

## Open PhD Positions: Cytotoxic Granule Secretion in T Lymphocytes at Saarland University, Germany

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We invite applications from talented and highly motivated candidates for PhD positions in the Cellular Neurophysiology Department at the Center for Integrative Physiology and Molecular Medicine (CIPMM), Saarland University. (More details about our department's research can be found here: <https://cipmm.uni-saarland.de/index.php/en/physiology/cell-neuro/cell-neuro-research>).

### Job Description:

Secretion is a fundamental biological process essential for cellular communication and information exchange. Cytotoxic T lymphocytes (CTLs) play a crucial role in the adaptive immune system, targeting and eliminating tumor cells through granule secretion. Our department has longstanding expertise in the molecular mechanisms of synaptic secretion in both neuronal and immune cells. Our research employs cutting-edge imaging technologies—including confocal microscopy, structured illumination microscopy (SIM), stimulated emission depletion (STED) microscopy, total internal reflection fluorescence (TIRF) microscopy, and electron microscopy—integrated with advanced proteomics, genetic analysis, and essential molecular biology and biochemistry techniques such as FACS, Western blotting, and cloning.

The successful PhD candidates will investigate the mechanisms underlying the secretion of cytotoxic entities by T lymphocytes. This project is part of the prestigious European Research Council (ERC) Synergy grant "ATTACK" consortium. (Learn more about the consortium here: <https://supramolecular-attack-particles.eu/>). The project benefits from close collaboration within the consortium, which includes leading scientists from Oxford (UK), Toulouse (France), and Siena (Italy). These positions offer a collaborative, interdisciplinary environment within a vibrant scientific community at CIPMM, Homburg.

**Keywords:** Cytotoxic T lymphocytes, immunological synapse, granule secretion, supramolecular attack particles (SMAPs)

### We Offer:

An open, dynamic, supportive and stimulating work environment that encourages teamwork, initiative, and creativity.

### Qualifications:

- A Master's degree in Immunology, Physiology, Cell Biology, or a related field
- Strong interest in cell biology, biochemistry, and genetics, with a keen scientific curiosity
- Experience with state-of-the-art cell biology, imaging, and molecular biology techniques
- Ability to work independently and collaboratively within a team
- High motivation, reliability, and initiative
- Proficiency in English (written and spoken)

**Contract Period:** The position is limited to 3 years, with the possibility of extension (German E13 TV-L).



**Start Date:** Positions will be filled as soon as suitable candidates are identified.

**Application Process:** Interested candidates should send their application, including a motivation letter and CV in a single PDF file, to Dr. Hsin-Fang Chang at Hsin-Fang.Chang@uks.eu.

For further inquiries, please contact:

**Dr. Hsin-Fang Chang**

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