Instituto de Medicina Molecular João Lobo Antunes (iMM) opens a call for one research fellowship under the project “IL7R in lung cancer development, metastasis and resistance to immune checkpoint inhibitor therapy” (IL7R_LungCan - Project number HR21-00761), with the funding support from “La Caixa” Banking Foundation.

The ad was published at EURAXESS Portugal Portal on 6th of February 2024 and also disseminated in iMM website. The call was opened from 7th of February 2024 until 21st of February 2024 and during which the following applicant applied:

✓ Arifa Shabbir
✓ Francisca Carneiro de Castro Ferreira
✓ Frederico Pierre Restolho Mateus
✓ Hamid Bahrami
✓ Inês Catarina Rosa Graça
✓ José António Gonçalves Vareda
✓ Mohammad Amin Bakhshan
✓ Patrícia Martins Amaral
✓ Rafael Adrian Vazquez Alor

The applicant Inês Catarina Rosa Graça was excluded because she did not submit all documents required in the job ad.

On the 27th of February of 2024, the jury composed by João Taborda Barata (FMUL/iMM), Rita Cascão (iMM) and Rita Fragoso (iMM) met to analyze the application documents (motivation Letter in English, detailed CV, MSc certificate, two reference letters and/or reference contacts).

**Work Plan and Goals:**
Lung cancer is the leading cause of cancer-related deaths worldwide. Non-small-cell lung cancer (NSCLC) is the major lung cancer subtype, accounting for 85% of all cases. Interleukin (IL)-7 and its receptor (IL-7R) are critical for T-cell development, survival of naïve T-cells, and generation and maintenance of memory T-cells, being essential for efficient immune anti-tumor responses. However, in the current project, funded by La Caixa Foundation and based on our preliminary data, we wish to demonstrate that IL-7R can have an oncogenic role in lung cancer. The successful candidate will be a highly organized, motivated and pro-active person that will participate in tasks such as the following:

- Maintaining proper lab organization: inventory and reagent database management; ordering and interaction with suppliers;
- Secretariat support to the PI;
- Molecular biology techniques (DNA and RNA extraction, PCRs, RT-PCR, cloning, Western blot);
- Flow cytometry analysis;
- Cell culture of cancer cell lines and primary cancer cells;
- Preparation of broad-use lab solutions;
- Mouse genotyping (DNA extraction and PCR) and colony management.
**Candidate’s Profile:**
- Master’s degree in biomedical sciences with focus in Oncobiology;
- Previous expertise in handling and processing human samples;
- Previous experience in cell culture of cancer cell lines and primary cancer cells;
- Previous experience in in vivo mouse work and colony management;
- Previous experience in molecular biology techniques (DNA and RNA extraction, qPCR, RT-PCR, Western blot);
- Previous experience in Flow Cytometry analysis;
- High sense of responsibility, organization and method;
- Pro-active personality;
- Ability to work independently but also with team spirit;
- Excellent knowledge of English, spoken and written.

**Necessary Documents for Applications:**
- Motivation Letter in English;
- Detailed CV;
- MSc certificate;
- Two reference letters and/or reference contacts. The non-compliance with these requirements determines the immediate rejection of the application.

In case the applicant does not have yet the required degree certificate, a declaration of honor stating the conclusion of the necessary qualifications for the purposes of this process will be accepted and must be sent by the end date of the call.

**Selection Method:** Curriculum Analysis (60%) and Motivation Letter (40%). The Curriculum will be analyzed qualitatively, and in what concerns to its content and relevance for the tasks to be performed, namely: executed tasks and/or published scientific work, with special emphasis on areas related to the work plan (20%); research experience and relevant knowledge in the area of the proposed work plan as described in the candidate profile (40%). The letter of motivation will be evaluated in what concerns the motivation and adequacy for the activities to be performed (25%), and command of the English language (15%).

**Curriculum Analysis (60%)**

The Curriculum Analysis took in consideration the following criteria:
- Executed tasks and/or published scientific work, with special emphasis on areas related to the work plan (20%):
  - Published scientific work (10%);
  - Master’s degree, with focus on Oncobiology (10%);
- Research experience and relevant knowledge in the area of the proposed work plan (40%):
  - Handling and processing human samples (5%);
  - Cell culture of cancer cell lines and primary cancer cells (10%);
  - In vivo mouse work and colony management (10%);
  - Molecular biology techniques (DNA and RNA extraction, qPCR, RT-PCR, Western blot) (10%);
  - Flow Cytometry analysis (5%).

**Motivation Letter (40%)**

The Motivation Letter took in consideration the following criteria:
- Motivation and adequacy for the activities to be performed (25%);
- Command of the English language (15%).
The analysis and discrimination of the admitted candidate’s classification in the sole phase of this process are presented in Annex I.

At this stage, the selected candidate is the one with the highest score.

Lisbon, 29th of February 2024

João Taborda Barata (FMUL/iMM)

Rita Cascão
Rita Cascão (iMM)

Ana Rita Fragoso
Rita Fragoso (iMM)
<table>
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<tr>
<th>Applicant</th>
<th>Published scientific work (10%)</th>
<th>Master's Degree, with focus on oncobiology (10%)</th>
<th>Handling and processing human samples (5%)</th>
<th>Cell culture of cancer cell lines and primary cancer cells (10%)</th>
<th>In vivo mouse work and colony management (10%)</th>
<th>Molecular biology techniques (DNA and RNA extraction, qPCR, RT-PCR, Western blot) (10%)</th>
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**Justification**

- **Arifa Shabbir**: The applicant holds a master's degree; however, the academic background is not specifically focused on oncobiology. The candidate has publishing contributions, including in the cancer field. There is no clear mention of human sample processing and handling as well as no previous experience in flow cytometry. The applicant refers experience in cell culture, but does not specify primary cancer cells (mandatory). Likewise, in the in vivo work the candidate has previous experience in mouse handling but not colony management. The motivation letter is very broad and short, not demonstrating the interest of the candidate in this particular project.

- **Francisca Carneiro de Castro Ferreira**: The applicant holds a master's degree, with special focus on oncobiology. The candidate has publishing contributions in the cancer field. The candidate clearly indicates previous experience in human sample handling and processing as well as flow cytometry. Likewise, the applicant refers experience in cell culture (cancer cell lines and cancer primary cells) and all the molecular biology techniques required. Despite indicating previous experience in ex vivo mouse work, the candidate does not mention previous experience in mouse handling and colony management (mandatory). The motivation letter showed that the candidate was fit for most of the activities to be performed, and has good command of the English language.

- **Frederico Pierre Restolho Mateus**: The applicant holds a master's degree, with special focus on oncobiology. The candidate has no publishing contributions. There is no clear mention of human sample processing and handling nor in vivo work (mandatory). The applicant refers experience in cell culture, but does not specify primary cancer cells (mandatory). The candidate has previous experience in flow cytometry. Likewise, the applicant has experience in some of the molecular biology techniques required. The motivation letter is very broad and short, not demonstrating the interest of the candidate in this particular project.

- **Hamid Bahrami**: The applicant holds a master's degree; however, the academic background is not specifically focused on oncobiology. The candidate has publishing contributions, not directly related to the cancer field but in lung pathology. There is no clear mention of human sample processing and handling as well as no previous experience in flow cytometry. The candidate refers experience in cell culture, but does not specify primary cancer cells (mandatory). Likewise, there is no clear mention of previous contact with mouse work and colony management (mandatory). Lastly, the applicant has experience in all the molecular biology techniques required. The motivation letter is very broad, not demonstrating the interest of the candidate in this particular project.

- **José António Gonçalves Varela**: The applicant holds a master's degree, with special focus on oncobiology. The candidate has publishing contributions, but not in the cancer field nor related with lung pathology. The candidate clearly indicates previous experience in human sample handling and processing but not in flow cytometry. The candidate refers experience in cell culture, but does not specify primary cancer cells (mandatory). Likewise, there is no clear mention of previous contact with mouse work and colony management (mandatory). Lastly, the applicant has experience in all the molecular biology techniques required. The motivation letter showed that the candidate was fit for most of the activities to be performed, and has good command of the English language.
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Declaração de inexistência de conflito de interesses (CDI)

Os membros do júri do Concurso para Atribuição de 1 (uma) Bolsa de Investigação, Ref.ª IMM/BII/9-2024, aberto ao abrigo do projeto “IL7R in lung cancer development, metastasis and resistance to immune checkpoint inhibitor therapy” (IL7R_LungCan - Project number HR21-00761), vêm por este meio declarar que não se encontram em situação de conflito de interesses que os impeça de participar no respetivo processo de seleção e atribuição de bolsa.

Declaram também manter a confidencialidade ao longo do processo de avaliação.

Lisboa, 29 de Fevereiro de 2024

João Taborda Barata [FMUL/IMM]

Rita Cascão (IMM)

Ana Rita Fragoso

Rita Fragoso (IMM)