



PROJECT ACRONYM

CUPIDO

PROJECT TITLE

Cardio Ultraefficient nanoParticles for Inhalation of Drug prOducts

Deliverable 10.16

Summary of annual workshops, networking events, and building communities

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1. Executive summary

Activities to be performed by CUPIDO, under the framework of WP10, aim at the following goals:

- Facilitate the **acceptance** and use, by healthcare professionals and patients, of the developed new bio-formulation and therapies;
- Create **awareness** and seek involvement of the general public around the main benefits of the latest results in active nanoparticle-based medicinal products and non-invasive therapies;
- Build and maintain a strong link with other European projects, initiatives and clusters active in the cardiovascular diseases care sector.

IN supports the consortium in reaching these objectives by facilitating the outreach to general public and relevant stakeholders. In collaboration with the coordinator, IN outlined the project's training plan, which has been included in D10.14 and D10.15.

Key deliverable achievements

The consortium organized and participated to networking events / meetings with:

- 1) scientific communities involved in nanomaterials and cardiology sectors;
- 2) industrial and pharmaceutical sector;
- 3) general public.

2. Cooperation between participants

As leader of Task 10.3 "Building communities", IN created this deliverable D10.16. This deliverable describes the main activities performed by the consortium, under the framework of WP10, during the 2nd Reporting Period of the project, between August 2018 – January 2020 (M19-M36).

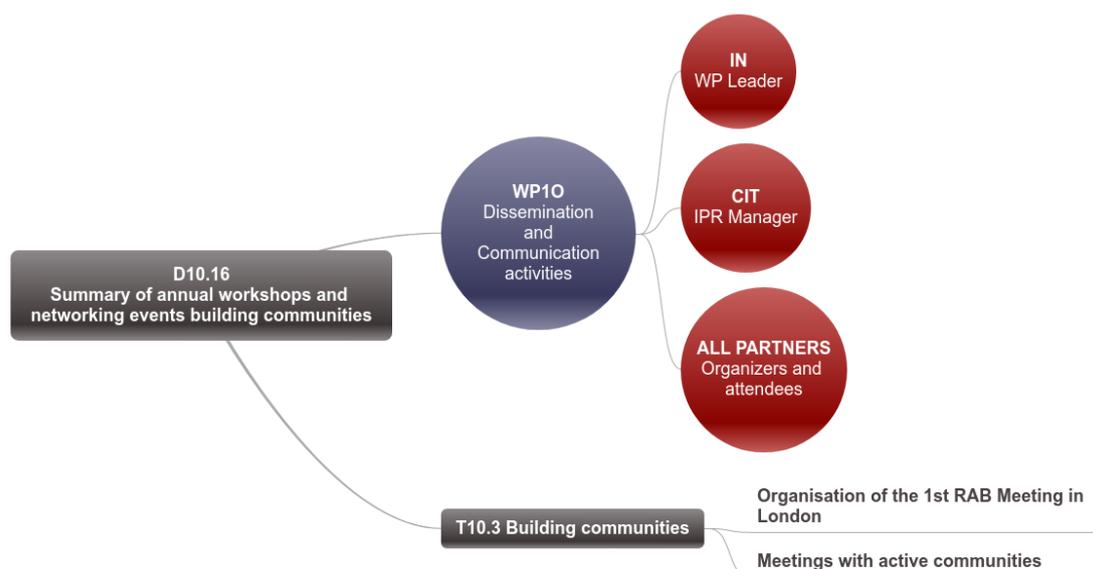


Figure 1. Mind map illustrating the collaboration between partners for the creation of D10.16.



3. Building communities

In the past year, CUPIDO had the chance to network with relevant communities by participating or organizing events targeted to different audiences.

3.1. Scientific communities

CUPIDO's partners participated in the following meetings building connection with scientific community:

1. **EuroNanoForum 2019 (NANOTECHNOLOGY AND ADVANCED MATERIALS PROGRESS UNDER HORIZON2020 AND BEYOND). Bucharest (RO), 12-14 June 2019.** EuroNanoForum 2019, an event of the Romanian Presidency of the Council of the European Union, stands as the most significant European forum that brings together scientists, industrialists and policy makers. The event was attended by approx. 1,000 participants from Europe and across the globe. It offers opportunities for discussions on cross-sectorial challenges focusing on both, the industrial application of research results and future strategic research priorities in the area of Nanotechnology and Advanced Materials of the Horizon 2020 NMBP Programme and beyond. Our partners, Michela Candotti from IN and Lorenzo Degli Esposti from CNR-ISTEC, were there to represent CUPIDO with a project poster and a booth.
2. **ESC Congress 2019 together with World Congress of Cardiology. Paris (France) 31 August – 4 September 2019.** The ESC Congress is one of the world's largest and most influential cardiovascular events contributing to global awareness of the latest clinical trials and breakthrough discoveries. This year it gathered around 30,000 delegates and showcased more than 500 sessions during the five-day conference. The spotlight of this year was the Global Cardiovascular Health, highlighting differences in prevalence, clinical manifestations, prevention strategies, diagnostic modalities and management of cardiovascular diseases around the world. Our project coordinator Daniele Catalucci presented the latest results showing that a novel inhaled miR-133-loaded nanoparticle delivery approach can prevent cardiac dysfunction in an experimental model (Abstract 3072). The presentation of Daniele was first highlighted in the Daily Science News distributed to all the participants (available online too), and it was also selected as one of the Congress Condensed Basic Science Highlights presented during the last day.



Figure 2. CUPIDO's partner during the meeting: on the right Lorenzo Degli Esposti at EuroNano Forum in Bucharest; on left Daniele Catalucci in Paris.

3. **ULLA Summer School 2019. Helsinki (Finland), 29 June - 7 July 2019.** ULLA was founded in 1992 as an European Consortium for (Post Graduate) training in the field of Pharmaceutical Sciences. ULLA takes the name from the cities of the founding universities of the consortium, namely Uppsala, London, Leiden and Amsterdam. 160 PhD students from pharmaceutical institutions in Uppsala, London, Leiden/Amsterdam, Copenhagen, Paris, Parma, Leuven and Helsinki are expected to participate in the ULLA Summer School, which takes place every 2nd year. Our partner, Eride Quarta, PhD Student from



Plumestars presented a CUPIDO poster entitled “Peptide loaded calcium phosphate nanoparticles in dry powder inhaler for targeting to heart”.

4. **AAPS 2019, Annual Conference of the American Association of Pharmaceutical Scientists. San Antonio, TX (USA), 3 - 6 November 2019.** AAPS Communities unite members with a common interest in a specific topic in a web-based, always-available, virtual environment. AAPS PharmSci 360 combines all the energy of a large scientific conference with the intimacy of a niche meeting. Five robust tracks covering all aspects of the pharmaceutical sciences, hundreds of exhibitors with dozens of additional learning opportunities, thousands of scientific posters featuring the latest, most innovative research in the field. Paolo Colombo, CEO of our partner Plumestars and AAPS fellow, was there presenting the speech: “Hyaluronic-Cisplatin Film for Implant for Malignant Mesothelioma Recurrences”, concerning Hyalcis exploits nanotechnology and advanced material research results to bring to market an innovative medical treatment of mesothelioma. The uptake by pharmaceutical industry of the hyaluronic-cisplatin film technology, studied by Plumestars, will assign a more effective cure against recurrences of this rare and very aggressive form of cancer, that is difficult to diagnose and highly resistant to anticancer drugs. Eride Quarta from Plumestars, was also at AAPS 2019 presenting the speech: “Novel Insulin Powder: bioavailability in rats” and a poster concerning the last developments of dpCaPs manufacturing of CUPIDO project.

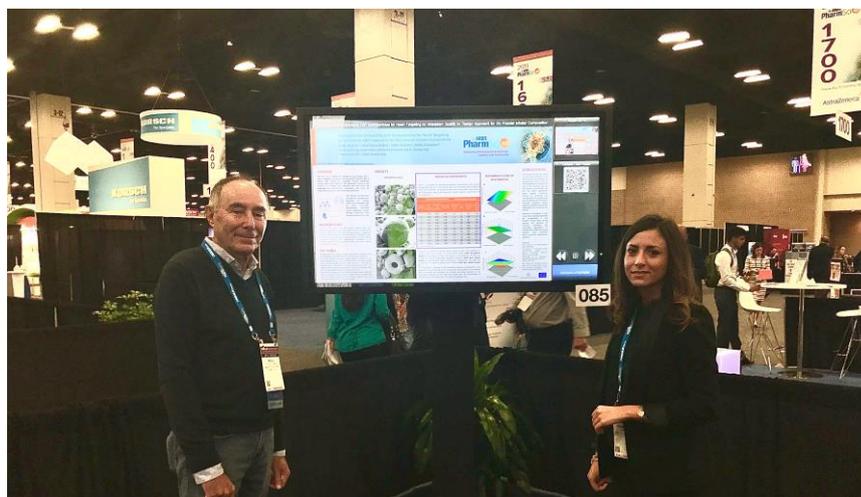


Figure 3. Plumestars’s team during the Annual Conference of the American Association of Pharmaceutical Scientists, on the right Paolo Colombo and on left Eride Quarta in San Antonio, TX (USA).

3.2. Industry and B2B

The consortium was also active in industrial and B2B environment presenting CUPIDO during exhibition and events:

1. **CPhI Worldwide. Madrid (Spain), 9-12 October 2018.** CPhI Worldwide, together with co-located events ICSE, InnoPack, P-MEC and FDF, hosts more than 45,000 visiting pharma professionals over three days. 2,500+ exhibitors from 153 countries gather at the event to network and take advantage of more than 150 free industry seminars. Our partner Nemera was there at booth 2D20.
2. **RDD Europe 2019. Lisbon (Portugal) 7-10 May 2019.** Respiratory Drug Delivery (RDD®) Europe 2019 took place at the Estoril Congress Center near Lisbon, Portugal, from May 7–10, attracting academic, government, and pharmaceutical industry representatives to hear and build on the latest scientific, clinical and regulatory advances. Jointly organized by RDD Online and Aptar Pharma, the conference was notable for the quality of its highly regarded presenters and progressive program themes.



Attracting over 500 delegates from over 30 countries, this was the largest RDD Europe conference to date, with the majority of delegates coming from continental Europe (47%) and the others traveling from the UK (25%), the US and Canada (16%) or Brazil, China, India, Israel, Japan, Singapore, Taiwan, Tunisia, Turkey, Ukraine, and Uruguay (collectively, 12%). About 85% of attendees reported working for pharmaceutical companies or their suppliers, while the remaining 15% were from academia and regulatory authorities. Our partner Manuela Basso from Nemera presented there their latest work for CUPIDO.

3. **R2B, Research to Business. Bologna (IT), 6-7 June 2019.** More than 6,350 visitors attended the 14th edition of the International Exhibition, which hosted 165 exhibitors and 60 start-ups. 650 one-on-one meetings organized in the Innovat&Match area, involving 178 delegates from 19 Countries. More than 120 conferences and workshops hosted, and 250 Speakers involved. In this edition, the Main focus was Artificial Intelligence and Big data: Industrial e Human revolution. Our partner, prof. Paolo Colombo from Plumestars, was there presenting their latest results for CUPIDO.
4. **DDL. Edinburgh 2019 (UK), 11-12 December 2019.** The Drug Delivery to the Lungs (DDL) Conference provides an annual forum for scientists, academics, clinicians, regulatory and industry specialists involved in developing medicines by inhalation. Nemera presented their latest work for CUPIDO with a poster and at the exhibition stand.



Figure 4. Nemera's team in Madrid.

Regulatory Advisor Board (RAB)

The project organized a meeting with experts on regulation and preclinical requirements. The 1st Regulatory Advisory Board Meeting was held in London (UK) on the 9th of October 2019. The consortium invited and met in London four worldwide experts: prof. David Brayden from Conway Institute of Biotechnology (University College Dublin); prof. Karim Amighi, head of the Laboratory of Pharmaceuticals and Biopharmaceutics at Université Libre de Bruxelles (ULB), Belgium; Dr. Gilles Hanton from GH Toxconsulting; and Dr. Omar Usmani, Respiratory Medicine and Consultant Physician at the National Heart and Lung Institute (NHLI), Imperial College London & Royal Brompton Hospital (RBH). During this fruitful and stimulating meeting, the external experts gave their feedback on needed developability assets or equivalents regarding the Chemistry Manufacturing and Control, Preclinical Proof of Concept, and Preclinical Toxicology. This meeting was organized to anticipate the needs, in first place, for clinical trials in humans.



3.3. General public

The CUPIDO's partners are also engaged in disseminating among the general public:

1. **MEET me TONIGHT. Milan (IT), 27-28 September 2019.** This is a great annual initiative for disseminating and sharing the scientific culture among citizens of all ages. The event is part of the European Researchers' Night initiative, organized every year on the last Friday of September by the European Commission. Our project Coordinator, Daniele Catalucci, with his team, entertained the older and younger public with several demonstrations.
2. **New Scientist Live 2019. London (UK), 10-13 October 2019.** New Scientist Live 2019 offered not only an unbeatable talks program, but there were also more than 150 exhibits and lots of interactive experiences showcasing the greatest innovations, technologies, and research in the world right now. Among them, there was also CUPIDO at the booth 1350 with some exhibits on the nano to micro system that targets the heart. The event gathered over 40,000 professionals, families and science lovers, inspiring those of all ages. IN and CITC were there to represent the project.

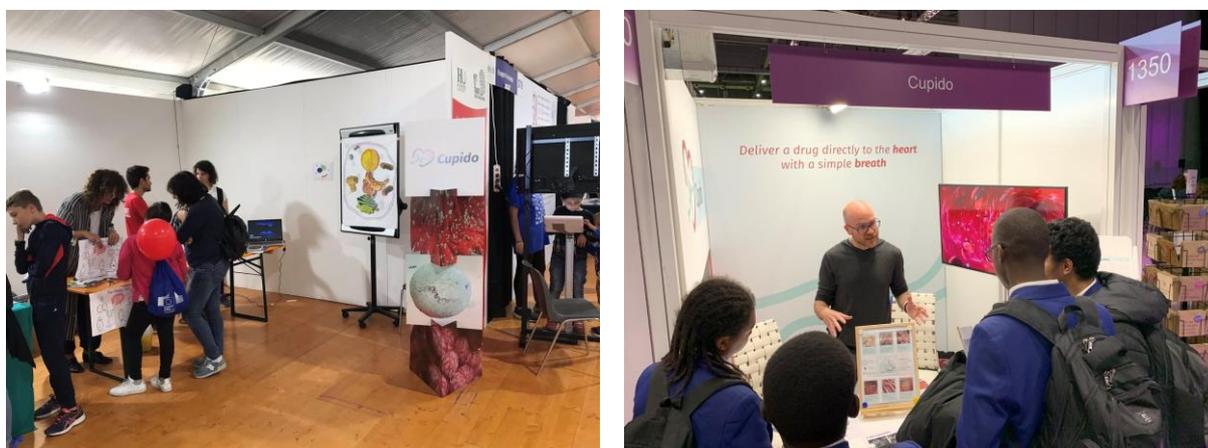


Figure 5. Sneekpeaks form MEETmeTONIGHT and New Scientist Live.

Next steps

During the next years, we forecast to participate to additional events where relevant active communities are involved. In 2020 the CUPIDO World Café, foreseen in WP10 during the last year of the project, will be organized. The event will focus on the future of CUPIDO, to explore possible follow-ups and create a workshop/networking event with stakeholders that might be interested in. The aim of the event will be to strengthen existing relationships, create new ones and disseminate about the project. A scientific board will select the external profiles to invite and will define the topics to discuss i.e. the requirements for clinical trials, etc. While generally world cafés are organized in small roundtables that address questions that matters, the Consortium will re-shape the format to maximize the impact for the project.

4. Conclusions

During the past year, the CUPIDO consortium participated to several relevant networking events and moreover organized and participated to the 1st RAB Meeting in London. The contents of this deliverable will be updated at need during periodic reporting at M48 (D10.17). The satisfaction questionnaires on the training activities organized by CUPIDO, collecting the participants' feedback, will be included in D10.18 (to be submitted at the end of the project).