

"Hello"



POZNAN
UNIVERSITY
of Medical Sciences

**HORIZON EUROPE
PARTNERSHIP OFFER**

HORIZON-HLTH-2024-STAYHLTH-01-05-two-stage
Personalised prevention of non-communicable diseases - addressing
areas of unmet needs using multiple data sources



"Interdisciplinary team of ambitious, established, yet still curiosity driven researchers from PUMS. That would gladly add their knowledge, skills and capabilities to the project consortia addressing above mentioned call. Which we consider crucial for safeguarding the future OUR society".

ORCID ID's

Arleta Kowala-Piaskowska 0000-0002-2087-3410
Barbara Ginter-Matuszewska 0000-0003-4516-1409
Marta Karaźniewicz-Łada: 0000-0003-4091-7035
Błażej Rubiś: 0000-0003-1730-0176
Michał Szulc: 0000-0003-3295-2789
Przemysław Mikołajczak: 0000-0002-1252-6523

"Who?"





PUMS?

**Experienced in EU Research and Innovation
Framework Programmes as partner and coordinator.**

**7,260 Enrolled students,
958 International students,
929 Administrative personnel,
1,482 Academic staff, including 200 Professors.**

6

**Number of hospitals owned by PUMS within the city of Poznan.
Those do not only serve local community with 2200 beds.
PUMS hospitals are also base of scientific and clinical research
with equipment on par with most modern facilities in the world.**

Years of activity in the field of health research.

>100

What can PUMS bring to the project?

01 Data assessment:

- 1) epidemiological – descriptive, experimental and analytical/observational,
- 2) calculators/load tests for individual disease entities,
- 3) medical physical examinations,
- 4) laboratory tests,
- 5) imaging tests,
- 6) dietary consultation,
- 7) specialist qualitative analysis and quantitative diagnostic markers and/or medicinal substances,
- 8) analysis of genetic polymorphisms,
- 9) analysis of gene expression (coding and noncoding sequences including miRNA),
- 10) dermatology consultations.



What can PUMS bring to the project?

02 Tools and analyses:

1. Qualitative and quantitative analysis of small molecules and chemical compounds using highly specialized HPLC equipment with UV-VIS, FLD and RID detection, and UPLC with UV-VIS and MS/MS detection in the scope of:

- development and validation of new analytical methods in accordance with the FDA, EMA and ICH guidelines, intended for the analysis of biologically active compounds in various matrices,
- assessment of the purity of pharmaceutical preparations, quantitative and qualitative analysis of the components of biological samples, cell lysates, natural products,
- monitoring the concentrations of drugs and their metabolites and endogenous compounds (vitamins D2, D3, A, E, beta-carotene, B1, B6, iodine, endogenous glucocorticoids, neurotransmitters: dopamine and its metabolites) in biological matrices (plasma/serum, blood, urine, saliva, cerebrospinal fluid, synovial fluid, tissues),
- quantitative analysis of drugs and their metabolites (including cytostatic drugs) for pharmacokinetic studies and bioavailability studies,
- qualitative and quantitative analysis of selected markers of disease entities.



What can PUMS bring to the project?

03 Tools and analyses PART2:

2. Analysis of elements using modern ICP-MS apparatus in the field of environmental pollution research (water, sewage) and its impact on the human body (content of elements in hair, skin),
3. Identification and quantitative analysis of macromolecular compounds (amino acids, proteins, nucleic acids) using immunoidentification techniques, ELISA, MALDI-TOF,
4. Pharmacokinetic analyzes in the field of:
 - individualization of dosage in order to increase the effectiveness and safety of therapy,
 - evaluation of drug-drug interactions in vivo,
 - population modeling to estimate the sources of variability in concentrations, pharmacokinetic parameters and effects of medicinal substances,
 - interpretation of the results of bioavailability studies of medicinal substances,
5. Pharmacogenetic analyzes to assess the impact of genetic polymorphisms of receptors, protein transporters and enzymes involved in the metabolism of drugs and endogenous compounds on the effectiveness and safety of pharmacotherapy.



What can PUMS bring to the project?

04 Tools and analyses PART3:

6. Microbiological expertise in the field of:

- antibiotic resistance analysis,
- activity of new antibacterial and antifungal compounds,
- microbiological purity of pharmaceutical products and the environment for manufacturing medicinal products,
- validation of microbiological methods/protocols.

7. Pharmacodynamic studies of ligand-receptor interaction
ion research (water, sewage) and its impact on the human body
(content of elements in hair, skin),



What can PUMS bring to the project?

05 Access to infrastructure

Centre for Innovative
Pharmaceutical Technology (CITF)

University Clinical Trials Support
Centre with an Early Phase
Centre (UniCTSC)

Specialized laboratories: bioanalytical,
microbiological, laboratory diagnostics,

Animal house

Samples Biobank





PUMS

currently awaits approval
of its plan to launch
Digital Medicine Centre.

In the process
of governmental evaluation.

PUMS AS WILD CARD IN COMPETITION WITH OTHER CONSORTIA's

COSTS

PUMS guarantees high quality of analyses performed at competitive costs levels.

That allows project consortia to apply savings achieved this way into further investigations, more investigators.

Achieving this way better impact.

Evaluation Leverage

Utilisation of R&D funding in health area in European Union shows many striking examples of divide between so called "old EU" and "new EU" [and health conditions of relevant societies].

It also visible when looking at participation rate of "Widening countries" in health-related Framework Programme Funding.

DENSITY of RTD institutions within one city

Poznan is archetype of "academic city". PUMS can act as a hub for consortium to cooperate with:

- Poznan academic environment [YOU NAME ANY SCIENTIFIC AREA -> WE HAVE SCIENTIFIC TEAM within the city that is operating within the field,
- Polish rapidly growing MEDTECH SME's sector,
- "eastern" partners with high impact potential e.g. UKRAINE, KAZAKHSTAN.

LET'S WORK TOGETHER



Karolina Michalak,
karolinamichalak@ump.edu.pl
+48 61 854 60 54

PUMS Internation RTD. Co-op. Dept.

CC: Paweł Kaczmarek,
pawel.kaczmarek@ppnt.poznan.pl
www.linkedin.com/in/pawelkaczmarekppnt

Horizontal Contact Point for Western Poland

