

# 7<sup>th</sup> Newsletter

*11 / 2022*

[www.drugmetrology.com](http://www.drugmetrology.com)

**EMPIR**



The EMPIR initiative is co-funded by the European Union's Horizon 2020 research and innovation programme and the EMPIR Participating States

## Welcome

I welcome you with great pleasure but also with some nostalgia to our final MeDDII newsletter. We take this opportunity to provide the final outcomes and achievements of our project.

In the last six months all tasks of each work package were concluded.

Our 6<sup>th</sup> project meeting was held in a hybrid format (online and at IPQ, Portugal) in November 2022 with 20 participants.

The partners were also involved in several dissemination activities, mainly the final MeDDII workshop for end users and metrologists held in an online format, for two days, with more than 50 participants all over the world. The project partners published nine peer reviewed papers since June 2022 and participated in several national and international conferences.

Five deliverables were sent to MSU, namely, one from WP1, two from WP2, two from WP4 and D9 that is related to standardisation dissemination.

I hope you will find valuable the information in this newsletter. It was my pleasure to coordinate this project during the last 3 and half years and I believe the outcomes will benefit both user and medical community as it will the metrology community.

I would also like to thank all 16 project partners involved in this project for their outstanding commitment, namely IPQ, CETIAT, CMI, DTI, METAS, NEL, NQIS, RISE, DNV, HSG-MIT, INESC MN, THL, UMCU, STRATH, BHT and KRISS. A big thanks to our advisory board and all our stakeholder that followed our project.

We will continue to work on improving measurements in the health sector, especially in drug delivery devices. This project had the premise that with better measurements we can save lives, and this is what we hope we achieved.

Elsa Batista

Coordinator of project MeDDII

## News and facts

- The 6<sup>th</sup> meeting of the MeDDII project was in a hybrid format (online and at IPQ, Portugal) on 17<sup>th</sup> of November 2022. All partners involved in the project participated, along with some members of our advisory board.



**Figure 1** - MeDD II partners at IPQ Laboratories

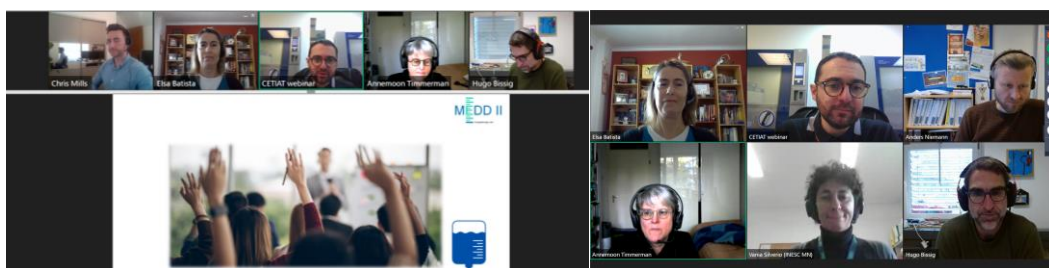
- A training course on Metrology for drug delivery was held online on the 8<sup>st</sup> of September by NEL and CETIAT IPQ. In total more than more than 50 participants from the medical field attended the training course. The presentations are available on our webpage.

UMC Utrecht provided an onsite workshop on drug delivery for medical personnel at ESICM Lives on October 22-26, 2022, Paris with 25 participants.



In total the training workshops for users done by this project had more than 170 participants, from nurses, doctors, maintenance officers of hospitals and regular hospital staff. The feedback from these workshops allowed us to conclude that the impact was very good.

- The final MeDDII Workshop was held online during 23<sup>rd</sup> and 24<sup>th</sup> November 2022 with more than 50 participants and 12 speakers, organized by IPQ and CETIAT. The first day was dedicated to end users in the medical world and the second day was dedicated to the dissemination of the project outcomes.



- EURAMET has published a **case study on the project MeDDII** concerning our collaboration with standardization in the revision of the relevant standards for syringe pump testing.
- A Special issue of the **Journal Biomedical Engineering** - Title "Medical flow and dosing measurement metrology in drug delivery" is being prepared with 10 papers and is expected to be available in February 2023 (Issue 1/2023).

## Highlights from the work packages

During this last six months the project has been on finalizing all deliverables of the project.

Under WP2, deliverable 3 - "Validation report on the primary standards developed for the in-line measurement of the dynamic viscosity of Newtonian liquids with a target uncertainty of 2 % (k=2)" was prepared and approved by MSU, along with deliverable 4 - "Report on the use of a calibrated microfluidic multi-parameter chip for the in-line measurement of pressure, viscosity and temperature".

Under WP3 - A EURAMET guide on calibration of drug delivery devices was developed and will now be assigned to EURAMET TC F Liquid flow subgroup for publication. This is deliverable 6 of the project.

The partners of WP4 prepared deliverable 7 - "Validation report on the extended prediction model for multi-infusions" and deliverable 8 - Best practice guide on how to build an optimised multi-infusion set-up to ensure the most effective dosing of a combination of drugs and fluids with different viscosities, including guidance on check valves and other components that benchmark stability in flow rates"

Finally, under WP5 the deliverable 9 regarding "Evidence of contributions to or influence on new or improved international guides, recommendations and standards with a specific focus on the following guides and committees: ISO/TC 48, ISO/TC 84, ISO/TC 210, ISO/TC 30, ICE/TC62D. Examples of early uptake of project outputs by end-users", was concluded.

All these documents are available on the project webpage and Zenodo community.

## Dissemination of work

During this project many dissemination tools were used: Guidelines, flyers, videos, reports, presentations, peer reviewed papers, trade journals papers, newsletters, case studies and workshops and very active participation in standardization. I hope all the work done will help the medical and metrological community to be closer together, solving measurement problems that will benefit patients diagnostics and treatment.

## How to contact us

MeDD II project coordination

Elsa Batista from IPQ

Email: [ebatista@ipq.pt](mailto:ebatista@ipq.pt)

Scientific leader

Hugo Bissig from METAS

Email: [Hugo.bissig@metas.ch](mailto:Hugo.bissig@metas.ch)

Project website: [www.drugmetrology.com](http://www.drugmetrology.com)

Zenodo: <https://zenodo.org/communities/medd2>