

Supplementary Table S1. Summary of proteomic studies related to stress in bovine.

Condition	Sample	Technique	Main identified proteins	Ref
Bovine ketosis	Plasma	2DE MALDI-TOF	Haptoglobin AGP α -chymotrypsin Apolipoprotein-AIV α -2-HS-glycoprotein	16, 17
Bovine ketosis	Plasma	iTRAQ	Cathelicidin Glutathione peroxidase Factor V α 2-antiplasmin Prothrombin	17
Bovine ketosis	Liver	2DE MALDI-TOF	Energy production, Carbohydrate metabolism, Fatty acid metabolism, Amino acid metabolism Nucleotide metabolism Oxidative stress Cell structure	19
Bovine ketosis	Liver	iTRAQ	Krebs cycle regulatory enzymes Gluconeogenesis regulatory enzymes	19
Feed restriction in cows	Hypothalamus	2DE MALDI-TOF-TOF	Energy metabolism Nucleotide metabolism Cellular stress	12
Feed restriction in cows	Liver	2DE MALDI- TOF MALDI-TOF-TOF	Beta-oxidation Carbohydrate metabolism Protein metabolism Electron transport Calcium homeostasis Cytoskeleton structure Oxidative stress	20
Feed restriction in cows	Skeletal muscle	2DE MALDI- TOF	Glycogen metabolism Krebs cycle Glycolysis Fatty acid degradation Lactate production	22
Fed restriction in cows	Pituitary gland	2DE MALDI-TOF-TOF	Pituitary hormone synthesis and secretion machinery Oxidative metabolism	23
NEB	Milk	Dimethyl- labelling LC-MS/MS	Acute phase proteins Stomatin	24
Lactation	Mammary gland	25: DIGE MALDI-TOF 26: 2DE + mass spectrometry	Lipid synthesis	25,26
Environmental	Serum	DIGE	Paraoxonase-1	27

condition		MALDI-TOF	Glutathione peroxidase 3, Complement system, α -2-HS-glycoprotein AMBIP precursor	
Stress and viral infection	Serum	2DE MALDI-TOF	Serum amyloid A, Apolipoprotein CIII Apolipoprotein A1 Haptoglobin	30
Stress and viral infection	Bronchi- alveolar fluid	2DE LC-MS/MS	Superoxide dismutase (SOD) GPx α -2-HS-glycoprotein, Fibrinogen Annexin	31