

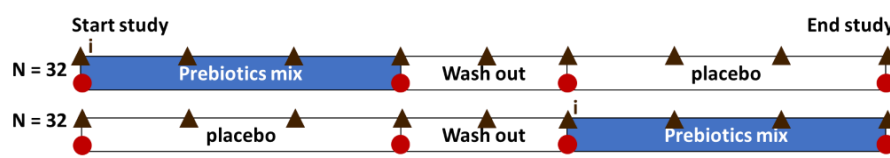


<b>Algemene gegevens</b>	
PPS-nummer	<b>AF-18143</b>
Titel	<b>No Guts No Glory</b> (previously Measurement of Gut Health)
Thema	<b>Gezond &amp; Veilig</b>
Uitvoerende kennisinstelling(en)	<b>TNO</b>
Projectleider onderzoek (naam + emailadres)	<b>Frank Schuren (frank.schuren@tno.nl)</b>
Penvoerder (namens private partijen)	<b>Matthijs Moerland (CHDR)</b> <b>Wilbert Sybesma (DSM)</b>
Contactpersoon overheid (indien relevant)	<b>Wijnie van Eck</b>
Adres projectwebsite	<b><a href="https://topsectoragrifood.nl/project/af-18143-measurement-of-gut-health/">https://topsectoragrifood.nl/project/af-18143-measurement-of-gut-health/</a></b>
Startdatum	<b>01-05-2019</b>
Einddatum	<b>30-04-2022</b>

<b>Goedkeuring penvoerder/consortium</b>	
De jaarrapportage dient te worden besproken met de penvoerder/het consortium. De TKI's nemen graag kennis van eventuele opmerkingen over de jaarrapportage.	
De penvoerder heeft namens het consortium de jaarrapportage	<b>Y goedgekeurd</b>
Eventuele opmerkingen over de jaarrapportage:	

<b>Inhoudelijke samenvatting van het project</b>	
Probleemomschrijving	<p>In this public private partnership TNO, DSM Nutritional Products and CHDR will investigate in healthy people (age 45+ years) the systemic health effects of modulating the gut microbiome using dietary fibers.</p> <p>Disease prevention through improving human health is attracting more attention. The gut microbiome is an important new target in these approaches. However, even though the role of the microbiome in human health and disease is increasingly recognized, the specific relationships between gut microbiome and human health are largely unknown and there is an urgent need for new approaches to study this interaction, not only in lab mice but also in humans.</p>
Doelen van het project	<p>Previously, TNO has developed two measurement solutions, one on the gut microbiome which is a platform called i-screen and one on measurement of health in form of resilience in healthy people (quantification of a person's phenotypic flexibility (personal response to a dietary challenge)).</p> <p>In the current project we will:</p> <ul style="list-style-type: none"> <li>• Set up a clinical intervention study to investigate if it is possible to relate the effects of influencing the gut microbiome, by dietary fiber consumption, to health, which is quantified as a person's phenotypic flexibility.</li> <li>• Report on the combination of in vitro ( i-screen) and in vivo (from the clinical trial) gut microbiome data to investigate if only screening in vitro will provide clarity on effects.</li> </ul> <p>With this approach we would like to conclude on an important problem in the applied gut microbiome research in which many products show</p>

	<p>effects on gut microbiome, however effectiveness and contribution to general health are unclear.</p> <p>The project is organized in five work packages (WP):</p> <ul style="list-style-type: none"> <li>• WP1 Project management and meetings – including reporting, finances, organization etc.</li> <li>• WP2 Human intervention study – including the design of the prebiotic fiber mix, the design and set-up of the clinical intervention, the final selection of biomarkers, writing the study protocol for METC approval, recruitment of subjects and execution of the clinical intervention study and sampling.</li> <li>• WP3 Lab analyses – including part a) on the analysis of biomarkers of the in vivo samples (blood, stool) and part b) the analysis of the in vitro stool samples (i-screen).</li> <li>• WP4 Data analyses – including data integration, visualization and statistics.</li> <li>• WP5 Dissemination – including scientific publications and presentations at conferences regarding the project and its outcomes.</li> </ul>
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<b>Resultaten</b>	
Beoogde resultaten 2019	<p>M1: Consortium agreement signed by all partners</p> <p>D1: Final study protocol for the METC</p> <p>M2: Approval of the protocol by the METC</p>
Behaalde resultaten 2019	<p>The first milestone (M1) was the achieved in spring: the consortium agreement was signed by all partners and accordingly May 1<sup>st</sup> 2019 is the official start date of the project. The name of the project was changed to “No Guts No Glory”</p> <p>The main deliverable for 2019 was the protocol for to the Medical Ethical Committee (D1). This was sent to the METC November 4<sup>th</sup>, and early December we responded to their final question. Due to the Christmas Holidays official approval (M2) was given early 2020.</p> <p>The final study design includes 4 Phenflex challenge tests and stool samples every 4 weeks. These frequent measurements will lead to a wealth of samples and data within a sound scientific design. A highlight is the fruitful collaboration with the partners so multiple win-win additions could be made to the study design. Additions include mental well-being, oral microbiome and biomarkers and experimental measures of vascular health.</p>  <p>▲ Feces collection (on site or via mail kit); i: i-screen on feces. ● Challenge test on site (CHDR)</p>
Beoogde resultaten 2020	<p>Start human intervention study: first subject first visit</p> <p>M3a: Start in vitro analysis (i-screen) of the first samples</p> <p>Because of a faster execution of the activities planned for 2020 than originally anticipated, we expect the human samples to be ready (M3b) in Q4 2020 (instead of Q2 2021).</p>

**Opgeleverde producten in 2019** (geef de titels en/of omschrijvingen van de producten / deliverables of een link naar de producten op de projectwebsite of andere openbare websites)

Wetenschappelijke artikelen:

METC protocol for the study "A randomized, double-blind, placebo-controlled crossover study to assess the effect of 12-week fibre supplementation on mixed-meal challenge response in adults" (CHDR1901) to Stichting Beoordeling Ethiek Biomedisch Onderzoek (BEBO).

Externe rapporten:

NA

Artikelen in vakbladen:

NA

Inleidingen/posters tijdens workshops, congressen en symposia:

Presentation titled "Measuring gut health: Combining microbiome measurement and phenotypic flexibility to evaluate health effects of microbiome modulation" at the 13<sup>th</sup> International scientific conference on probiotics, prebiotics, gut microbiota and health (17-20<sup>th</sup> June 2019, Prague).  
<https://www.probiotic-conference.net/ipc2019-conference-proceedings.htm>

TV/ Radio / Social Media / Krant:

NA

Overig (Technieken, apparaten, methodes etc.):

NA