

A.

tau monomer +  $\alpha$ -syn monomer

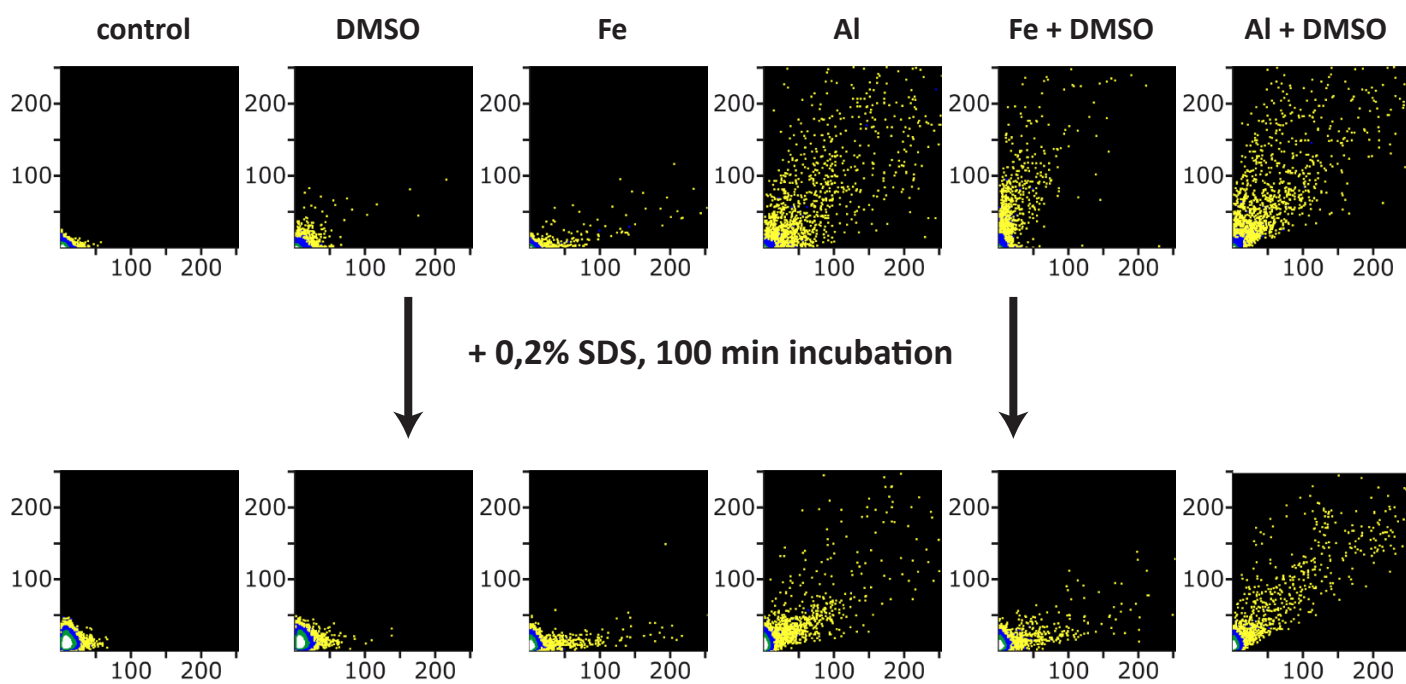
		$T_0$ (before SDS)		$T_{100}$ (after SDS)	
		tau <sup>488</sup>	$\alpha$ -syn <sup>647</sup>	tau <sup>488</sup>	$\alpha$ -syn <sup>647</sup>
<b>control</b>	mTau	-	-	-	-
	pTau	-	-	-	-
<b>DMSO</b>	mTau	15	12	-	-
	pTau	11	8	-	-
<b>Fe<sup>3+</sup></b>	mTau	39	3	54	25
	pTau	53	10	77	59
<b>Al<sup>3+</sup></b>	mTau	137	80	92	82
	pTau	131	115	98	113
<b>Fe<sup>3+</sup> + DMSO</b>	mTau	45	29	81	56
	pTau	67	44	94	94
<b>Al<sup>3+</sup> + DMSO</b>	mTau	132	88	94	120
	pTau	127	104	110	106

B.

tau oligomer +  $\alpha$ -syn monomer

		$T_0$ (before SDS)		$T_{100}$ (after SDS)	
		tau <sup>488</sup>	$\alpha$ -syn <sup>647</sup>	tau <sup>488</sup>	$\alpha$ -syn <sup>647</sup>
<b>control</b>	mTau	-	-	-	-
	pTau	-	-	-	-
<b>DMSO</b>	mTau	27	5	-	-
	pTau	20	2	-	-
<b>Fe<sup>3+</sup></b>	mTau	175	3	81	3
	pTau	197	14	87	17
<b>Al<sup>3+</sup></b>	mTau	154	35	92	37
	pTau	151	73	88	116
<b>Fe<sup>3+</sup> + DMSO</b>	mTau	206	29	111	47
	pTau	187	33	110	54
<b>Al<sup>3+</sup> + DMSO</b>	mTau	155	65	85	64
	pTau	151	83	85	109

C.



**supp. figure 2:** FIDA (fluorescence intensity distribution analysis) of SDS-stable mixed tau<sup>488</sup> and  $\alpha$ -syn<sup>647</sup> oligomers. A. Coaggregation of tau and  $\alpha$ -syn in presence of different aggregation inducers. Oligomer size is presented as monomers per oligomer for tau<sup>488</sup> and  $\alpha$ -syn<sup>647</sup> before ( $T_0$ ) and after ( $T_{100}$ ) incubation with 0.2% SDS for 100 minutes. Oligomer size was calculated by FIDA analysis (assuming no quenching-effects in oligomers) if the presence of oligomers was indicated by cross-correlation data. B. Coaggregation of pre-formed tau<sup>488</sup> oligomers and  $\alpha$ -syn<sup>647</sup> monomers. Oligomer size is presented as monomers per oligomer for tau and  $\alpha$ -syn<sup>647</sup>. C. SIFT-2D histograms depicting the presence of mixed pTau<sup>488</sup> and  $\alpha$ -syn<sup>647</sup> oligomers before and after incubation with 0.2% SDS for 100 minutes.