GROUP'S NAME: (sugere-se que o nome fique a 2 linhas, no máximo 3 linhas – 57 caracteres, sem espaços)

PRECAM – Precancerous Conditions and Early Cancer Management

PROJECTS WITH EXTERNAL FUNDING

AIDA - An Artificially Intelligent Diagnostic Assistant for gastric inflammation; Horizon Europe; 101095359; 6 334 803,75€ (2023-2026); Mário Dinis-Ribeiro (PI@IPOP and WP leader)

Description (2000 caracteres, sem espaços)

Most cases of gastric cancer (GC) are detected at a late stage, when patients have a median life expectancy of about a year. Diagnosing people at risk of developing GC at the pre-symptomatic stage, typically chronic gastric inflammation, could significantly improve the outlook.
Artificial intelligence (AI) can help clinicians make sense of their own data by automating much of the treatment and analysis, which require manual work and years of experience. But it can do more: it can bring together available data from various sources into a vast data lake and cross-correlate the data to derive a 'risk score' for gastric cancer and shed light on the mechanisms of its evolution.
Aida aims to do just that. It helps researchers understand the mechanisms that trigger gastric oncogenesis, helps clinicians diagnose precancerous inflammation at the earliest possible stage, suggests personalised therapeutic strategies for treatment and follow-up, and makes personalised recommendations for monitoring patient health status, thus contributing to gastric cancer prevention.
This places Aida squarely on Europe's agenda of 'Staying healthy in a rapidly changing society'. Aida unites some of Europe's leading authorities in the field of gastric inflammation, gastric cancer, leading AI and machine learning experts, experts on data governance and privacy, representatives of the public administration and patient advocates. Aida also has strong ties with the industry.
After the project, the results will live on in a foundation that acts as a transnational focal point for chronic gastric inflammation — and GC in general. We hope that the solid, inclusive design principles of Aida, its societal relevance and its durability will spawn a vigorous ecosystem around chronic gastric inflammation, its understanding and its treatment. And we hope that it will inspire other data collaboratives in health — for other chronic inflammations, other forms of cancer or other ailments altogether.

TOGAS – TOwards GAstric cancer Screening implementation in the European countries; EU4H; 101101252; 11 337 063,81€ (2023-2026); Mário Dinis-Ribeiro (PI@IPOP and WP leader)

Description (2000 caracteres, sem espaços)

No effective screening modality to prevent gastric cancer is available in Europe. Elimination of H.pylori bacteria is expected to decrease the mortality by 40%; another approach is early is detection of precancerous lesions for surveillance.
The general objective of TOGAS is to provide the missing evidence-based knowledge to be further transferred to design plan and implement appropriate gastric cancer prevention across the EU. The results from this project will aide policy makers in incorporating gastric cancer screening into their healthcare priorities while balancing its effectiveness, feasibility and acceptability with long-term potential adverse effects.

TOGAS has 3 specific objectives: 1) Assessment of state of play as well as the needs of MSs and target populations in gastric cancer prevention, including information on 'opportunistic' screening initiatives organised in public and private setting. 2) Assessment of the appropriateness of various gastric cancer-screening modalities for the use in the EU. 3) Assuring the sustainability of the results by an effective dissemination strategy and coordination of the methodologywith the approaches used within the EU, including with the European Guidelines and Quality Assurance Schemes.
TOGAS will involve three pilot studies, each designed to address specific aspects of gastric cancer screening and early detection. Cost effectiveness modelling and addressing medical ethics aspects will be an important integral part of the project.
To disseminate widely project results TOGAS will organize three highly visible conferences inviting the key stakeholders and MS representatives as well as a high-level conference together with other cancer screening projects.
The TOGAS consortium unites 18 partners and 3 associated partners representing higher educational institutions, research structures, clinics and wider CSO from 14 member states.

ONCOSCREEN – A European "shield" against colorectal cancer based on novel, more precise and affordable risk-based screening methods and viable policy pathways; HORIZON; 101097036; 12 972 076,25€ (2023-2026); Mário Dinis-Ribeiro (PI@IPOP)

Description (2000 caracteres, sem espaços)

A multilevel campaign to boost colorectal cancer screening.
Population-based screening for colorectal cancer (CRC) is recommended in the EU. Accounting for 12.4 % of all cancer deaths, only one in seven EU citizens participate in screening programmes. The EU-funded ONCOSCREEN project aims to reverse this trend by promoting accurate, non-invasive, cost-effective screening tests based on new technologies and an increased awareness on the disease. Personalised approaches for screening are needed to consider genetic and other socioeconomic variables and environmental stressors. With this in mind, the project will develop a risk-based, population-level stratification methodology for CRC to account for genetic prevalence, socioeconomic status and other factors. Bringing together a 38-partner consortium, the project is in line with Horizon Europe's Cancer Mission.

EUCANSCREEN – European Action on Cancer Screening; EU4H; 101162959; 38 749 916,70€ (2024-2028); Mário Dinis-Ribeiro (PI@IPOP and Task leader)

Description (2000 caracteres, sem espaços)

The European Union's Beating Cancer Plan has introduced a new EU-Supported Cancer Screening Scheme to ensure high-performance cancer screening programs across all Member States. The EUCanScreen project aims to promote the sustainable implementation of high-quality screening programs for breast, cervical, and colorectal cancers, as well as recommended screenings for lung, prostate, and gastric cancers. The main goal of the project is to reduce the cancer burden and achieve equity in screening access throughout the EU.
Objectives:
1. Ensure full, cost-effective, and quality-assured implementation of breast, cervical, and colorectal cancer screening.
2. Prepare for the implementation of lung, prostate, and gastric cancer screening.
3. Improve data collection and monitoring, and ensure equal access to screening programs.

4. Foster collaboration with other EU projects to ensure sustainability. The consortium brings together 29 countries, including 25 EU Member States, Ukraine, Moldova, Norway, and Iceland. The project is coordinated by the University of Latvia and involves additional 28 competent authorities, 61 affiliated partners and 7 associated partners. The project duration is 48 months with a total budget of EUR 38.7 million.

GATE - GenerAlizable and Trustable computer assisted upper gastrointestinal Endoscopy; FCT; COMPETE2030-FEDER-00886200; 249 480,00 € (2025-2028); Francesco Renna (INESC TEC) & Mário Dinis-Ribeiro (PI@IPOP)

Description (2000 caracteres, sem espaços)

The GATE (Generalisable and Reliable Computer-Assisted Upper Gastrointestinal Endoscopy) project is a partnership between INESC TEC and IPO Porto. It aims to research, develop, and implement computer vision algorithms in a hospital setting to support the management of gastric cancer. Specifically, the goal is to develop algorithms that detect and determine the extent of intestinal metaplasia in a gastrointestinal endoscopic examination, ensuring that the results are not only accurate but also reliable and generalizable across different clinical settings. Understanding the average performance of algorithms is not sufficient to develop trust in an AI system. Reliability assessment approaches, such as local adjustment and density principles, seek to address the problem of uncertainty in deep neural networks, allowing the estimation of the reliability of an individual algorithm's decision. Regarding generalizability, recent self-supervised learning paradigms have strong synergies with the GATE multicenter datasets, allowing the exploration of new approaches.

SNIFF – *Saliva-based Non-Invasive volatile organic compounds for gastric cancer detection;* Maria de Sousa Award 5th Edition (PI-261- CI-IPOP-45-2025) 20 000€ (2026-2028) Catarina Lopes

Description (2000 caracteres, sem espaços)

The SNIFF project aims to develop a noninvasive strategy based on the detection of volatile organic compounds (VOCs) in body fluids—particularly saliva—as a screening tool for gastric lesions. The goal is to establish a risk model to refer individuals at higher risk to individualized strategies for screening and monitoring gastric cancer in its early stages.