

European Training Network Positions in H2020 ETN

AGePOP

The AGePOP European Training Network (ETN) will boost Europe's innovation capacity and leadership in oral drug development. Its multisectoral approach will train 11 Early Stage Researchers to become the future experts in drug development for the advanced age population, shedding light on an urgent need of our ageing society. Following a multidisciplinary strategy, the ESRs will collect the first-ever dataset of physiological characteristics of the GI tract of older people and geriatric patients, developing novel *in vitro* and *in silico* tools, e.g. a mobile test kit to evaluate gastric emptying kinetics and an absorption risk calculator to predict adverse effects from altered pharmacokinetics.

The AGePOP consortium of 14 partners from 5 countries, will provide ESRs with a unique Europe-wide learning experience, at the intersection between research excellence in oral drug products and expertise in clinical research and practice, preparing them to lead their future careers with confidence and success. The ESRs will be hosted by one of the six AGePOP Beneficiaries:

- National and Kapodistrian University of Athens (Greece)
- Katholieke Universiteit Leuven (Belgium)
- Universität Greifswald (Germany)
- Bayer AG (Germany)
- Merck Healthcare KGaA (Germany)
- F. Hoffmann- La Roche AG (Switzerland).

All host organisations will offer the possibility of secondments in a different sector, at either another Beneficiary's institution or at AbbVie Deutschland GmbH & Co KG (Germany), AstraZeneca AB (Sweden), Janssen Pharmaceutica NV (Belgium), the Korgialenio-Benakio Red Cross Hospital (Greece), Novartis Pharma AG (Switzerland), UCB Pharma GmbH (Belgium) or the University Medicine Greifswald (Germany).

For further information on the project please visit the AGePOP website: www.agepop.eu

What we offer

The successful candidates will benefit from an international scientific network of academic partners with research excellence in oral drug products, researchers from leading pharma companies as well as individual and network-wide training modules, including transferable skills courses. Furthermore, each ESR will be supervised by an Industry-Academia supervisory team consisting of at least one supervisor from each field. The ESRs will receive an attractive salary in accordance with the MSCA regulations of Early Stage Researchers.

Each ESR position in AGePOP allows the researcher to work towards a PhD at one of our three leading academic institutions. The ESRs will be recruited within 2021 for a duration of 36 months. Every ESR will work on an independent research project which will be flexible enough to match the competence and goals of the candidate.

Marie Skłodowska-Curie ESRs are paid an attractive gross salary of 3,270 €/month for 36 months (as defined in MSCA guidelines). The exact (net) salary will be confirmed upon appointment and is dependent on local tax, social and health insurance regulations and on the country correction factor (to allow for the difference in cost of living in the different EU Member States). Each ESR will also be compensated with a Mobility Allowance of 600 €/month, and, for researchers who have a family, a Family Allowance of 500 €/month. All amounts are subject to deductions and taxes. Family is defined as persons linked to the researcher by (i) marriage, or (ii) a relationship with equivalent status to a marriage recognized by the national legislation of the country of the beneficiary or of the nationality of the researcher, or (iii) dependent children who are actually being maintained by the researcher; family status is determined at recruitment and does not evolve.



Qualifications

- Master's degree in Pharmaceutical Sciences, Biology, Biomedical Sciences or equivalent that qualifies for doctoral studies
- Proof of English proficiency as communication and teaching language throughout AGePOP is English (e.g. IELTS, TOEFL or similar test, not for native speakers).

Eligibility criteria

Specific Eligibility Criteria of the H2020 Marie Skłodowska-Curie programme:

- At the time of recruitment, the applicants should be in the first four years (full-time equivalent research experience) of their research careers and have not been awarded a doctoral degree.
- Mobility rule: At the time of recruitment, applicants should not have resided or carried out main activity (studies, work, etc.) in the country of the host for more than 12 months in the 3 years prior to the recruitment date.

Applications

Complete applications in English should include a motivation letter, full CV, transcripts, English language proficiency certificate(s) (not for native speakers), and two recommendation letters or complete contact information of two referees, and should be submitted by email as a single pdf-file to apply@agepop.eu.

- Please clearly **indicate in the subject line which position you are applying for**, e.g. 'AGePOP application: ESR 04, ESR 08'.
- The **PDF form 'Eligibility Check'** must be filled in and submitted with your application.
- All applications have to be **submitted to the above address by 31 March 2021** at 23:59 (CET).

Please note that applications are handled confidentially but may be shared with the supervisors in the project, if necessary.



Open positions

ESR 01: The oral formulations swallowability and esophageal transit in older populations

- position filled -

ESR 02: Gastric emptying in older people assessed by salivary caffeine concentrations

- position filled -

ESR 03: The protein digestion and related micronutrient absorption profile in geriatric patients undergone bariatric surgery

- position filled -

ESR 04: Physicochemical characteristics of upper gastrointestinal contents of older people and their impact on oral drug absorption

Project Description

This project has 3 objectives:

1. Characterization of the composition of contents in the fasted stomach and duodenum of older people;
2. Development of media for evaluating the performance of drug products to be administered to older people;
3. Evaluation of differences in the composition of luminal contents of older people from healthy adults and geriatric patients on oral drug absorption.

Expected Results: New in vitro methodologies performance evaluation of orally administered drug products in older people

Essential Background: Master or Diploma or Second state examination in Pharmaceutical, Biomedical or Chemical Sciences.

Desirable Background: Experiences in Pharmaceutical Technology, Biopharmaceutics, Analytical Chemistry

Host Institution: National and Kapodistrian University of Athens, Greece

Supervisors: Dr. M. Vertzoni, Prof. C. Reppas

Local Requirements: Candidates should preferably have basic knowledge of Greek language. Selected candidate will be requested to attend Greek language courses upon recruitment.

PhD institution: National and Kapodistrian University of Athens, Greece

Planned Secondment: Host: Novartis, Switzerland; Supervisor: A. Kourentas

Recurrent hospital visits: Host: Red Cross Hospital of Athens; Supervisor: C. Goumas

Planned Starting Date: 1 June 2021

Application Deadline: 31 March 2021 at 23:59 (CET)

ESR 05: Physicochemical characteristics of upper gastrointestinal contents of geriatric patients and their impact on oral drug absorption

- position filled -

ESR 06: The real-life dosing conditions of geriatric patients

- position filled -

ESR 07: The effect of malnutrition and polypharmacy in aging on gastrointestinal (GI) transit time, gastric fluid emptying and pH

- position filled -



ESR 08: Intestinal drug disposition in older people and in geriatric patients with Alzheimer's disease	
Project Description Assess the effect of advanced age and of Alzheimer's disease on drug disposition in older people and in geriatric patients with Alzheimer's disease in relation to intestinal transporters and enzymes. Gastrointestinal drug and formulation behavior will be explored using the GI-sampling technique (relevant examples: see http://ungap.eu/GIsampling)	
Expected Results: unique insight into alterations in drug disposition in older people and geriatric patients with Alzheimer's disease. In particular: 1) new reference data on GI drug behavior and the abundance and activity of intestinal transporters and enzymes; 2) improved PBPK models to evaluate transporter- and/or enzyme-mediated intestinal drug absorption and drug-drug interactions.	
Essential Background: Master degree in Pharmaceutical Sciences or in Biomedical Sciences	Desirable Background: Master thesis work and/or experience in pharmaceutical sciences
Host Institution: Katholieke Universiteit Leuven, Belgium	Supervisors: Prof. P. Augustijns, Prof. Dr. T. Vanuytsel
Local Requirements: Applicants should possess a university degree	
PhD institution: Katholieke Universiteit Leuven, Belgium	
Planned Secondments: Host: Merck; Supervisor: A. Lehmann	
Planned Starting Date: 1 June 2021	Application Deadline: 31 March 2021 at 23:59 (CET)

ESR 09: The leakiness of gastrointestinal epithelium of older people and its impact on oral drug absorption	
Project Description This project has two objectives: 1. Exploration of the paracellular permeability of gastric epithelium, epithelium of small intestine and epithelium of large intestine of older people based on the urinary excretion of selected sugars; 2. Evaluation of the impact of differences in paracellular permeability from published data in adults on oral drug absorption	
Expected Results: Potential differences between adults and older people in paracellular oral drug absorption.	
Essential Background: Master or Diploma or Second state examination in Pharmaceutical or Biomedical Sciences.	Desirable Background: Experiences in Pharmaceutical Technology, Biopharmaceutics, Analytical Chemistry
Host Institution: National and Kapodistrian University of Athens, Greece	Supervisors: Dr. M. Vertzoni, Prof. C. Reppas
Local Requirements: Candidates should preferably have basic knowledge of Greek language. Selected candidate will be requested to attend Greek language courses upon recruitment.	
PhD institution: National and Kapodistrian University of Athens, Greece	
Planned Secondments: Host: Janssen Pharmaceutica, Belgium; Supervisor: C. Mackie	
Recurrent hospital visits: Host: Red Cross Hospital of Athens, Supervisor: C. Goumas	
Planned Starting Date: 01 May 2021	Application Deadline: 31 March 2021 at 23:59 (CET)



ESR 10: Application of PBB/PBPK software tools to predict oral drug absorption in older people and geriatric patients (WP2) and development of an absorption risk calculator to assess the probability of adverse effects in older people due to altered pharmacokinetics.

ESR 10 will evaluate the predictability of Physiologically based Pharmacokinetic (PBPK) models in context of absorption in older people and geriatric patients. The candidate will utilize data from ESR 1-9 for improving the predictions of absorption-related processes in the advanced age population and will implement an absorption risk calculator to identify the probability of adverse events to happen due to altered absorption/pharmacokinetics.

Expected Results: Use and improve PBPK models for evaluating the performance of orally administered drugs to older people and geriatric patients and propose an absorption risk calculator.

Essential Background: Applicants should preferably have a Master's degree in a project-related field (e.g. Pharmacy, Pharmaceutical Sciences, Drug Delivery, Industrial Pharmacy).

Desirable Background: First insights into programming language (e.g. R) are beneficial but not a must. German as additional language skill is beneficial but not a must.

Host Institution: Merck Healthcare KGaA, Germany

Supervisors: Dr. S. Hansmann, Dr. A. Lehmann

Local Requirements: The candidate should be able to work in a diverse project team. A curious and innovative mindset is a prerequisite for the project as well as the ability to communicate results effectively and clearly to an interested scientific community.

PhD institution: National and Kapodistrian University of Athens (NKUA), Greece

Planned Secondments: Host: NKUA; Supervisor: C. Reppas

Planned Starting Date: 1 September 2021

Application Deadline: 31 March 2021 at 23:59 (CET)

ESR 11: Development of open access PBB/PBPK models to predict oral drug absorption in Geriatric Patients and Older People

- position filled -

