China Scholarship Council – University Maastricht

PhD Programme Application form

Basic information

- To be filled in by the prospective UM supervisors -

1. Information on prospective UM supervisors and Promotor

1a. First Supervisor/promoter:

- Title(s), initial(s), first name, surname: Prof. Marcela Pekna, MD, PhD
- Research group: Regenerative Neuroimmunology
- Address for correspondence: Institute of Neuroscience and Physiology, Box 440, 405 30 Gothenburg, Sweden
- Telephone: +46-31-786 3581
- E-mail: Marcela.Pekna@neuro.gu.se

1b. Second Supervisor/copromoter:

- Title(s), initial(s), first name, surname: Anna Stokowska, PhD
- Research group: Regenerative Neuroimmunology
- Address for correspondence: Institute of Neuroscience and Physiology, Box 440, 405 30 Gothenburg, Sweden
- Telephone: +46-31-786 3473
- E-mail: Anna.Stokowska@neuro.gu.se

1c. Promotor (if applicable): **– see above**

- Title(s), initial(s), first name, surname: Prof. Harry Steinbusch, MD, PhD
- Research group:
- Address for correspondence:
- Telephone:
- E-mail:

2. Information on UM Faculty/ Department/ Institute/ School contact person:

When the application is granted by both the CSC and UM, the contact person is responsible for the practical arrangements (i.e. assistance in obtaining a visa, finding accommodation, etc.) of the visit of the PhD candidate:

- Title(s), initial(s), first name, surname: Prof. Marcela Pekna, MD, PhD
- Research group: Regenerative Neuroimmunology
- Address for correspondence: Institute of Neuroscience and Physiology, Box 440, 405 30 Gothenburg, Sweden
- Telephone: +46-31-786 3581
- E-mail: Marcela.Pekna@neuro.gu.se

- To be filled in by the applicant if already known –

1. Information on the applicant

- Initial(s), first name, surname:
- Male/female:
- Current work address:

- Telephone:
- E-mail: WeChat:
- Private address:

2. Details of applicant's home university

Note! A separate letter of recommendation by the supervisor or faculty dean of the home university is required.

- Name of home university:
- Address:
- Telephone:
- E-mail:
- Website (if available):

3. Applicant's home university Master Thesis supervisor:

- Title(s), initial(s), first name, surname:
- Address for correspondence:

- Telephone:
- E-mail: WeChat:

4. Research field(s)

Translational neuroscience, experimental stroke, neurodegeneration, neuroimmunology

5. Title of research plan for CSC-UM PhD Programme

Targeting secondary neurodegeneration to enhance recovery after stroke

6. Short summary of research plan (max. 250 words) (A full plan has to be submitted later)

Background: Stroke affects about 12 million people worldwide annually. Of the approximately 6 million survivors, about 50% suffer from long-lasting or permanent disability. No efficient therapy is currently available, except for the removal of the occluding blood clot during the first hours after ischemic stroke. Loss of function after stroke is due to cell death in the infarcted tissue, cell dysfunction in the peri-infarct region, as well as dysfunction and neurodegeneration in remote brain areas. Plasticity responses in spared brain regions are a major contributor to functional recovery, while secondary neurodegeneration in remote regions is associated with depression and impedes the long-term outcome after stroke. The complement system is part of the immune response that protects the host against pathogenic bacteria but has also other important functions, not least in the central nervous system.
Study objective: This project will determine the role of the complement system in the cellular and molecular mechanisms controlling secondary neurodegeneration after ischemic stroke.
Expected Results: The project will use experimental models of stroke in combination with genetic and pharmacological manipulation of the complement system, neuroimaging, state-of-the-art transcriptomics and bioinformatics. The PhD student will receive theoretical training in neurobiology and neuroimmunology, statistical analysis of data, as well as acquire methodological and hands-on skills in experimental stroke induction, behavioral testing of mice, tissue processing, (immuno)histochemistry, RNAscope, microscopy, high content image analysis, and quantitative rt-PCR. The PhD student will be also trained in transferable skills such as research grant writing, research dissemination (academic writing, presentation) and research communication.

Requirements: Master's degree in medicine, neuroscience or biology, C2 level of English
Group's performance: The research group has pioneered the investigations on the role of the complement system in the CNS, >90 publications (cited >12 000x), h-index 46.

7. Motivation for CSC-UM PhD application (max. 250 words)
Two letters are required, one from the student and one from the promotion team.

Applicant's Curriculum Vitae (if available)
----
8. Personal details

Applicant
- Title(s), initial(s), first name, surname:

CSC-UM PhD programme start 1-9-2022

- Surname:
- Nationality: Chinese
- Date of Birth:

- Country and place of birth:

9. Master's degree (if applicable)
Note! Add a copy of your Master's degree to your application

University:
Faculty/discipline:
City and country:
Date:
Grade average:
Title Master's thesis (if applicable):
Thesis grade: