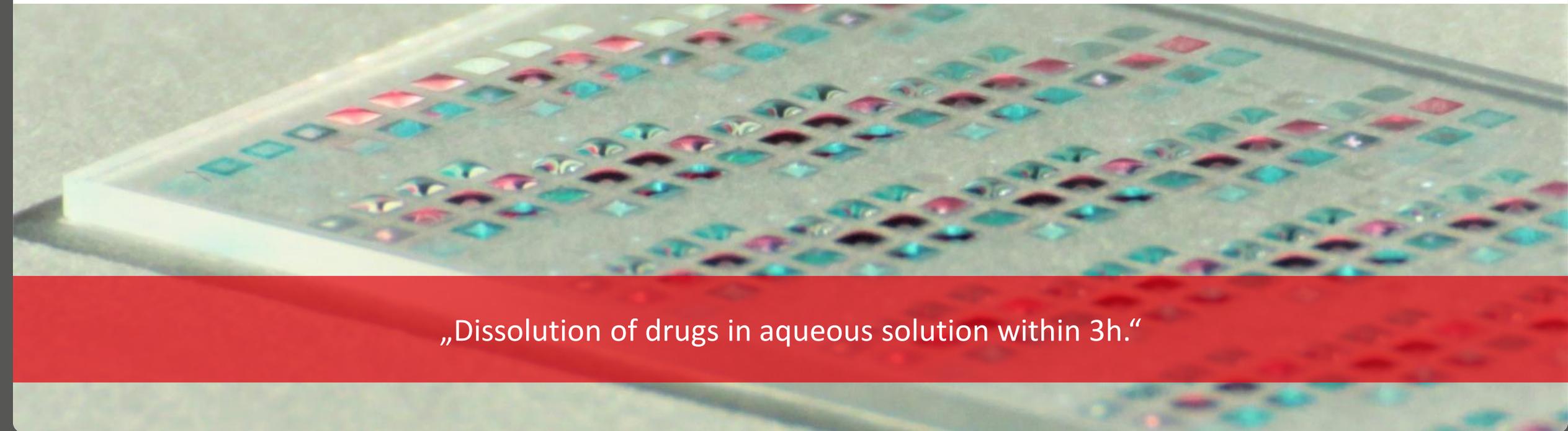


# Drug dissolution on Droplet Microarray



„Dissolution of drugs in aqueous solution within 3h.“

# Protocol Dissolution of drugs on DMA after drying

## Material:

DMA (80 spots)  
Stock solution of drug: 4mM in DMSO  
PBS  
Pipette P2.5, P20 and P200  
Petri dishes, filter pads  
Light-protected chamber with silica gel for drying  
Nanodrop

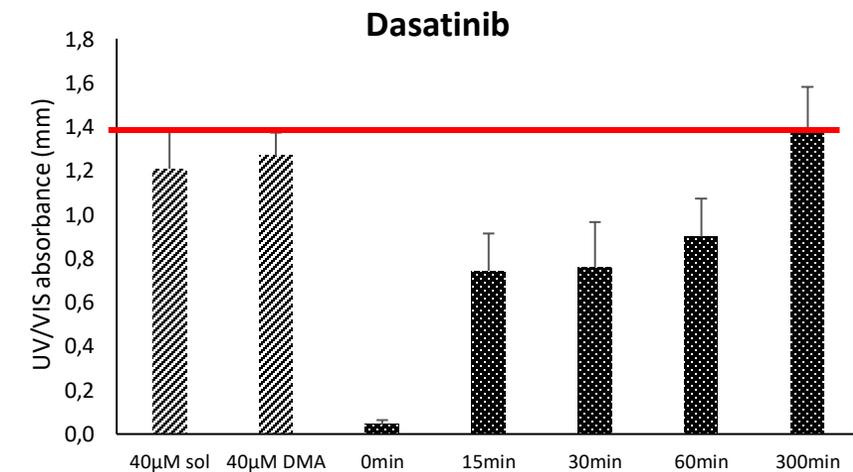
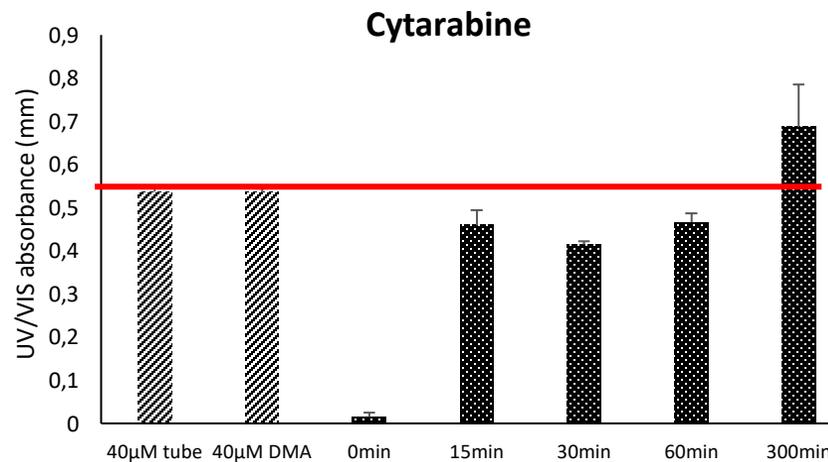
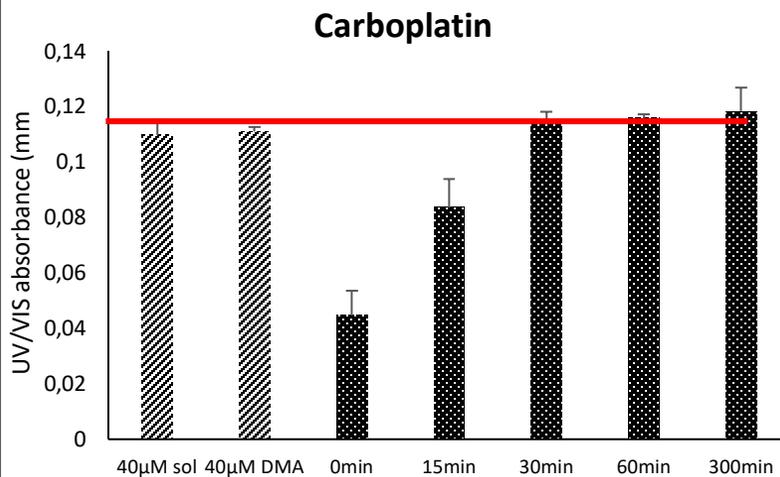
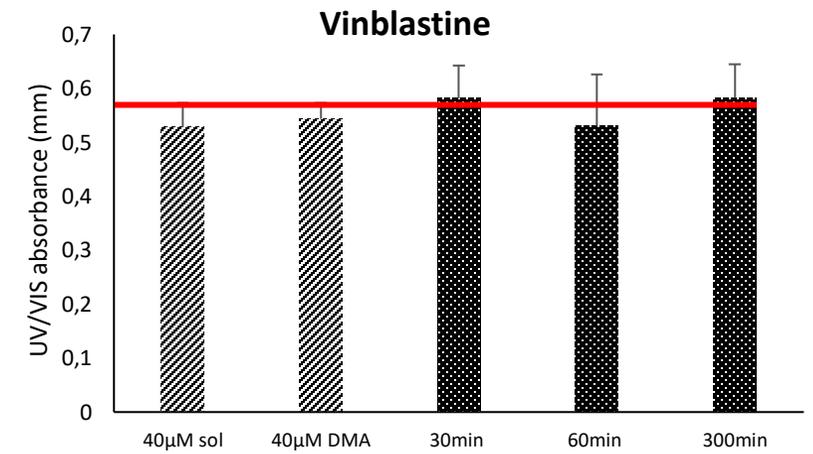
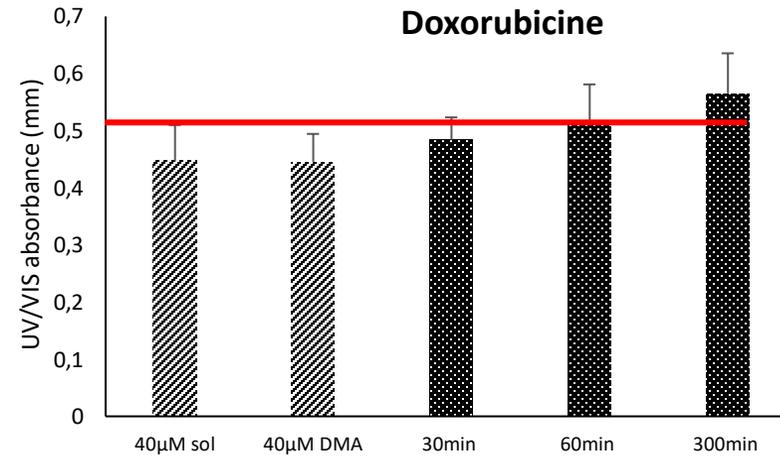
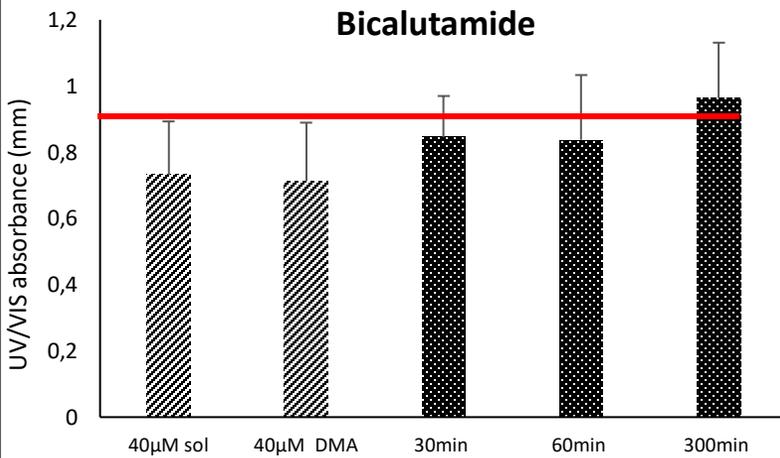
## Day1:

100nL of a 4mM Stock solution (dissolved in DMSO) were dispensed on DMA with 80 spots with I-DOT-One or I-DOT Mini  
5 repetitions were dispensed for each compound  
DMA was dried overnight in a light protected chamber

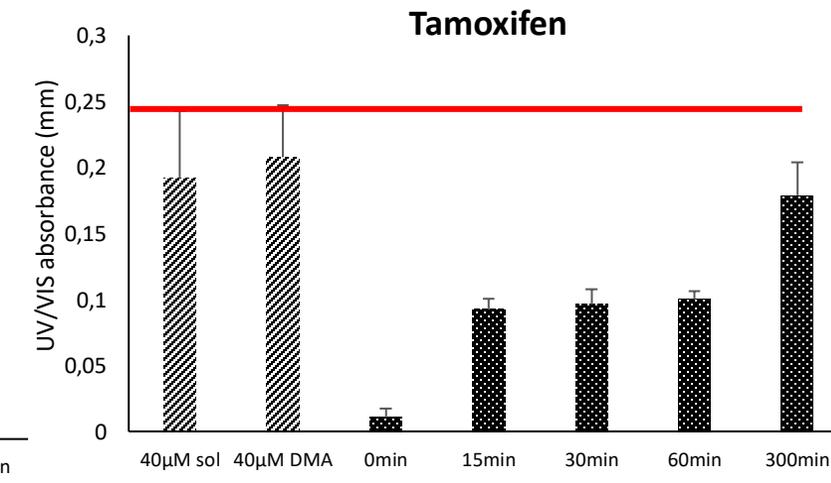
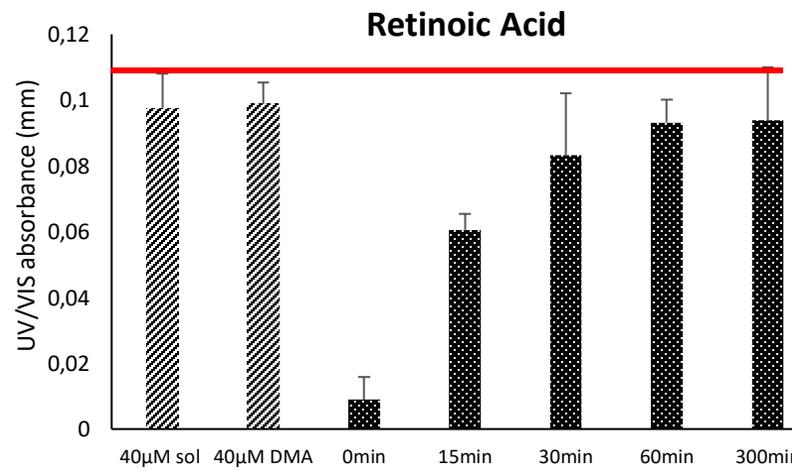
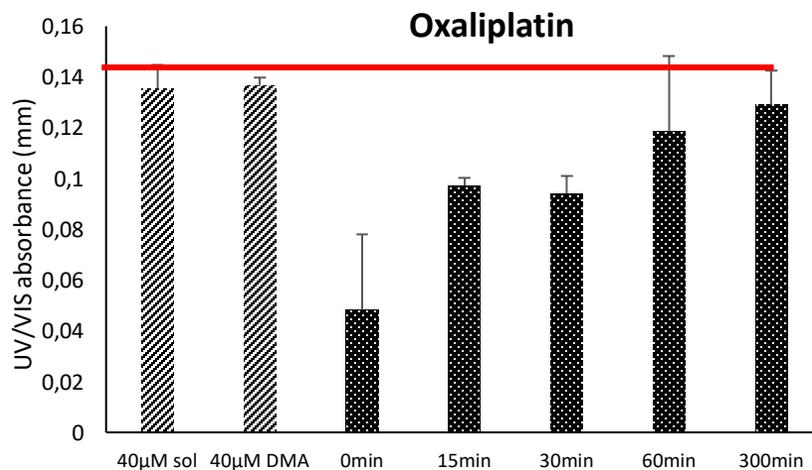
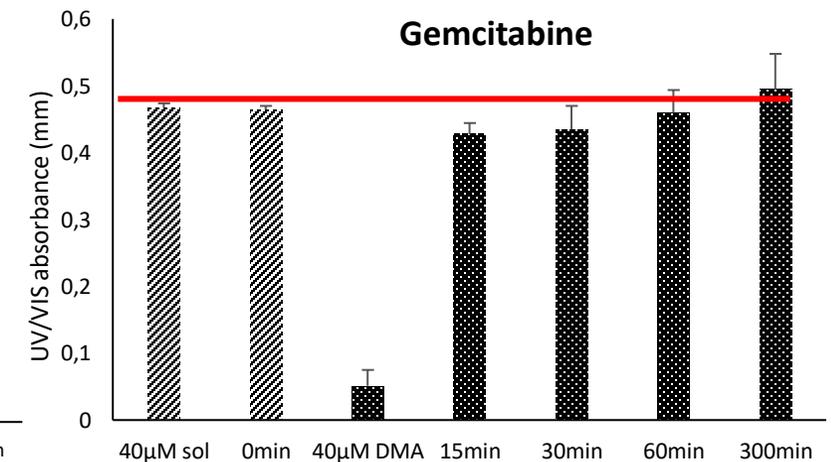
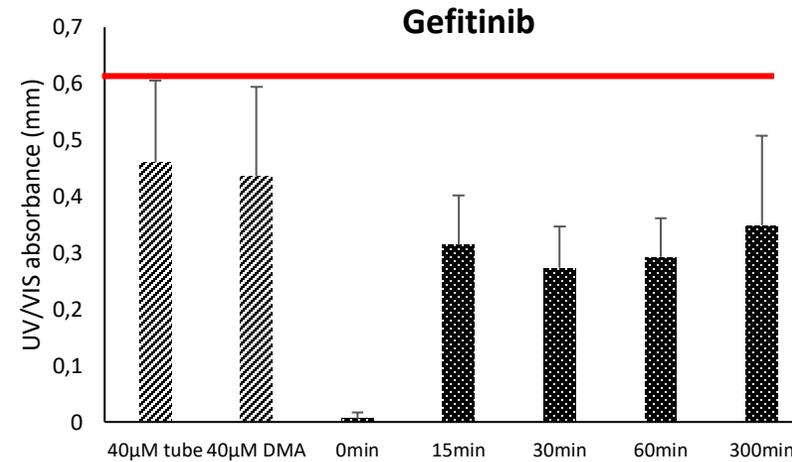
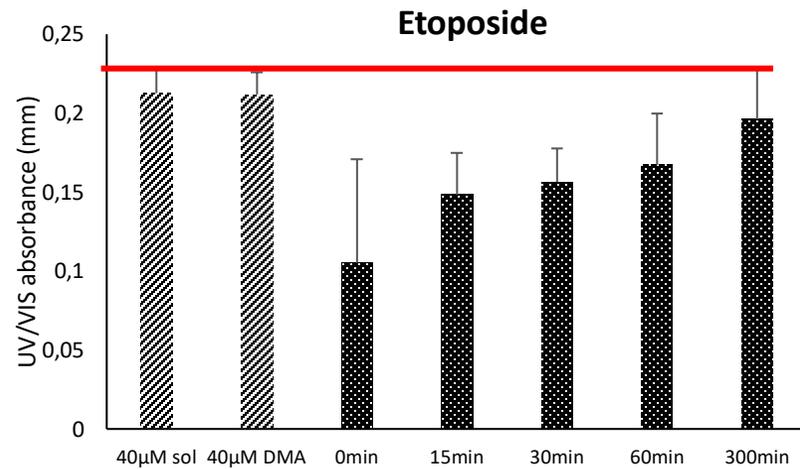
## Day2:

40 $\mu$ M dilutions of all compounds were prepared as control/standard  
10 $\mu$ L of PBS was added on each spot with a P20 24h after drying and incubated in a humidifying chamber (with humidifying pad in the lid and 10mL humidifying buffer in the lower part) at RT for different time points (0 min, 15 min, 30 min, 60 min, 300 min):  
The entire UV/VIS spectrum of 40 $\mu$ M solution/control was measured with the Nanodrop  
T=0: 10  $\mu$ L PBS were added on to the spot and the sample was removed immediately to measure UV/VIS (work was performed close to the Nanodrop)  
The procedure was repeated for the remaining time points  
T=15: 5 samples were measured after 15min  
T=30: 5 samples were measured after Sample was measured after 30min  
T=60: 5 samples were measured after 1h  
T=300: 5 samples were measured after 5h  
The humidifying chamber was closed immediately after each removal of the samples from the DMA to avoid evaporation.

# Dissolution of 12 drug library on DMA



# Dissolution of 12 drug library on DMA



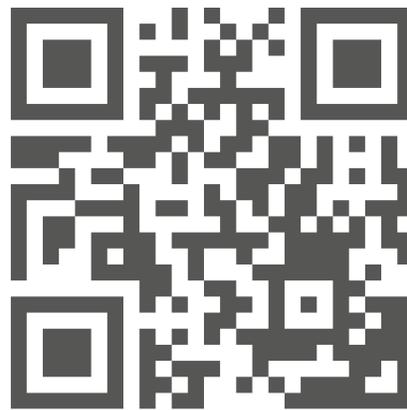
# Quantification of Drug Dissolution

compound	0 min	15 min	30 min	60 min	300 min
Bicalutamide	X	X	100%	100%	100%
Doxorubicin	X	X	100%	100%	100%
Carboplatin	41%	76%	100%	100%	100%
Cytarabine	2,6%	85%	77%	86%	100%
Dasatinib	3,5%	61%	62%	74%	100%
Etoposide	8,7%	12,20%	13,9%	74%	100%
Gefitinib	1,3%	68%	59%	63%	75%
Gemcitabine	12,3%	92%	100%	100%	100%
Oxaliplatin	36%	72%	69%	100%	100%
Retinoic Acid	9%	62%	85%	96%	100%
Tamoxifen	6%	48%	50%	52%	93%
Vinblastine	X	X	100%	100%	100%

x= time point not measured



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