#### INSTITUTO DE MEDICINA MOLECULAR JOÃO LOBO ANTUNES

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Instituto de Medicina Molecular João Lobo Antunes (iMM) opened a call for one postdoctoral researcher position with the funding support from "La Caixa" Banking Foundation under the project "IL7R\_LungCan".

The ad was published at EURAXESS Portugal Portal on 1<sup>st</sup> of June 2022 and also disseminated in iMM website and Research Gate Platform.

The call was opened from 2<sup>nd</sup> of June 2022 until 9<sup>th</sup> of July 2022 and during which the following applicant applied:

- Aabid Hussain
- Abhishek Raj Jha
- Ana Filipa Ponte
- Asma Ressaissi
- Ayca Nur Demir
- Berna Somuncu
- Celso Viana
- Cindy Olmos Carreño
- Diana Faria Bicho
- Diptika Tiwari
- Fatima El Agy
- Francine Tankeu Nzufo

- Francisco Lagunas-Rangel
- Gabriel Rodríguez
- Hélio Crespo
- Khalid Rashid
- Kit Man Chan
- Marouane Chemek
- Md. Asaduzzaman Khan~
- Omar Alheib
- Vandana Sharma
- Vanessa de Sá
- Varash Shamsakhzari

The candidates Ayça Nur Demir, Berna Somuncu and Varash ShamsAkhzari were excluded since they didn't send all required documents and/or don't hold the PhD degree as required in the job ad.

On the 12<sup>th</sup> of july 2022 the jury composed by João Barata, Rita Cascão and Rita Fragoso (all PhD's), met to analyze the application documents (Motivation Letter with a short description of previous research experience with relevance to the project, the main scientific achievements, and why the candidate believes IMM should hire him/her; 2) CV, including list of publications; 3) two reference letters and/or reference contacts) in accordance to the profile and work plan indicated in the job advert.

Work Plan and Objectives: 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. Immunotherapy based on PD-1 axis blockade transformed the therapeutic landscape of advanced NSCLC in recent years. However, resistance can emerge and constitutes a significant challenge. Another clinical hurdle stems from >50% primary tumors metastasizing. 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 IL7R can have an oncogenic role in lung cancer. We aim to:

- Demonstrate that IL-7R signaling in NSCLC cell lines and PDX samples leads to cancer cell proliferation, survival, motility, migration or invasion in vitro.
- Using xenograft and knock-in models of IL7R overexpression, show that IL-7R signaling promotes lung cancer development, expansion and/or metastasis in vivo.



- Characterize the tumor cell-intrinsic and microenvironmental mechanisms involved in IL-7R-dependent cancer development (with a particular focus on the immune compartment).

### Candidate's Profile:

- Doctoral Degree in Biomedical sciences or related fields (for more than 3 years);
- Know-how in cancer research and/or immunology;
- Experience working with laboratory animals is highly valued (preferably with personal license for handling animals);
- Experience in molecular biology;
- Experience in multicolor flow cytometry analysis;
- Experience with cell culture of cell lines and primary cells (knowledge of proliferation, viability, migration and invasion assays is an important plus);
- Basic concepts of microscopy;
- 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;
- The international experience of the candidate, although not a determining criterion for selection, will be valued.

**Necessary Documents for Applications:** 1) a motivation Letter with a short description of your previous research experience with relevance to the project, your main scientific achievements, and why you believe we should hire you; 2) your CV, including list of publications; 3) two reference letters and/or reference contacts.

**Selection Method**: Applications will be evaluated by João Taborda Barata (FMUL/IMM), Rita Cascão (IMM) and Rita Fragoso (IMM). The admitted applications will be evaluated taking into account the quality, timeliness and relevance of the scientific path (scientific production and research experience) and curriculum of each candidate and their adequacy to the team and the proposed work plan.

First phase: Curriculum Analysis (60%) and Motivation Letter (10%). The Curriculum will be analyzed qualitatively, and in what concerns to its content and relevance for the tasks to be performed, namely: executed 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 (5%), and command of the English language (5%).

<u>Second stage</u>: The jury will select for the interview (evaluation: 30%) 5 candidates who obtained in the first phase the highest ranking, with a minimum of 50%. If less than 5 candidates obtained a minimum rating of 50% those with at least 50% will all be interviewed. No interviews will be conducted if none of the candidates achieves a score of at least 50% in the first phase.

# **Curriculum Analysis (60%)**

The analysis of the Curriculum Vitae took in consideration:

- Executed 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%).

#### Motivation Letter (10%)

The analysis of the Motivation Letter took in consideration:

- Motivation and adequacy for the activities to be performed (5%);
- Command of the English language (5%).

The analysis and discrimination of all admitted candidate's classification is presented in Annex I.

### Interview (30%)

Following the evaluation of the CV and motivation letter, the jury decided that 7 candidates instead of 5 as initially indicated in the job ad, should be interview. All 7 candidates obtained a score equal and/or higher than 50%. The candidates are identified below. The interview took place on 18<sup>th</sup> of July 2022.

- Celso Viana;
- Hélio Crespo;
- Ana Filipa Ponte;
- Francine Tankeu Nzufo;
- Gabriel Rodríguez;
- Vanessa de Sá;
- Diana Faria Bicho;

The interview was based in the following criteria:

- Communication and social skills (5%)
- Grasp of the project, commitment and independent thinking (20%);
- Spoken English (5%)

The analysis and discrimination of the candidates' classification in the interview phase and the total classification in both phases are presented in Annex II.

Lisbon, 27th of July 2022

João Barata (FMUL, iMM)

Rita Cascão (iMM)

Ana Rita Fragoso Rita Fragoso (iMM)

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## ANNEX I - Postdoctoral Research position Reference IMM/CT/65-2022

	Curriculum	Analysis (60%)	Motivation	Letter (10%)		
Applicant	Executed and/or published scientific work, with special emphasis on areas related to the work	Research experience and relevant knowledge in the area of the proposed work plan as described in the candidate profile	Motivation and adequacy for the activities to be performed (5%)	Command of the English language (5%)	Total	Justification
	plan (20%)	(40%)				
Celso Viana	20	40	0	5	65	The candidate has 4 publications as 1° author and 17 publications as co-author, with publications in the cancer field. He has a PhD in Pathology as well as in Physiology and Pharmacology with experience in the field of cancer (such as colorectal and breast cancer). The candidate has experience in all the techniques required for this position. The motivation letter has no mention to the project. The motivation letter reveals interest for this position, but does not show interest for this particular project and its rational. The candidate seems to have a good command of the written English language.
Hélio Crespo	13	40	5	5	63	The candidate has 2 publications as 1° author and 7 publications as co-author, with some publications in the cancer field. He has a PhD in Life Sciences — Cellular and Molecular Medicine (Immunology), and has some experience in the field of cancer (such as bladder cancer). This previous expertise in immunology and cance is relevant to carry out this project. The candidate has experience in all the techniques required for this position, and has FELASA certification. The motivation letter reveals interest for this position, as well as interest for this particular project and its rational. The candidate seems to have a good command of the written English language.
Ana Filipa Ponte	15	38	0	5	58	The candidate has 12 publications as 1º author and 15 publications as co-author, with few publications in the cancer field. She has a PhD in Biomedical Sciences (Fanconi anemia) and experience as postdoctoral fellow in the field of cancer (ovarian and breast cancer). She also has some skills in immunology and therapic development. The candidate has experience in all the techniques required for this position, but maybe not so in deep in the case of FACS. The motivation letter has no mention to the project. The motivation letter reveals interest for this position, but does not show interest for this particular project and its rational. The candidate seems to have a good command of the written English language.
Francine Tankeu Nzufo	15	36	0	5	56	The candidate has 4 publications as 1° author and 10 publications as co-author, with few publications in the cancer field. She has a PhD in Pharmacology and experience in the field of cancer (namely leukemia and study of anti-cancer compounds). The candidate has experience in most of the techniques required for this position, except for FACS and microscopy. The motivation letter has no mention to the project. The motivation letter reveals interest for this position, but does not show interest for this particular project and its rational. The candidate seems to have a good command of the written English language.
Gabriel Rodríguez	13	38	0	5	56	The candidate has 4 publications as 1° author and 2 publications as co-author, with publications in the cancer field. He has a PhD in Biomedicine Science and experience in the field of cancer (namely in breast cancer and neuroblastoma) and anti-tumor therapies. The candidate has experience in most of the techniques required for this position, except for microscopy. The motivation letter has no mention to the project. The motivation letter reveals interest for this position, but does not show interest for this particular project and its rational. The candidate seems to have a good command of the written English language.
Vanessa de Sá	20	30	0	5	55	The candidate has 4 publications as 1° author and 16 publications as co-author, with publications in the cancer field (and specifically in lung cancer). She has a PhD in Sciences and Biochemistry, and importantly experience in the field of lung cancer. The candidate has experience in some of the techniques required for this position, except for deep skills in in vivo experiments and microscopy. The motivation letter reveals interest for this position, but does not show interest for this particular project and its rational. The candidate seems to have a good command of the written English language.
Diana Faria Bicho	13	33	0	5	51	The candidate has 6 publication as 1° author and 6 other publications as co-author, but not in the cancer field. She has a PhD in Biomedicine, with expertise in immunomodulatory therapies for inflammatory diseases which could be an interesting contribution for this project. The candidate has experience in all the techniques required for this position, also with a FELASA certification. The motivation letter reveals interest for this position, but does not show interest for this particular project and its rational. The candidate seems to have a very good command of the written English language.
Md. Asaduzzaman Khan	20	23	0	5	48	The candidate has several publications, including in the cancer field. He has a PhD in Biochemistry and Molecular Biology, with expertise in cancer and therapeutics. The candidate has experience in some of the techniques required for this position, except for FACS and microscopy. Still the CV does not clearly states the actual skills of the candidate. The motivation letter reveals interest for this position, but does not show interest for this particular project and its rational. The candidate seems to have a very good command of the written English language. Of note, this candidate has been away from lab activities in the last 2 years (just remote work) due to pandemics.

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Khalid Rashid	13	30	0	5	48	The candidate has 4 publications as 1° author and 9 publications as co-author, with publications in the cancer field. He has a PhD in Molecular Oncology and experience in the field of cancer (such as pancreatic cancer). The candidate has experience in all the techniques required for this position. The motivation letter has no mention to the project, and its has not been properly endorsed. The motivation letter reveals interest for this position, but does not show interest for this particular project and its rational. The candidate seems to have a good command of the written English language.
Aabid Hussain	10	30	0	5	45	The candidate has 1 publication as 1° author and 6 other publications as co-author, but not in the cancer field. He has a PhD in Cellular Immunology & Experimental Therapeutics Laboratory. The candidate has experience in all the techniques required for this position. The motivation letter is extensive and is a repetition of the CV, also it has no mention to the project. The motivation letter reveals interest for this position, but does not show interest for this particular project and its rational. The candidate seems to have a good command of the written English language.
Fatima El Agy	20	15	0	5	40	The candidate has 5 publication as 1° author and 5 other publications as co-author, all in the cancer field. She has a PhD in genetics and molecular biology, and has expertise in cancer (namely in colon and rectal cancer). The candidate does not clearly describe her expertise in the techniques required for this position. The motivation letter reveals interest for this position, but does not show interest for this particular project and its rational. The candidate seems to have a good command of the written English language.
Francisco Lagunas- Rangel	10	25	0	5	40	The candidate has 21 publications as 1° author and 1 other publication as co-author, but scarce publications in the cancer field. He has a PhD in Genetics and Molecular Biology, and seems to have some expertise in cancer (namely in leukemia). The candidate does not clearly describe his expertise in the techniques required for this position (the CV does not clearly states the techniquel expertise), still he seems to have some skills in molecular techniques and in vivo work according with the motivation letter. The motivation letter reveals interest for this position, but does not show interest for this particular project and its rational. The candidate seems to have a good command of the written English language.
Diptika Tiwari	14	20	0	5	39	The candidate has 6 publication as 1° author and 6 other publications as co-author, with few in the cancer field. She has a PhD in Reproductive Biology, with some expertise in cancer (such as cervical cancer). The candidate has experience in most of the techniques required for this position, except for in vivo mice models of cancer which is crucial to suessfully carry out this work plan. The motivation letter reveals interest for this position, but does not show interest for this particular project and its rational. The candidate seems to have a good command of the written English language.
Kit Man Chan	13	20	0	5	38	The candidate has 12 publications as 1° author and 4 publications as co-author, with publications in the cancer field. He has a PhD in Biomaterials Engineering, with some expertise in cancer (bladder and prostate cancer). The candidate has experience in all the techniques required for this position, except skills in in vivo work with cancer mice models. The motivation letter has no mention to the project. The motivation letter reveals interest for this position, but does not show interest for this particular project and its rational. The candidate seems to have a good command of the written English language.
Marouane Chemek	10	15	0	5	30	The candidate has 4 publications as 1° author and 9 publications as co-author, with no publications in the cancer field. He has a PhD in Biological Sciences and Biotechnology, but no expertise in cancer nor other relevant area related to the work plan of this project. The candidate lacks most some of the technical requirements for this position, namely cell culture and FACS. The motivation letter has no mention to the project. The motivation letter reveals interest for this position, but does not show interest for this particular project and its rational. The candidate seems to have a good command of the written English language.
Asma Ressaissi	10	10	0	5	25	The candidate has 6 publications as 1° author and 5 publications as co-author, but not in the cancer field. He has a PhD in Biology "Pharmaceutical and toxicological Biochemistry". The candidate has no experience in most of the techniques required for this position, namely in vivo mice models, FACS and microscopy. The motivation letter has no mention to the project. The motivation letter reveals interest for this position, but does not show interest for this particular project and its rational. The candidate seems to have a good command of the written English language.
Vandana Sharma	10	10	0	5	25	The candidate has 2 publications as 1° author and 4 publications as co-author, with limited reports dedicated to cancer field. She has a PhD in Aplastic anemia. Despite the candidate has some expertise regarding immunology, she lacks knowledge in cancer. The candidate has some expertise in the techniques required, but no experience in in vivo mice models (only dissection) and microscopy. The motivation letter has no mention to the project. The motivation letter reveals interest for this position, but does not show interest for this particular project and its rational. The candidate seems to have a good command of the written English language.
Abhishek Raj Jha	5	10	0	5	20	The candidate has 3 publications as 1° author and none publications as co-author, but not in the cancer field. He has a PhD in Biotechnology and Biochemist. The candidate has experience in most of the techniques required for this position, except for in vivo mice models. However, in the motivation letter it seems that he has a 5 months postdoctoral research experience in cancer field with the use of mice models, but this was not clear in the CV. The motivation letter has no mention to the project. The motivation letter reveals interest for this position, but does not show interest for this particular project and its rational. The candidate seems to have a good command of the written English language.

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Omar Alheib	5	10	0	5		The candidate has 6 publications as 1º author, but not in the cancer field. He has a PhD in tissue engineering, regenerative medicine, and stem cells (TERM&SC). The candidate has neither experience in cancer nor in most of the techniques required for this position. The candidate seems to have skills in in vivo models. The motivation letter has no mention to the project. The motivation letter reveals interest for this position, but does not show interest for this particular project and its rational. The candidate seems to have a good command of the written English language.
Cindy Olmos Carreño	5	5	0	5	15	The candidate has no publications as 1º author but has 3 publications as co-author (none in the cancer field). She has a PhD in Biological Chemistry. The candidate has no experience in most of the techniques required for this position, namely in vivo mice models (although she is a vet, she has no expertisse in vivo mice models), FACS and molecular techniques. The motivation letter has no mention to the project. The motivation letter reveals interest for this position, but does not show interest for this particular project and its rational. The candidate seems to have a good command of the written English language.

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# **ANNEX II - Postdoctoral Research Position Reference IMM/CT/65-2022**

		Interview (30%)						
Applicant	Total Annex I	Communicatio n and social skills (5%)	Grasp of the project, commitment and independent thinking (20%)	Spoken English (5%)	Total Annex II	Justification	Total Annex I + Annex II	Ranking
Hélio Crespo	63	5	20	5	30	The candidate was able to elaborate about his previous work experiences, in an enthusiastic way. The candidate revealed expertise in all the techniques required, especially in mice models and colony management. He understood the project concept and was able to discuss its rational. The candidate was really motivated to work in this project and team. Very good spoken english.	93	1
Diana Faria Bicho	51	5	20	5	30	The candidate was able to elaborate about her previous work experiences. She revealed expertise in all the techniques required, especially in mice models which is fundamental for the work plan. Also, her expertise in immune system and immunomodulatory therapies are an interesting contribution for this project. She discussed the project rational. The candidate was motivated to work in this project and team. Very good spoken english.	81	2
Francine Tankeu Nzufo	56	5	10	2	17	The candidate was able to elaborate about her previous work experiences, in an enthusiastic way. The candidate showed interest for this project, and revealed some knowledge in the techniques required, excpet for FACS and molecular techniques. However, it seems that this candidate might not be independent enought to carry out this work plan. She made an effort to discuss the project rational. The candidate was really motivated to work in this project and team. Good spoken english.	73	3
Gabriel Rodríguez	56	2	10	2	14	The candidate was a bit nervous. He showed interest for this project, and revealed expertise in some of the techniques required. He made an effort to discuss the project rational. The candidate seemed motivated to work in this project and team; he red some of our papers and wanted to know more about the project. Good spoken english.	70	4

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Celso Viana	65	1	2	1	4	The candidate was not able to elaborate about his previous work experiences. He did not explained well his motivation and interest in this project. The candidate revealed no grasp or understanding of its rational. Not so good spoken english.	69	5
Vanessa de Sá	55	5	5	2	12	The candidate was able to elaborate about her previous work experience. Despite her knowledge in lung cancer, it seems that this candidate has experience in a more clinical approach and not so much in basic/translation projects. She has expertise in some of the techniques required, except for deep skills in in vivo experiments. The candidate revealed no grasp or understanding of the project rational, and was not so enthusiastic about it. Average spoken english.	67	6
Ana Filipa Ponte	58	1	2	1	4	The candidate was not able to elaborate about her previous work experiences. She did not explained well her motivation and interest in this project. She did not revealed expertise in some of the techniques required, namely in mice models and multi-colour FACS. The candidate revealed no grasp or understanding of the project rational, and was not so enthusiastic about it. Not so good spoken english.	62	7