DSMCN
DIPARTIMENTO DI SCIENZE MEDICHE, CHIRURGICHE E NEUROSCIENZE

SHEET FOR PUBLIC SELECTION NOTICE UPON QUALIFICATIONS AND INTERVIEW FOR THE AWARD OF 1 RESEARCH GRANT (EX-ART 22 L 240/2010)

Annex No

Type of grant	**RESEARCH GRANT LETTER** b)
Department	Medical, Surgical and Neurological Sciences
CUP	-CUP B53D23025150001
Grant amount (in compliance with the minimum set by MIUR[1]) (total amount, including charges to be paid by the employer)	€ 19.457,00 € 24.000,00
Availability of budget and allocation grant costs, including employer charges	Project: 2268-2023-CM-PROFCMUR_PNRR-PRIN2022_PC_002
Duration (in months)	12 months possibly renewable
Renewable	Yes
Number of positions	1
Scientific Director	Prof. Maria Grazia Castagna
Scientific Disciplinary sector/s	MEDS-26/A (EX MED/46) Technical sciences of laboratory medicine
Competitive exam sector	GSD 06/MEDS-26 (EX S.C. 06/N1) Sciences of health professions and applied medical technologies

[1] Indicate the total amount including the charges to be borne by the employer, and the gross amount to be paid.

Research field[2]	Medical sciences
Research project	2268-2023-CM-PROFCMUR_PNRR-PRIN2022_PC_002
Acronym for research project	N/A
Location(s) of the research activity	University of Siena, Department of Medical, Surgical and Neurological Sciences -Endocrinology Unit- AOUS
Project title (ITA)	Farmacogenetica del Lenvatinib nei pazienti affetti da cancro tiroideo avanzato: correlazione con eventi avversi ed efficacia terapeutica
Project title (ENG)	Pharmacogenitics of Lenvatinib in advanced thyroid cancer patients: correlation with adverse events and clinical outcome
Description of the research project/topic	This project aims at dissecting the complex interplay between lenvatinib side effects SNPs in genes associated with drug bioavailability, plasma dose of the drug and microbioma alteration by: 1) Prospectively correlating plasma drug concentrations with lenvatinib's adverse events and SNPs 3) Investigating the presence of an altered microbiota composition in enrolled patients that experienced more severe diarrhea and eventually correlate the results with those obtained 4) Optimize the therapeutic management strategy and maximize the clinical benefits of TKI treatment in advanced thyroid cancer patients

[2] For the purpose of publication on the European portal, indicate one of the following fields: Agricultural sciences; Anthropology; Architecture; Arts; Astronomy; Biological sciences; Chemistry; Communication sciences; Computer science; Criminology; Cultural studies; Demography; economics; Educational sciences; Engineering; Environmental science; Ethics in Health sciences; Ethics in natural sciences; Ethics in physical sciences; Ethics in social sciences; Geography; History; Information science; Juridical sciences; Language sciences; Literature; Mathematics; Medical sciences; Neurosciences; Pharmacological sciences; Philosophy; Physics; Political sciences; Psychological sciences; Religious Sciences; Sociology; Technology; Other

Activities entrusted to the research fellow (ITA)	Gestione biobanca e database di campioni biologici. In dettaglio: 1) L'assegnista sarà coinvolto/a nell'analisi degli SNP. Il DNA genomico sarà estratto dai leucociti del sangue periferico utilizzando la procedura di precipitazione salina, ottenuta da campioni di sangue venoso a digiuno raccolti durante il trattamento con lenvatinib. L'analisi degli SNP sarà effettuata mediante amplificazione PCR. 2) I campioni di plasma di ciascun paziente saranno raccolti sia all'inizio del trattamento per i pazienti che inizieranno la terapia, sia al "tempo 0" nei pazienti già in terapia. I campioni verranno successivamente raccolti durante il trattamento ogni 2 mesi e conservati a -80°C. Per misurare il livello plasmatico di Lenvatinib, verranno utilizzati 3 ml di sangue intero. I campioni di sangue verranno centrifugati a 3000 rpm per recuperare il plasma che verrà conservato a -80°C. 3) I campioni di feci saranno raccolti per ciascun paziente, prima di iniziare il trattamento con Lenvatinib e a 6 e 12 mesi dopo l'inizio della terapia. I campioni di feci verranno raccolti in triplicato per ciascun momento temporale.
Activities entrusted to the research fellow (ENG)	Management of biobank and database of biological samples. In detail: 1) She/His will be involved with SNPs analysis. Genomic DNA will be extracted from peripheral blood leukocytes using salting out procedure, obtained by fasting venous blood samples collected during lenvatinib treatment. Analysis of SNPs will be carried out by PCR amplification. 2) Plasma samples of each patient will be collected either at the starting point of patients who will start the treatment or at the "time 0" in patients already under therapy. Samples will be further collected during treatment every 2 months and stored at -80. To measure Lenvatinib plasma level, 3 ml of whole blood will be used. Blood samples will be centrifuged at 3000 rpm to recover plasma that will be stored at -80°. 3) Stool samples will be collected for each patient, by all RUs, before starting the treatment with Lenvatininb and at 6 and 12 months after starting therapy. Stool samples will be collected in triplicate for each time point
Maximum number of evaluable publications	*NO*

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Access Requirement	Master's degree in Biology (LM-6)
Preferred qualification	Master's degree in Biology (LM-6)
Additional qualifications and requirements[3]:	NO

Siena, date of the digital signature

The Director of the Department

Prof. Francesco Dotta

The Scientific Director

Prof. ssa Maria Grazia Castagna

[3] For example (for guidance only): *Possible foreign language (s) requested; Advanced level of written and spoken knowledge of one or more foreign languages; Work and/or training experience at public and/or private research facilities; Experiences in the international field*