

# Workshop de lansare

al proiectului RO-NO-2019-0187 cu titlul

**“Sisteme active de administrare a medicamentelor  
pe bază de nanoparticule magnetice funcționalizate cu  
peptide pentru tratamentul bolilor urechii interne“  
(TargEar)**

30 septembrie 2020, Ora 10<sup>00</sup>

**Sala Cavalerilor**

**Sediul Universității “Apollonia” din str. Păcurari, nr. 11, Iași**

**Promotor :**

UNIVERSITATEA "APOLLONIA" din Iași, România



**Parteneri:**

INSTITUTUL DE CERCETĂRI BIOLOGICE IAȘI

FILIALĂ A INCDSB BUCUREȘTI, Iași, România

UNIVERSITY OF OSLO, Oslo, Norvegia



**Acest eveniment se va desfășura respectând toate normele sanitare în vigoare  
Purtarea măștii și distanțarea sunt OBLIGATORII!**

<https://www.univapollonia.ro/targear/>

[www.eeagrants.ro](http://www.eeagrants.ro)

[www.norwaygrants.org](http://www.norwaygrants.org)

<https://uefiscdi.gov.ro/eea-grants-proiecte-colaborative-de-cercetare>



# First workshop meeting

in the Romanian-Norwegian Research  
Project TARGEAR

at

“ Apollonia” University of Iasi

30 September 2020  
Iasi, Romania



# ACTIVE TARGETED DRUG DELIVERY SYSTEMS BASED ON PEPTIDE – FUNCTIONALIZED MAGNETIC NANOPARTICLES FOR THE TREATMENT OF INNER EAR DISEASES (TargEar)

Code: RO-NO-2019-0187

Financing contract no 15 / 2020

Name of the Program: Research - RO 02

Total value of public funding:: 1.163.984 euro (5.624.137,90 Lei)

Project start date: 01.09.2020

Project duration: 36 months

Promoter :

“APOLLONIA” UNIVERSITY of Iasi, Romania

Project Partners:

INSTITUTE OF BIOLOGICAL RESEARCH IASI, branch of NIRDBS, Iasi, Romania

UNIVERSITY OF OSLO, Oslo, Norway

Funding: Financial Mechanism NO 2014-2021 and the Government of Romania

Program Operator: The Executive Unit for the Financing of Higher Education, Research, Development and Innovation (UEFISCDI)

<https://www.univapollonia.ro/targear/>

[www.eeagrants.ro](http://www.eeagrants.ro)

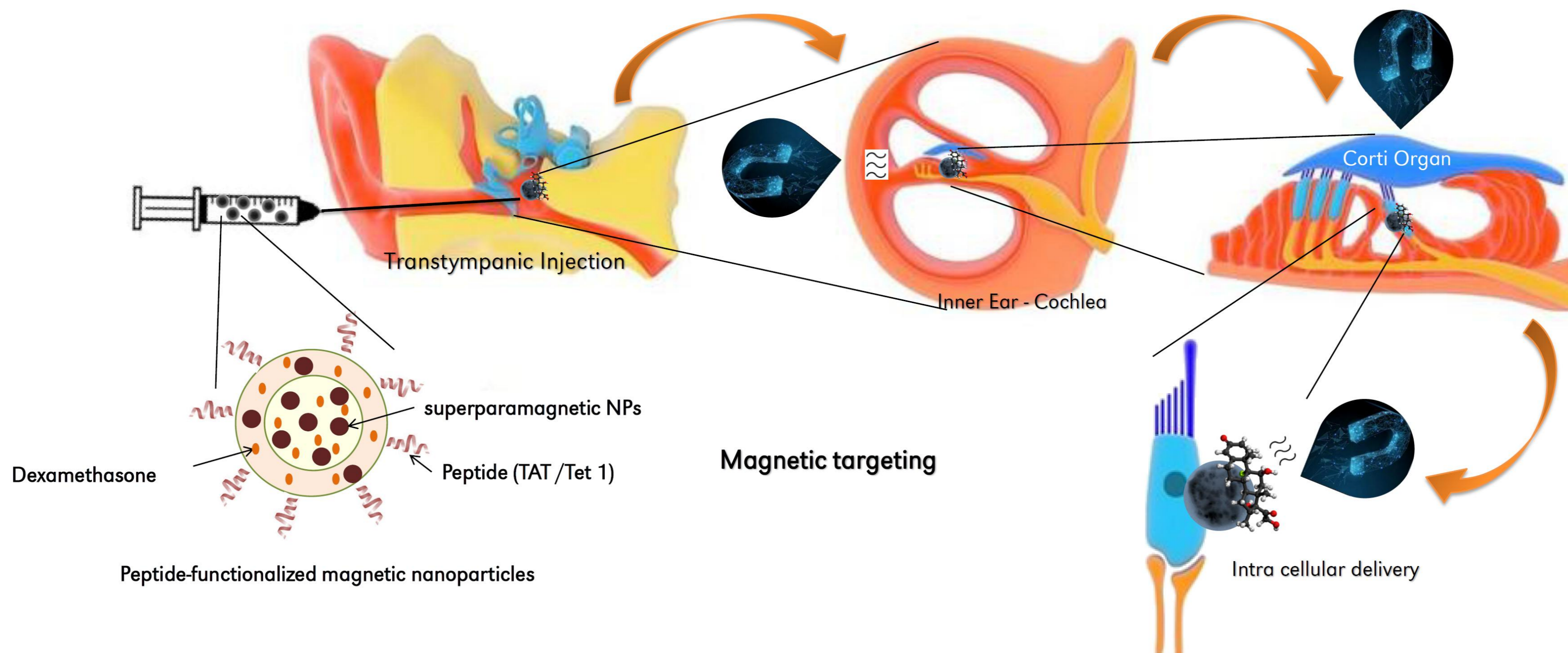
[www.norwaygrants.org](http://www.norwaygrants.org)

<https://uefiscdi.gov.ro/eea-grants-proiecte-colaborative-de-cercetare>



**General aim:**

Preparation of peptide-functionalized magnetic nanocarriers (oligochitosan-based nanocapsules and oligochitosan-coated liposomes) loaded with a model drug.



*The schematic representation of this project general aim*



***Specific objectives that will lead to achieving the general aim are:***

- a) Synthesis of oligochitosan, peptide-functionalized oligochitosan and magnetic nanoparticles as precursors;
- b) Preparation of peptide-functionalized oligochitosan magnetic nanocapsules loaded with dexamethasone;
- c) Preparation of magnetic liposomes coated with oligochitosan and loaded with dexamethasone;
- d) *In vitro* evaluation of the biomaterial properties of the obtained nanocarriers;
- e) *In vitro* assessment of the behavior of the obtained nanocarriers at a cellular level.



## ***Key targets:***

- ✚ Drug-loaded peptide-functionalized magnetic nanocapsules with diameters smaller than 200 nm.
- ✚ Drug-loaded peptide-functionalized magnetic liposomes with diameters smaller than 200 nm.
- ✚ Peptide-functionalized magnetic nanocarriers (liposomes and nanocapsules) with diameters smaller than 200 nm loaded with fluorescein.
- ✚ Publication of 6 ISI articles.
- ✚ 12 participations at international conferences.
- ✚ 4 bilateral workshops



## Team members

Name	Position	Academic degree
<b>UNIVERSITY OF OSLO - Partner 2</b>		
<b>Nystrom Bo</b>	Principal Investigator P2	
<b>Sande Sverre Arne</b>	Experienced researcher	
<b>PhD student - Vacant</b>	PhD student	
<b>“APOLLONIA” UNIVERSITY of Iasi - Promoter</b>		
<b>Popa Marcel</b>	Project manager	University professor
<b>Popovici Daniela Raluca</b>	Economic Manager	Economist
<b>Atanase Leonard Ionut</b>	Experienced researcher	University professor
<b>Cadinoiu Anca Niculina</b>	Experienced researcher	Scientific researcher (CS III)
<b>Rata Delia Mihaela</b>	Experienced researcher	Scientific researcher (CS III)
<b>Daraba Oana Mihaela</b>	Experienced researcher	University lector

Name	Position	Academic degree
<b>Mihalache Gabriela</b>	Experienced researcher	Associate professor
<b>Radulescu Luminita</b>	Experienced researcher	University professor
<b>Martu Marius Cristian</b>	Junior researcher	University assistant
<b>Popovici Corina</b>	PhD student	PhD student
<b>INSTITUTE OF BIOLOGICAL RESEARCH IASI - Partner 1</b>		
<b>Vochita Gabriela</b>	Principal Investigator P1	Scientific researcher (CS II)
<b>Gherghel Daniela</b>	Experienced researcher	Scientific researcher (CS III)
<b>Mihai Cosmin-Teodor</b>	Experienced researcher	Scientific researcher (CS II)
<b>Stache Alexandru-Bogdan</b>	Research assistant	Scientific research assistant
<b>Moldovan Cristina</b>	PhD student	PhD student



## Activities:

Year	Activity	Partner involved
2020	<b>Stage I</b> Synthesis and characterization of the precursors	“APOLLONIA” UNIVERSITY UNIVERSITY OF OSLO
	<b>Task I.1</b> Synthesis and characterization of oligochitosan	UNIVERSITY OF OSLO
	<b>Task I.2</b> Synthesis and characterization of synthetic copolymer	“APOLLONIA” UNIVERSITY





Year	Activity	Partner involved
2021	<p align="center"><b>Stage II</b></p> <p align="center">Design, synthesis and characterization of peptide-functionalized magnetic nanocarriers loaded with dexamethasone</p>	<p align="center">“APOLLONIA” UNIVERSITY UNIVERSITY OF OSLO</p>
	<p align="center"><b>Task II.1</b></p> <p align="center">Functionalization of oligochitosan with the peptides</p>	<p align="center">“APOLLONIA” UNIVERSITY UNIVERSITY OF OSLO</p>
	<p align="center"><b>Task II.2</b></p> <p align="center">Preparation of characterization of magnetic nanoparticles</p>	<p align="center">“APOLLONIA” UNIVERSITY</p>
	<p align="center"><b>Task II.3</b></p> <p align="center">Preparation of peptide-functionalized magnetic nanocapsules loaded with dexamethasone</p>	<p align="center">“APOLLONIA” UNIVERSITY UNIVERSITY OF OSLO</p>
	<p align="center"><b>Task II.4</b></p> <p align="center">Preparation of peptide-functionalized magnetic liposomes loaded with dexamethasone</p>	<p align="center">“APOLLONIA” UNIVERSITY</p>
	<p align="center"><b>Task II.5</b></p> <p align="center">Physico-chemical characterization of peptide-functionalized NPs</p>	<p align="center">“APOLLONIA” UNIVERSITY UNIVERSITY OF OSLO</p>



## Project management

Monitoring the progress of the project implementation according to the general description in the light of the following elements:

- (i) respecting the implementation of the scientific activities as described in the WP list;
- (ii) Budget allocation to each activity;
- (iii) Achievement of results;
- (iv) Achievement of objectives.

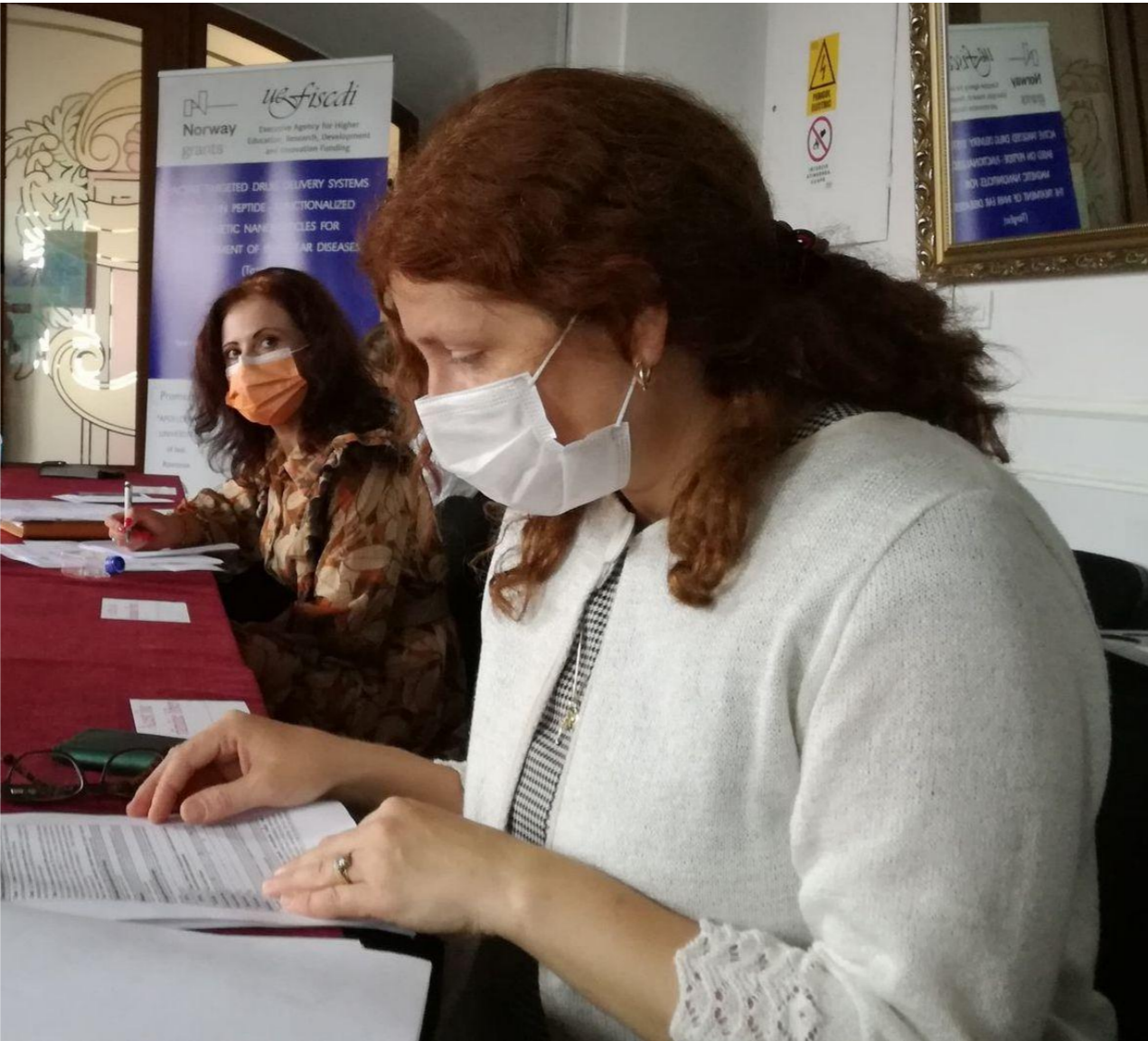
In case of deviations from the initial plan, the management plan will be adjusted by establishing and applying corrective actions.

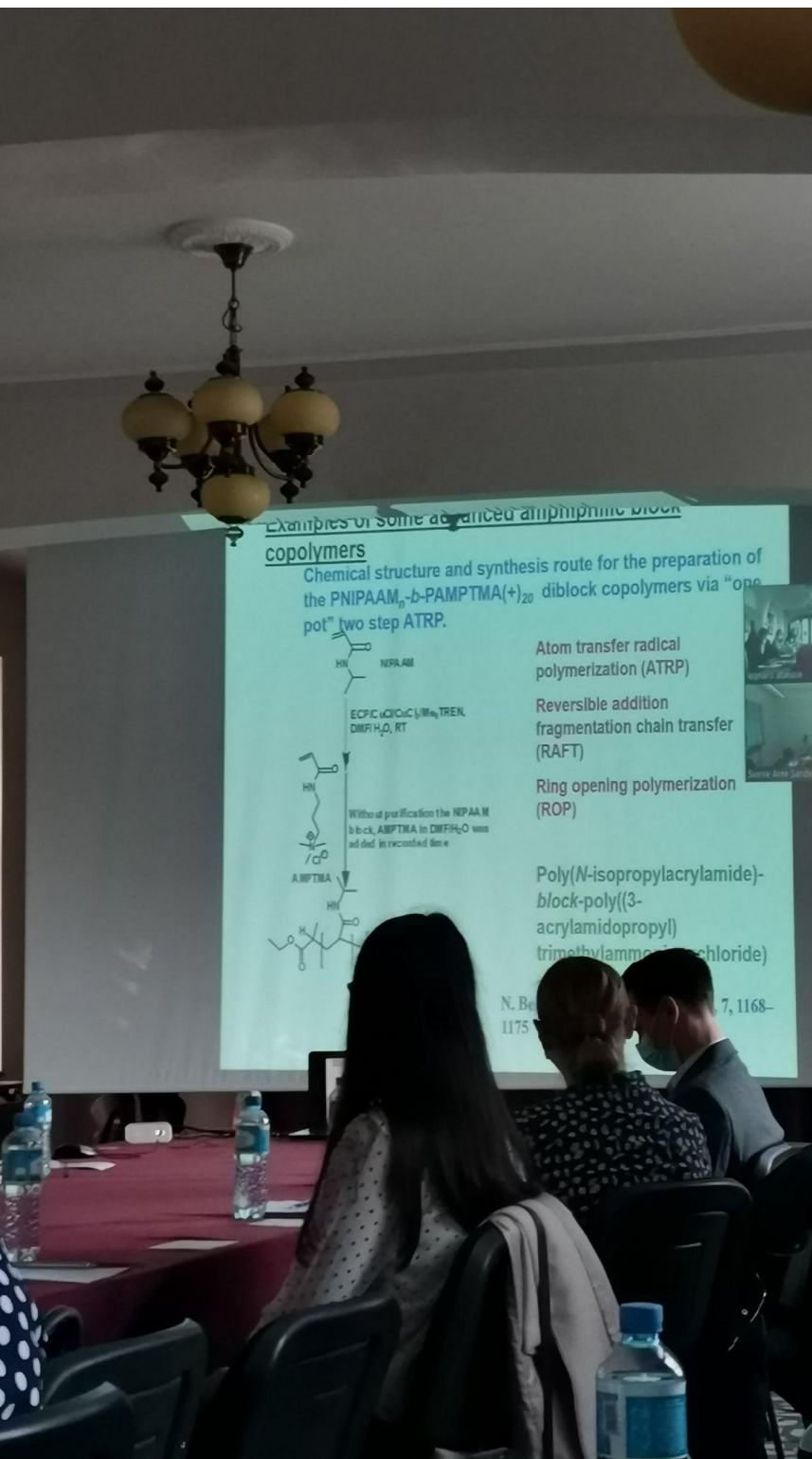
Each team member will report to the project coordinator, regularly, the progress of the project.

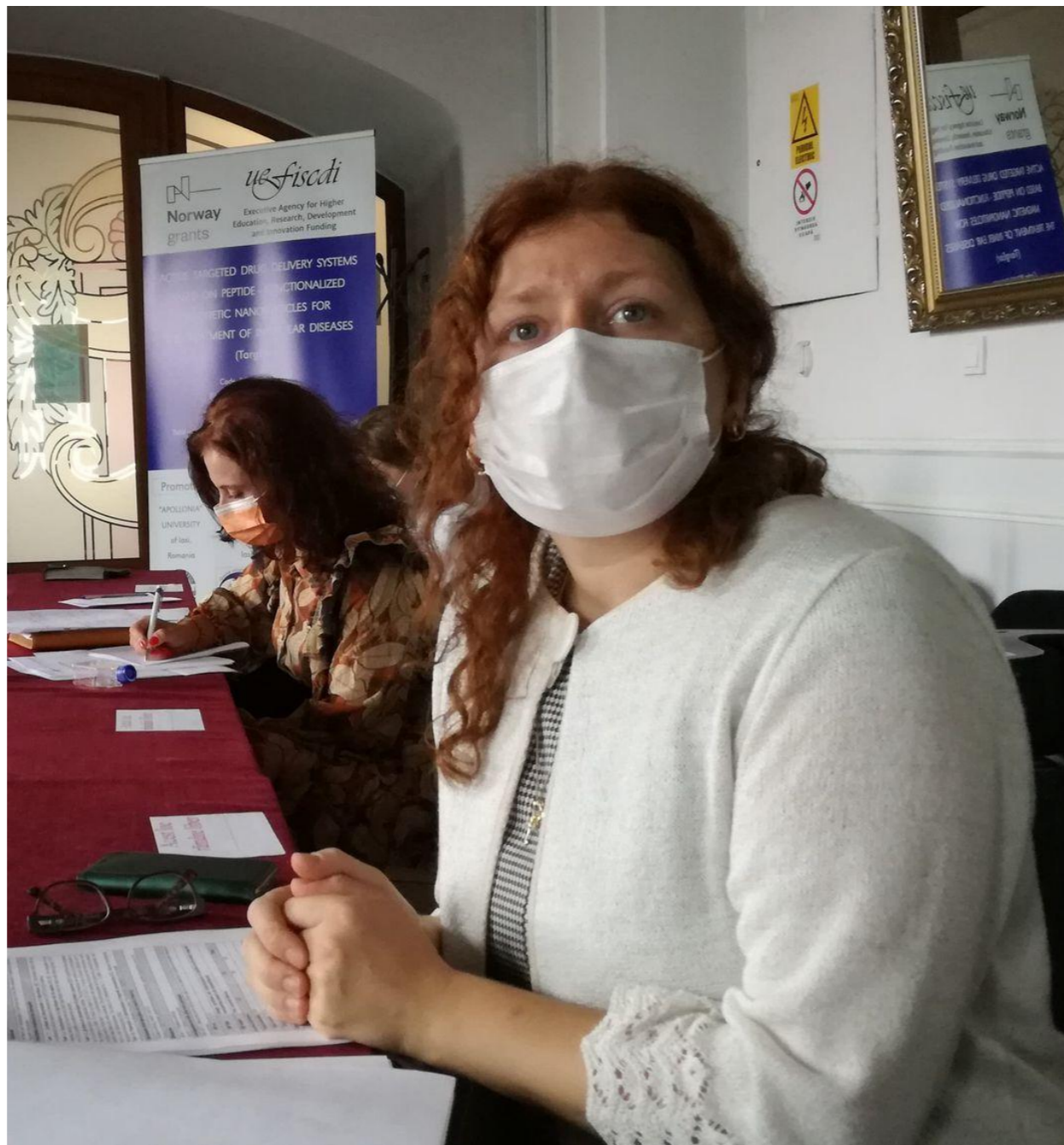
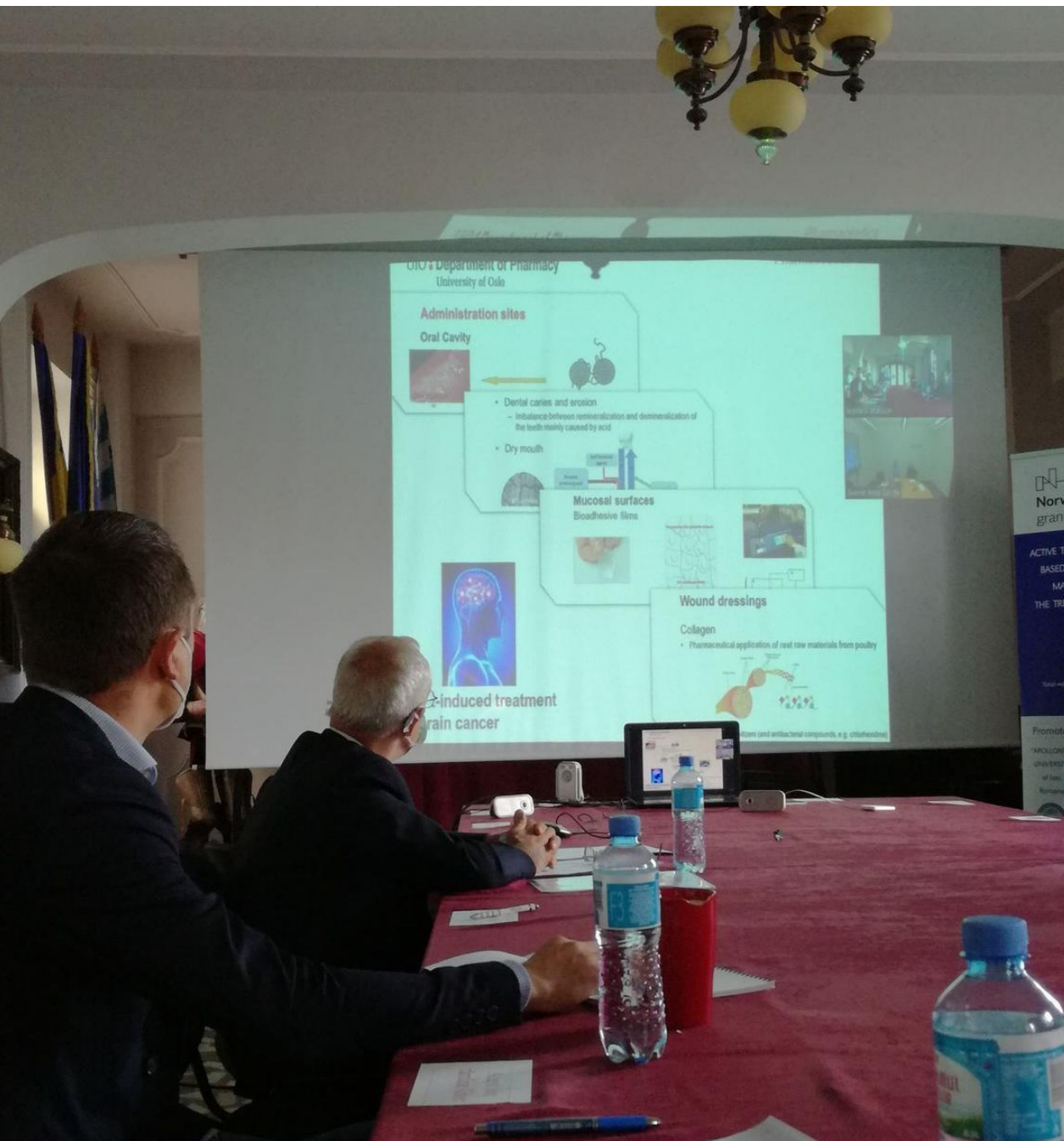
This will cover technical progress, results, deliverables and compliance with the Work Plan.

Regular short meetings of project members in form of informal workshops will be organized. Each project member will be in charge with editing the scientific progress reports and sending to the project coordinator, which will prepare the final report corresponding to each project phase.

# Photos taken during this workshop











We want to thank to “APOLLONIA” University of Iasi, especially to prof. univ. dr. Vasile BURLUI for the provided support

The planned research activities will be carried out with funding from the NO Grants 2014-2021, under Project contract no. 15/2020