



# 10<sup>th</sup> Hands-On Proteomics Workshop

## (2D Gel Electrophoresis in combination with Mass Spectrometry)

### Efficiency and Reliability through Innovative Technology

#### SERVA Electrophoresis

##### High Performance Electrophoresis (HPE) - A New Dimension of 2D Gel Electrophoresis

Learn to handle a complex workflow using the 2D High Performance Electrophoresis System. The combined use of the HPE Tower and HPE 2D gels allows a separation quality not experienced before. Following the IEF in SERVA IPG BlueStrips samples are separated on 2D horizontal gels using the HPE Tower system. Additionally a 2D approach using IPG Blue strips and vertical PRIME gels, followed by a Western blot using SERVA equipment and buffers is shown.

#### DECODON

##### Image Analysis with Delta2D – expression profiles from 2DE, 2D WesternBlot, 2D DIBE,...

DECODON shows you how to use Delta2D, how to analyze images in an innovative way and how to use statistical approaches to get robust data including visualization for presentation and easy understanding. Learn to analyze 2D western blot, redox proteomics, coverages, and many more approaches with Delta2D.

#### BRUKER

##### Strategies for Protein Identification - from in-gel digestion to protein identification

Learn how to prepare good samples for MALDI-TOF/TOF-MS. Tips and tricks for sample preparation to achieve highly valuable protein identification by an highly automated workflow. Learn how to "read" MS and MS/MS data to check your database output with respect to reliability and accuracy.

Do you have certain questions you want to discuss?  
Do you want to have your own samples analyzed?  
Please ask for further information when you register.

#### Registration:

Details see <https://www.cta.tuwien.ac.at/index.php?id=16297>

Registration via website or email to [martina.marchetti-deschmann@tuwien.ac.at](mailto:martina.marchetti-deschmann@tuwien.ac.at)

Please register – course is limited to 10 participants.

**When:** 14.04. – 17.04.2020 (details see page 2)

**Where:** Vienna University of Technology, Getreidemarkt 9; Building BB , 1060 Vienna

<b>Costs:</b>		Industry	Students, PhD, PostDoc...
	early bird (Mar 01, 2020)	590,00€	480,00€
	after Mar 01	695,00€	590,00€

latest registration Mar 27, 2020

After this ask for open position directly at [martina.marchetti-deschmann@tuwien.ac.at](mailto:martina.marchetti-deschmann@tuwien.ac.at)

AuPA Members have a discount of 50€.

Lunch, Coffee break, scripts, consumables are included

# Program

## Tuesday, April 14<sup>th</sup>, 2020

08:30	to	08:45	L	Registration and Welcome
08:45	to	09:00	L	Introduction of participants (e.g. name, work place, type of research, goal)
09:00	to	09:20	L	Overview of the workshop program
09:20	to	09:40	L	Image Analysis of 2D electrophoresis gel - state of the art
09:40	to	10:00	L	Introduction to Modern Protein Mass Spectrometry
10:00	to	10:15		Coffee break
10:15	to	10:30	L	Theory: Fluorescence 2D gel electrophoresis and 2D Western Blotting
10:30	to	11:45	P	Sample Preparation (Sci-Dyes, Lightning Red), IPG strip rehydration and Experimental setup of the workshop
11:45	to	13:00		Lunch
13:00	to	15:45	P	Gel analysis with demo gels under supervision (1)
15:45	to	16:00		Coffee break
16:00	to	17:00	L	Mass spectrometry
17:00	to	18:00	L/P	HPE Tower, HPE 2D Gels, Start 1 <sup>st</sup> dimension: Cup Loading, start IEF

## Wednesday, April 15<sup>th</sup>, 2020

08:00	to	09:45	P	Stop IEF, Equilibration of IPG, Start 2 <sup>nd</sup> dimension (1)
09:45	to	10:00		Coffee break
10:00	to	11:30	P	2D gel electrophoresis (vertical) for Western Blotting
11:30	to	12:00	P	Preparing Laptops
12:00	to	12:45		Lunch
12:45	to	15:15	P	Gel analysis with demo gels under supervision (2)
15:15	to	15:30		Coffee break
15:30	to	16:15	L	Mass spectrometry - sample preparation
16:15	to	17:15	L	Mass spectrometry - analysis of mass spectra
17:15	to	18:00	L	Modern Mass Spectrometry for Proteomics

## Thursday, April 16<sup>th</sup>, 2020

08:00	to	10:00	P	Scan gels
10:00	to	12:00	L	Gel analysis with demo gels under supervision (3)
12:00	to	13:00		Lunch
13:00	to	14:30	L	Mass spectrometry
14:30	to	14:45	P	Coffee break
14:45	to	17:00	P	Mass spectrometry
16:30	to	17:30	P	Trouble shooting

## Friday, April 17<sup>th</sup>, 2020

08:00	to	10:00	L/P	Latest Developments in 2D electrophoresis, mass spectrometry & software analysis
10:00	to	10:15		Break
10:15	to	11:45	L/P	Q & A

L: lecture, P: Hands-On

Slight changes of time plan may occur during the course.