederlandse inbreng worden gecoördineerd (met name in het geval er meerdere Nederlandse partijen aan de actie zullen deelnemen).
(Which universities, institutions and enterprises will be participating and how will the Dutch input be co-ordinated (particularly in the event that more than one Dutch party will participate in the Action))?

I have participated in writing the action and have been proposed as MC member. I will contact other MC members and substitutes before and after all MC meetings. During this, we will exchange information, align views and distribute tasks. We will use our existing contacts to promote the action and stimulate Dutch participation, and to disseminate the information from the action. During the course of the action we intend to have a scientific meeting associated with an MC meeting in the Netherlands on the topic of the action to which scientists and industry will be invited to participate and attend.

7. Hoe zullen de kosten van het onderzoek worden gefinancierd? Onder welke voorwaarden en wanneer zal deze financiering beschikbaar komen?

(How will the research be financed? Under what conditions and when will this funding become available?)

We have ongoing research on mitochondria and energy metabolism which we will incorporate in the Action. We are particularly eager to use the Action to strengthen the international dimension of the research of our PhD students (exchange) and to use the Action to obtain additional funding (from various sources, national, European and trans-atlantic). It will also help to move mitochondria higher up the research agenda (also in NL).

8. Wie moet worden aangemeld als Nederlandse vertegenwoordiger in het Managementcomité (maximaal 2 personen)? Geef titel, voornaam, naam, organisatie, afdeling, postadres, telefoon, fax, E-mail adres en evt. web-adres.

(Who is to be signed up as the Dutch representative in the Management Committee (no more than 2 individuals). Please state title, first name, last name, organisation, department, postal address, telephone number, fax number, email address and website, if any)

MC member:

Prof.Dr.Ir. Jaap Keijer

Full Professor

Human and Animal Physiology

Wageningen University

De Elst 1, 6708 WD Wageningen

PO Box 338, 6700 AH Wageningen

The Netherlands

E-mail: jaap.keijer@wur.nl

Phone: +31-317-484136 (alt. 484748)

Fax: +31-317-483962

MC substitutes:

Dr. Vincent de Boer

Scientist

Human and Animal Physiology

Wageningen University
De Elst 1, 6708 WD Wageningen
PO Box 338, 6700 AH Wageningen
The Netherlands
E-mail: vincent.deboer@wur.nl
Phone: +31-317-484699
Fax: +31-317-483962

Dr. Sander Grefte
Scientist
Human and Animal Physiology
Wageningen University
De Elst 1, 6708 WD Wageningen
PO Box 338, 6700 AH Wageningen
The Netherlands
E-mail: sander.grefte@wur.nl
Phone: +31-317-483014
Fax: +31-317-483962



Datum (Date): 26-02-2016

Handtekening (Signature)

Naam (Name)* MENNO T. VAN MANEN, DIRECTOR OPERATIONS

* Het COST-formulier dient te worden ondertekend door de directeur van de onderneming of het instituut of door de decaan van de universiteitsfaculteit.
(The COST form must be signed by the manager of the enterprise or the institution or by the dean of the university faculty)

