

PATHWAY

- International career pathways and online curriculum for clinician-scientists -

TRANSNATIONAL MEETING



25th & 26th November 2019
Granada



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Meeting Granada - Agenda

Date:	25 th and 26 th of November 2019
Starting time:	09:00 am
Venue:	Carmen de la Victoria
Participants	Gent: Dirk Elewaut, Johan Vande Walle, Thomas Renson, Ann-Sophie de Craemer, Liselotte Deroo UCL: Colby Benari, Geraint Rees Granada: Juan Ignacio Arcelus Martínez, José Peinado, José Exposito Danone Nutricia Research: Belinda van't Land, Farah Kools UMC Utrecht: Olle ten Cate, Berent Prakken, Annet van Royen, Margot Weggemans Extra invited: Norman Rosenblum (University of Toronto)
Goal:	In-depth discussion of the progress on work packages 2 and 3/ Preview of upcoming outputs.

DAY 0 – PRE-MEETING DINNER

Dinner has been arranged for everyone arriving on Sunday 24th of November (from 20:00 to 22:30 hrs).

DAY 1

Breakfast will take place at the Carmen de la Victoria venue.

Time	Subject	
08:45/ 09:00	Welcome – Coffee & Tea	Everyone
09:00/ 09:30	Opening of meeting and general update on the progress of the PATHWAY project	José Peinado
09:30/ 10:30	Evaluation Educhallenge and implementation handbook – Outputs 9 and 11	Belinda van't Land
10:30 / 11:15	Evaluation first pilot online course – Output 8 – Part 1	Ann-Sophie de Craemer, Thomas Renson, Liselotte Deroo
11:15/ 11:30	Coffee/ Tea Break	Everyone
11:30 / 13:00	Evaluation first pilot online course – Output 8 – Part 2 - Survey results - How to improve the course for the next cohort - Quality assurance	Ann-Sophie de Craemer, Thomas Renson, Liselotte Deroo
13:00/ 14:00	Lunch at Carmen de la Victoria – Signing participant list day 1	Everyone

14:00/ 14:30	Administrative announcements/ Progress on the work packages/ Reminder about Multiplier Events	Farah Kools (Nadine Nonnekes ONLINE)
14:30/ 15:15	Implementation of the online course/ How to make the course sustainable after the lifetime of the project/ Business plan – Output 10	Geraint Rees
15:15/ 15:30	<i>Coffee/ Tea Break</i>	<i>Everyone</i>
15:30/ 16:00	Personal perspective on the project/ Pathway of the clinician-scientist – Output 1	Norman Rosenblum
16:00/ 17:30	EPAs: Discussion on the progress – Output 3	Olle ten Cate

Dinner will take place at Carmen de la Victoria. Starting time will be announced.

DAY 2

Breakfast will take place at the Carmen de la Victoria venue.

Time	Subject	
08:45/ 09:00	<i>Welcome – Coffee & Tea</i>	<i>Everyone</i>
09:00/ 10:30	Evaluation first pilot mentorship programme – Output 7 <ul style="list-style-type: none"> - Survey results - How to improve the programme for the next cohort - Quality assurance 	Thomas Renson
10:30/ 10:45	<i>Coffee/ Tea break - Signing participant list day 2</i>	<i>Everyone</i>
10:45/ 11:15	Personal perspective on the project/ Pathway of the clinician-scientist – Output 1	Berent Prakken
11:15/ 12:00	Article on the clinician-scientists career pathways/ Letter to the editor – Outputs 1 and 2 – Dissemination	Farah Kools
12:00/ 12:30	Upcoming meetings: <ul style="list-style-type: none"> - Multiplier Event Gent – What is our role? - Next (and last) Transnational Meeting @DNR - Upcoming Eureka Summer School 2020 	Belinda van't Land
12:30/ 12:45	Wrap-up	Berent Prakken
12:45/ 13:45	<i>Lunch at Carmen de la Victoria</i>	<i>Everyone</i>

PATHWAY Project Summary

Current translational medicine fails to sufficiently bridge the gap between bench and bedside. This results in a tremendous waste in research investments and numerous biomedical innovations that never reach the bedside. There is broad consensus that clinician-scientists (doctors/surgeons with a full scientific training) hold the key to bridge this gap. However, the number of clinician-scientists is declining due to the failure to retain them in the academic and industrial workforce. The three main sources of this problem are the lack of established career pathways for clinician-scientists, the limited possibilities for integration of clinical and scientific skills and lack of awareness amongst stakeholders of the added value of clinician-scientists.

The first objective of this Strategic Partnership is to create efficient, sustainable and attractive career pathways for clinician-scientists, including the development and implementation of a mentorship program.

The second objective is to integrate research and clinical components in the training of clinician-scientists. This will be achieved by the development and implementation of two innovative online educational building blocks:

- 1) An online course on 21st century skills which provides the clinician-scientists with tools to integrate clinical and research values and skills during their training,
- 2) Educhallenge based on an existing issue from the industrial partners that will be solved in collaboration with the patient organization.

The third objective is to generate impact by raising awareness amongst stakeholders throughout Europe (including policy makers and regulators) of the added value of clinician-scientists in bridging the gap between bench and bedside. This will be achieved by the development of a stakeholder communication toolbox ensuring targeted and efficient ways of disseminating the results of the PATHWAY project to relevant stakeholders in Europe.

The project partners are spread over Europe in different geographical areas and are an excellent representation of the academic stakeholders in Europe. Together with the active participation of a large international industrial partner, a patient organization and an expert non-governmental organization the consortium is well equipped to effectively address the three objectives of the PATHWAY project and to achieve the long-term goal of the project: bridging the gap between.

Intellectual Outputs

Output 1: Clinician-scientist career pathways

An overview of career pathways for clinician-scientists is presently not available in Europe. Especially those career pathways that are not always clear or upfront for people who are not in MD/PhD tracks. An overview of different career paths to take will make the career of the clinician-scientist more efficient, since it provides a bird's-eye view of the possibilities. Also, students will know which choices they will have to make at which moment in time. On a policy level the pathways increase transparency and facilitate the recognition of skills and qualifications. This output will result in an academic article and will be imbedded in the online course (IO 8). The original planning was to deliver this output in spring 2019, but following ongoing discussion regarding the definition of clinician-scientists and defining the target group of the online course (IO 8), we have decided to postpone this deadline to spring 2020.

University College London (UCL) is in the lead of this output. All other involved partners are responsible for the content of the article, drawing especially from their own countries' perspective. In order to reach wider audience, we have agreed that all partners will be responsible for the dissemination of this output; not only Universidad de Granada (UGR). UGR will be still be responsible for the dissemination through the Pathway website.

Start date: 1-12-2017

End date: **1-5-2020 ONGOING**

Output 2: Profile of the clinician-scientist

This output is about clarifying the profile of a clinician-scientist. To develop this profile, quantitative and qualitative research needs to be conducted. Examples of questions:

- What is the definition of a clinician-scientist?
- How many clinician-scientists are there in Europe?
- What do the different systems in Europe look like?

These are very relevant questions and have not been investigated on a European level before. Output 2 will be completed as a letter to the editor instead of a dictionary/handbook which clarifies the profile of a clinician-scientist and unifies all terminologies as we have noticed a communication barrier throughout Europe. In this letter we describe the need for a universal language within translational medicine to raise awareness for the role of clinician-scientists. Output 2 can be considered as a crucial prefix to output 1 as we have to start the conversation on the profile of the clinician-scientist and simultaneously bridge the communication barrier between countries across Europe.

UCL is lead of this output. In order to write this 'letter to the editor', the consortium is gaining information from members of staff in hospitals and universities who support the career development of clinician-scientists and clinician-scientists themselves. Each consortium partner is involved in this process.

Start date: 1-12-2017

End date: **1-5-2020 ONGOING**

Output 3: EPAs for clinician-scientists

First, the consortium explored which EPAs can be used in the training of clinician-scientists. Second, based on the outcomes of this exploration, several EPAs are being developed for the training of clinician-scientists. This is a completely new concept in both North-America and Europe. EPAs are already used for the training of medical students, but not for research work or the combination clinical and scientific duties. The outcomes of this exploration are very valuable for medical faculties on a global level and could radically change the training of clinician-scientists on a global level as well.

Since UMC Utrecht is the most experienced partner in the topic of EPAs and is already involved in EPAs for clinical training, this partner leads this output. UCL contributes to the content of the EPAs. All partners contribute to the publication of the results in a peer reviewed journal. UGR publishes the results on the website. The outcomes of the exploration will also be shared via conferences such as the conference of the International Association of Medical Education. Since our previous progress report, we have experienced a delay regarding the progress of output 3. UMC Utrecht has appointed a new staff member who will make sure that this output will be finished in 2020. Since output 3 is a stand-alone output, this delay does not have consequences for the rest of the Pathway project.

Start date: 1-12-2017

End date: **1-3-2020 ONGOING**

Output 4: Mentorship program template

For this output, we are developing a handbook describing our mentorship programme. This guidebook will be implemented in the online course (IO 8) and during the implementation of the mentorship programme (IO 7). A mentorship program for clinician-scientists does not exist yet in Europe. In North-America, some medical faculties have experience with this concept, among them University of Toronto (UofT). Norman Rosenblum, UofT, has therefore shared his experience about mentorship and based on this knowledge, an innovative template for Europe will be developed. Our handbook focuses on a long-term mentorship programme that can guide clinician-scientists throughout their whole training, which can take more than 10 years starting at Masters level. This handbook will not only be used for our Pathway project, but can also be adapted to other training programmes. Within UMC Utrecht, several departments have already shown their interest in this handbook.

As just mentioned, this handbook will be implemented in the online course. During the process of designing and building the online course, we had to adapt our handbook a several times. We have therefore decided to submit this output once the framework and content of the online course have been finalized. During our transnational meeting in Ghent, we discussed the final draft of the handbook and the consortium decided that we should write an extra paragraph on the nuances of the working environment of a clinician-scientist. For this reason, this output will be delivered at the end of May 2019. UCL is in the lead of this output. In order to reach wider audience, we have agreed that all partners will be responsible for the dissemination of this output, not only Universidad de Granada.

Start date: 1-12-2017

End date: **1-6-2019 FINISHED**

Output 5: Mentor profile

Mentors play an important role in the success of the mentorship program. We therefore decided to integrate output 5 in the handbook of output 4 to facilitate the selection and matching process of mentors and mentees. A natural click between the mentor and mentee is necessary to start of a successful mentorship programme and we aim to facilitate this. As written above, this guide will be used during the implementation phase of the mentorship programme (IO 7). Output 5 can be considered as a crucial supplement to output 4. As just mentioned, this handbook will be implemented in the online course (IO 8). During the process of designing and building the online course, we had to adapt our handbook a several times. We have therefore decided to submit this output once the framework and content of the online course have been finalized. During our transnational meeting in Ghent, we discussed the final draft of the handbook and the consortium decided that we should write an extra paragraph on the nuances of the working environment of a clinician-scientist. For this reason, this output will be delivered at the end of May 2019.

Nutricia research is in the lead of this output as Nutricia has ample experience with mentorship programs. The consortium has selected more than 35 international mentors through the network of the Eureka Institute (one of the associated partners of our project). Thus, we selected more mentors than originally planned. A higher number of mentors will have positive effect on the matching process for mentors and mentees. To disseminate our project results with a wider audience, we decided to also select mentors from other institutions than only our partners. The selected mentors are from all over the world. As mentors are not all employed by our partner institutions, we will not be able to invite all mentors for our transnational meetings. A few consortium colleagues are also selected as mentor and will be the ambassadors of the mentor group during the upcoming transnational meetings.

Start date: 1-12-2017

End date: 1-6-2019 FINISHED

Output 6: Professional development portfolio for clinician-scientist

For the clinician-scientist a template of an individual roadmap/professional development portfolio will be developed making use of the data gathered for outputs 1 and 2. This portfolio will be used during the online course (IO 8) and mentorship programme (IO 7) to create an individual career roadmap. During the second transnational meeting in London, we discussed that there are pathways that are not always clear or upfront for clinician-scientists. We have noticed that every clinician-scientist will face a few crossroads during his/her career and we believe that this portfolio can provide guidance. The template of the roadmap will be published on the website for the use by other European Medical Faculties.

Nutricia will lead this output. The other consortium partners contribute to the content of this portfolio. UGR will publish the roadmaps (open source).

Start date: 1-12-2017

End date: 1-7-2019 FINISHED [DELIVERABLE PENDING]

Output 7: Implementation of the mentorship programme

The mentorship programme is presented to the partners during the third transnational meeting in Ghent. Unlike what is written in the grant application, the mentorship programme will be connected to the yearly 'Translational Medicine: Doing the Right Research Right' Summer School in Utrecht, the Netherlands. Participants of this Summer School, who are not only young clinician-scientists, but also life scientists, can sign up for the mentorship programme. During the last meeting Ghent we discussed that working environment of the clinician-scientists is very much intertwined with the working environment of the life scientists. Bringing those two groups together in one programme will have a positive effect on the aims of this project. Not only students of the partner institutes are welcome to sign up, but also Summer School participants from other centers and countries. By doing so, we will reach a wider audience and can disseminate our project further. Since this summer course is offered every year, we thereby make the mentorship programme sustainable after the lifetime of the project.

Before attending this mentorship programme, students must follow the online course (IO 8), which will prepare them for this programme and facilitates the matching of mentors and mentees. When finishing this online course, the mentor and mentee will have meetings via Skype or Zoom (or if applicable face-to-face). The implementation of the mentorship programme will be evaluated during the fourth transnational meeting in Granada. As mentioned earlier, all selected mentors are Eureka alumni. This means that we have selected mentors from all over the world, which will help us to disseminate the results to a wider audience, even outside Europe. During our last meeting in Ghent, all consortium partners agreed that there is a need to offer a mentorship programme outside of the Summer School. For this, a business plan (IO 10) will be developed and discussed during the meeting in Granada. UMC Utrecht leads the implementation of the mentorship programme. Nutricia Research BV provides valuable input.

Start date: 1-7-2019

End date: **1-3-2020 ONGOING**

Output 8: Online course

This output is the development of a joint, international, online course for clinician-scientists/life scientists that will be used as a preparation for the mentorship programme (see output 7). In contrary to what is written in the Pathway proposal, we decided that this course will not only focus on clinician-scientists. The working environment of the clinician-scientists is very much intertwined with the working environment of the life scientists. Bringing those two groups together in one programme will have a positive effect on the aims of this project. These two groups will follow a different online track designed to specifically prepare each of them according to their tailored needs.

During the online course, the following topics will be discussed: career pathways, professional and personal pitfalls, and mentorship. The Pathway mentors will also follow the online module regarding mentorship. The courses will be offered as a Small, Private, Online Course (SPOC). SPOCS are characterized by small groups, interactive and collaborative learning tools and high success-rate. The course will first be developed for the students who have joined the Summer School Pathway students, external participants can participate at a later stage in the project. The online course will be released in September 2019, just after finishing the translational medicine Summer School of 2019. The consortium abandons the idea of inviting 10 students per partner

institution to attend this course. By inviting participants of the yearly Summer School to attend this course, the consortium reaches out to a wider audience which helps to disseminate the project results. After running the first pilot version of the course in September 2019, the consortium will evaluate the programme and will adapt the course for summer 2020 (the upcoming Summer School).

UMCU has ample experience with online educational methods and will therefore be responsible for the development of the course by e-learning developers with both a technical and a didactical background. Ghent University, University College London and UMCU will contribute to the development of the content of the course. All partners share any existing course materials at the start of the development phase and will give their input on the content of the course. Universidad de Granada is responsible for the evaluation process of the online course. After implementation of the course, the course will be evaluated and adapted appropriately. The framework of the online course has been discussed with the associated partners.

Start date: 1-5-2018

End date: 1-7-2019 PILOT FINISHED [EVALUATIONS PENDING]

Output 9: Educhallenge

Contrary to the grant application, we will offer a face-to-face educhallenge instead of an online version. Teaming up with other students is a very important aspect of an educhallenge and this cannot be reached by an online edition. The educhallenge will be implemented during the translational medicine Summer School. During the Summer School edition of 2018, we have already offered a pilot version, which was a great success. The challenge of 2019 will be based on an existing issue experienced by our industrial partner Nutricia Research BV with focus on the interaction between industry and academia, which can will be solved in collaboration with patient organizations like ENCA/PRES. The challenge is expected to have a positive impact on the students. It will provide them with tools to combine clinical and research skills in their training and to understand the patient and industry perspective of current complex biomedical issues.

During the last meeting Ghent, Nutricia presented example cases for the Educhallenge of 2019. The consortium has chosen one of the examples. UMCU will lead this output. Nutricia and ENCA/PRES contribute to the content. University of Ghent contributes to the development of the challenge. Universidad de Granada is responsible for the evaluation process of the Educhallenge.

Start date: 1-5-2018

End date: 1-7-2019 PILOT FINISHED [DELIVERABLE PENDING]

Output 10: Implementation of the online course

The newly developed course will be implemented after the translational medicine Summer School. The main goal of this course is to prepare mentees and mentors for the mentorship programme (IO 7) Students will be divided over mixed, international groups to foster international collaboration and networking. Each group has its own course environment. The groups will be supervised by a content expert from one of the partners and by an e-moderator (didactical and technical e-learning expert). The estimated course duration is 2 weeks with a study load of 6 hours. This course will be offered in 2019 and 2020 (after the Summer School) and will be evaluated after each edition. After the lifetime of this project, it will remain part of the Summer School, but

future plans include a stand-alone version which can be offered to other institutions. Students will receive a certificate of attendance if they have successfully finished the course.

This output will result in an implementation handbook which will help other institutions to implement this course in their institution. UMCU is responsible for the enrollment of the students and e-moderation. The different organizations contribute as experts in teaching the course. Universidad de Granada is responsible for the quality assurance of this output. The Virtual Learning Environment of Elevate will be used to offer the course.

Start date: 15-7-2019

End date: **1-3-2020 ONGOING**

Output 11: Implementation of the educhallenge

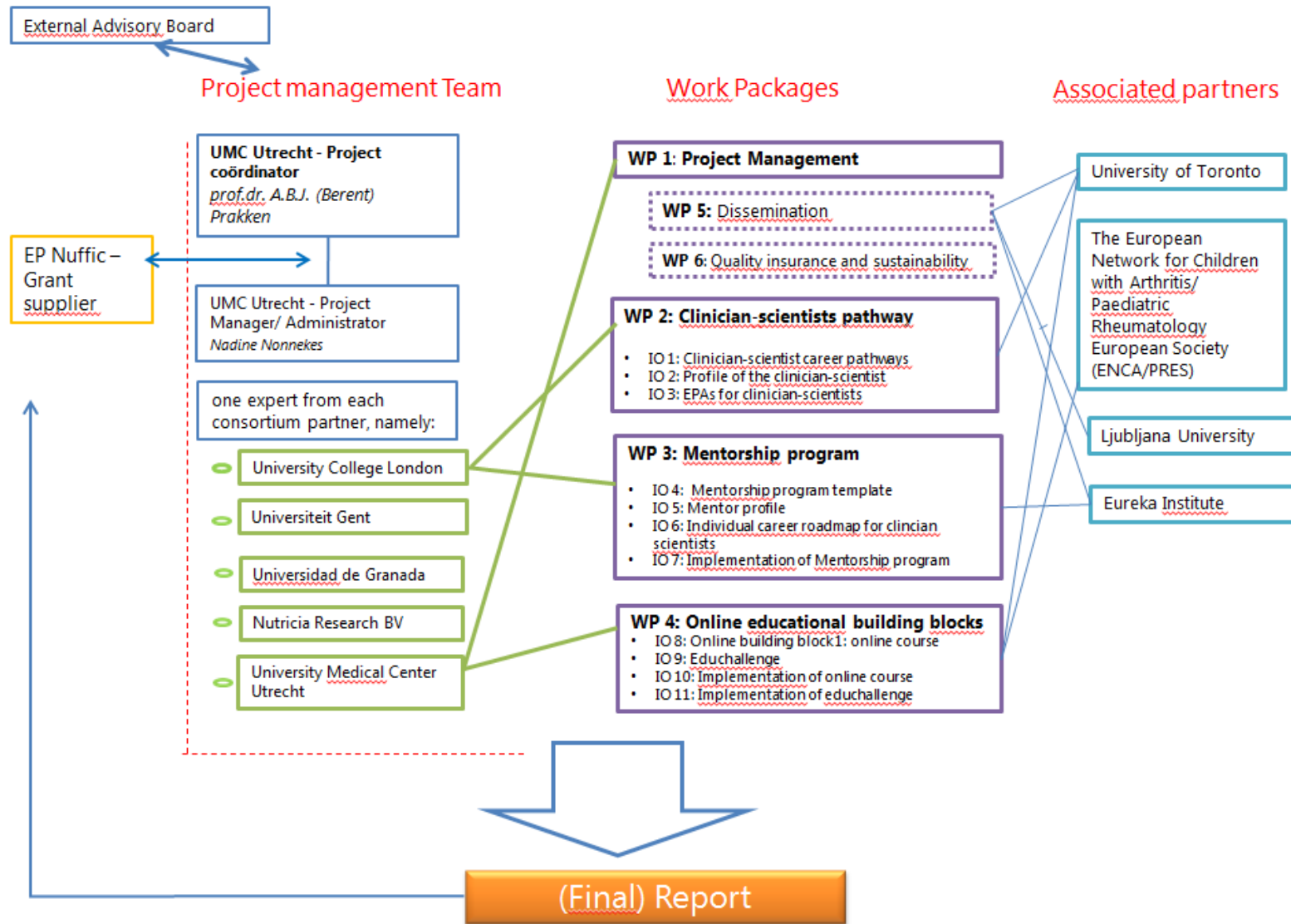
The face-to-face educhallenge will be implemented during the Summer Schools. During the Summer School edition of 2018, we have already offered a pilot version, which was a great success. The challenge of 2019 and 2020 will be based on an existing issue from an industrial company such as Nutricia Research BV which may be solved in collaboration with a patient organization as ENCA/PRES.

This output will result in an implementation handbook in which we describe how to set up an Educhallenge. UMCU leads this output, Nutricia and ENCA/PRES have an important role. UMCU is responsible for offering the challenge. Nutricia or another leading industrial body is given the opportunity to deliver a case that will be solved and ENCA/PRES is available to discuss the patient perspective with the students. All partners contribute to the supervision and support of the students.

Start date: 15-7-2019

End date: **1-3-2020 ONGOING**

Project Structure



Timeline

