

5.7.2017

PhD student position in infection and structural biology

A PhD student position is available in the research group of Dr Arto Pulliainen at the Institute of Biomedicine, University of Turku.

Pulliainen-laboratory aims to understand i) how bacterial toxins/effector proteins are secreted, ii) how bacterial toxins/effector proteins recognize and enter the target host cell and iii) how bacterial toxins/effector proteins manipulate host cell signaling to ultimately influence the disease progression. Our ultimate goal is to gain insights that allow development of new antimicrobials for emerging antibiotic resistant bacteria. The laboratory is currently funded by the Academy of Finland and the Sigrid Jusélius Foundation (– 2020).

The research focus for the PhD student position is on type IV secretion systems (T4SSs) – multiprotein megadalton complexes that span the cell envelope of clinically significant bacteria including genera *Brucella*, *Helicobacter*, *Legionella*, *Bartonella* and *Bordetella*. T4SSs translocate a multitude of different toxins/effector proteins, such as pertussis toxin or CagA oncoprotein, into to the extracellular space or directly into the cytosol of host cells. Type IV secretion systems also mediate bacterial conjugation and therefore they are key players in the spread of antibiotic resistance determinants.

The person selected for the position studies the secretion mechanism of T4SSs as well as the elusive host cell recognition process of T4SS pilus structures. The project also involves drug discovery approaches. T4SSs are ideal drug targets since no analogous counterparts are known from eukaryotes.

To qualify for the position, the candidate needs: 1) high motivation level, work morale and independent initiative, and 2) completed or nearly completed MSc or an equivalent degree.

Please send your application in English as a single PDF document to Arto Pulliainen (arto.pulliainen@utu.fi), 31.8.2017 at the latest. The application has to contain: i) one page motivation letter, and ii) CV with contact information of at least two references.

The start time is negotiable, but September 2017 is preferable.
The position includes a 4-month trial period.

Further information:

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