

Supplementary data

Figure S1: Optical images of matrix spots recorded after matrix deposition using a micro-spotting piezoelectric device on a rat brain tissue section. (a) conventional 2,5-DHB, (b) conventional 2,6-DHAP, and (c) liquid ionic matrix 2,5-DHB/3-AP (2,5-DHB/3-acetylpyridine).

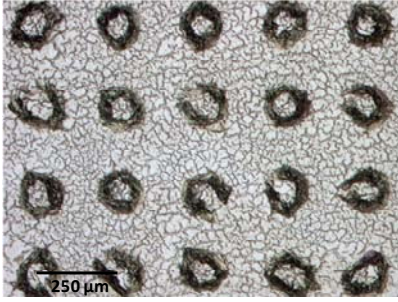
Figure S2: MS spectra acquired in the positive reflectron mode after deposition by micro-spotting of 2,6-DHAP and 2,5-DHB/3-AP on a rat brain tissue section. (a) Mass spectrum for 2,6-DHAP recorded just after the introduction of the target in the mass spectrometer, (b) mass spectrum for 2,6-DHAP recorded after 1 hour under high vacuum conditions, (c) mass spectrum for 2,5-DHB/3-AP recorded just after the introduction of the target in the mass spectrometer and (d) mass spectrum for 2,5-DHB/3-AP recorded after 2 days under high vacuum conditions.

Figure S3: Structure of the synthesized LIM. (a) 2,5-DHB/ANI (2,5-DHB/aniline), (b) 2,5-DHB/DANI (2,5-DHB/N,N-dimethylaniline), (c) 2,5-DHB/DEANI (2,5-DHB/N,N-diethylaniline), (d) 2,5-DHB/Pyr (2,5-DHB/pyridine), and (e) 2,5-DHB/3-AP (2,5-DHB/3-acetylpyridine).

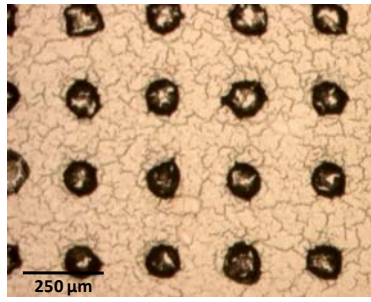
Figure S4: MS spectra acquired in the negative reflectron mode from rat brain tissue sections after the deposition using micro-spotting of (a) 2,5-DHB/ANI, (b) 2,5-DHB/DANI, (c) 2,5-DHB/DEANI, (d) 2,5-DHB/Pyr, and (e) 2,5-DHB/3-AP.

Figure S5: MALDI molecular images recorded in negative reflectron mode from a rat brain tissue section after micro-spotting of the LIM 2,5-DHB/3-AP of two lipids presenting a complementary distribution. First lipid presents a measured m/z of 806.7 and corresponds to the sulfatide (ST) {36:1} whereas a second lipid with an m/z 857.7 corresponds to the phosphoinositol (PI) {36:4}.

(a) 2,5-DHB deposition



(b) 2,6-DHAP deposition



(c) 2,5-DHB/3-AP deposition

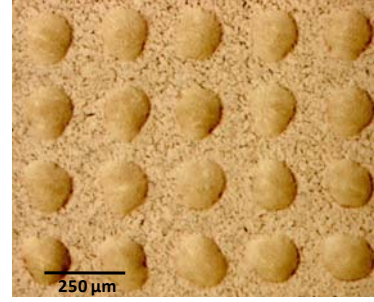


Figure S1

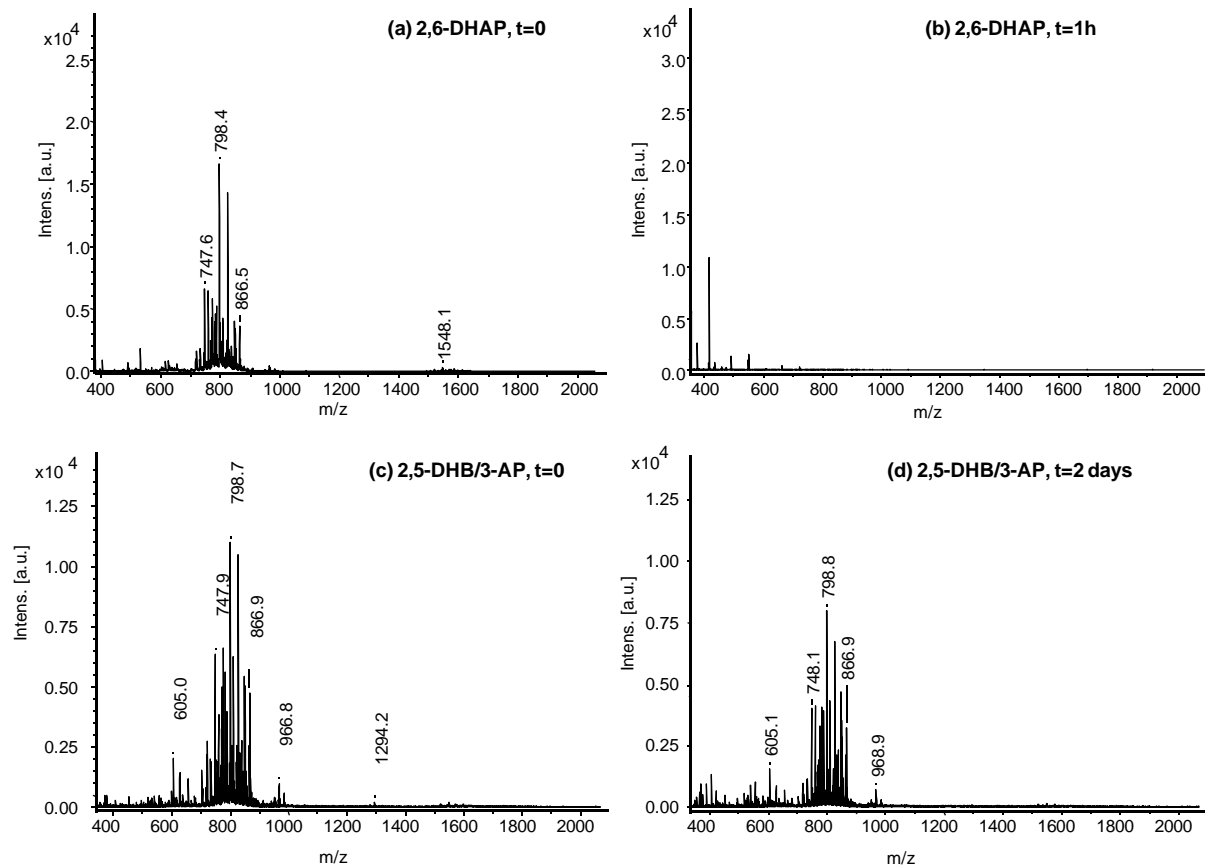
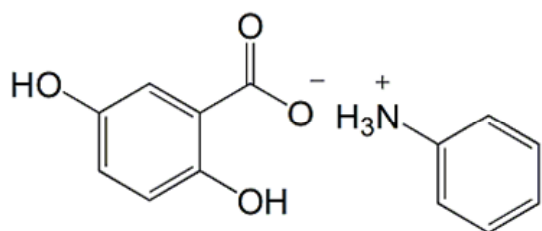
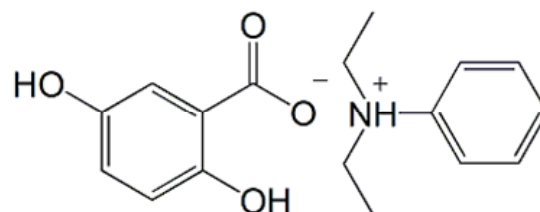


Figure S2

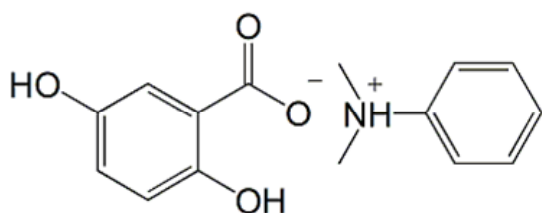
(a) 2,5-DHB/ANI



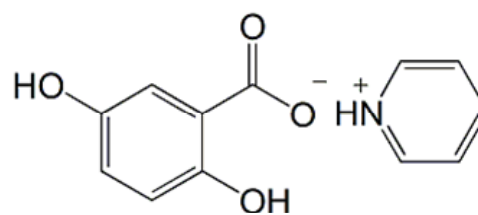
(b) 2,5-DHB/DANI



(c) 2,5-DHB/DEANI



(d) 2,5-DHB/Pyr



(e) 2,5-DHB/3-AP

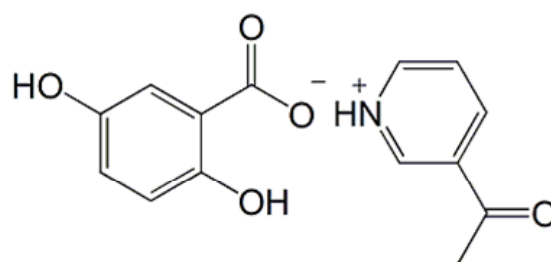


Figure S3

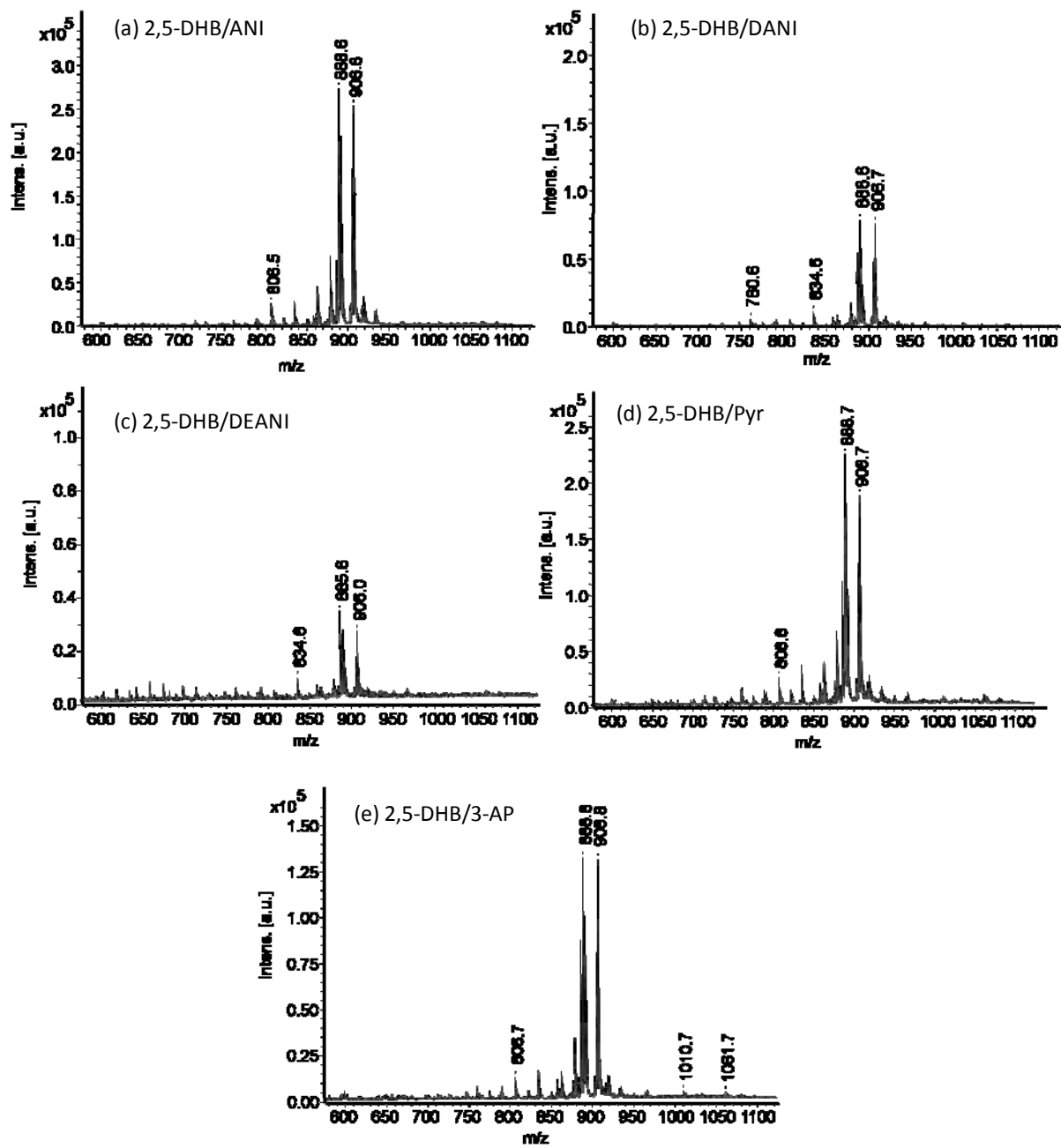


Figure S4

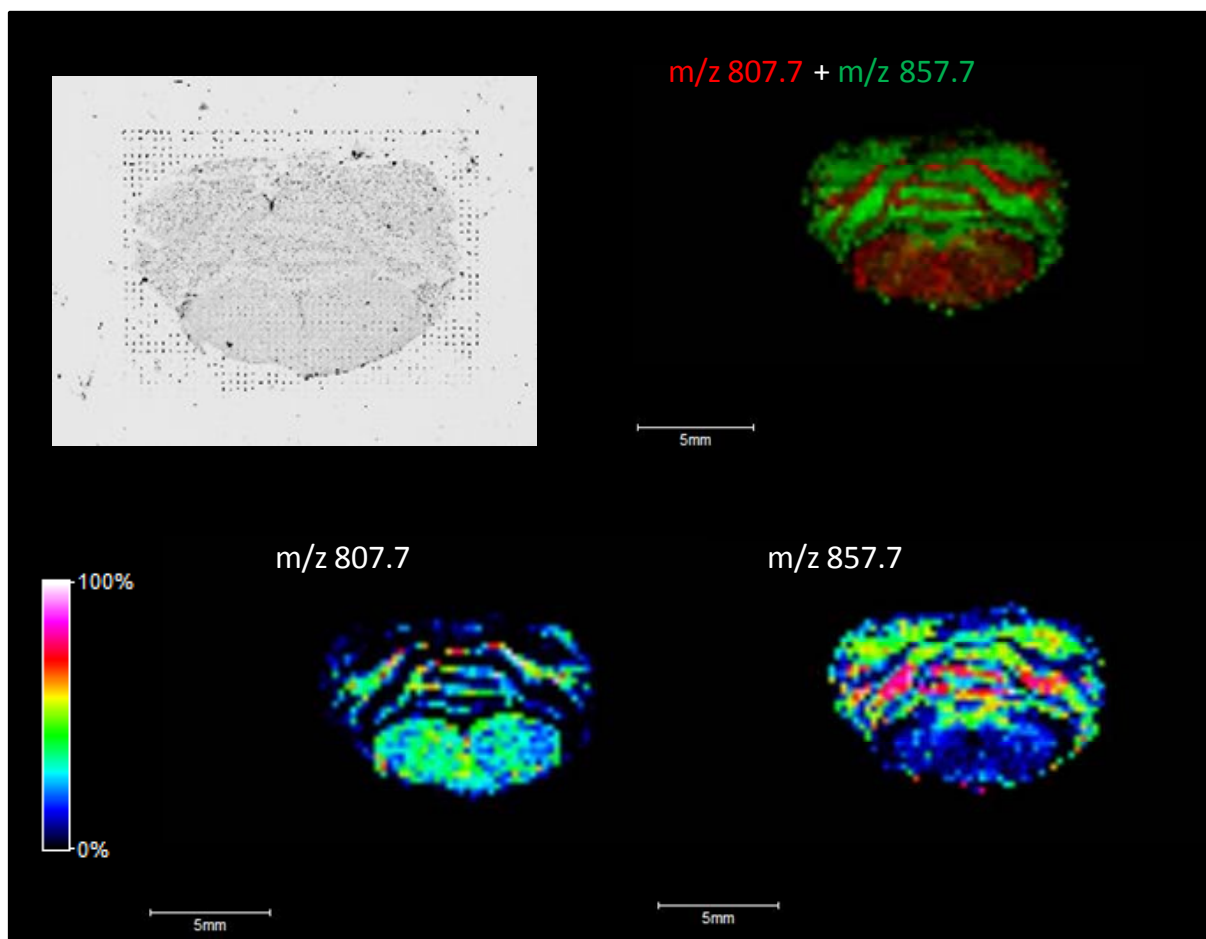


Figure S5