



## China Scholarship Council – University Maastricht

### PhD Programme Application form

#### Basic information

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#### 1. Information on prospective UM supervisors and Promotor

##### 1a. First Supervisor/promoter:

- Title(s), initial(s), first name, surname: Prof. Dr. Milos Pekny, MD, PhD
- Research group: Laboratory of Astrocyte Biology and CNS Regeneration
- Address for correspondence: Department of Clinical Neuroscience, Institute of Neuroscience and Physiology, Sahlgrenska Academy at the University of Gothenburg, Medicinaregatan 9A, Gothenburg
- Telephone: +46 786 32 69
- E-mail: Milos.Pekny@neuro.gu.se

##### 1b. Second Supervisor/copromoter:

- Title(s), initial(s), first name, surname: Dr. Ulrika Wilhelmsson, PhD
- Research group: Laboratory of Astrocyte Biology and CNS Regeneration
- Address for correspondence: Department of Clinical Neuroscience, Institute of Neuroscience and Physiology, Sahlgrenska Academy at the University of Gothenburg, Medicinaregatan 9A, Gothenburg
- Telephone: +46 765 80 53 80
- E-mail: Ulrika.Wilhelmsson@neuro.gu.se

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

- Title(s), initial(s), first name, surname: Prof. Dr. Harry Steinbusch, 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:*

- Initial(s), first name, surname: Dr. Ulrika Wilhelmsson, PhD
- Research group: Laboratory of Astrocyte Biology and CNS Regeneration
- Address for correspondence: Ulrika. Wilhelmsson@neuro.gu.se
- Telephone: +46 765 80 53 80
- E-mail: Ulrika. Wilhelmsson@neuro.gu.se

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- 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 models, regenerative medicine**

**5. Title of research plan for CSC-UM PhD Programme**  
**The role of reactive astrocytes in hemorrhagic stroke**

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

**Background:** Stroke affects millions of people every year. There is an urgent need for novel approaches to improve the outcome for stroke patients. Astrocytes control many functional aspects of CNS, including water balance, neural plasticity and regeneration responses. We previously established that reactive astrocytes are highly important for the protection of the brain tissue in ischemic stroke, and neurotrauma, but in some neuropathological contexts, have maladaptive functions. Most recently, we showed the importance of reactive astrocytes for post-stroke neuronal connectivity.

**Study objective:** To address the role of reactive astrocytes in hemorrhagic stroke, by using collagenase model of hemorrhagic stroke and mice with attenuated reactive gliosis. We will perform MRI imaging, the assessment of brain edema, neuroinflammatory/gliial responses by spatial transcriptomics, immunohistochemical techniques, high content image analysis, and as recovery of sensomotorical functions.

**Expected Results:** Our preliminary data suggest that modulation of reactive gliosis in has important effects on the formation of brain edema, neuroinflammatory responses and on functional recovery post-stroke.

**Requirements:** Highly dedicated PhD student (C2 level of English) will join a dynamic research team that pioneered discoveries of the role of astrocytes in neurological diseases. He/she will master state-of-the-art technologies, learn to generate and interpret research data, present the project in a broad translational context, receive feedbacks, develop professional communication and transferable skills, e.g. grant writing, or research dissemination.

**Group's performance:** The research group plays a leading role in highly interdisciplinary international collaborative networks including EU-funded collaborative research consortia, >140 publications (cited >21 000x), h-index 64.

## **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)**

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### **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: