



UNIVERSITÀ DI PISA

Excerpt from the Rector's decree n. 1694/2021

Call for the selection of n. 3 Junior Research Fellows

(Under the Italian Law 240/2010 article 24, subparagraph 3, point a)

The University of Pisa announces a call for 3 Junior Fixed-Term Research Fellow for the Department and the scientific area or sector as listed in Annex A.

The fixed-term contract is to carry out research activities, teaching, integrative teaching activities and services for students, for a 350 hours commitment, on a full-time basis.

The Junior Research Fellow is required to perform lectures for a minimum of 36 up to a maximum of 60 hours per academic year, allocated as an institutional assignment for Bachelor's and Master's degree programmes, Specialization Schools and PhD programmes. It is possible to provide a further derogation up to a maximum of 72 hours, in order to avoid an excessive partitioning of teaching modules.

Contract duration: 3 years

Gross annual salary: € 36.344,04

Deadline for application: 4/11/2021 1 p.m.

Admission requirements:

Medicine Degree Specialty School Qualification as listed in Annex A

As for a qualification awarded abroad, equivalency or comparability documentation has to be provided

No admission to this selection for:

- Professors or Research Fellows with permanent position at the university, currently employed or currently retired;
- Fixed-term Research Fellowship or Post PhD research grants at the University of Pisa or other Italian universities, either public, private or online, and other public institutions (Under the Italian Law Italian Law n. 240/2010, articles 22 and 24) for a period that, totalled over this contract, would exceed 12 years altogether, even when not consecutive. As for the duration of the working period mentioned above, parental leave or medical leave, are excluded (under the existing legislation).

Applications:

Applications are to be submitted online only, using the following link: <https://pica.cineca.it/unipi/> or shall be invalid. It is necessary to have an email address to login and complete the application.

Applicants should fill in all the required data and upload all documents in PDF format.

The system allows saving a draft of the application within the application deadline. The system will register the online application date and send a receipt with an automatic e-mail reply. After deadline, the system will not allow login nor application submission.

In order to be valid, application shall include all the required data, applicant's signature and a valid identification document.

Each application will be assigned a tracking number to be cited in all subsequent communications, together with the selection code provided by the application form.

Applicants undertake to communicate in writing any variations of what declared in the application form.

The communication shall be edited in PDF format, signed and forwarded to the University of Pisa Rector via the Italian certified e-mail system address (P.E.C. Posta Elettronica Certificata): protocollo@pec.unipi.it or via e-mail at: concorsi@adm.unipi.it. Applicant's valid identification document shall be annexed.

For further information on application submission, please refer to concorsi@adm.unipi.it

For any IT malfunctioning please refer to unipi@cineca.it.

Applications shall be completed with the following annexes:

1. A self-attested Curriculum of the personal didactics, teaching and scientific activities, dated and signed;
2. The Publications applicant considers eligible for this selection with the corresponding list dated and signed;
3. A complete list of all Publications, dated and signed;
4. A copy of the fiscal code (if applicable) and identification card/passport, dated and signed;

All publications should not exceed 30 megabyte and are to be submitted in PDF format only, using the specific section of the application form.

Selection procedure:

A Rector's Decree will appoint the Selection Committee, consisting of three members.

The selection will be made according to a preliminary assessment of the candidates with an accurate and evidenced analytic evaluation of the Curriculum, of qualifications and scientific results, including PhD thesis.

After the preliminary assessment, the candidates that have comparatively proven to be the most meritorious, will be admitted to an open interview; they will represent between 10 and 20 % of the total and will be not less than six. The interview will concern applicant's qualifications and scientific results. In the event the number of applicants is six or less, all candidates are admitted. All admitted candidates will be summoned by registered post at least twenty days before the interview; the failed attendance to the interview will be considered as a voluntary renunciation.

During the interview, all candidates will be furthermore tested on the foreign language skills requested by the selection.

In compliance with the provisions adopted following the COVID-19 epidemiological emergency, interviews will take place on virtual mode to ensure the simultaneous connection between the members of the Commission and the candidates, under the regulations on the protection of personal data for confidentiality conservation.

During the interview it will be forbidden the audio / video recording through the IT platforms used as well as the broadcasting of the audio / video recording made with tools other than the platform.

The interview disclosure will be guaranteed inviting all candidates and any third part who has requested, with a link to the event; the link will be published at <https://www.unipi.it/index.php/concorsi-gare-e-bandi> in the section "Prove e colloqui in modalità telematica - Aule virtuali" and will allow the connection to the telematic session.

"The list of candidates admitted to the interview will be published on the university website at <https://www.unipi.it/index.php/concorsi-gare-e-bandi> in the section dedicated to the procedure in this call "

Please note that the English version is given as a matter of courtesy, for the only purpose of information. It cannot be legally used in the event of a dispute or a claim arising from the interpretation of this translation and concerning the contents, a possible uncertainty, contradiction or discrepancy. Should this occur, the Italian version of the call shall prevail as the only valid. For full Italian text see: <https://www.unipi.it/ateneo/bandi/ricercat/ricercator/index.htm>

(1) If applicable

Cod.RIC2021PON_ASS_A1

Dipartimento di Medicina Clinica e Sperimentale
Settore Concorsuale 06/F3 - Otorinolaringoiatria e Audiologia
SSD MED 32 - Audiologia

n. 1 posto

Committment regime: full time

Scientific manager: Prof. Stefano Berrettini

Thematic Area: innovation

Motivation consistency and compliance with the restricted thematic areas of Innovation or Green:

The proposed study protocol is based on the innovative use of a patented medical device, with the purpose of rehabilitation and cognitive enhancement of the elderly hearing impaired patient. The protocol can be adapted and exported to other categories of patients, even in the tele-rehabilitation regime. The device that will be used, the AvDesk, is produced by a startup company in Pisa. The project therefore appears consistent with the restricted thematic area of INNOVATION.

Research title:

New tele-rehabilitation protocol for elderly patients with cochlear implants, through cross-modal stimulation and cognitive enhancement

Research topic:

Hearing loss affects more than 1/3 of subjects between the ages of 61 and 70 and over 80% of those over the age of 85 and has been shown to represent a modifiable variable that affects cognitive impairment. The cochlear implant (CI) is a valid tool for auditory remediation in patients with severe-profound deafness and, even in elderly patients, has been shown to provide good hearing results and an improvement in the quality of life. However, the results achieved by elderly patients are frequently lower than those obtained by younger patients, especially in terms of verbal perception in a noisy environment. This seems to be due to a reduced capacity for central integration of auditory inputs, due to the aging of neuronal structures. Furthermore, according to recent evidence, auditory remediation through CI in the elderly patient can determine positive effects on the cognitive functions. It has recently been shown that when an acoustic input is reinforced by a visual input, auditory functions are enhanced, thanks to the activation of multisensory neuronal populations. We aim to develop and apply an innovative rehabilitation protocol for elderly patients submitted to CI, based on cross-modal stimulation and therefore on improving the central integration of stimuli, through the use of the AvDesk (Linari Medical) device. This is a patented medical device, designed for the visual telerehabilitation of patients with visual field deficits and which can be used for audio-visual cross-modal stimulation. By improving the central integration of cross-modal signals, the device should allow a sort of cognitive training and enhancement and therefore likely lead to the improvement of hearing performance in elderly patients with CI. Finally, previous experiences have shown how remote rehabilitation with AvDesk in the home environment is as effective as its use in the healthcare facility. We can therefore believe that the use of AvDesk can also bring advantages in medical conditions other than those for which it has already been used in the past, and in particular in deafness, even in telerehabilitation settings. This innovative protocol can also be adapted and exported to the rehabilitation of other categories of hearing impaired patients.

Specific research activity:

Scientific research and educational activity, as well as medical activity in the field of physiopathology and clinic of auditory communication in pediatric and adult age; functional and instrumental semeiotics, methodology, therapy and rehabilitation in audiology are specific fields of expertise and research. The specific research activity will concern innovation in the treatment and rehabilitation of the hearing-impaired patient with cochlear implant and other innovative technologies.

Scientific productivity goals:

Scientific innovative publications in indexed national and international journals, on the research topic. Dissemination of the results of the research activity through active participation to meetings, courses and webinars.

Location of the activities:

Department of Clinical and Experimental Medicine, University of Pisa. Medical activity at the University Hospital of Pisa, Otolaryngology Audiology and Phoniatics Unit.

Specific didactic activity:

Teaching or support teaching activity in medical study courses (Educational activity in the degree course of Medicine and Surgery, in the degree courses in Health Professions, in the Specialization courses in the medical area, in university Masters), and other study courses where the discipline is present (sector MED 32 or related scientific sectors).

Research period in the company (compulsory): 6 months

Linari Medical srl

Date and time of the discussion of qualifications and publications:

November 30, 2021 2.00 pm (telematics)

**The oral exam will verify the knowledge of the language: English
(it will be ascertained during the discussion of qualifications and publications)**

Candidates may submit a maximum number of 12 scientific publications including the PhD thesis, if submitted.

Medical activity is expected

l'Azienda Ospedaliero-Universitaria Pisana

Titoli di studio richiesti per lo svolgimento dell'attività assistenziale:

**Educational qualifications required for carrying out the medical activity:
Degree in medicine and surgery
Specialization in Audiology and Phoniatics**

Cod.RIC2021PON_ASS_A2

Dipartimento di Patologia Chirurgica, Medica, Molecolare e dell'Area Critica
Settore Concorsuale 06/D1 Malattie dell'Apparato cardiovascolare e malattie dell'Apparato respiratorio
SSD MED/11 - Malattie dell'Apparato cardiovascolare

n. 1 posto

Regime di impegno: tempo pieno

Responsabile scientifico: Raffaele De Caterina

Ambito tematico: Innovazione

Motivazione coerenza e rispondenza con le aree tematiche vincolate dell'Innovazione o Green:

L'aterosclerosi, sia coronarica che delle arterie periferiche, è la causa principale delle malattie cardio- e cerebrovascolari, prima causa di morte in Europa. L'infiammazione sistemica cronica è uno dei meccanismi fondamentali alla base della formazione, progressione e instabilità della placca aterosclerotica, ed è considerata il processo finale comune del cosiddetto "rischio residuo" in pazienti già in terapia medica ottimale per il controllo dei classici fattori di rischio cardiovascolare. L'angolo di fase è un parametro fornito da strumenti in grado di misurare la bioimpedenza, che identifica in modo quantitativo i fluidi extravascolari, che a loro volta, in assenza di condizioni cliniche di scompenso cardiaco congestizio, correlano strettamente con il livello di infiammazione corporea sistemica. La bioimpedenziometria potrebbe implementare la valutazione dello stato infiammatorio perfezionando la strumentazione già esistente sulla base dei dati clinici, biomorali e di imaging cerebro-vascolare avanzato disponibili nella coorte di pazienti arruolati nell'ambito dello studio CAMP, attualmente in corso, il progetto appare pertanto coerente con l'area tematica vincolata dell'INNOVAZIONE.

Titolo della ricerca:

Nuove tecniche quantitative di valutazione dell'infiammazione sistemica in pazienti con aterosclerosi carotidea, per la prevenzione dell'ictus e del decadimento cognitivo precoce

Tema della ricerca:

Ruolo dell'infiammazione sistemica nell'instabilizzazione dell'aterosclerosi e nell'emergenza di eventi clinici cardiovascolari

Specifiche attività di ricerca:

Scopo della ricerca qui proposta è di valutare, con tecnologie innovative di bioimpedenziometria, lo stato di infiammazione sistemica e locale in pazienti con aterosclerosi carotidea, già in terapia medica ottimale, per identificare soggetti a rischio di sviluppare sia eventi avversi ischemici, quali l'ictus cerebrale, che un precoce decadimento cognitivo, in un'ottica di innovazione e trasferimento tecnologico, con approccio di interscambio tra il mondo della ricerca scientifica e quello produttivo dell'industria.

Obiettivi di produttività scientifica:

Pubblicazioni scientifiche, in ragione di almeno 1 prodotto/anno pubblicato su riviste con IF >4.0

Sede svolgimento delle attività:

Dipartimento di Patologia Chirurgica, Medica, Molecolare e dell'Area Critica

Attività didattica specifica prevista:

Seminari di ricerca - Affiancamento ai docenti del Settore come Cultore della Materia

Periodo di ricerca in impresa:

Impresa: Akern s.r.l.

Numero di mesi: 6

Data e orario di svolgimento della discussione dei titoli e delle pubblicazioni:

22 novembre ore 11:30 (telematica)

La prova orale accerterà la conoscenza della lingua: inglese

(verrà accertata in sede di discussione dei titoli e delle pubblicazioni)

I candidati potranno presentare un numero massimo di 12 pubblicazioni scientifiche ivi compresa la tesi di dottorato, se presentata.

È prevista attività assistenziale presso l'Azienda Ospedaliero-Universitaria Pisana

Titoli di studio richiesti per lo svolgimento dell'attività assistenziale:

Laurea in Medicina e Chirurgia

Specializzazione in Malattie dell'Apparato Cardiovascolare o discipline equipollenti o affini

Cod.RIC2021PON_ASS_A3

Dipartimento di Ricerca Traslationale e delle Nuove Tecnologie in Medicina e Chirurgia
Settore Concorsuale 06/A4 - Anatomia Patologica
SSD MED/08 - Anatomia Patologica

n. 1 posto

Regime di impegno: Full time

Responsabile scientifico: prof. Antonio Giuseppe Naccarato

Ambito tematico: Innovation(

Motivazione coerenza e rispondenza con le aree tematiche vincolate dell'Innovazione o Green:

The implementation of new technologies in the surgical pathology routine, and the integration of the morphological, clinical, radiological and molecular data represent the beginning of the digital revolution that is involving all the healthcare areas. Therefore, it is straightforward that the use and implementation of these technologies imply the identification of a specific healthcare professional able to manage these tools, understand their limits and potentiality and integrate the data obtained from therapeutic and research workflow. This substantial amount of data can be used for both scientific and production purposes, promoting: the enhancement of human resource development; the spreading of an open approach to innovation; the connection among the scientific and industrial worlds..

Titolo della ricerca:

Integrated Research in Digital Oncologic Pathology

Tema della ricerca:

Technology has deeply renovated several healthcare fields, bringing significant improvements but also creating new essential challenges for healthcare professionals. In the field of the Surgical Pathology, the introduction of new digital tools allowed to transform cyto-histological slides into digital images, giving life to "Digital Pathology", a wide application area with multiple advantages, including: •slides' remote view (telediagnosis), a requirement that became crucial during the pandemic period to ensure diagnostic and assistance continuity to the patients. •the need for "second opinion" even in real time (teleconsultation), particularly important in the context of complex assessments, such as those carried out during organ transplant surgery. •education, as showed by the gradual transition to a "distance learning" methods. •multidisciplinary discussion, in order to standardize the interpretation of predictive biomarkers. •the improvement of lab workflow at all levels (management, traceability and archiving systems), through the implementation of digital technologies in management software systems. At the same time, the rise of the "Precision Oncology" increased the request of prognostic and predictive tests able to stratify patients. However, this need has clashed with: intra- and inter-tumor heterogeneity; the complex interaction between the different cellular compartments; the difficult assessment by only "human eyes" of slight morphological alterations or expression variability. Therefore, these hardware tools have been supplemented by sophisticated and precise software tools based on "Artificial Intelligence" and "Machine Learning" able to overcome these limits. The "Digital Pathology" succeeded to combine diagnostic and research purposes, allowing the conversion of innovative ideas into commercial products. Therefore, it is clear that the use and the implementation of these new technologies in the diagnostic routine and in future research projects needs a new healthcare professional able to manage these tools and integrate clinic, radiological and molecular data, in order to improve and expand therapeutic and research approaches.

Specifica attività di ricerca:

The activity covered by the present contract consists of research activities focused on topics relevant for SSD MED/08 and SC 06/A4, and in particular: i) the slides' digitization; the integration of morphological, clinical, radiological and molecular data; ii) new approaches to histological, cytological, ultrastructural and molecular diagnostics, also referred to the pathology of specific organs and apparatus that need specific diagnostic skills.

Obiettivi di produttività scientifica:

The researcher's scientific productivity objectives will be aimed, over the three-year period, at the publication as author of at least 2 scientific articles in high-impact scientific journals.

Sede svolgimento delle attività:

UO di Anatomia Patologica 1 Universitaria, Azienda Ospedaliero Universitaria Pisana.

Attività didattica specifica prevista:

The candidate must carry out teaching activities consistent with the research project. This course will aim to highlight the scientific, diagnostic and therapeutic improvements coming from the implementation of digital technologies in diagnostic and clinical routine.

Periodo di ricerca in impresa:

Impresa: Epredia Italy S.r.l. Via varesina, 162, 20156, Milano (MI).

Numero di mesi 6

Periodi di ricerca all'estero:

Istituzione: Weill Cornell Medicine, 1300 York Avenue, New York, NY 10065

Numero di mesi: 6

Data e orario di svolgimento della discussione dei titoli e delle pubblicazioni:

29 Novembre 2021 ore 16:00 (telematica)

La prova orale accerterà la conoscenza della lingua: inglese

(verrà accertata in sede di discussione dei titoli e delle pubblicazioni)

I candidati potranno presentare un numero massimo di 20 pubblicazioni scientifiche ivi compresa la tesi di dottorato, se presentata.

È prevista attività assistenziale presso l'Azienda Ospedaliero-Universitaria Pisana

Titoli di studio richiesti per lo svolgimento dell'attività assistenziale:

Laurea in Medicina e Chirurgia

Specializzazione in Anatomia Patologia o discipline equipollenti o affini