Graphic Abstract

Choline

Trimethylamine

Trimethylamine-*N*-oxide

Gut microbiome

Hepatic Flavin-Monooxidase

Atherosclerotic plaque progression

Increase of pro-inflammatory monocytes (CD14++CD16+, Ly6c^{high})

Platelet hyperreactivity

Ischemic Stroke

Myocardial Infarction