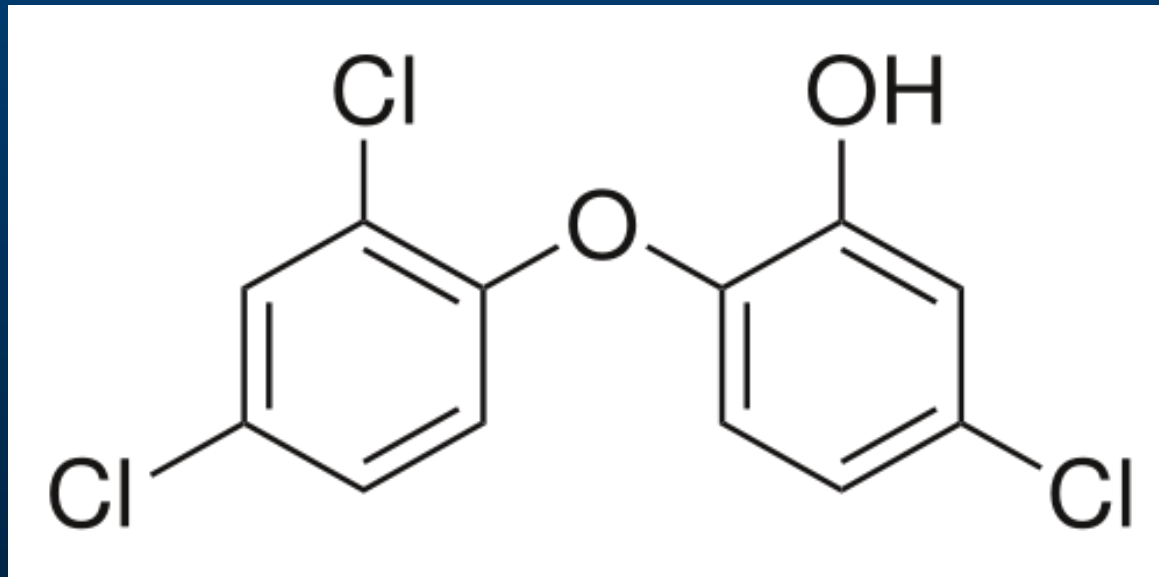




The effect of triclosan on the permeability of mitochondrial membranes and lecithin liposomes

Mikhail Dubinin

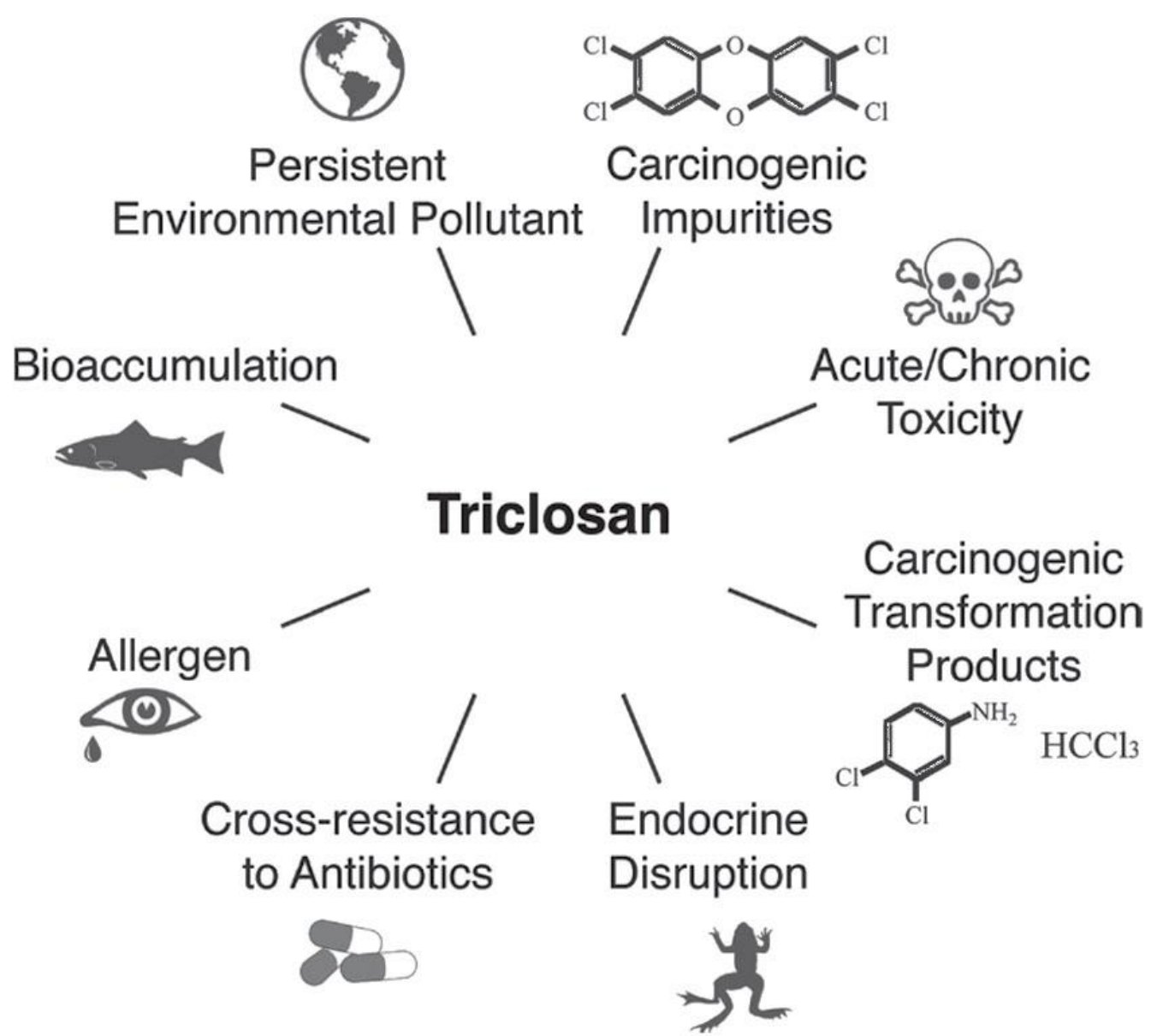
Mari State University

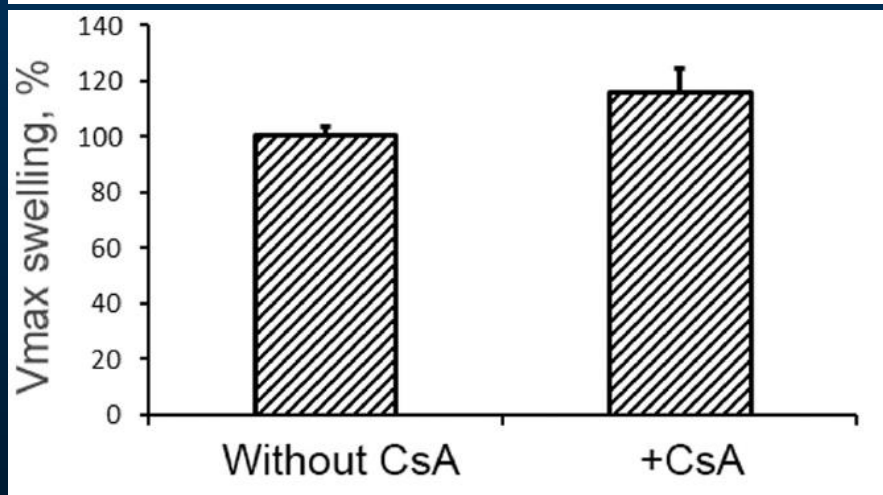
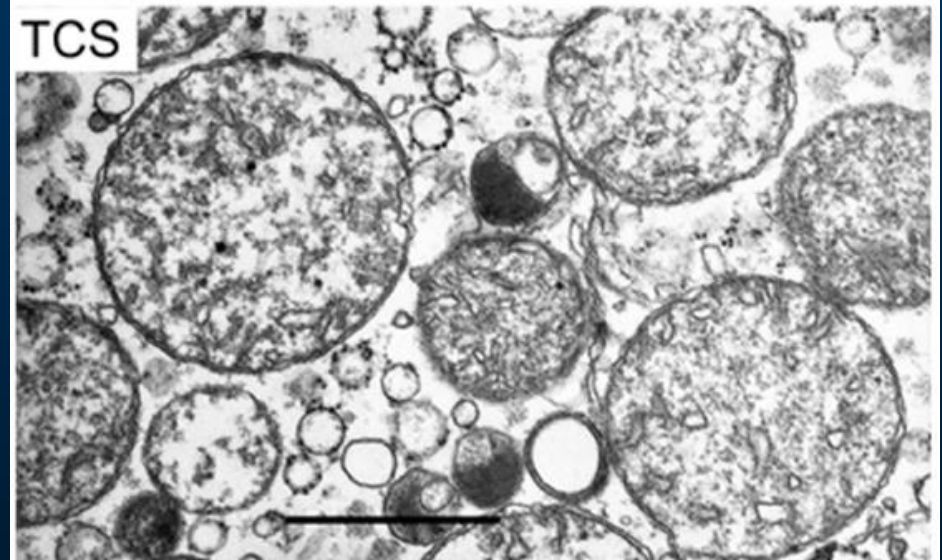
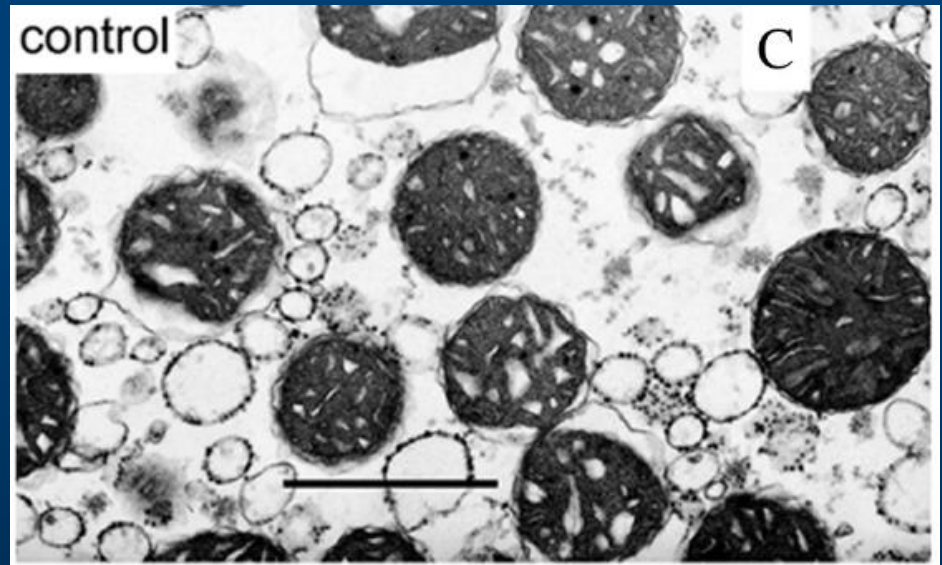
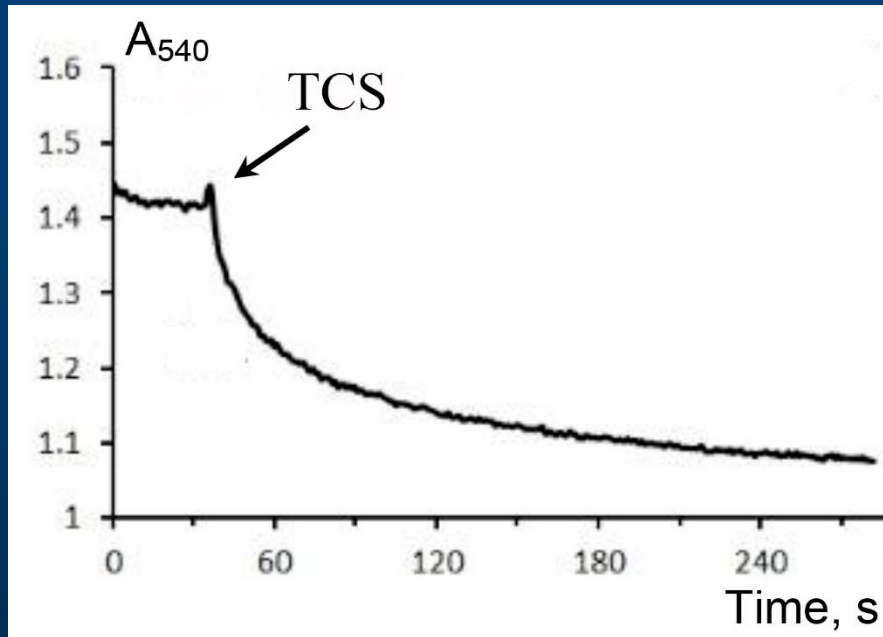


The chemical structure of triclosan

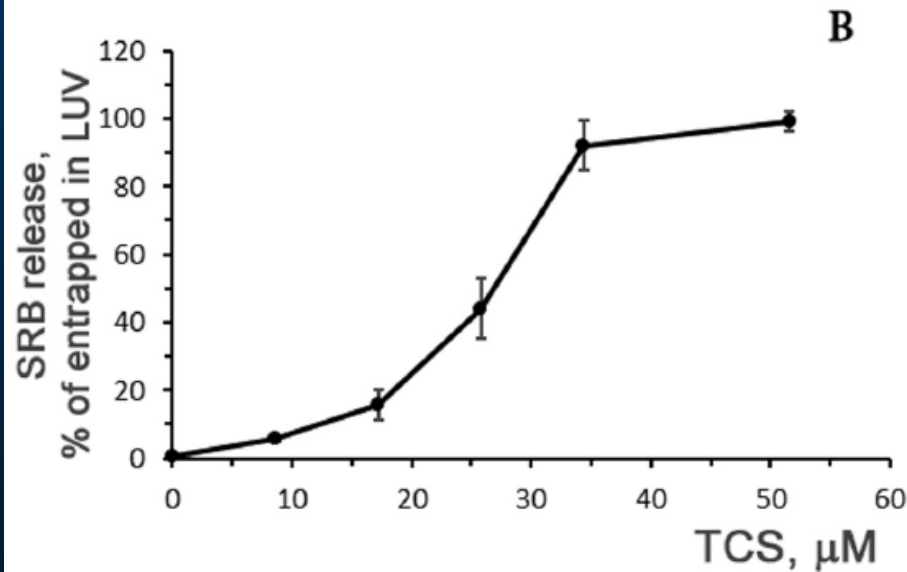
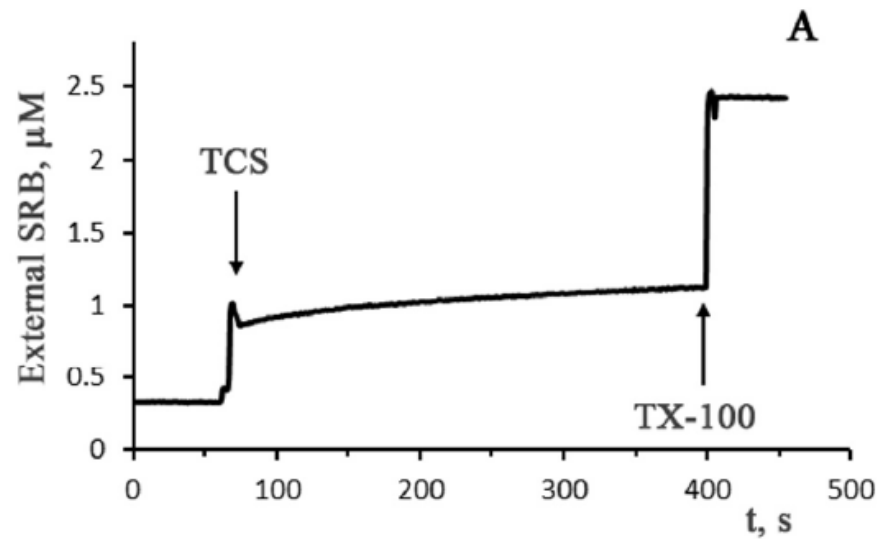
Sources of triclosan



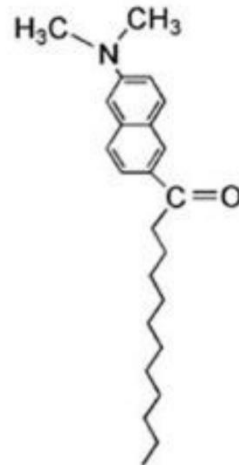
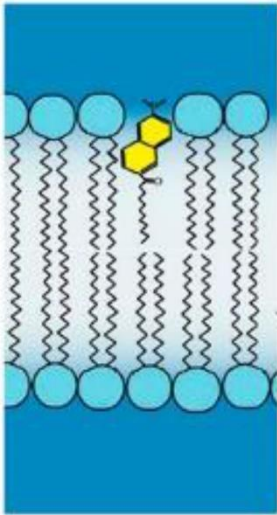




**TCS induces CsA-insensitive
mitochondrial swelling**



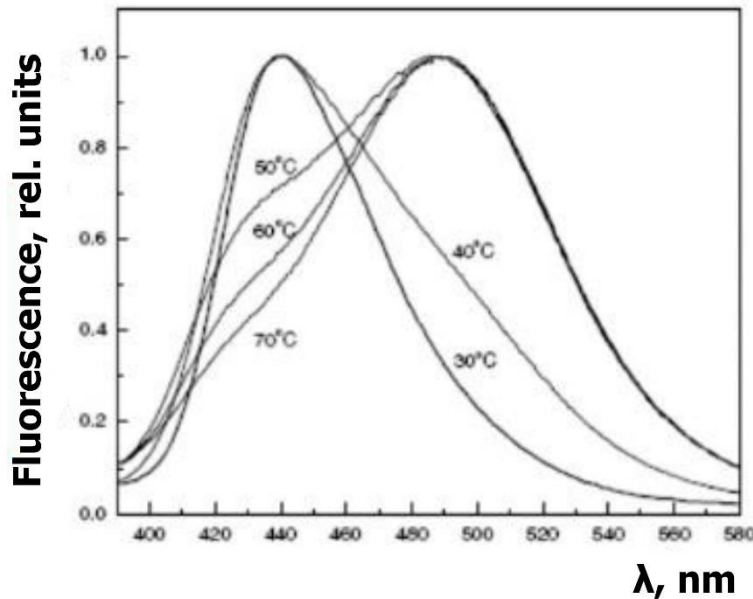
Effect of TCS on the permeability of lecithin liposomes

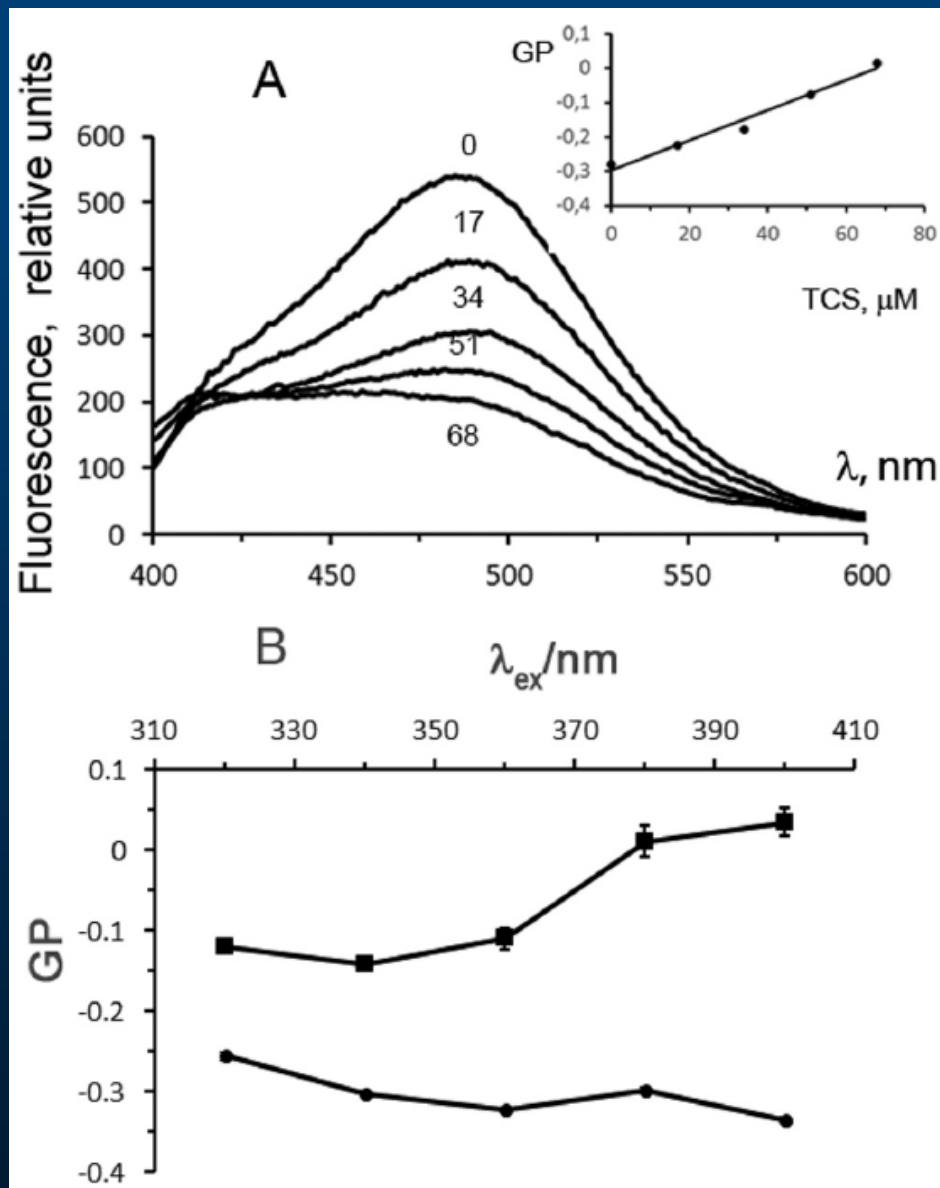


Laurdan (6-Dodecanoyl-2-Dimethylaminonaphthalene)

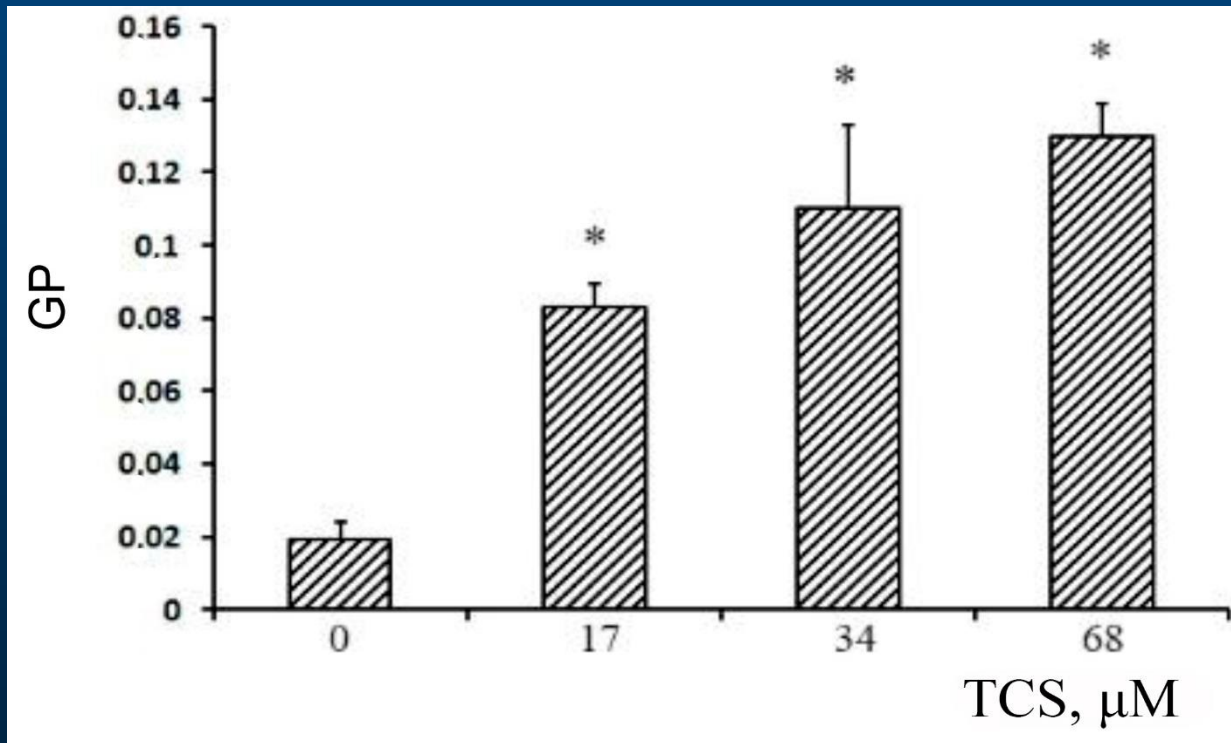
$$GP = \frac{I_B - I_R}{I_B + I_R}$$

where I_B and I_R are the emission intensities at 440 and 490 nm respectively





Effect of TCS on laurdan GP in
egg-PC liposomes



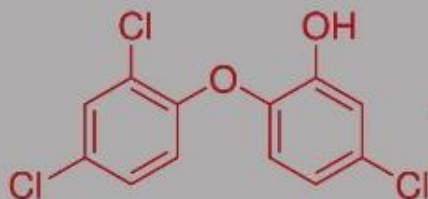
Dependence of the GP laurdan in the membrane of rat liver mitochondria on the concentration of TCS



Liposomes



Membrane permeabilization and leakage of sulforhodamine B from liposomes
An indication of phase heterogeneity in the lecithin/triclosan system revealed with laurdan



Triclosan



Mitochondria



Cyclosporin A-insensitive swelling of mitochondria
Release of cytochrome c from the organelles