

Output of the PrIOMiC network since 2019 (status: August 2024)

1A) PrIOMiC mobility grants

Since the start of PrIOMiC in 2019, **over 30 mobility grants have been awarded** (funded entirely or partially) by PrIOMiC.

If you are interested in applying for a PrIOMiC mobility grant: please consult the guidelines & regulations available via <https://www.crig.ugent.be/en/priomic-crig-ugent-international-thematic-network>

1B) List of publications in context of PrIOMiC partnerships

Selected list of joint publications (manuscripts in preparation/review are not included) between local (UGent) and international PrIOMiC partners since 2019 until Aug 2024:

- 'Chitosan/γ-PGA nanoparticles-based immunotherapy as adjuvant to radiotherapy in breast cancer' - Castro F et al, *Biomaterials* 2020 (team Prof. Olivier De Wever & Prof. Maria Oliveira)
- 'The ProBio trial: molecular biomarkers for advancing personalized treatment decision in patients with metastatic castration-resistant prostate cancer' – Crippa et al, *Trials* 2020 (teams Bram De Laere/Piet Ost with Karolinska)
- 'Increased Pathway Complexity Is a Prognostic Biomarker in Metastatic Castration-Resistant Prostate Cancer' - De Laere et al, *Cancers* 2021 (teams Piet Ost & Bram De Laere, with Vancouver & Karolinska)
- 'Tissue- and Blood-derived Genomic Biomarkers for Metastatic Hormone-sensitive Prostate Cancer: A Systematic Review' - Van der Eecken et al, *Eur. Urol. Oncol.* 2021 (team Piet Ost/Bram De Laere, pathology and urology departments U(Z)Gent, & Vancouver)
- 'MISpheroid: a knowledgebase and transparency tool for minimum information in spheroid identity' – Peirsman et al, *Nature Methods* 2021 (team Prof. Olivier De Wever, with contributions of several other Ugent teams & Prof. Maria Oliveira)
- 'Epithelial-Mesenchymal Transition (EMT) as a Therapeutic Target' (review) – Jonckheere et al, *Cells Tissues Organs* 2022 (teams Geert Berx, Steven Goossens & Kyra Campbell)
- 'Novel Insights on the Use of L-Asparaginase as an Efficient and Safe Anti-Cancer Therapy' – Van Trimpont et al, *Cancers* 2021 (team Steven Goossens, UZ department pediatric hematology & team Arnon Lavie)
- 'Endoglin, a Novel Biomarker and Therapeutic Target to Prevent Malignant Peripheral Nerve Sheath Tumor Growth and Metastasis' - Gonzalez-Munoz et al, *Clin Cancer Res* 2023 (team Olivier De Wever & Hector Peinado)
- 'Unsupervised detection of fragment length signatures of circulating tumor DNA using non-negative matrix factorization' – Renaud et al, *Elife* 2022 (team Bram De Laere & Karolinska)
- 'Clinical Trial Protocol for ProBio: An Outcome-adaptive and Randomised Multiarm Biomarker-driven Study in Patients with Metastatic Prostate Cancer' – De Laere et al, *Eur Urol Focus* 2022 (teams Bram De Laere/Piet Ost & Karolinska)
- 'Whole Slide Imaging-Based Prediction of TP53 Mutations Identifies an Aggressive Disease Phenotype in Prostate Cancer' – Pizurica et al, *Cancer Res* 2023 (team Kathleen Marchal in collaboration with team Piet Ost and colleagues from the departments of pathology and urology at U(Z)Gent, and the team of Prof. Olivier Gevaert in Stanford)

- 'AR and PI3K Genomic Profiling of Cell-free DNA Can Identify Poor Responders to Lutetium-177-PSMA Among Patients with Metastatic Castration-resistant Prostate Cancer' - Vanwelkenhuyzen et al, *European Urology Open Science* 2023 ([teams Piet Ost/Bram De Laere & Karolinska](#))
- 'Prognostic Value of Low-Pass Whole Genome Sequencing of Circulating Tumor DNA in Metastatic Castration-Resistant Prostate Cancer' – Norgaard et al, *Clin Chem* 2023 ([team Bram De Laere & Karolinska](#))
- 'In vivo stabilization of a less toxic asparaginase variant leads to a durable antitumor response in acute leukemia' – Van Trimpont et al, *Haematologica* 2023 ([team Steven Goossens, UZ department pediatric hemato-oncology, team Arnon Lavie](#))
- 'Multiregion sampling of de novo metastatic prostate cancer reveals complex polyclonality and augments clinical genotyping'. Warner, ..., Ost and Wyatt - *Nature Cancer* 2024 ([teams Piet Ost & Bram De Laere, urology and pathology departments at U\(Z\)Gent](#))
- 'Prediction of plasma ctDNA fraction and prognostic implications of liquid biopsy in advanced prostate cancer' – Fonseca et al, *Nature Communications* 2024 ([teams Bram De Laere, Vancouver & Karolinska](#))
- 'Androgen receptor pathway inhibitors versus taxanes in metastatic castration-resistant prostate cancer: Results from the biomarker-driven ProBio platform trial' – De Laere et al, *Nature Medicine* 2024 ([team Bram De Laere/Piet Ost & Karolinska, with contributions of dept urology U\(Z\)Gent and other clinical centers in Belgium](#))

1C) Overview of successful (joint) applications for research funding

Selected list of (joint) applications for research funding in the context of PrIOMiC partnerships (applications that were not granted or in preparation/pending not included) since 2019 until Aug 2024

- funded research projects at 'Kom op Tegen Kanker', both in the context of the collaboration between the Ghent teams (Piet Ost & Bram De Laere) with the PrIOMiC partners in Karolinska (Prof. Grönberg & Dr. Lindberg) on the ProBio clinical study (with the aim to implement the clinical trial at U(Z)Gent (and other hospitals in Flanders)
 - 2020: "ProBio: Een klinische studie in verschillende Belgische ziekenhuizen waarbij mannen met uitgezaaide prostaatkanker behandeld worden met een doelgerichte therapie, gekozen op basis van het tumorprofiel in het bloed" – promotor Prof. Piet Ost (UGent); ([read more](#))
 - 2022: "ProBio-mHSPC: Een klinische studie waarbij mannen met uitgezaaide prostaatkanker bij diagnose behandeld worden met een doelgerichte therapie op basis van het tumorprofiel in bloed of weefsel" – promotor Prof. Bram De Laere (UGent); ([read more](#))

Also read the 'Kom op tegen Kanker' interview with Bram De Laere [via this link](#)

- 2021: [CIHR funding \(Canadian Institutes of Health Research\)](#) for the project 'Genomic dissection of de novo metastatic prostate cancer prior to treatment' ([read more](#)) (team Piet Ost in UGent & Alex Wyatt in Vancouver)
- funded project at 'The National Centre for replacement and refinement and reduction of animals in Research' ([UK grant](#)) for the project 'Establishing Drosophila melanogaster as part of the pre-clinical pipeline for anti-metastatic cancer drug discovery' – budget for PrIOMiC

partner Prof. Kyra Campbell; UGent partners are Prof. Geert Berx & Prof. Steven Goossens ([read more](#))

- The collaboration between the team of Prof. Olivier De Wever (UGent) and the team of Prof. Maria Oliveira (Porto) formed the basis of successful grant applications by the team of Prof. Oliveira (with prof. De Wever as co-PI and member respectively):
 - 2022: "RADIORESISTANCE: Dissect the tumor microenvironment to battle cancer radioresistance and immune escape", funded by FCT- the Portuguese Science Foundation
 - 2022: "READOUT: Bridging iron metabolism and immune cells at the irradiated tumor microenvironment to identify novel therapeutic targets in rectal cancer", funded by FCT- the Portuguese Science Foundation
- the collaboration between the team of Steven Goossens and colleagues (UGent & UZ Gent) and the team of Prof. Arnon Lavie (Chicago) formed the basis of several successful grant applications by CRIG/UGent teams, including a predoctoral mandate at FWO Vlaanderen, a 'Kom op tegen Kanker' project and UGent IOF funding.

1D) Valorization

- from bench to bedside: implementing the ProBio liquid biopsy assay from the Karolinska Institute as a routine diagnostic test (joint collaboration between the teams of Prof. Piet Ost & Dr. Bram De Laere, the Center for Medical Genetics Ghent & Molecular Diagnostics Ghent, and the international partners from the Karolinska Institute)

1E) Invited speakers seminars (co-)funded by PrIOMiC

Since 2019, PrIOMiC has (co-)funded >10 invited speaker seminars, in which international experts gave a lecture to CRIG/UGent researchers (and students), and hosted by CRIG or CRIG group leaders & their research teams. Interested to host a seminar with international speaker that can be relevant for the PrIOMiC network? Please contact us via CRIG@UGent.be