

## Research assistant in biology of the ageing *C. elegans*

The **Institute of Biochemistry of the Romanian Academy**, Splaiul Independentei 296, Bucuresti, Romania, 060031, is looking to hire **one research assistant** to carry out lifespan-modulating wet-lab experiments in *C. elegans* and to analyze the mechanisms of ageing. The successful candidate will join the **Computational Biology of Aging Research Group** in the Department of Bioinformatics and Structural Biochemistry.

### **Job description:**

The post is funded by a EU POC-A1-A1.1.4-E- 2015 Competitiveness Operational Programme 2014-2020 award, for the development of a „*Multi-omics prediction system for prioritization of gerontological interventions*” (GERONTOMICS). The duration of the post is one year, extendable for up to 2 years, based on satisfactory performance. The selected candidate will work **full-time** in the project.

GERONTOMICS aims to use a systems biology approach to combine data from different “omics” levels (e.g.: genomic, transcriptomic, epigenomic, etc) and from various models of ageing in order to create a large-scale data-driven analysis and prediction platform for experimental interventions in gerontology.

The project involves both computational aspects (data aggregation and processing, multidimensional data analysis, network-based methods, systems theory approaches, etc) as well as wet-lab experiments (some of the predicted interventions will be tested in vivo), with a highly multi-disciplinary team.

Candidates should be highly motivated, with a PhD (or studying for the PhD title) in a biology-related field. Students enrolling for PhD in the current year (Oct-Nov), will be considered eligible, however their contract will be conditioned by successful enrollment to the PhD program and the starting date of this job will have to postdate the date of their PhD starting date. Excellent English language skills are also required in our group. Competencies in gerontology (ageing research), molecular biology, genetics and or biochemistry will be considered an advantage.

### **Job responsibilities:**

Based on genetic predictions resulted from bioinformatics analyses which have been performed or are currently underway, the successful candidate, together with other members of the wet-lab team, will conduct lifespan assays to test the effect of multiple genetic interventions on longevity. The research assistant will also support the group in analyzing the results obtained and will collaborate with the rest of the team to refine the prediction algorithms. If predictions will be successful in extending worm lifespans, additional biochemistry and molecular biology experiments to investigate the exact mechanisms by which this is achieved will be performed.

As a research assistant, the candidate's responsibility will be to:

- Collaborate with the rest of the team in selecting the best genetic mutants to be tested,
- Culture *C. elegans* and use molecular biology to create knockout or transgenic worms under the supervision of other senior members of the team,
- Carry out morphological analyses and record *C. elegans* behavior throughout their lives,
- Perform lifespan and healthspan assays,
- Investigate molecular mechanisms of ageing in various *C. elegans* mutants,
- Analyze and interpret results from wet-lab experiments,
- Publish and present results to the group, at scientific meetings and in scientific papers

While not the main focus of the post, being in an interdisciplinary team will also offer the successful candidate the opportunity to train in other fields than his/her own (e.g. gerontology, bioinformatics and systems biology).

The post will require the successful candidate to be able to present his/her work to the rest of the group and occasionally might also require him/her to attend and present at national and international meetings. Depending on the existing skill set and the candidate's career goals, attendance to various training courses could also be available.

**Skill requirements:**

- Work experience in a biology, biochemistry, chemistry or pharmacology-related field
- Being able/open to work in a multi-disciplinary team and in a fast-paced work environment
- Excellent ability to communicate (oral/written/presentations) and work well in a team

*Optional but desirable skills (will be a plus but are not mandatory):*

- Prior experience in working with nematodes
- Knowledge in genetics and experience with methods of molecular biology
- Experience with microscopy techniques

**Eligibility requirements:**

- Primary degree in a field that is relevant to biology (eg: biochemistry, pharmacology, etc)

**Career stage:**

Early-stage. 1 position

For any formal or informal inquiries (e.g. discussing ideas of fun team building activities), prospective students and postdocs are **encouraged** to contact me by e-mail at: [robi.tacutu@gmail.com](mailto:robi.tacutu@gmail.com).

For eligibility, the job application must include the following documents:

- Request for job application (form can be found on our website)
- Curriculum Vitae
- Copy of diploma for highest academic grade achieved
- Letter of intent
- A minimum of two letters of recommendation

*It should be noted, that upon successful selection, the candidate might be required to provide additional documents (eg: copy of official ID, all academic diplomas, criminal records, etc) or authorized translations of these (if the official document language is not Romanian).*

Job applications should be sent before 16:00, **28.09.2018**, by e-mail at [robi.tacutu@gmail.com](mailto:robi.tacutu@gmail.com) or directly at the Institute of Biochemistry of the Romanian Academy, Bucharest, Splaiul Independentei, nr 296, sector 6, room 307 (Human resources), for the attention of Dr. Robi Tacutu. We estimate that job interviews will take place within the next week after the job deadline, at the Institute's location (in special cases, skype interviews can also be arranged).

Job first posted on: **28.08.2018**

Group's webpage: [www.aging.biochim.ro](http://www.aging.biochim.ro); [www.aging-research.group](http://www.aging-research.group)

## Asistent de cercetare in biologia imbatranirii la *C. elegans*

**Institutul de Biochimie al Academiei Romane**, Splaiul Independentei 296, Bucuresti, Romania, 060031, scoate la concurs **un post vacant de asistent de cercetare**, pentru a efectua experimente de modulare a longevitatii in laborator, folosind ca sistem model *C. elegans* si pentru a analiza pe baza datelor obtinute mecanismele imbatranirii. In urma concursului, candidatul selectat se va alatura grupului de cercetare **Biologie Computationala a Imbatranirii** in cadrul Departamentului de Bioinformatica si Biochimie Structurala.

**Descrierea postului:** Postul este finantat printr-un proiect EU POC-A1-A1.1.4-E-2015 Programul Operational Competitivitate 2014-2020, pentru dezvoltarea unui „Sistem de predictie bazat pe integrare multi-omics pentru prioritizarea interventiilor gerontologice” (GERONTOMICS). Durata proiectului este de un an, cu posibilitatea de prelungire pana la 2 ani, in baza unei performante satisfacatoare. Persoana selectata va lucra cu norma **intreaga** in cadrul proiectului.

Prin proiectul GERONTOMICS grupul nostru isi propune utilizarea metodelor de „systems biology” pentru a integra date de la diferite niveluri „omics” (e.g.: genomica, transcriptomica, epigenomica, etc), folosind o gama larga de modele de imbatranire, cu scopul de a crea o platforma computationala de analiza si predictie a interventiilor experimentale in gerontologie. Proiectul include atat aspecte computationale (agregare si procesare de date, analiza multi-dimensională, metode de analiza de retele, metode de teoria sistemelor, etc), precum si experimente wet-lab (validarea experimentală a unui set prezis de interventii gerontologice), fiind sustinut de o echipa multi-disciplinara.

Se cauta candidati motivati de cercetare, posesori ai unei diplome de doctor (sau doctoranzi) in domeniul biologiei (sau intr-un domeniu conex). Studentii care sunt eligibili a fi inscrisi la doctorat in anul curent (Oct-Nov), sunt considerati de asemenea eligibili, dar obtinerea acestui post este conditionata de inscrierea lor in programul doctoral. De asemenea, data de incepere in cadrul proiectului trebuie sa postdateze data de incepere a doctoratului. Datorita echipei cu componenta internationala, cunoasterea limbii engleze este obligatorie. Competente aditionale in gerontologie (studiul imbatranirii), biologie moleculara, genetica sau biochimiei vor reprezenta un avantaj.

**Responsabilitati:** Asistentul de cercetare va efectua teste de longevitate a nematodelor cu modificari genetice multiple pentru validarea predictiilor genetice obtinute in cadrul unor analize bioinformatiche anterioare (sau in desfasurare in acest moment). Asistentul de cercetare va sustine de asemenea activitatea celorlalti membri ai grupului prin analiza rezultatelor de laborator obtinute si va colabora cu restul echipei pentru a imbunatati algoritmi bioinformatici de predictie. In cazul predictiilor care extind cu succes durata de viata, asistentul de cercetare va lua parte si la experimente de biochimie si biologie moleculara pentru investigarea mecanismelor care stau la baza acestui fenomen.

Ca asistent, responsabilitatile candidatului vor fi:

- Colaborarea cu echipa pentru selectia mutantilor genetici care vor fi testati,
- Cultivarea nematodelor *C. elegans* si utilizarea tehnicilor de biologie moleculara pentru a crea mutanti transgenici/knockout (sub supravegherea altor membri seniori din echipa),
- Evaluarea morfologica si inregistrarea comportamentului de-a lungul vietii nematodelor,
- Realizarea de teste de longevitate (lifespan) si calitate a vietii (healthspan) *C. elegans*,

- Investigarea mecanismelor moleculare ale imbatranirii in diferiti mutanti,
- Analizarea si interpretarea rezultatelor de laborator obtinute,
- Publicarea si prezentarea rezultatelor in cadrul grupului, la intalniri stiintifice si in jurnale de specialitate

Ca membru al unei echipe inter-disciplinare, candidatul selectat va avea ocazia de a-si dezvolta aptitudini si de a acumula cunostinte si in alte domenii decat domeniul sau de activitate (e.g. biologie teoretica si experimentală, bioinformatica, stiinta calculatoarelor/automatica, invatare automata si „systems biology”).

In functie de necesitate, candidatul selectat trebuie sa aiba si capacitatea de a prezenta rezultatele activitatii sale la intalniri cu intregul grup si ocazional la conferinte nationale sau internationale. Participarea la unele cursuri de formare este de asemenea posibila.

#### **Cerintele postului:**

- Experienta de cercetare in domeniul biologiei, biochimiei, chimiei sau farmacologiei
- Capabil de lucru intr-o echipa multi-disciplinara si intr-un mediu de lucru dinamic
- Capacitate ridicata de comunicare (oral/scriis/prezentari) si de a lucra in echipa

*Skill-uri optionale, dar care constituie un avantaj:*

- Experienta anterioara de lucru in laborator cu nematode
- Cunostinte de genetica si experienta in folosirea tehnicilor de biologie moleculara
- Experienta cu tehnici de microscopie

#### **Criterii de eligibilitate:**

- Diploma de studii intr-un domeniu relevant biologiei imbatranirii

**Nivel in cariera:** Early-stage (Junior). 1 pozitie

Pentru orice intrebari formale sau informale (e.g. propuneri „fun” pentru activitati de „team building”), orice candidat, student sau postdoc este **incurajat** sa ne contacteze prin e-mail la: [robi.tacutu@gmail.com](mailto:robi.tacutu@gmail.com).

Pentru inscrierea la concurs, candidatii vor prezenta un dosar care va contine:

- Cerere participare la selectie (modelul pentru cerere poate fi gasit pe site)
- Curriculum Vitae
- Copie dupa ultima diploma de absolvire
- Scrisoare de intentie
- Minimum doua scrisori de recomandare

*De mentionat, in cazul candidatilor selectati, este posibil ca la momentul incheierii contractului sa fie cerute si alte documente (e.g.: copie act identitate, toate diplomele de studii, cazier judiciar, etc) sau copii autorizate ale acestora (daca documentul nu este in limba Romana).*

Dosarele de concurs se primesc pana la data de **28.09.2018**, ora 16:00, prin e-mail la adresa [robi.tacutu@gmail.com](mailto:robi.tacutu@gmail.com) sau la sediul Institutului de Biochimie al Academiei Romane din Bucuresti, Splaiul Independentei, nr 296, sector 6, cam 307 (Resurse umane), in atentia Dr. Robi Tacutu. Estimam ca interviurile se vor desfășura în saptamana urmatoare deadline-ului, la sediul Institutului (in cazuri speciale, este posibila si aranjarea unui interviu prin skype).

Anunt postat incepand cu data: **28.08.2018**

Pagina grupului: [www.aging.biochim.ro](http://www.aging.biochim.ro); [www.aging-research.group](http://www.aging-research.group)