



## Andrej Besse

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### Units

Medizinische Onkologie und Hämatologie

## Publications (17)

Besse A, Sedlarikova L, Büchler L, Kraus M, Yang C, Strakova N, Soucek K, Navratil J, Svoboda M, Welm A, Jörger M, Driessen C, Besse L. HIV-protease inhibitors potentiate the activity of carfilzomib in triple-negative breast cancer. *Br J Cancer* 2024

Besse L, Kraus M, Besse A, Driessen C, Tarantino I. The cytotoxic activity of carfilzomib together with nelfinavir is superior to the bortezomib/nelfinavir combination in non-small cell lung carcinoma. *Sci Rep* 2023; 13:4411.

Kliebhan J, Besse A, Kampa-Schittenhelm K, Schittenhelm M, Driessen C. Mutant driving the Warburg Effect in Mantle Cell lymphoma. *Clin Case Rep* 2022; 10:e6296.

Schwestermann J, Besse A, Driessen C, Besse L. Contribution of the Tumor Microenvironment to Metabolic Changes Triggering Resistance of Multiple Myeloma to Proteasome Inhibitors. *Front Oncol* 2022; 12:899272.

Bolomsky A, Caers J, Hübl W, Schreder M, Zojer N, Driessen C, Tang J, Besse L, Heckman C, Kubicek S, Hannich J, Miettinen J, Malyutina A, Besse A, Huber J, Fellingner S, Breid H, Parsons A, Klavins K, Ludwig H. Heterogeneous modulation of Bcl-2 family members and drug efflux mediate MCL-1 inhibitor resistance in multiple myeloma. *Blood Adv* 2021; 5:4125-4139.

Besse L, Besse A, Kraus M, Maurits E, Overkleeft H, Bornhauser B, Bourquin J, Driessen C. High Immunoproteasome Activity and sXBP1 in Pediatric Precursor B-ALL Predicts Sensitivity towards Proteasome Inhibitors. *Cells* 2021; 10

Ring S, Spiegl M, Besse A, Bonilla W, Stemeseder F, Schmidt S, Orlinger K, Krebs P, Ludewig B, Wenger R, Hartmann F, Cupovic J, Onder L, Lütge M, Pérez Shibayama C, Gil Cruz C, Scandella E, De Martin A, Mörbe U, Flatz L. Viral vector-mediated reprogramming of the fibroblastic tumor stroma sustains curative melanoma treatment. *Nat Commun* 2021; 12:4734.

Besse L, Pilon M, Farhan H, Vulpe C, Overkleeft H, Driessen C, Ståhlman M, Huber J, Bolomsky A, Ludwig H, Hannich J, Loguinov A, Everts B, Berkers C, Besse A, Borén J, Florea B, Sathianathan M, Stolze S, Sobh A, Zaal E, van der Ham A, Ruiz M, Phuyal S, Büchler L. Treatment with HIV-Protease Inhibitor Nelfinavir Identifies Membrane Lipid Composition and Fluidity as a Therapeutic Target in Advanced Multiple Myeloma. *Cancer Res* 2021; 81:4581-4593.

Byrgazov K, Besse A, Kraus M, Slipicevic A, Lehmann F, Driessen C, Besse L. Novel Peptide-drug Conjugate Meliflufen Efficiently Eradicates Bortezomib-resistant Multiple Myeloma Cells Including Tumor-initiating Myeloma Progenitor Cells. *Hemasphere* 2021; 5:e602.

Byrgazov K, Kraus M, Besse A, Slipicevic A, Lehmann F, Driessen C, Besse L. Up-regulation of multidrug resistance protein MDR1/ABCB1 in carfilzomib-resistant multiple myeloma differentially affects efficacy of anti-myeloma drugs. *Leuk Res* 2020; 101:106499.

Driessen C, Pabst T, Hitz F, Hawle H, Rondeau S, Berset C, Besse A, Besse L, Ribi K, Samaras P, Mey U, Rüfer A, Mach N, Betticher D, Cantoni N, Novak U, Müller R, Zander T. Promising activity of nelfinavir-bortezomib-dexamethasone (NeVd) in proteasome inhibitor-refractory multiple myeloma. *Blood* 2018

Barrio S, Martinez-Lopez J, Rosenwald A, Beckmann R, Bargou R, Braggio E, Stewart A, Raab M, Einsele H, Driessen C, Chatterjee M, Leich E, Stühmer T, Da-Viá M, Barrio-Garcia C, Lehnert N, Besse A, Cuenca I, Garitano-Trojaola A, Fink S, Kortüm K. Spectrum and functional validation of PSMB5 mutations in multiple myeloma. *Leukemia* 2018

Krupkova O, Cambria E, Besse L, Besse A, Bowles R, Wuertz-Kozak K. The potential of CRISPR/Cas9 genome editing for the study and treatment of intervertebral disc pathologies. *JOR Spine* 2018; 1:e1003.

Abt D, Driessen C, Engeler D, Schmid H, Slaby O, Vodinska M, Silzle T, Bader J, Kraus M, Sedlarikova L, Besse A, Besse L. Improving the efficacy of proteasome inhibitors in the treatment of renal cell carcinoma by combination with the human immunodeficiency virus (HIV)-protease inhibitors lopinavir or nelfinavir. *BJU Int* 2017

Besse L, Kraus M, Besse A, Bader J, Silzle T, Mehrling T, Driessen C. The first-in-class alkylating HDAC inhibitor EDO-S101 is highly synergistic with proteasome inhibition against multiple myeloma through activation of multiple pathways. *Blood Cancer J* 2017; 7:e589.

Besse A, Besse L, Overkleeft H, Bader J, Kraus M, Morgan G, Weinhold N, Rasche L, Stolze S, Driessen C. Carfilzomib resistance due to ABCB1/MDR1 overexpression is overcome by nelfinavir and lopinavir in multiple myeloma. *Leukemia* 2017; 32:391-401.

Xin B, Groll M, Driessen C, van der Stelt M, Kisselev A, van der Marel G, Filippov D, Florea B, Besse A, Huber E, de Bruin G, Overkleeft H. Structure-Based Design of  $\beta$ 5c Selective Inhibitors of Human Constitutive Proteasomes. *J Med Chem* 2016; 59:7177-87.

## Projects (8)

### **Genetic contributors of multiple myeloma cells involved in their homing and escape from T-cell recognition**

*Fundamental Research - Jul 1, 2022 - Jun 30, 2023*

*Automatically Closed*

### **ALK-Inhibitoren als potentielle Therapie bei Proteasom-Inhibitor-resistentem Multiplen Myelom**

*Fundamental Research - Oct 1, 2021 - Sep 30, 2023*

*Automatically Closed*

### **Immunoproteasome activity as a predictive marker and therapeutic target in hematological malignancies**

*Fundamental Research - Jul 1, 2021 - Dec 31, 2021*

*Automatically Closed*

### **Towards identification of novel therapeutic targets: Assessment of proteasome-related alterations in MM patients' datasets**

*Fundamental Research - Jan 1, 2021 - Dec 31, 2021*

*Automatically Closed*

### **The molecular landscape of proteasome inhibitor resistance of multiple myeloma in vivo**

*Fundamental Research - Jul 1, 2020 - Dec 31, 2023*

*Automatically Closed*

### **The „seed and soil“-based pathogenesis of proteasome inhibitor resistance in multiple myeloma**

*Fundamental Research - Jan 1, 2019 - Dec 31, 2019*

*Automatically Closed*

### **Identifying and targeting the "Achilles' heel" in proteasome inhibitor-resistant multiple myeloma**

*Fundamental Research - Oct 1, 2018 - Dec 31, 2021*

*Automatically Closed*

### **HIV-Proteaseinhibitoren als Basis für Krebstherapie: Verständnis des Mechanismus, Identifikation der Targets, Entwicklung wirksamerer Substanzen**

*Fundamental Research - Nov 1, 2016 - Oct 31, 2018*

*Automatically Closed*