



Universiteit  
Leiden  
The Netherlands

## Intelligent workflows for automated analysis of mass spectrometry-based proteomics data

Güler, A.T.

### Citation

Güler, A. T. (2022, April 7). *Intelligent workflows for automated analysis of mass spectrometry-based proteomics data*. Retrieved from <https://hdl.handle.net/1887/3281870>

Version: Publisher's Version

License: [Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

Downloaded from: <https://hdl.handle.net/1887/3281870>

**Note:** To cite this publication please use the final published version (if applicable).

# **Intelligent Workflows for Automated Analysis of Mass Spectrometry-based Proteomics Data**

Arzu Tuğçe Güler

ISBN: 978-94-6423-731-3

Copyright © 2022 Arzu Tuğçe Güler

Cover design: Arzu Tuğçe Güler

Printing: ProefschriftMaken.nl

All rights reserved. No part of this book may be reproduced in any form without written permission of the author or, if applicable, the publishers of the publications.

# **Intelligent Workflows for Automated Analysis of Mass Spectrometry-based Proteomics Data**

**Proefschrift**

ter verkrijging van  
de graad van doctor aan de Universiteit Leiden,  
op gezag van rector magnificus prof.dr.ir. H. Bijl,  
volgens besluit van het college voor promoties  
te verdedigen op donderdag 7 april 2022  
klokke 11.15 uur

door

**Arzu Tuğçe Güler**  
geboren te Ankara, Turkije in 1988

Promotor:	prof.dr. M. Wuhrer
Co-promotor:	dr. N.M. Palmblad
Leden promotiecommissie:	prof.dr. J.J. Goeman
	prof.dr. P.L. Horvatovich, Rijksuniversiteit Groningen
	dr. K.J. Wolstencroft
	dr. M. Roos

*Ars longa, vita brevis*



# Table of Contents

<b>Chapter 1</b>	General Introduction	<b>9</b>
<b>Chapter 2</b>	Scientific Workflows for Bibliometrics	<b>27</b>
<b>Chapter 3</b>	Automating Bibliometric Analyses Using Taverna Scientific Workflows	<b>51</b>
<b>Chapter 4</b>	COMICS: Cartoon Visualization of Omics Data in Spatial Context Using Anatomical Ontologies	<b>77</b>
<b>Chapter 5</b>	Metadata-driven Calibration of Mass Spectrometry Data	<b>93</b>
<b>Chapter 6</b>	Discussion	<b>109</b>
<b>Appendices</b>		<b>121</b>
	Summary	<b>122</b>
	Nederlandse Samenvatting	<b>124</b>
	Acknowledgements	<b>127</b>
	Curriculum Vitae	<b>129</b>
	PhD Portfolio	<b>131</b>
	List of Publications	<b>134</b>