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Mid-Term Review Meeting

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Abstract

The HyMedPoly Mid-Term Review meeting was held at Eurescom GmbH in Heidelberg, Germany on 10 November 2016 in the presence of the project beneficiaries, the Early Stage Researcher cohort and the representatives of European Commission's Research Executive Agency.

The report describes the meeting and document preparation and outlines the presentations and discussions at the review meeting.

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• *This report is classed as* **PU =** Public

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Impressum

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Executive Summary

HyMedPoly aims to develop new therapies based on biomedical polymers and inorganic materials.

The HyMedPoly Mid-Term Review was held at Eurescom GmbH in Heidelberg on 10 November 2016 and was attended by all 15 Early Stage Researchers (ESRs) engaged on HyMedPoly, representatives of the seven beneficiaries and the Research Executive Agency (REA) Project Officer and the appointed technical expert . The meeting is seen by the European Commission as a valuable source of feedback to both the consortium and the REA.

In preparing for the meeting the Coordinator agreed an agenda with the Project Officer, ensured that the Researcher Declarations for all recruited fellows had been and detailed the information needed to participants. Two documents were prepared for the meeting; a Mid-Term report and a document profiling each ESR. The report concluded that by establishing an ESR cohort within a focussed research programme, the HyMedPoly project group is well placed to develop novel therapeutic hybrid biomaterials.

The Mid-Term Review meeting followed the proposed agenda. Starting with introductions to the project team and the MSCA programme, the meeting then reviewed progress through reports from the coordinators and the fifteen ESRs. Discussions between the REA representatives and the ESR cohort were followed by discussions with the beneficiaries and then the project group as a whole.

Initial verbal feedback was positive with the project being permitted to proceed to Period 2 and some additional actions suggested by the REA representatives.

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1 Introduction to the HyMedPoly Project

Infection has become one of the toughest problems in the medical world and as bacteria become more resistant to drugs there are fewer effective antibiotics to fight against pathogens.

HyMedPoly is developing new therapies based on intrinsically antibacterial polymers, polymer composites with inorganic materials and polymers with antibacterial additives for the production of drug-free antibacterial hybrid biopolymers as therapeutic materials to prevent, control and remove infections.

Our ultimate goals are to develop a new generation of professionals who will play a pivotal role in pushing forward this challenging and knowledge-intensive field for the coming decades to benefit the European economy and who will be able to bring state-of-the-art technology to industry, advance products for hospitals and personal healthcare, and develop new and improved therapeutic strategies.

The HyMedPoly team has recruited a cohort of fifteen Early Stage Researchers (ESRs) to work with a group of nine universities and companies to:

- Validate the new materials concepts and determine key design parameters that will guide the development of families of novel therapeutic hybrid polymers to combat bacteria-related infection.

- Study industrial processing techniques to fabricate the medical materials and product demonstrators.

- Undertake a comprehensive and innovative training programme to meet industrial demands for fully rounded professional researchers.

Appendix 2 gives more details of the project group and the research projects supported.

2. Preparation for the HyMedPoly Mid-Term Review Meeting.

The Mid-Term (Review) Meeting (MTM) is an integral part of the monitoring of the progress of Marie Skłodowska Curie Action (MSCA) projects.

The MTM assesses how the project group has delivered the programme of scientific, training, management and networking activities which is described in the Annex I-Description of the Action (DoA) of the Grant agreement (GA) for the project. Particular attention is paid to the training activities and networking aspects including activities across different sectors.

The meeting is held between the network participants and the Research Executive Agency (REA) Project Officer and is seen by the European Commission as a valuable source of feedback to both the consortium and the REA.

The HyMedPoly Coordinator (Lucideon) agreed with the REA the date, the venue and the agenda of the meeting. The meeting was fixed to be held on 10 November 2016 (Project Month 23) at Eurescom's offices in Heidelberg, Germany. This date meant that the meeting was held in advance of the 2 March 2017 deadline for the submission of the periodic report covering the first reporting period.

The date was fixed to ensure that the Project Coordinator, the Scientific Co-ordinator, representatives of the Partner Organisations and all the appointed Early Stage Researchers could attend the meeting.

The REA appointed an external expert with a scientific background in the area of HyMedPoly to assist with the review.

In addition to agreeing the date and venue, the Coordinator completed the following actions for the meeting:

- Agreed an agenda with the Project Officer. The agenda followed the structure suggested by the EC Informal Guidelines for the Mid-Term Review Meeting and is detailed in Appendix 1.
- Ensured that the Researcher Declarations for all recruited fellows had been submitted by each beneficiary in the Participants' Portal site
- Provided all MTM participants including recruited researchers with the informal guidelines on the meeting structure and the input that they had to provide along with a schedule for its provision.

A Mid-Term report and a document profiling each ESR were prepared provided to the Project Officer before the meeting.

The Mid-Term report outlined the project achievements against the objectives described in the DoA. Following the supplied template it detailed;

- scientific results
- research training
- networking and transfer of knowledge

- dissemination
- outreach activities
- project management

The MTR summarised the work performed from the beginning of the project and highlighted the main results.

Early activity had set the foundations for the project.

A proactive dissemination programme was started at an early stage, with the website www.hymedpoly.eu as the main vehicle for external communications on network activities and achievements.

A standard recruitment approach was agreed by the project partners for both advertising and interviewing of candidates and all fifteen ESR positions were filled.

Although at an early stage of their projects, the ESRs are making good progress in their chosen topics with active communication between the host universities and the industrial/clinical partners. Eleven of the projects are developing, synthesising and testing new biopolymers, bioceramics and bioactive glasses that can act as active agents to prevent or eradicate bacterial infections. Two projects are investigating *in-vitro* bio-evaluation of antimicrobial biomaterials with a focus on wound dressings. A further two projects are using computer modelling studies and digital manufacturing approaches to specify structures and surfaces which will maximise the antimicrobial effectiveness of the novel materials and products developed.

In parallel with their research projects, the ESRs are following a training programme, which introduces the scientific and clinical themes relevant to the initiative and highlights the issues around managing collaborative research and development.

As the ESRs have progressed their projects they had increasingly presented their work and participated in outreach activities. For example they have given presentations and displayed technical posters at biomaterial conferences, they have helped to organise technical events at their host organisations and they have attended undergraduate events to talk about their projects and the MSCA programme in general.

The report concluded that by establishing an ESR cohort within a focussed research programme, the HyMedPoly project group is well placed both to develop novel therapeutic hybrid biomaterials for antibacterial applications and to build a world leading reputation for the EU in this discipline

The ESR Profile Document followed the best practice suggestion with the MTR guidelines and provided the Project Officer with details of each of the recruited researchers and listed the following along with a photo of each researcher:
Name, age, host institution, country of origin, country of recruitment, secondments performed and foreseen, trainings, basic studies with dates, research goals regarding deliverables and milestones and plans for the future.

3 The Mid-Term Review Meeting and Feedback

The Mid-Term Review Meeting was held on 10 November 2016 with the Project Officer and the appointed expert meeting representatives of each of the 7 beneficiaries plus one partner organisation (Eurescom) and the 15 ESRs (Figure 1).

Figure 1 The HyMedPoly ESRs and Partner Representatives with the EC Project Officer and Technical Expert outside Eurescom's Offices.

The agenda shown in Appendix 1 was followed throughout. Following a welcome and Introduction to the Project and the MSCA programme from both the Project Co-ordinator and the REA Project Officer, a Tour de Table enabled each of the scientist-in-charge to briefly introduce their organisations, present their research team and describe their role within the network.

The Coordinator's Reports from Lucideon and University of Westminster then summarised scientific, training, networking and management activities in Period 1.

Each of the Early Stage Researchers then presented their individual reports through 10 minute PowerPoint presentations and followed by 5 minute discussions. The presentations were in numerical order of ESR designation and were spilt over two sessions. Each session was chaired by ESR volunteers.

The ESRs were provided with a presentation template by the coordinators to ensure consistency between the presentations. The topics covered were;

- Personal Profile
- Project Objectives
- Methodology
- Main Results to Date
- Training Experience during HyMedPoly
- Expected Impact of HyMedPoly on the ESR's Career.

Three discussion sessions followed the ESR presentations. First the ESRs met with the REA Representatives to discuss their experiences within the Network in terms of training, progress and impact on their future careers. A meeting between the Project Partners and REA Representatives then followed, in which financial issues and the periodic report were discussed. The meeting concluded with a feedback and open discussion of all parties.

Initial verbal feedback on the project was positive with the project being permitted to proceed to Period 2 and some additional actions suggested by the REA representatives. Written feedback on the review would be provided in early 2017 once the REA Representatives had considered the reports more fully.

Figure 2 Presenting the Project Overview at the Mid-Term Meeting

Appendix 1 – The Mid-Term Meeting Agenda

HyMedPoly

Drug-Free Antibacterial Hybrid Biopolymers for Medical Applications

MID-TERM MEETING

Thursday 10 November 2016,
Eurescom, Heidelberg

09:00 - 09:15 **Welcome and Introduction to the Project (15 mins)**
(REA Project Officer/External Expert/Project Coordinator)

09:15 - 09:45 **Tour de Table (30 mins)**

All scientist-in-charge should briefly present their research team and describe their role within the network. Introduction of the Partner Organisations.

09:45 - 10:30 **Coordinator's Report (45 mins) (Lucideon/University of Westminster)**
- I) Scientific
- II) Training
- III) Networking
- Iv) Management

10:30 - 10:50 ***Coffee Break***

10:50 - 12:35 Researchers' Individual Reports (10 minute PowerPoint Presentation from Each Researcher; 5 minute Discussions/Change Over) (Chairs...Sheila Piarali, Patricia Varela)

10:50 – 11:05 ESR01 - Jeddah Marie Vasquez
11:05 – 11:20 ESR02 - Subha Purkayastha
11:20 – 10:35 ESR03 - Lukas Gritsch
11:35 – 11:50 ESR04 - Binh Thi Thanh Phan
11:50 – 12:05 ESR05 - Elena Marcello
12:05 – 12:20 ESR06 - Isabel Orlando
12:20 – 12:35 ESR07 - Seray Kaya

12:35 - 13:15 ***Networking Lunch***

13:15 - 15:15 **Researchers' Individual Reports (10 minute PowerPoint Presentation from Each Researcher; 5 minute Discussions/Change Over) (Chairs.. Lukas Gritsch, Isabel Orlando)**

13:15 – 13:30 ESR08 - Muhammad Maqbool
13:30 – 13:45 ESR09 - Agata Łapa
13:45 – 14.00 ESR10 - Alexandra Paxinou
14:00 – 14:15 ESR11 - Sheila Piarali
14:15 – 14:30 ESR12 - Faezeh Shalchy
14:30 – 14:45 ESR13 - Loris Domenicale
14:45 – 15:00 ESR14 - Ayesha Idrees
15:00 – 15:15 ESR15 - Patricia Varela

15:15 - 15:30 ***Coffee Break***

15:30 - 17:00 **Meeting between the ESRs and the REA Representatives (90 mins)**

17:00 - 17:30 **Meeting between the Project Partners and REA Representatives (30 mins)**

17:30 - 18:00 **Feedback and Open Discussion (30 mins)**

Meeting Close

HyMedPoly received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant agreement No. 64305.

Appendix 2 – The HyMedPoly Project Group and Research Projects

HyMedPoly aims to develop new therapies based on biomedical polymers and inorganic materials. The nine universities and companies from across Europe shown in Table 1 are creating a cohort of 15 European Industrial Doctorates. The projects, detailed in Table 2, are to synthesise new biopolymers with added antibacterial functionality and develop functionalised bioactive ceramics and glasses that can act as active agents to kill bacteria and prevent their growth.

The new material systems from HyMedPoly are aimed at applications such as wound care, implants and bio film prevention.

Table 1.1: The HyMedPoly Consortium Members

Consortium Member		Legal Entity Short Name
Beneficiaries		
1.	Lucideon	Lucid
2.	University of Westminster	UoW
3.	Politecnico di Torino	Polito
4.	University of Erlangen-Nuremberg	FAU
5.	Vornia	Vornia
6.	University of Southampton	Soton
7.	Knappschafts-Hospital Bochum GmbH	KHB
Partner Organisations		
8.	IK4 Tekniker	IK4
9.	Eurescom	EUR

Table 1.2: The HyMedPoly Research Projects

ESR	Project Title	Researcher	Academic Host	Non Academic Host
1	Degradable Antibacterial Polyesters and Composites	Jeddah Marie Vasquez	Polito	Vornia
2	Design and Engineering of Therapeutic Polyurethanes	Subha Purkayastha	Polito	Vornia
3	Bioresorbable Antibacterial Polyesters	Lukas Gritsch	FAU	Lucid
4	Biodegradable and Bioresorbable Polyesters	Binh Thi Thanh Phan	FAU	Lucid
5	Novel Antibacterial Natural Polymers	Elena Marcello	UoW	Vornia
6	Hydrogel Based Hybrid Antibacterial Polymers	Isabel Orlando	UoW	Vornia
7	Bioactive Silica Glass	Seray Kaya	FAU	Lucid
8	Substituted Hydroxyapatite	Muhammad Maqbool	FAU	Lucid
9	Bioactive Phosphate Glass	Agata Łapa	FAU	Lucid
10	Innovative Antibacterial Polymers	Alexandra Paxinou	UoW	KHB
11	Antibacterial Materials For Tissue Engineering Scaffolds	Sheila Piarali	UoW	KHB
12	Mechanobiology of Cell-Surface Interaction	Faezeh Shalchy	Soton	Lucid
13	Mechanics of Porous and Structured Materials	Loris Domincale	Soton	Lucid
14	In-vitro Bio-evaluation of Antibacterial Polymers	Ayesha Idrees	Polito	KHB
15	Antibacterial Testing of Polymers	Patricia Valera	Polito	KHB

