

Name Assoz.-Prof. Dr. Thomas Gruber
Date of Birth January 14th, 1971
Place of Birth St. Johann i. T. (Austria)
Business Address: Division of Translational Cell Genetics, Department for Medical Genetics,
Innsbruck Medical University
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Education:

1977-1981 Elementary school
1981-1989 Secondary school (Gymnasium)
1989-1993 Studies in Physics, Astronomy and Philosophy, Universities of Vienna and Innsbruck
1993-1999 Studies in Microbiology, University of Innsbruck; title of the master thesis: *Interaction of ribosomal S8 proteins from mesophilic and thermophilic Archaea and Bacteria with their specific S8 binding site on the 16S rRNA.*
1999-2000 Civilian service
2000-2003 Studies for PhD at the Institute for Human Genetics, Medical University of Innsbruck; title of the PhD thesis: *Studies on the physiological roles of distinct protein kinase C isotypes in T cell signaling employing the gene knockout strategy.*
2003-2012 Postdoc in the laboratory of Prof. Dr. Gottfried Baier at the Institute for Medical Genetics, Molecular and Clinical Pharmacology, Medical University of Innsbruck.
2012- 2015 University assistant (B1) at the Institute for Medical Genetics, Molecular and Clinical Pharmacology, Medical University of Innsbruck.
2015-2019 Assistance Professor (A2) at the Institute for Medical Genetics, Molecular and Clinical Pharmacology, Medical University of Innsbruck.
since 2019 Associate Professor at the Institute for Medical Genetics, Medical University of Innsbruck.

Grants: FWF P22207 "The PKC θ /Cbl-b signaling pathway in immunological tolerance", Jan. 2010 – Dec. 2012.
FWF P26892 " Analysis of the TGF β /Cbl-b pathway in autoimmunity and tumor immunity, June 2014 – Dec. 2017

Meetings: 4th European Congress of Immunology, Vienna
15th International Congress of Immunology, Milano

Cancer Immunology and Immunotherapy Conference, Washington
D.C
Oncotyrol Retreat, Innsbruck
Austrian Society for Hematology and Oncology, Salzburg
Oncotyrol Retreat, Obergurgl
Spezialforschungsbereich (SFB) Retreat, Vienna
European Assoc. for Cancer Research Meeting, Innsbruck

Teaching activity:

Lectures and practical courses in Molecular Medicine, Medical Biology and in the Molecular Cell Biology and Oncology PhD program; Supervision of graduate students

Main area of research:

- T cell immunology with focus on autoimmunity and tumor immunity
- Molecular mechanisms of T cell signalling

Important research findings so far:

- PKC θ is important for activation of NFAT, NF κ B, and AP-1 in T cells and regulates calcium flux.
- PKC α and PKC θ cooperate in transplant rejection.
- The orphan receptor NR2F6 is a repressor of T cell activation.
- PKC θ modulates T cell activation thresholds by phosphorylating Cbl-b and targeting it for degradation.
- Silencing *Cblb* in CD8⁺ T cells augments the efficacy of a tumor vaccine in a melanoma model.
- Cbl-b targets SMAD7 for degradation and mediates TGF β sensitivity of T cells.
- Cbl-b regulates GM-CSF expression of T cells and susceptibility of mice to experimental autoimmune encephalomyelitis.
- Cbl-b mediates the inhibitory effects of PD-1 *in vitro* and in a tumor model *in vivo*.
- Cbl-b inhibits natural killer cell activity and regulates cancer metastasis.

Publications

Link to all publications: <http://orcid.org/0000-0002-5796-7090>