

# Mass spectrometry imaging and profiling of single cells: application in breast cancer research

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Emerging Technologies in Single Cell Research

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Maastricht University

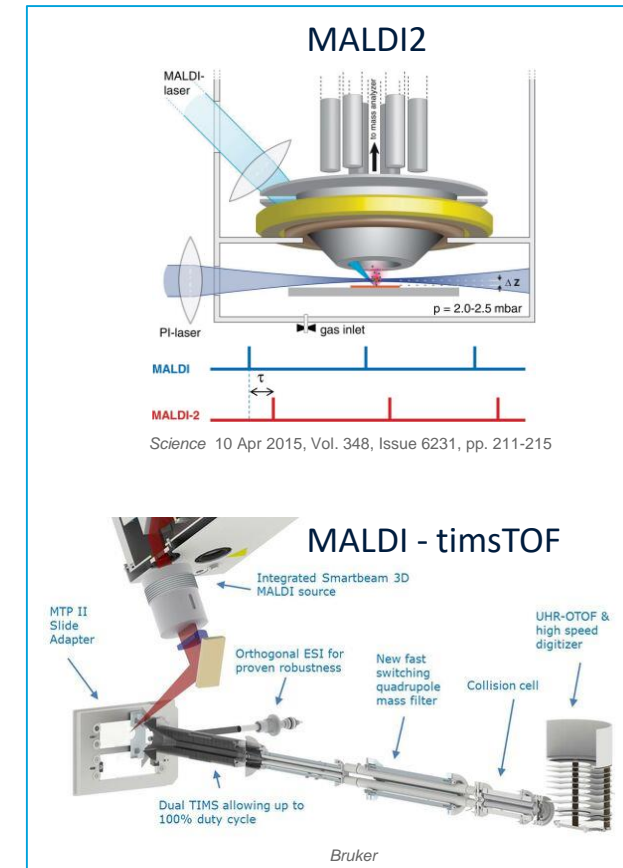
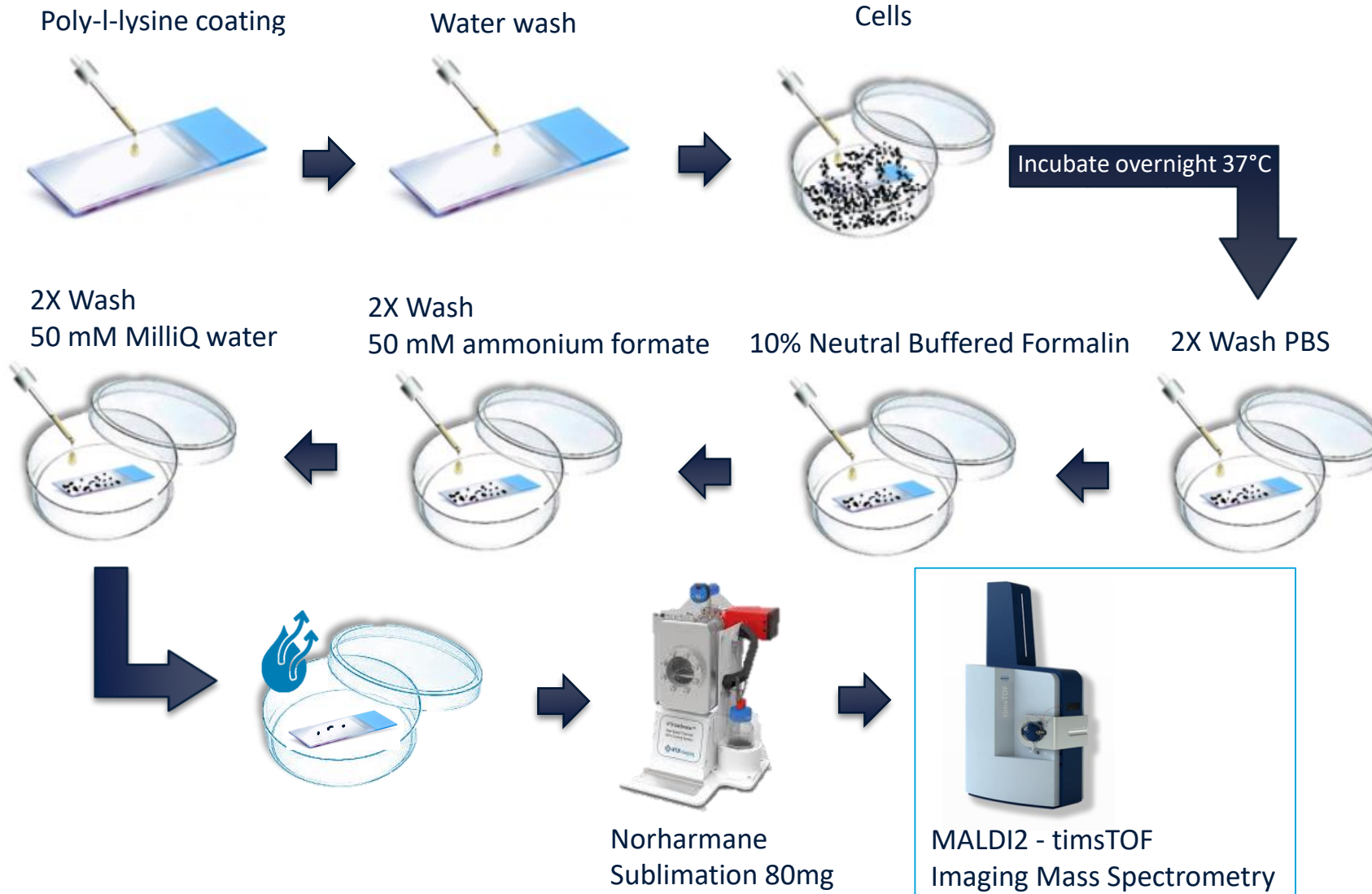


@Maastricht4Imaging

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# Workflow



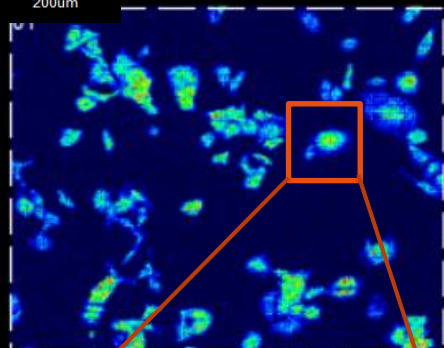


# Example images

HCC1143

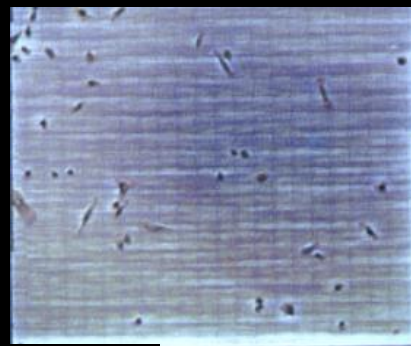


200um

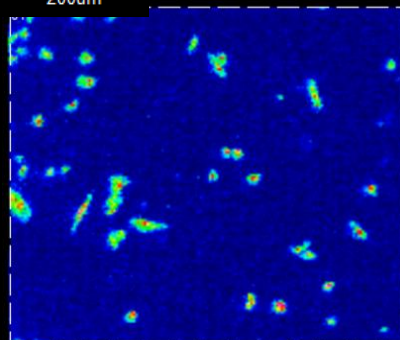


PC 35:9  
PE 38:9

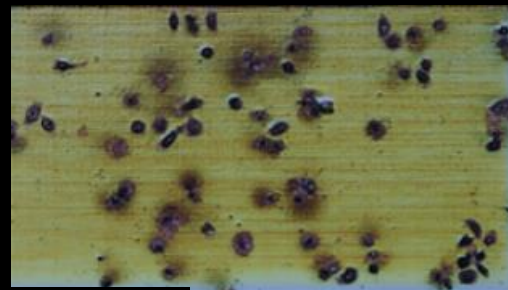
MDA-231



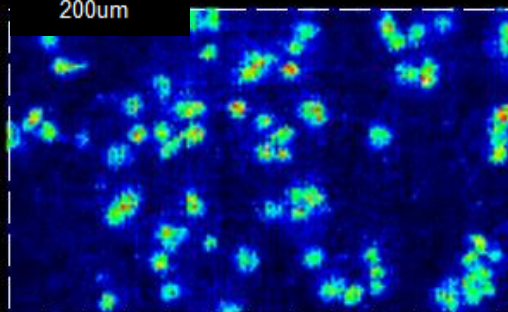
200um



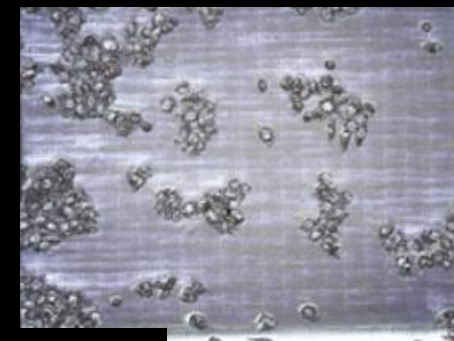
MDA-468



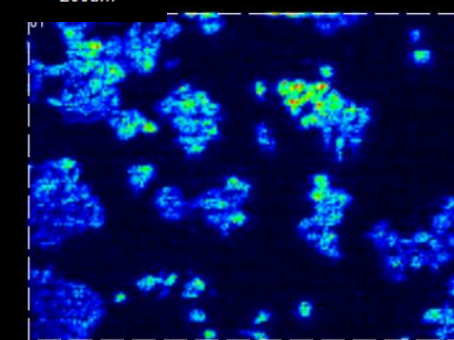
200um



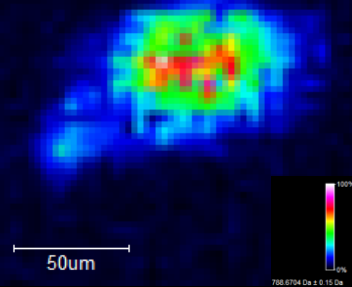
MCF-7



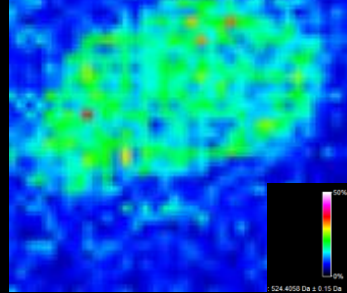
200um



PC 36:1

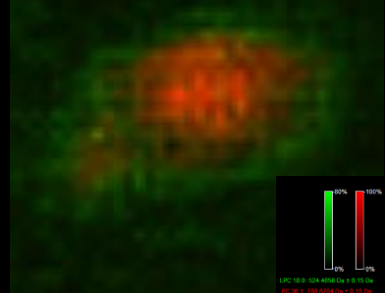


LPC 18:0



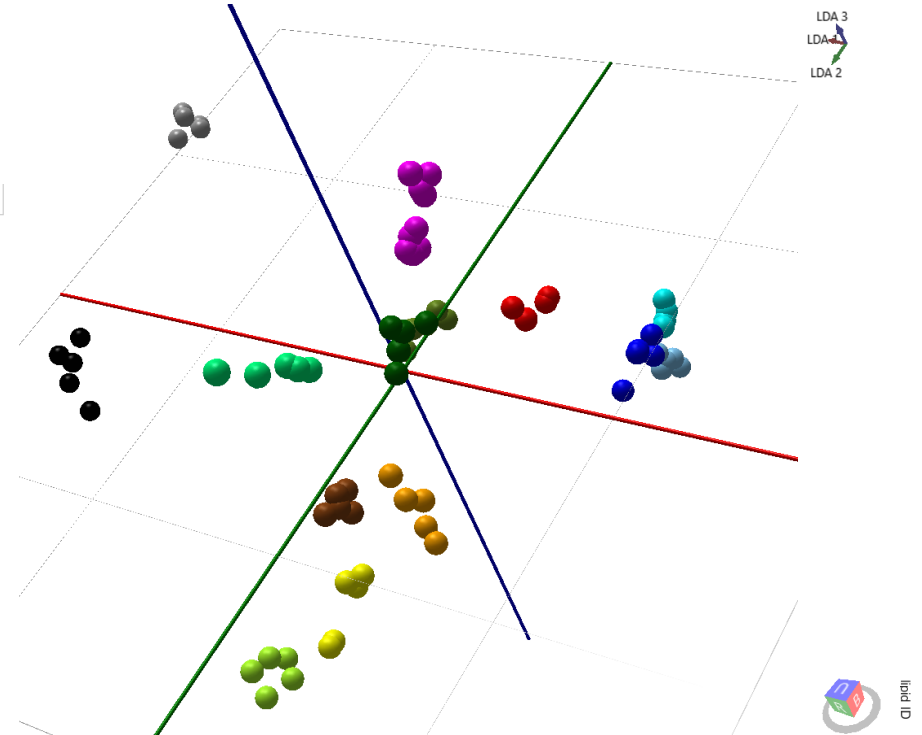
PC 36:1

LPC 18:0



# Recognition model

## Lipid ID's



Validation Type	20% out
Model type	Lda
Number of Pos dimensions	7
Number of Lda dimensions	7
Outlier Type	None

Group result:

Group	Number of spectra	Number of passes	Number of failures	Number of outliers	Correct Classification Rate	
					Excluding outliers	Including outliers
Total	75	71	4	0	94.67%	94.67%

Confusion matrix:

	cal 120 pos	efm 19 pos	hcc 1937 pos	hcc 1954 pos	hcc1143 pos	hdqp1 pos	hs 578t pos	jimt-1 pos	mcf 10a pos	mcf 7 pos	mda 231 pos	mda 436 pos	mda 453 pos	mda 468 pos	Total
cal 120 pos	5	0	0	0	0	0	0	0	0	0	0	0	0	0	5
efm 19 pos	0	5	0	0	0	0	0	0	0	0	0	0	0	0	5
hcc 1937 pos	0	0	5	0	0	0	0	0	0	0	0	0	0	0	5
hcc 1954 pos	0	0	0	5	0	0	0	0	0	0	0	0	0	0	5
hcc1143 pos	0	0	0	0	5	0	0	0	0	0	0	0	0	0	5
hdqp1 pos	0	0	0	0	0	5	0	0	0	0	0	0	0	0	5
hs 578t pos	0	0	0	0	0	0	10	0	0	0	0	0	0	0	10
jimt-1 pos	0	0	0	0	0	0	0	5	0	0	0	0	0	0	5
mcf 10a pos	0	0	0	0	0	0	0	0	4	1	0	0	0	0	5
mcf 7 pos	0	0	0	0	0	0	0	0	3	2	0	0	0	0	5
mda 231 pos	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5
mda 436 pos	0	0	0	0	0	0	0	0	0	0	0	5	0	0	5
mda 453 pos	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5
mda 468 pos	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5
Total	5	5	5	5	5	5	10	5	7	3	5	5	5	5	75

