Localization of Sphingomyelin in Cholesterol Domains by Imaging Mass Spectrometry

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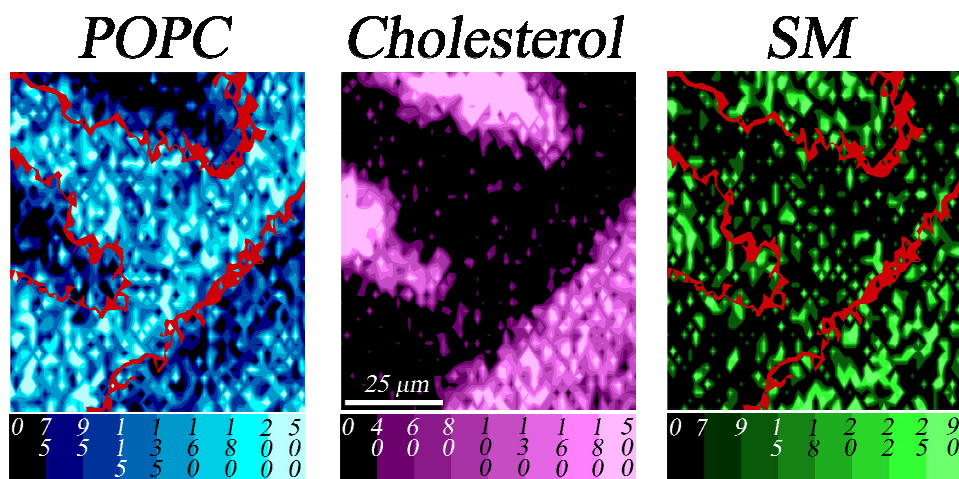University Park, Pennsylvania 16802

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Figure 1: Lipid molecular ion intensity mappings for a monolayer of the 30/47/23 POPC/18:0 sphingomyelin/cholesterol mixture. POPC signal ([M+H]$^+$ at m/z 760 and [C$_8$H$_{19}$NPO$_4$]$^+$ at m/z 224) is represented in blue, cholesterol signal ([M-H]$^+$ at m/z 385 and [M-OH]$^+$ at m/z 369) is represented in pink, and sphingomyelin signal ([M+H]$^+$ at m/z 731 and [C$_{17}$H$_{30}$ON]$^+$ at m/z 264) is represented in green. The ion intensity scales are in counts/nC and the scale bar (25 μm) with the cholesterol ion map applies for each. The outlines of the cholesterol domains (red) in the POPC and sphingomyelin images are shown for emphasis.