

Appendix I
INFORMATION SHEET / INFORMAZZJONI

“Developing a metabolite driven analytical method for early detection of colorectal cancer.”

INFORMATION SHEET

You are kindly being asked to participate in a research study entitled:

“Developing a metabolite driven analytical method for early detection of colorectal cancer.”

You may find some of your questions answered below:

What is this study about?

This study makes part of doctoral research being conducted by Marija Muscat. The aim of this study is to develop and validate novel biomarker panels for the early detection and prevention of colorectal cancer (CRC) by integrating metabolite profiling, dysbiosis indices, and immune-related DNA methylation markers. This will enhance the accuracy of predictive assays, improving sensitivity and specificity for CRC screening while reducing associated costs. The study involves the generation of a well-annotated prospective cohort, by incorporating community outreach and participation across diverse age groups. The proposed impact of the study is to contribute to lowering CRC incidence through improved early detection and prevention strategies.

What would my participation involve?

You will be given an overview of the purpose of the study and how it will involve you. If you agree to take part in this research study, you will be asked to sign an informed consent form.

With your consent, 15mL of blood will be drawn from a vein in your arm by a medical doctor or a nurse. You are also asked to provide a faecal sample using provided kits following consent for participation in the study.

What personal data will be collected?

Information relating to your age, gender, and health status is required strictly for use during the study. This information will be made pseudonymous and will be correlated with your samples, in order to link laboratory findings with clinical information. These data, along with any results arising from the research, will be securely stored by the Project supervisor in such a way that it cannot be retraced to your personal identity by any of the other research investigators of this project or by any third parties. For further details, please refer to the section about data protection and privacy below.

What happens to the collected samples?

As soon as the sample enters the study, it will be referenced and made pseudonymous. Faecal and blood samples will be processed as required by the project. For the duration of the study, the blood, faecal samples and any products extracted from them (namely exosomes, bacterial DNA and protein) will be stored on secure premises at the University of Malta. All samples and data will be given a code to keep your identity confidential and no information that may potentially disclose your identity will be passed on to third parties.

All samples will be disposed of once the study is finished. Pseudonymous test results will be available for use in related research only, for a period of 10 years after collection of the sample, unless you decide to opt out of the study. In the latter case, any collected samples and personal data pertaining to you will be destroyed.

What genetic tests will be carried out?

No human genetic tests will be performed. Tests on commensal microbes in the gut and methylation status of specific genes, are only relevant within the context of this study and they will not identify any medically relevant condition within you. The data will not be made available to you, any insurance company, your employer, your family doctor, or any other physician who treats you now or in the future but only to your consultant in charge.

What are the benefits of this study to me and the community?

This research project will not directly benefit you as a participant. The use of the blood sample to measure these markers in blood will provide an opportunity to support colorectal cancer screening for early diagnosis. The prospective cohort generates a resource that can verify early diagnosis.

What risks, inconvenience or discomfort might I experience?

There is no added significant physical risk to your health for participating in this study. You may experience minor discomfort or pain and perhaps bruising at the site where blood samples are taken. In the extremely unlikely event that you will suffer any effects that require medical care, you will be treated free of charge, under the local health service system, and it will be the responsibility of the clinical investigator to make all the necessary arrangements to this effect.

All procedures will be carried out in the presence of an experienced physician, and according to established European guidelines. You may ask any questions you may have at any time.

What are my data protection and privacy rights?

This study has been approved by the Research Ethics Committee of the Faculty of Medicine & Surgery of the University of Malta. All data will be processed strictly in accordance with the provisions of the General Data Protection Regulation (EU) 2016/679 for the sole purpose of this study.

All of the personal data which can lead to your identity will only be held by the project supervisor who is duty bound not to release any traceability data to any third parties. All samples taken for this study will be allocated a random, non-sequential code for anonymization purposes and sent to or collected by the principal investigator. Only the project supervisor will have access to the samples and the ability to correlate your sample with personal details.

If you feel that you would not like to proceed with the study, you shall be free to withdraw your participation at any time, without any consequences whatsoever. In this event, all biological samples and your personal data will be identified by the project supervisor and destroyed. However, data pertaining to you which has already been used and incorporated into the project database shall be retained anonymously without any traceability records.

Full confidentiality is guaranteed with respect to all information obtained verbally, in writing, or as a result of any of the tests that we shall carry out. Nothing will be publicised which in any way can disclose your identity.

The ownership of any information derived directly or indirectly from this project, as well as any products or services developed directly or indirectly as a result of this research, will be regulated by the intellectual property rights (IPR) agreement.

For further information on the study, you may contact:

Principal investigator:	Marija Muscat
Contact email:	marija.muscat.17@um.edu.mt
Contact Numbers:	2340 3261/ 7980 3962
Project Supervisor:	Professor Godfrey Grech (99702552)

INFORMAZZJONI – STUDIJU

Qed tiġi ġentilment mitlub/a sabiex tipparteċipa f'riċerka intitolata:

“Developing a metabolite driven analytical method for early detection of colorectal cancer.”

Tista' ssib tweġibiet għal xi mistoqsijiet li jista' jkollok hawn taħt:

Fughiex inhu dan l-istudju?

Dan l-istudju huwa parti minn riċerka għad-dottorat ta' Marija Muscat. L- għan ta' dan l-istudju huwa li jiżviluppa u jivvalida sistemi ġodda ta' indikaturi bioloġici għall-identifikazzjoni u prevenzjoni bikrija tal-Kanċer tal-musrana billi nintegraw profili ta' metaboliti, indici ta' disbijożi u markaturi tal-methylation relatati mas-sistema immunitarja. Dan isaħħaħ l-eżattezza tas-sistema ta' tbassir, itejjeb is-sensitivita' u specificita' tad-detezzjoni tal-kanċer tal-musrana filwaqt li jnaqqas in-nefqa assoċjata mad-dijanjosi. Dan l-istudju jinvolti il-ġenerazzjoni ta' kampjuni prospettivi annotati sew, billi jinkorpora parteċipazzjoni fil-komunita' b'etajiet differenti. L-impatt propost tal-istudju huwa li jikkontribwixxi għat-tnaqqis tal-inċidenza ta' kanċer fil-musrana permezz ta' strategiji mtejba ta' detezzjoni bikrija u prevenzjoni .

X'tinvolti l-parteċipazzjoni tiegħi?

Ser tingħata informazzjoni dwar l-għan tal-istudju u kif dan jista' jaffettwak. Jekk tiddeċiedi li tiegħu sehem f'din ir-riċerka, tiġi mitlub/a tiffirma formola tal-kunsens. Bil-kunsens tiegħek, jitteħidlek kampjun ta' 15mL demm minn vina fi driegħek minn tabib/a jew infermier/a għal analiżi oħrajn li wkoll jiffurmaw parti minn dan l-istudju. Inti mitlub/a li tagħti kampjun tal-ippurġar. Il-riċipjenti u struzzjoni tingħata waqt il-kunsens.

X'informazzjoni personali ser tingħabar?

Informazzjoni dwar l-eta', sess, u stat ta' saħħa huma meħtieġa strettament għal dan l-istudju. Din l-informazzjoni tiġi psewdonimizzata u kkorrelatata mal-kampjuni tiegħek, biex ir-riżultati li joħroġu mit-testijiet ikunu jistgħu jiġu konnessi mad-data. Din l-informazzjoni, kif ukoll ir-riżultati tar-riċerka, ser jiġu maħzuna b' mod sikur mill- superviżur tal-proġett, mingħajr ma tkun tista' tiġi traċċata l-identita' tiegħek minn riċerkaturi oħrajn jew minn terzi persuni. Għal iktar dettalji, jekk jogħġbok irreferi għas-sezzjoni dwar il-protezzjoni tad-data u l-privatezza hawn taħt.

X' jiġri mill-kampjuni?

Hekk kif kampjun jingħabar u jsir parti mill-istudju, dan jiġi mogħti numru ta' referenza u jiġi psewdonimizzat. Dmija u kampjuni ta' ippurġar ser jiġu processati fil-laboratorju skont l-eżigenza tal-proġett. Matul l-istudju, il-kampjuni u prodotti estratti minnhom (particelli, DNA tal-mikrobi u proteini) jiġu maħzuna f' bini sikur ġewwa l-Universita' ta' Malta. Il-kampjuni u d-data jingħataw kodiċi

sabiex l-identita' tiegħek tinzamm b' mod kunfidenzjali u l-ebda informazzjoni li tista' twassal biex l-identita' tiegħek tkun magħrufa ser tgħaddi għand terzi persuni.

Il-kampjuni kollha jintremew kif l-istudju jispicċa. Ir-rizultati tat-testijiet jibqgħu disponibbli b' mod psewdonimu sabiex jintużaw f' riċerka relatata għal perjodu ta' 10 snin mid-data tat-teħid tal-kampjun, sakemm ma tiddeċidix li toħrog mill-istudju. F' dan l-aħħar każ, il-kampjuni u data konnessi miegħek jiġu meqruda mis-supervizur tal-proġett.

X' testijiet ġenetiċi jsiru?

L-ebda testijiet ġenetiċi barra mill-iskop ta' dan il-proġett ser isiru. Għalhekk, ir-rizultati ta' dawn it-testijiet huma relevanti biss fil-kuntest ta' dan l-istudju u m' humiex ser jidentifikaw xi kundizzjoni medika li jista' jkollok. L-informazzjoni mhux ser tkun aċċessibbli għalik, kumpaniji ta' assigurazzjoni, min iħaddmek, tabib tal-familja jew kwalunkwe tabib ieħor hliel il-konsulent li hu inkarigat mill-kura tiegħek.

X' inhuma l-benefiċċji ta' dan l-istudju għalija u għall-komunita'?

Dan il-proġett mhux ser jibbenefika lilek direttament bħala parteċipant/a. mhux ser jibbenefika lilek direttament bħala parteċipant/a. Madankollu, l-użu tad-demem, ser iwassal biex, eventwalment, nkunu nistgħu naqdbu l-indikaturi bioloġici iktar bikrija u l-uzzu ta' test fid-demem ikun jista jagħti support siewi lill-iscreening tal-Kanċer tal-musrana.

X' riskji, inkonvenjent jew skumditu' jista' jkolli?

Il-parteeipazzjoni tiegħek ma tinvolvi ebda riskju fiżiku sinjifikanti għal saħħtek. Fejn jittieħed id-demem, jista' jkollok xi skumditu' minima jew tbenġil hāfif f' dik il-parti tad-driegħ. Fil-każ, estremament improbabbli, li jkollok effetti li jirrikjedu kura medika, din tiġi pprovduta b' xejn mis-servizz lokali tas-saħħa, u tkun ir-responsabbilta' tal-investigatur kliniku/investigatrici klinika li tieħu hsieb li l-kura tingħata.

Il-proċeduri kollha jiġu mwettqa fil-preżenza ta' tabib/infermier esperjenzat u skont linji gwida stabbiliti fl-Ewropa. Tista' ssaqsi xi mistoqsijiet li jista' jkollok fi kwalunkwe mument.

X' inhuma d-drittijiet tiegħi dwar il-protezzjoni tad-data u l-privatezza?

Dan l-istudju ġie approvat mill- FREC (Research Ethics Committee of the Faculty of Medicine & Surgery of the University of Malta). Id-data tiegħek ser tiġi proċessata strettament skont il-provizjonijiet tal-*General Data Protection Regulation* (EU) 2016/679 għall-uniku skop ta' dan l-istudju.

L-informazzjoni personali kollha li tista' twassal għall-identita' tiegħek ser tkun miżmuma biss mis- superviżur tal-proġett, li huma marbuta bid-dover li ma tagħti ebda informazzjoni traċċabbli għalik lill- investigaturi oħrajn jew terzi persuni. Il-kampjuni kolha li jittieħdu għal dan l-istudju jiġu allokati kodiċi każwali u mhux sekwenzjali għal raġunijiet ta' anonimizzazzjoni u jintbagħtu jew jiġu miġbura mis- superviżur tal-proġett. L-aċċess għall-kampjuni u l-kapaċita' li dawn jiġu korrelati mad-dettalji personali tiegħek jinżammu biss mill-istess intermedjarji tal-proġett.

Jekk tħoss li ma tixtieqx tkompli tipparteċipa f'din ir-riċerka, inti liberu/libera li tieqaf fi kwalunkwe stadju tal-proġett, mingħajr ebda konsegwenzi. F'dan il-każ, il-kampjuni u data personali tiegħek jiġu traċċati u meqruda. Madankollu, informazzjoni miksuba mill-kampjuni tiegħek li diġa' ġiet użata u inkorporata fl-istudju tibqa' miżmuma b'mod anonimu li ma tistax tiġi konnessa miegħek.

Kunfidenzjalita' assoluta qed tiġi garantita fir-rigward ta' kull informazzjoni, miksuba verbalment, bil-miktub jew bħala riżultat ta' testijiet. Ebda informazzjoni li tista' tiżvela l-identita' tiegħek ma ser tiġi ppubblikata.

Is-sjieda tal-informazzjoni kollha miksuba, direttament jew indirettament, minn din ir-riċerka, kif ukoll kwalunkwe prodotti jew servizzi żviluppanti bħala riżultat tagħha, ser ikunu regolati mill-Ftehim dwar id-Drittijiet tal-Proprietà Intelletwali (Intellectual Property Rights; IPR).

Għal iktar informazzjoni dwar dan l-istudju, tista' tikkuntattja lil:

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Superviżur tal-proġett:	Prof. Godfrey Grech (99702552)