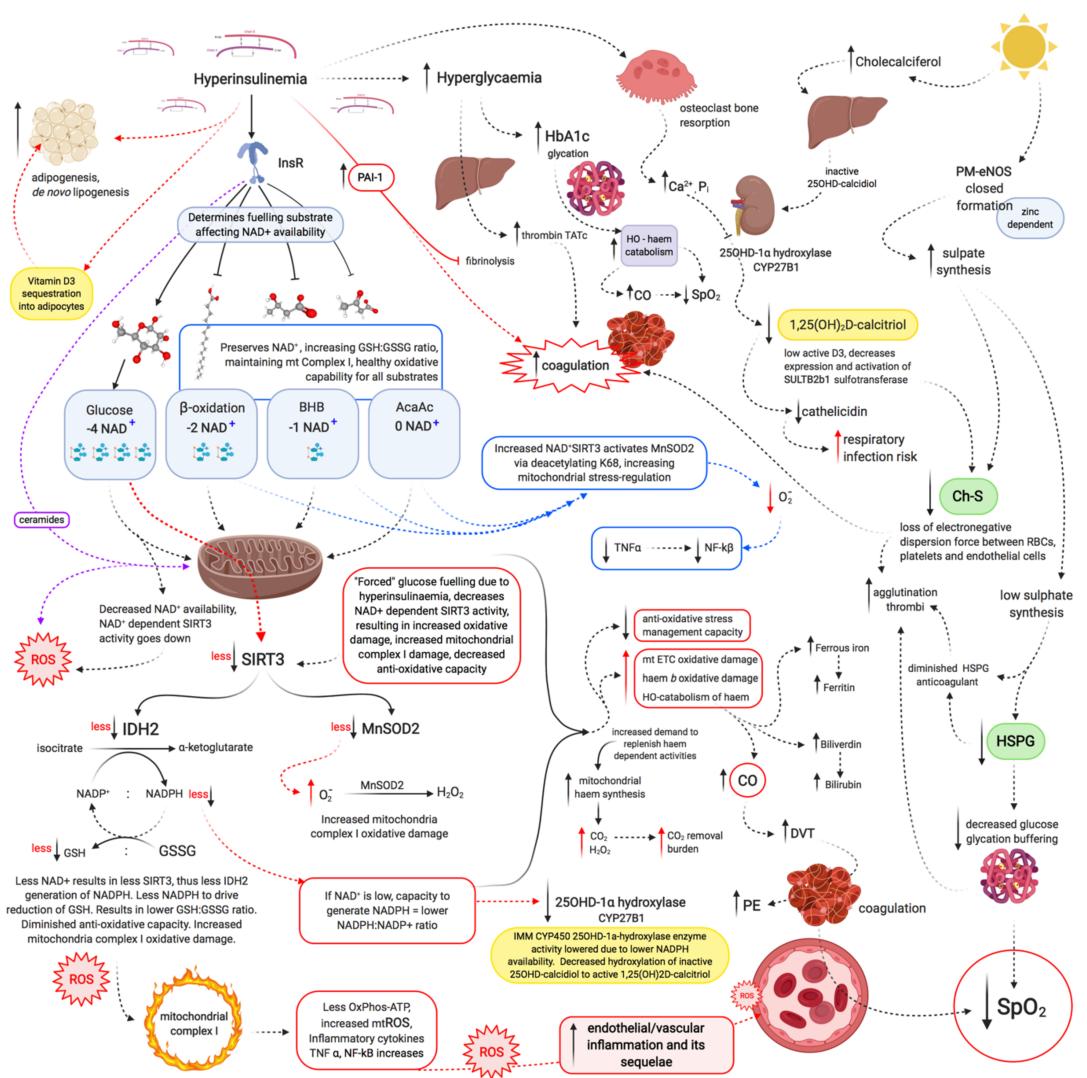


## APPENDIX A



**APPENDIX A: In-depth schematic representation of the role of hyperinsulinaemia in endothelial/vascular inflammation, red blood cell (RBC) and platelet coagulation, sequestration and/or inhibition of vitamin D activation and its downstream consequences, such as decreased cholesterol-sulphate (Ch-S), heparan-sulphate proteoglycans (HS) and cathelicidin synthesis. Calcium ( $Ca^{2+}$ ), carbon dioxide ( $CO_2$ ), carbon monoxide (CO), deep vein thrombosis (DVT), cytochrome P450 Family 27 Subfamily B Member 1 (CYP27B1), electron transport chain (ETC), endothelial nitric oxide synthase (eNOS), reduced glutathione (GSH), oxidised glutathione (GSSG), haemoglobin A1c (HbA1c), haem-oxygenase (HO), hydrogen peroxide ( $H_2O_2$ ), isocitrate dehydrogenase 2 (Idh2), insulin receptor (InsR), lysine 69 (K68), manganese superoxide dismutase 2 (MnSOD2), mitochondrial (mt), nicotinamide adenine dinucleotide (NAD<sup>+</sup>), nicotinamide adenine dinucleotide phosphate (NADP), Nuclear Factor kappa-light-chain-enhancer of activated B cells (NF- $\kappa$ B), phosphate ( $P_i$ ), plasma membrane (PM), plasminogen activator inhibitor type 1 (PAI-1), pulmonary embolism (PE), reactive oxygen species (ROS), oxygen saturation ( $SpO_2$ ), sirtuin 3 (SIRT3), sulfotransferase 2B1b (SULT2B1b), superoxide ( $O_2^-$ ), thrombin-antithrombin complex (TATc), Tumour necrosis factor alpha (TNF- $\alpha$ ), Type 2 Diabetes Mellitus (T2DM).**