

Cell culture: primary cell cultures, cell proliferation and cell viability assays, colony formation assay, tumor migration and 3D tumor invasion assays, 3D spheroid cultures

Biochemical techniques: agarose gel electrophoresis, western blotting, ELISA, immunohistochemistry, immunofluorescence, comet assay

Molecular biology techniques: RNA isolation and cDNA synthesis, PCR, qRT-PCR, DNA cloning with bacterial transformation

Awards

2017 publication award, 2nd place, by the Austrian Society of Radiation Oncology, Biology and Physics (ÖGRO)

2015 publication award, 1st place, by the Austrian Society of Radiation Oncology, Biology and Physics (ÖGRO)

2013 Young Scientist Award, by the European Radiation Research Society

Education

2016 PhD in Radiation Biology; Thesis: 'Epithelial cell signalling in radiation-induced oral mucositis as a basis for biological targeting – preclinical studies'

2012 – 2016 PhD program in Medical Physics/Malignant Diseases at Medical University of Vienna, Austria

2006 – 2010 MSc diploma studies in Molecular Biotechnology at the Vienna University of Applied Sciences, Austria

MSc in 2010, Thesis: 'TCF and LEF binding partners of β -catenin – identification of alternative binding sites' at the Department of Genetics, Veterinary University of Vienna

1998 – 2006 High School, Austria

Career:

since 10/2016 PostDoc Researcher at the Medical University of Vienna, Department of Radiotherapy, Applied and Translational Radiobiology Group at MedAustron, Center for Ion Therapy and Research

01/2012-09/2016 PhD candidate, Department of Radiation Oncology, Medical University Vienna

04/2011-12/2011 Researcher, Akron Molecules AG, Vienna

10/2013-03/2011 Scientific Assistant, Institute of Cancer Research, Medical University Vienna,

Collaboration partners

MedAustron Center for Ion Therapy and Research, Cornell Medicine New York, Imperial College London

Summary of scientific work

Original Papers/Reviews	First, senior or corresponding author	Co-author
10	8	2

Publication list

1. **Gruber S**, Arnold M, Cini N, Gernedel V, Hetzendorfer S, Mayer J, Kowald LM, Rohorzka A, Morava S, Pfaffinger S, Kuess P, Dörr W, Radioprotective effects of dermatan sulfate in a preclinical model of oral mucositis – targeting inflammation, hypoxia and junction proteins without stimulating proliferation, International Journal of Molecular Sciences, 2018 Jun 6;19(6). (IF=3.687)
2. **Gruber S**, Cini N, Kowald LM, Mayer J, Rohorzka A, Kuess P, Dörr W, Upregulated epithelial junction expression represents a novel parameter of the epithelial radiation response to fractionated irradiation in oral mucosa, Strahlenther Onkol. 2018 Aug;194(8):771-779 (IF=2.459)
3. Kowaliuk M, Bozsaky S, **Gruber S**, Kuess P, Dörr W, 'Systemic administration of heparin ameliorates radiation-induced oral mucositis-preclinical studies in mice.' Strahlenther Onkol. 2018 Jul;194(7):686-692. (IF=2.459) (IF=2.459)
4. **Gruber S**, Frings K, Kuess P, Dörr W, 'Protective effects of systemic dermatan sulfate treatment in a preclinical model of radiation-induced oral mucositis.' Strahlenther Onkol., 2018 Jul;194(7):675-685. (IF=2.459)
5. **Gruber S**, Bozsaky E, Roitinger E, Schwarz K, Schmidt M, Dörr W, 'Early inflammatory changes in radiation-induced oral mucositis : Effect of pentoxifylline in a mouse model.' Strahlenther Onkol., 193(6) (2017) (IF=2.459)
6. **Gruber S**, Dörr W, 'Biological mechanisms of radiation effects', Der Radiologe, 57(7) (2017) (IF=0.404)
7. **Gruber S**, Dörr W, 'Tissue reactions to ionizing radiation-Oral mucosa.' Mutation Research, 770 (2016) (IF=5.205)
8. Frings K, **Gruber S**, Kuess P, Kleiter M, Dörr W., 'Modulation of radiation-induced oral mucositis by thalidomide : Preclinical studies.' Strahlenther Onkol., 192(8) (2016) (IF=2.459)

9. **Gruber S**, Hamedinger D, Bozsaky E, Schmidt M, Wolfram K, Haagen J, Habelt B, Puttrich M, Dörr W., 'Local hypoxia in oral mucosa (mouse) during daily fractionated irradiation - Effect of pentoxifylline.' Radiother Oncol. 116(3) (2015) (IF=4.942)
10. **Gruber S**, Schmidt M, Bozsaky E, Wolfram K, Haagen J, Habelt B, Puttrich M, Dörr W., 'Modulation of radiation-induced oral mucositis by pentoxifylline: preclinical studies.' Strahlenther Onkol., 191(3) (2015) (IF=2.459)

Conference contributions (2012-2017): > 15

Teaching

Medical University Vienna

- 2018 - Journal Club: Advanced Radiotherapy Techniques
- 2015 - Training Course: Clinical Radiobiology
- 2017 - Training Course: Clinical Radiobiology

Mentoring

Current: 3 co-supervised MSc students. 2 co-supervised PhD students

Graduated: 1 PhD student (co-supervision)

Review Activities

Reviewer of scientific papers (Radiotherapy & Oncology, Strahlentherapie und Onkologie)

Professional memberships

ESTRO, Austrian Society of Radiation Oncology, Biology and Physics (ÖGRO)