



Decree of the Rector n. 1150 of 25/11/2021
Competition for awarding 1 research grant at the University of Udine

DISCLAIMER:

The official and legally binding call for applications is in Italian only.
This document cannot be used for legal purposes and is only meant to provide information in English on the call for applications (Decree of the Rector n. 1150 of 25/11/2021). Please refer to the official call published on: <https://www.uniud.it/it/albo-ufficiale>

Any change and integration will be made available on the above mentioned web page. Therefore, no personal written communication regarding the examination date and/or competition results shall be provided to applicants.

GENERAL INFORMATION

RESEARCH GRANT PROJECT

Responsabile scientifico della ricerca / Principal investigator:

Nome e cognome / Name and surname: Giuseppe Damante
Qualifica / Position: Professore Ordinario / Full Professor
Dipartimento / Department: Area Medica (DAME) / Medicine
Area MIUR / Research field: 06 – Scienze Mediche
Settore concorsuale e Settore scientifico disciplinare / Scientific sector: 06/A1 - Genetica Medica; MED/03 – Genetica Medica

Titolo dell'assegno di ricerca / Topic of the research fellowship "assegno di ricerca":

I bandi sono consultabili dal sito dell'Ateneo, del MIUR e Euraxess / The calls are available on the University, MIUR and Euraxess websites

Testo in italiano:

Studio di fenomeni epigenetici nella progressione del carcinoma della tiroide mediante approcci NGS.

Text in English:

Investigation on epigenetic events in progression of thyroid cancer, by using NGS approaches.

Obiettivi previsti e risultati attesi del programma di ricerca in cui si colloca l'attività dell'assegnista di ricerca / Foreseen objectives and results of the research programme performed by the research fellow "assegnista di ricerca":

I bandi sono consultabili dal sito dell'Ateneo, del MIUR e Euraxess / The calls are available on the University, MIUR and Euraxess websites

Testo in italiano:

I tumori tiroidei sono tra le neoplasie endocrine più diffuse, con un'incidenza in Italia di circa 12/100.000 casi/anno. Oggigiorno, per stabilire l'approccio terapeutico più idoneo (diverso se si parla di un tumore benigno o maligno e, in quest'ultimo caso, in base alle caratteristiche di aggressività tumorale), la metodologia preoperatoria utilizzata di routine è la biopsia con ago sottile (FNAB). Questa, tuttavia, non permette sempre di definire l'aggressività della neoplasia e, anche quando affiancata dalla ricerca di marcatori molecolari noti, non ha valore predittivo sulla risposta al trattamento con chemioterapici o farmaci biologici.



Scopo del presente progetto è l'identificazione di eventi epigenetici importanti nella progressione del carcinoma tiroideo, utilizzando le metodologie di Next Generation Sequencing (NGS).

L'attività sarà effettuata sia utilizzando modelli sperimentali "in vitro", in particolare colture cellulari in linea continua a partenza da carcinoma tiroideo, che dall'analisi di materiale tumorale proveniente direttamente da pazienti.

Questo secondo approccio verrà sviluppato in due fasi:

1. In fase preoperatoria, utilizzando il materiale ottenuto tramite FNAB, si prevede sia la valutazione di marcatori già proposti in quest'ambito sia la ricerca di nuovi marcatori molecolari grazie all'ausilio di tecnologie all'avanguardia quali Methylated RNA Immunoprecipitation (me-RIP) e NGS. modo da delineare un profilo caratteristico per ciascun tumore, approccio utilizzato per la prima volta nel campo delle neoplasie. Queste informazioni aiuteranno a decidere, sulla base delle caratteristiche di aggressività, se effettuare o no l'intervento chirurgico e, inoltre, il tipo d'intervento.
2. In fase post-operatoria, attraverso l'utilizzo di materiale biologico ottenuto durante l'intervento chirurgico e con tecniche innovative di colture cellulari tridimensionali (organoidi) derivanti dal singolo tumore, si valuterà la risposta al trattamento con radioiodio e/o con farmaci antineoplastici.

Complessivamente questo approccio integrato potrà fornire marcatori predittivi estremamente utili per un trattamento personalizzato di pazienti con neoplasie tiroidee e, quindi, costituirà la base per l'approntamento di un migliore servizio da offrire alle aziende sanitarie. Si potranno, infatti, evitare interventi chirurgici non necessari come la tiroidectomia totale, superflua nelle neoplasie poco aggressive e che comporta un peggioramento della qualità di vita dei pazienti, soggetti a trattamenti e monitoraggio continuativi per tutta la vita, oltre ad un aumento dei costi di gestione.

Text in English:

Thyroid tumors are among the most widespread endocrine neoplasms, with an incidence in Italy of about 12/100,000 cases per year. Nowadays, to establish the most appropriate therapeutic approach (different in presence of benign or malignant tumors and based on the tumor aggressiveness characteristics), the standard preoperative methodology is the Fine Needle Aspiration Biopsy (FNAB). However, by this approach, is not always easy to define the neoplasia aggressiveness and, even when accompanied by the evaluation of known molecular markers, has no predictive value on the response to treatment with chemotherapeutics or biological drugs.

Aim of the present project is the identification of epigenetic events relevant during the progression of thyroid cancer, by using Next Generation Sequencing (NGS) approaches. The activity will be performed using both experimental models "in vitro" (continuous cell lines) and analysis of tumoral material from patients.

This second approach will be developed in two distinct phases:

1. In the preoperative phase, by using the FNAB samples, known and new molecular markers will be evaluated. To this purpose novel technologies, such as immunogen precipitation of methylated RNA (me-RIP) and NGS, will be performed. The me-RIP technology allows to evaluate the levels of RNA methylation in order to outline a characteristic profile for each tumor, an innovative approach used for the first time in the field of cancer. This information could be used to choose, on the bases of tumor aggressiveness, whether to perform or not surgery and, moreover, the type of intervention.
2. In the post-operative phase, through the use of biological material obtained during surgery and with the innovative three-dimensional (organoid) cell cultures technologies deriving from a single tumor, we will evaluate the tumor response to treatment with radioiodine and/or antineoplastic drugs.

Overall, this integrated approach will provide extremely useful predictive markers for personalized treatment of patients with thyroid cancer and, therefore, will form the basis for the preparation of a better service to be offered to healthcare companies. In fact, it will be possible to avoid unnecessary surgical procedures, such as total thyroidectomy, superfluous in neoplasms that are not aggressive, and which leads to a deterioration in the quality of patient's life, subject to continuous treatment and monitoring throughout life, as well as an increase in management.



Struttura dell'Università di Udine presso la quale verrà sviluppata l'attività di ricerca / Department or other structure of the University of Udine where research activities will be carried out:

Dipartimento di Area Medica (DAME) / Department of Medicine.

Tipologia di attività assistenziale prevista in relazione alle esigenze del programma di ricerca / Type of care activity scheduled in relation to the needs of the research program:

Nessun contatto con pazienti ma solo con dati clinici sensibili. / No contact with patients but only with sensitive clinical data.

Struttura ospedaliera coinvolta / Hospital facility involved:

Azienda Sanitaria Universitaria Friuli Centrale (ASU FC) SOC Istituto di Genetica Medica.

Importo dell'assegno di ricerca (al lordo oneri carico assegnista) / Total grant gross for the research fellowship:

€ 19.988,60

Durata dell'assegno di ricerca / Duration of the research fellowship "assegno di ricerca":

12 mesi / months

Finanziamento / Financed by:

La copertura finanziaria graverà sui seguenti fondi:

- Assegnazione Piano Strategico Dipartimentale biennio 2019/2020 Dipartimento di Area medica DR 280/2019", progetto PSD2_2019_2020_DAME;
- RICLIB_DAMANTE.

Requisiti di ammissione / Minimum qualifications necessary:

- Possesso del titolo di Dottore di ricerca o titolo equivalente conseguito all'estero;
- possesso di un curriculum scientifico professionale idoneo allo svolgimento dell'attività di ricerca contemplata.
- Research doctorate or equivalent qualification obtained abroad;
- professional scientific curriculum suitable for the research activity above mentioned.

Procedura selettiva / Competition procedure:

Valutazione per soli titoli / Assessment of qualifications only



Commissione giudicatrice / Examining Board:

Nome e Cognome	Qualifica	SSD	Università
Membri Effettivi / Permanent members			
Giuseppe Damante	PO	MED/03	Università degli Studi di Udine
Gianluca Tell	PO	BIO/11	Università degli Studi di Udine
Carla Di Loreto	PO	MED/08	Università degli Studi di Udine
Membro Supplente / Temporary members			
Daniela Cesselli	PA	MED/08	Università degli Studi di Udine

APPLICATIONS AND DEADLINE

Application for admission to the competition

Entries to the competition begin on 30 November 2021 at 02:00 p.m. (Italian time) and end on 17 December 2021 at 02:00 p.m. (Italian time).

The application to participate to the selection **must be completed, under penalty of exclusion, using the online procedure at the address <https://pica.cineca.it/>**

The online procedure involves two stages:
Stage I – Registration
Stage II – Filling out the online application.

At the end of Stage II, the applicant must print out the application form and sign it in the manner described in the online procedure (manual signature, with attached identity document, or digital signature), under penalty of exclusion from the selection. The application must not be signed if the applicant accesses the aforementioned online procedure using the SPID identification.

Documents, qualifications and publications, as listed in art. 4 of the above mentioned Call for applications, must be attached to the online application in electronic format (.pdf). The size cannot be larger than 30 MB.

The application to participate to the selection process is automatically sent to the University of Udine with the final closure of the online procedure.

The University administration:

- does not assume any responsibility in case it is impossible to read the documentation submitted in electronic format due to damaged files;
- does not accept or take into consideration titles or documents received in paper format or in a manner different from that set out in this article.

The administration takes no responsibility for the loss of any communication resulting from an inaccurate indication of the residence address of the applicant, or from the lack or tardy communication of their change, nor from any possible mail delivery or postal error not due to any fault of the administration.



Applicants are advised not to wait until the last days before the deadline of this call. The University assumes no liability for any malfunctions due to technical problems and/or overloading of the communication line and/or application systems.

Personal data collected, also with IT tools, are aimed at managing the procedure of the competition and the subsequent stipulation and management of the contract. The University of Udine is the "Data Controller". At any time, you can request access, corrections and, according to the University institutional purposes, the cancellation and limitation of the processing or oppose the processing of your data. You can always submit a complaint to the Italian Authority for data protection. The complete information is available on the University of Udine website in the section "privacy" accessible from the home page www.uniud.it
Direct link: <https://www.uniud.it/it/pagine-speciali/guida/privacy>

Note: Before signature of the research grant contract, the candidate awarded of reference research grant must submit a copy of the vaccination booklet or related certificate, and intradermal reaction – sec. Mantoux (performed in the last 12 months). The selected candidate will have to undergo any health assessment deemed necessary by the competent doctor and aimed at issuing the assessment of suitability for the specific task according to the protocol of the host structure. The signature of the contract will be possible only after obtaining the judgment of suitability for the specific task by Azienda Sanitaria Universitaria Friuli Centrale (ASU FC).

The Azienda Sanitaria Universitaria Friuli Centrale (ASU FC), by authorizing with a subsequent deed the access of the selected candidate to its facilities, ensures insurance cover for professional risks and third-party liability in the course of the authorized activity. The insurance policy for accidents and occupational diseases remains at the expense of the selected candidate. In the absence of such policy, the selected candidate will not be allowed to access the facilities of the Azienda Sanitaria Universitaria Friuli Centrale (ASU FC), and it will not be possible to proceed with the signature of the contract.

Head of the procedure

The officer in charge of the proceedings is Dr. Sandra Salvador, Head of Area Servizi per la Ricerca of the University of Udine. The responsible Office of the University of Udine is the Area Servizi per la Ricerca – Ufficio Formazione per la Ricerca, via Mantica n. 31 - 33100 Udine (tel +39 0432 556390 Fax +39 0432 556299).

For further information about the call for applications:

https://helpdesk.uniud.it/SubmitSR.jsp?type=req&populateSR_id=42105