



## Statement of individual author contributions and of legal second publication rights to manuscripts included in the dissertation

### Manuscript 1: Research Article (published)

Martin Kuric (MK), Susanne Beck (SB), Doris Schneider (DS), Wyonna Darleen Rindt (WDR), Marietheres Evers (MS), Jutta Meißner-Weigl, Sabine Zeck (SE), Melanie Krug, Marietta Herrmann, Tanja Nicole Hartmann, Ellen Leich, Maximilian Rudert, Denitsa Docheva, Anja Seckinger, Dirk Hose, Franziska Jundt (FJ), Regina Ebert (RE) (2024): Describing Myeloma Dissemination *in vitro* with hMSC-Interacting Subpopulations and their Aggregation/Detachment Dynamics, **Cancer Research Communications**

Participated in	Author Initials, Responsibility decreasing from left to right				
Study Design	<u>MK</u>	RE	FJ	Dirk Hose	Anja Seckinger
Methods Development	<u>MK</u>	DS	WDR		
Data Collection	<u>MK</u>	DS	SZ	Melanie Krug	Jutta Meißner-Weigl
Data Analysis and Interpretation	<u>MK</u>	SB	RE	FJ	Dirk Hose
Manuscript Writing Writing of Introduction Writing of Materials & Methods Writing of Discussion Writing of First Draft	<u>MK</u>	RE	FJ		All

**Explanations:** The content of this publication exceeds the usual scope (~29 pages Supplemental). It includes not only research findings but also survival data and protocols of new, established methods and their validations. The contribution of Martin Kuric was pivotal and predominant in all aspects of this work. DS assisted in the experimental procedures. Susanne Beck analyzed the raw data from RNAseq and survival data, which were interpreted, depicted, and summarized by Martin Kuric. "All" includes all authors unmentioned in the same row in no particular order.

### Manuscript 2: Data Analysis Software (published)

Martin Kuric (MK), Regina Ebert (RE) (2024): plotastic: Bridging Plotting and Statistics in Python, **Journal of Open Source Software** 9(95), 6304, <https://doi.org/10.21105/joss.06304>

Participated in	Author Initials, Responsibility decreasing from left to right				
Study Design	<u>MK</u>				
Methods Development	<u>MK</u>				
Data Analysis and Interpretation	<u>MK</u>				
Manuscript Writing Writing of Statement of Need Writing of Example Writing of Overview	<u>MK</u>	RE			

**Explanations:** This chapter is the manuscript of a software paper. This paper, its structure (Statement of Need, Example and Overview), and its use as a chapter in this manuscript/chapter-based thesis has been approved by the GSLs Common Graduation Commission. The software and its initial idea were entirely designed, developed, tested, documented, and released by MK. The software comprises more than 8000 total lines of code (including ~2000 testable lines) and is comparable in size to a typical web

application. Study design includes the initial idea and designing the architecture of the software modules. Methods development includes the independent acquisition of python development skills, developing prototypes, and the implementation of features into the design architecture. Data collection includes collecting test datasets for the software testing suite. Data analysis and interpretation includes developing the software testing suite (using pytest and continuous integration tools) and writing the online documentation (manuals and examples). Manuscript writing included the release of this software, which involved version control using GitHub, packaging and deployment on PyPi. RE gave feedback on the manuscript draft and has raised the funds for financing.

<b>Manuscript 3: Research Letter (published)</b>					
Daniela Simone Maichl (DSM), Julius Arthur Kirner (JAK), Susanne Beck (SB), Wen-Hui Cheng, Melanie Krug (MeK), <u>Martin Kuric (MK)</u> , Carsten Patrick Ade, Thorsten Bischler, Franz Jakob, Dirk Hose, Anja Seckinger, Regina Ebert (RE) & Franziska Jundt (FJ) (2023): Identification of NOTCH-driven matrisome-associated genes as prognostic indicators of multiple myeloma patient survival, <b>Blood Cancer Journal</b> , 13:134, <a href="https://doi.org/10.1038/s41408-023-00907-6">https://doi.org/10.1038/s41408-023-00907-6</a>					
Participated in	Author Initials, Responsibility decreasing from left to right				
Study Design Methods Development	DSM	JAK	FJ		
Data Collection	DSM	JAK	MeK	FJ	
Data Analysis and Interpretation	DSM	SB	FJ	<u>MK</u>	
Manuscript Writing Writing of Introduction Writing of Materials & Methods Writing of Discussion Writing of First Draft	DSM	FJ	RE	<u>MK</u>	

**Explanations:** This co-authorship is not a chapter in this dissertation. Martin Kuric produced figures of processed but complex-to-visualize data and gave feedback on the manuscript before submission.

<b>Manuscript 4: Research Paper (under peer-review)</b>					
Wyonna Darleen Rindt (WDR), Melanie Krug (MeK), Shuntaro Yamada, Franziska Sennefelder, Louisa Belz, Wen-Hui Cheng, Azeem Muhammad, <u>Martin Kuric (MK)</u> , Marietheres Evers, Ellen Leich, Tanja Nicole Hartmann, Ana Rita Pereira, Marietta Hermann, Jan Hansmann, Mohammed Ahmed Yassin, Kamal Mustafa, Regina Ebert (RE), and Franziska Jundt (FJ) (2024): A 3D bioreactor model to study osteocyte differentiation and mechanobiology under perfusion and compressive mechanical loading, <b>Acta Biomaterialia</b>					
Participated in	Author Initials, Responsibility decreasing from left to right				
Study Design Methods Development	FJ	WDR	RE	<u>MK</u>	
Data Collection	WDR	MeK	FJ	<u>MK</u>	
Data Analysis and Interpretation	WDR	FJ	RE	<u>MK</u>	
Manuscript Writing Writing of Introduction Writing of Materials & Methods Writing of Discussion Writing of First Draft	WDR	FJ	RE	<u>MK</u>	

**Explanations:** This co-authorship is not a chapter in this dissertation. Martin Kuric contributed by counseling during weekly meetings in tight collaboration with Franziska Jundt's group, assisting WDR during laboratory experiments, image analysis and giving feedback on submitted manuscript.

**Manuscript 5: Research Letter (published)**

Marietheres Evers (ME), Martin Schreder (MS), Thorsten Stühmer (TStü), Franziska Jundt (FJ), Regina Ebert (RE), Tanja Nicole Hartmann (TNH), Michael Altenbuchinger (MA), Martina Rudelius (MR), Martin Kuric (MK), Wyonna Darleen Rindt (WDR), Torsten Steinbrunn (TSte), Christian Langer, Sofia Catalina Heredia-Guerrero, Hermann Einsele (HE), Ralf Christian Bargou (RCB), Andreas Rosenwald (AR), Ellen Leich (EL) (2023): Prognostic value of extracellular matrix gene mutations and expression in multiple myeloma, **Blood Cancer J.**, 13(1):43, <https://doi.org/10.1038/s41408-023-00817-7>

Participated in	Author Initials, Responsibility decreasing from left to right									
Study Design Methods Development	EL	ME	FJ	RCB	AR					
Data Collection	EL	MS	MR	TSte	HE					
Data Analysis and Interpretation	ME	MA	EL	TStü	FJ	RE	TNH	<u>MK</u>	WDR	TSte
Manuscript Writing Writing of Introduction Writing of Materials & Methods Writing of Discussion Writing of First Draft	ME	EL	MS	All						

**Explanations:** This co-authorship is not a chapter in this dissertation. Martin Kuric contributed by counseling during regular meetings with Ellen Leich's group and giving feedback on submitted manuscript. "All" includes all authors unmentioned in the same row in no particular order.

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The doctoral researcher and the primary supervisor confirm the correctness of the above mentioned assessment.

Würzburg

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_____ Primary Supervisor's Name	_____ Date	_____ Place	_____ Signature
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