

# Integrated Research Training Group 1181: Checkpoints for Resolution of Inflammation

## Speaker

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## Aims and structure

The integrated GK 1181 (GK 1181), funded by the DFG for four years (2015-2019), has the objective to offer a highly qualified, translational training with focus on life sciences to graduate students in parallel to their dissertation.

Medical research is not only related to either clinics or laboratory – medical science is both. Thus all graduates within the GK 1181 receive a structural education and mentoring program to be prepared for a scientific career in life sciences. The graduates have received a comprehensive qualification in the field of basic and clinical research by completion of the dissertation. They have learned to think outside the box, have taken active part to an interdisciplinary research network, and have acquired comprehensive knowledge about inflammation from molecular mechanism up to diseases. In addition, national and international scientific collaborations are essential for the current and future path of the graduates.

The close networking of the GK 1181 with other graduate schools (FOR 2886, TRR 241, TRR 221, GK 1160 (Erlangen), TRR 130 (Erlangen, Berlin, Freiburg, Göttingen), IRTG 914 (München), CiM/IMPRS (Münster)) already led to joint scientific symposia.

In February 2019, the GK 1181 consisted of 41 graduates (18 full members, 9 GK-supported medical stipends, 14 associated doctorates) and 10 alumni.

## Research

Inflammation is a part of the elaborate human defense system. This process needs a functioning immune system to allow the defense against dangers, such as mechanical, chemical, and biological signals, or at least to contain and therefore prevent organ damage. The human body responds rapidly to dangers by an inflammatory response, which is also rapidly resolved after the dangers have been removed allowing for tissue

repair to begin. How resolution of inflammation functions is still inadequately researched and will be researched by the SFB 1181.

The SFB 1181 (Checkpoints for Resolution of Inflammation; compare own report) has been funded by the DFG since July 2015 and was established to investigate the molecular mechanisms involved in the resolution of inflammation. Our main focus is on why resolution of inflammation fails in chronic inflammatory diseases, such as arthritis, Crohn's disease, and asthma, which are characterized by chronic inflammation of the inner surfaces of the body, usually having serious health implications for its patients.

The research program is conceptually structured in three closely interconnected checkpoints:

- Checkpoint A: Switch from pro- to anti-inflammatory cytokine response
- Checkpoint B: Blockade of pro-inflammatory lymphocyte activation
- Checkpoint C: Fostering of tissue remodeling by cell death and tissue repair mechanisms

## Teaching

We believe that our structured mentoring and education program will not only result in better trained doctoral students, but will also turn the graduate students into independent scientists early in their career. Our goal is based upon the following mentoring and educational units:

- Mentoring commission and annual report  
Each graduate student of the GK 1181 is accompanied by a mentoring commission besides their direct supervisor. This commission will ensure the unobstructed progress of their thesis, suggests constructive enhancements, and assists with problem of all forms.

- Bi-weekly „Jour fixe“

Every other week, the graduates organize a meeting discussing literature, their own research data, or methodological problems and much more.

- Interdisciplinary training workshops and method seminars

These workshops and seminars will not only teach state of the art methods, but also introduce other areas, such as industry, techniques of rhetoric, or scientific writing.

- Seminars and mini symposia

These seminars are arranged by small groups of graduates, highlighting the wishes and requirements of the graduates. Furthermore, mini symposia are organized to generate stimuli by presentations of recent findings of international guest speakers in the multi-faceted research areas of the SFB 1181.

- Clinical rounds of life science researchers in the daily grind of a clinician

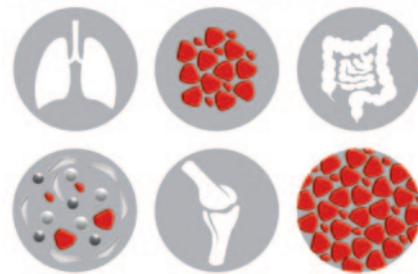
The graduates can get an impression of the clinical routine and state-of-the-art treatments of patients suffering of chronic diseases.

- Annual retreats and participation in national and international conferences and symposia  
During the annual retreats of the SFB 1181 the graduates have the opportunity to present their data to the members of the SFB and will be trained to present their work on international congresses.

- Publicity

An important aspect within SFB 1181 is scientific communication. The GK 1181 is closely involved in scientific events, such as the Lange Nacht der Wissenschaften in Erlangen and will inform about their respective field of study and career possibilities in life sciences as well as the current work of the SFB.

# IRTG 1181



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