



Karolinska  
Institutet



SciLifeLab

## Computational Biologist – The mucosal immune system at the single cell resolution “Single Cell RNA-seq Analysis and Data Visualization”

Transcriptomic analysis at the single cell level has revolutionized our understanding of the immune system and enabled the discovery of novel immune cell types (or subtypes) activation state in health and disease. In a joint effort, the Villablanca and Gagliani Labs are trying to understand the molecular and cellular mechanisms involved in the establishment of intestinal immune homeostasis and how a breakdown of these mechanisms may lead to immune mediated inflammatory diseases (IMIDs). Our aim is to interrogate cell composition and function using experimental models of inflammation and taking scRNA-seq approaches. This position is an exciting opportunity to work on the cutting-edge of mucosal immunology field utilizing computational biology and data visualization tools. The candidate will be part of a multidisciplinary team actively working with renowned collaborators around the globe. The Karolinska Institute provides a vibrant academic ecosystem with close links to top academics who are pioneers in scRNA-seq-based methodologies. This project is funded by the Wallenberg foundation, ERC-StG and the Swedish Research Council.

**Entry requirements:** The Villablanca and Gagliani Labs (Karolinska Institutet) have opportunities for highly creative and motivated postdoctoral bioinformaticians with an interest in mucosal immunology. We are looking for a candidate with proficiency and documented laboratory research experience, particularly in immune cell biology and bioinformatics analysis. The candidate is expected to become an expert in single cell genomics pipelines and in the evaluation of novel methodologies. In addition, the candidate will be responsible for the development, enhancement and maintenance of the scRNAseq program in the lab. A person is eligible for a position as postdoctoral researcher if he or she has obtained a PhD no more than seven years before the last date of postdoc employment. The candidate must enjoy collaborating with other scientists.

### Specific requirements

Expertise in scripting language (e.g. R, Python)

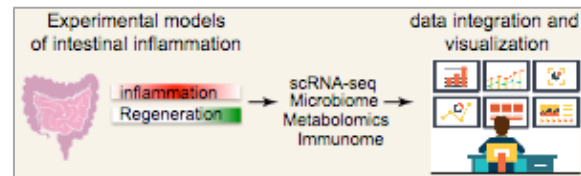
Formal programming language (e.g. Java)

Some expertise in immunology

Big data processing pipelines

Computational biology

Fluency in both spoken and written English.



**Application process** – Please apply in English and include the following documents (deadline June 15, 2018):

- An application letter and curriculum vitae
- A copy of degree certificates and any other relevant certificates
- A copy of degree projects and previous publications

### For more information, please contact:

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**Publications:** Peloquin JM., et al., *Annu. Rev. Immunol.*, 2016; Villablanca EJ., et al., *Gut*, 2014; Gagliani N., et al., *Cell*, 2014; Huber S., et al *Nature*, 2012; Villablanca EJ., et al., *Gastroenterology*, 2011; Villablanca EJ., et al., *Nat. Med.*, 2010