

# 2905

## Public Notice - International Selection Procedure

### PhD Scientific Researcher Recruitment

FCiências.ID/2018/DL57/CQE/2

**FCiências.ID - Associação para a Investigação e Desenvolvimento de Ciências**, through its Chairman of the Board of Directors, hereby announces the opening of an international call for the recruitment of a scientific researcher with a PhD degree, within the scope of **Project** Lead4Target PTDC/QUI-QIN/28662/2017, financed by National Funds in the form of an employment contract for an uncertain term on an exclusive regime, according to the Portuguese Labour Code and Decree-Law No. 57/2016, of August 29th, as amended by Law No. 57/2017, of July 19<sup>th</sup>, and complementary legislation.

#### I - Admission Requirements

Portuguese nationals, foreign and stateless persons may submit applications to this selection procedure, provided they hold a doctoral degree<sup>1</sup> in Chemistry (Inorganic Chemistry), and fully comply with the following requirements:

- The Ph.D. degree must have been granted for less than 3 years;
- Demonstrated experience in polymerization of cyclic esters (particular relevance will be given for lactide) and organometallic synthesis (namely ruthenium and iron);
- Consolidated experience in handling air-sensitive compounds under inert atmosphere using Schlenk techniques;
- Consolidated experience in spectroscopic techniques (UV-Vis and Infrared) and multinuclear NMR (<sup>1</sup>H, <sup>13</sup>C, <sup>31</sup>P, COSY, HMQC, HMBC, DEPT, APT);
- Experience in handling and growing human tumour cell lines and cytotoxic evaluation of organometallic complexes in tumour cells.
- Preference will be given to candidates with experience in analytical techniques for metal quantification (e.g. ICP-MS).

<sup>1</sup> Please note that Degrees obtained in foreign countries need a Portuguese Recognition issued by a Portuguese high degree Institution, according to the [Decree-Law nr. 66/2018](#), of august 16<sup>th</sup> and the [Ministerial Order nr. 33/2019](#), of January 25<sup>th</sup>. The presentation of such Recognition is mandatory for contract signature. More information can be obtained in: <https://www.dges.gov.pt/en/pagina/degree-and-diploma-recognition>.

#### II. Applicable Law

- Decree-Law No. 57/2016, of August 29th (RCD), in the wording conferred on it by Law No. 57/2017, of July 19th (RCD), taking also into account the provisions of Regulatory Decree No. 11-A/2017, of December 29<sup>th</sup>;
- Portuguese Labour Code, as approved by Law No. 7/2009, of February 12<sup>th</sup>, in its current version (CT);
- Administrative Procedure Code, as published in Decree-Law No. 4/2015, of January 7<sup>th</sup>, in its current version (CPA).

#### III. Work Plan

The objectives of the work plan are those indicated at Tasks 1 (Synthesis of linear multi-target biopolymers), 2 (Synthesis of micelle-like multi-target biopolymers), 3 (Synthesis of the new multi-target polymer-ruthenium conjugates ('RuCp-PMC')), 5 ("In vitro" analysis of anti-cancer effect), 6 (Characterization of the compounds effect on cell uptake/localization, signaling pathways, mechanism of

cell resistance and metastatic ability) and 7 (Metabolic and plasmatic stability assays and quantitative proteomics). Specifically, the candidate will be involved in the following tasks:

Task 1 – ii): Synthesis and characterization of macroligands bearing biomolecules, such as vitamins, as chain end groups.

Task 2 – Synthesis and characterization of new micelle-like multi-target biopolymers based on the amphiphilic polylactide-block-polyethylene glycol.

Task 3 - Synthesis and characterization of new multi-target polymer-ruthenium conjugates with the [RuCp(NN)P]<sup>+</sup> core (NN = bipyridine derivatized ligand; P is a phosphane)

Task 5.1 - IC<sub>50</sub> Determination: Cytotoxic effects of 'RuCp-PMC' will be quantified by calculating the drug concentration inhibiting cancer cell growth by 50% (IC<sub>50</sub>).

Task 5.2 - Cell death (apoptosis): Effect induced by 'RuCp-PMC' on apoptotic cell death of the selected cancer cell lines will be determined by AnnexinV/PI (flow cytometric analysis) of cells double stained for Annexin V and propidium iodide.

Task 6.1 - Cellular uptake and localization experiments: Cytosol, membrane, nucleus and cytoskeletal fractions will be extracted using a commercial kit and the ruthenium content in the different fractions will be quantified by ICP-MS.

Task 7 – Evaluation of the metabolic and plasma stability of the most promising candidates along and identification of PMCs' primary cellular targets and the biochemical pathways affected by these complexes using a quantitative proteomics approach based on iTRAQ-QTOF mass spectrometry.

#### **IV. Composition of the Jury**

In accordance to article 13 of the RCD, the members of the jury are:

- President – Doctor Andreia Valente, Assistant Researcher from Faculdade de Ciências, Universidade de Lisboa
- 1st Evaluator –Professor Maria Helena Garcia, Associated Professor, Retired, from Faculdade de Ciências, Universidade de Lisboa
- 2nd Evaluator - Professor Maria José Brito, Auxiliary Professor from the Chemistry and Biochemistry Department from Faculdade de Ciências, Universidade de Lisboa
- 1st Alternate Evaluator – Doctor Tânia Moraes, Assistant Researcher, Faculdade de Ciências, Universidade de Lisboa
- 2nd Alternate Evaluator – Doctor Ana Isabel Tomaz, CQE Researcher, Faculdade de Ciências, Universidade de Lisboa.

#### **V. Place of work**

Work will be developed at the facilities of Research Center Centro de Química Estrutural, in Campo Grande, Lisbon, Portugal.

#### **VI. Contract Duration**

The full-time employment contract with an uncertain term is expected to start on July 2019, and will last until the Work Plan referred to in section III is completed. It will have an expected duration of 24 months, with a maximum duration of 6 years, including an initial experimental trial period of 30 days.

#### **VII. Monthly Allowance**

The gross monthly salary entitle is stipulated in clause 1 a) of article 15 of the Regulatory Decree No. 57/2016, of August 29<sup>th</sup>, amended by the law nº 57/2017 of July 29<sup>th</sup>, corresponding to level 33 of the Consolidated Table of Allowances, as approved by Government Order No. 1553-C/2008, of December 31<sup>st</sup>, being 2,128.34 Euros, plus holiday and Christmas allowances, as well as food allowance, in value and conditions for workers with a legal relationship of employment under the Labour Code.

## VIII. Evaluation of applications

1. Failure to comply with the Admission Requirements implies the non-admission of candidates in absolute merit.
2. According to article 5 of the RCD, the selection of the candidates approved in absolute merit will rely on the evaluation of their scientific and curricular achievements in the last five years, taking into consideration the quality and relevance of the scientific production, and the professional activity indicated as more relevant by the candidate, for the project.
3. The final classification of candidates is given on a scale of 0 to 100%.
4. Evaluation of the relative merit of candidates, will rely on the following criteria:
  - a) Participation in relevant scientific projects in the area of Medicinal Chemistry, with emphasis in cancer - 20%;
  - b) Scientific publications in the area of Medicinal Chemistry, with emphasis in cancer - 50 %;
  - c) Pedagogical and outreaching activities, in particular in the context of promoting scientific practices, organization of courses, seminars and conferences, in the area of Medicinal Chemistry, with emphasis in cancer - 20 %;
  - d) Assessment of the references provided by the candidate - 0 %;
  - e) Interview, if deemed necessary by the jury - 10%.
5. The jury may decide to interview the two best ranked [in criteria a) to d) of paragraph 4)] candidates, for clarifications and improved explanations of curricular elements.
6. The jury shall deliberate by means of a roll-call vote based on the evaluation criteria.
7. Minutes of the jury meetings are drawn up, summarizing all relevant elements considered by jury members, as well as their individual votes and justifications.
8. After completion of the evaluation process, the jury will draw up a ranking of successful candidates with their classifications.
9. Hiring will be decided by the Chairman of the Board of Directors of FCIências.ID, based on the final jury recommendation.
10. The evaluation results will be published on the website of the FCIências.ID ("Concursos" tab). The candidates will be individually notified of the evaluation results by e-mail sent to the address indicated in the "Personal Data" section of the submitted form.
11. With the notification referred to in paragraph 10, the hearing phase of interested parties referred to in Article 121 *et seq.* of the CPA will begin, and last for ten working days.
12. The possible pronouncement of the candidate in a prior hearing must be addressed to the President of the jury and submitted in writing to [fciencias.id@fciencias-id.pt](mailto:fciencias.id@fciencias-id.pt). The President of the jury will convene a jury's meeting to produce the final decision, within thirty working days.
13. Within five working days of the final jury decision, the Board of Directors Chairman of FCIências.ID will approve it and the candidates will be notified.
14. The communication between FCIências.ID and the candidates will be electronic and will comply with the following rules:
  - a) At the time of electronic submission of any document - namely in the case of paragraph no 11 - the candidates must generate proof of "sent message".
  - b) FCIências.ID will send an email message acknowledging documents received to the email address used by the candidates, within two working days.

- c) In case of absence of a confirmation receipt by FCIências.ID – showing the possibility of technical problems that should neither be the responsibility of the candidate nor FCIências.ID - the candidates should contact FCIências.ID, with the proof referred to in point (a), to ensure delivery and proper receipt of the documents concerned.

#### **IX. Compliance with public policies**

1. FCIências.ID actively promotes a policy of non-discrimination and equal access, so that no candidate can be privileged, benefited, disadvantaged or deprived of any right or exempt from any duty due to, inter alia, ancestry, age, sex, sexual orientation, marital status, family status, economic situation, education, social origin or condition, genetic heritage, reduced working capacity, disability, chronic illness, nationality, ethnic origin or race, territory of origin, language, religion, political or ideological beliefs and trade union membership.
2. Under the terms of D.L. No. 29/2001, of February 3, a disabled candidate has a preference in equal classification, which prevails over any other legal preference. Candidates must declare their respective degree of disability, the type of disability and the means of communication / expression to be used in the selection process, under the terms of the above-mentioned diploma.

#### **X. Submission of Applications**

1. The present call will be open from 19/06/2019 to 03/07/2019.
2. The application and all the required documents may be submitted in Portuguese or English.
3. Applications will be submitted online, through the electronic platform of FCIências.ID (<http://concursos.fciencias-id.pt>).
4. On the electronic platform, applicants will complete a *mandatory* section on Personal Data [name, address, date of birth, contact email, nationality and scientific identifiers] and upload files with the documents listed below:
  - i. Detailed curriculum vitae - *mandatory*;
  - ii. A motivation letter clearly demonstrating that the candidate has an adequate profile for the position and fully complies with the Admission Requirements - *mandatory*;
  - iii. Up to five publications relevant for the objectives of the Work Plan - *mandatory*;
  - iv. Digital copies of documents proving formal academic degrees (PhD) and/or other scientific and professional qualifications - original documents must be provided in case of actual recruitment- *mandatory*;
  - v. Other documents that candidates consider relevant for the assessment of their scientific merit, or to declare the personal situation in the cases covered in section IX-2 of this Notice - *optional*.
5. By decision of the Chairman of the Board of Directors of FCIências.ID, candidates who do not submit the documents identified in paragraph 4 will not be admitted to the call. In case of doubts, the Chairman may also invite candidates to substantiate specific data or statements with official supporting documents, before accepting the candidates' submission.

This Public Note was approved by the jury on 18/06/2019.