**Table S3**. Most significant pathways for each group comparison

|  |  |  |
| --- | --- | --- |
| Group Comparison | Pathway | Group with increased representation |
| Control | PPI | n/a | n/a |
| Hp Gastritis | Homoserine dehydrogenaseShikimate dehydrogenaseAlcohol dehydrogenase(R,R)−butanediol dehydrogenase / diacetyl reductaseGlycerol dehydrogenaseD−arabinitol 4−dehydrogenaseL−iditol 2−dehydrogenaseMannitol−1−phosphate 5−dehydrogenaseMyo−inositol 2−dehydrogenaseUDPglucose 6−dehydrogenaseHistidinol dehydrogenase | Hp GastritisHp GastritisControlControlControlControlControlControlControlControlControl |
| Hp Atrophy | Ketol−acid reductoisomeraseGlycolate oxidaseFormate dehydrogenase, beta subunitAlanine dehydrogenaseUDPglucose 6−dehydrogenaseMalate dehydrogenase, (oxaloacetate−decarboxylating)Tagaturonate reductaseSuccinate dehydrogenase flavoprotein subunit, iron−sulfur subunit, cytochrome b556 subunitGlutamate synthase (NADPH/NADH) small chainL-aspartate oxidase | Hp AtrophyHp AtrophyHp AtrophyHp AtrophyControlControlControlControlControlControl |
| Autoimmune Atrophy | Hydroxymethylglutaryl−CoA reductaseAlpha−glycerophosphate oxidasePyruvate oxidasePhenylalanine dehydrogenaseTrimethylamine dehydrogenaseRibonucleoside−diphosphate reductase beta chainArsenate reductaseBetaine−homocysteine S−methyltransferaseL−aspartate oxidase5−methyltetrahydrofolate−−homocysteine methyltransferase | AutoimmuneAutoimmuneAutoimmuneAutoimmuneAutoimmuneAutoimmuneAutoimmuneAutoimmuneControlControl |
| PPI | Hp Gastritis | Homoserine dehydrogenaseShikimate dehydrogenaseAlcohol dehydrogenase(R,R)−butanediol dehydrogenase / diacetyl reductaseGlycerol dehydrogenaseD−arabinitol 4−dehydrogenaseL−iditol 2−dehydrogenaseMannitol−1−phosphate 5−dehydrogenaseMyo−inositol 2−dehydrogenaseUDPglucose 6−dehydrogenaseHistidinol dehydrogenase | HP GastritisHP GastritisPPIPPIPPIPPIPPIPPIPPIPPIPPI |
| Hp Atrophy | Ketol−acid reductoisomeraseFormate dehydrogenase, beta subunitD−lactate dehydrogenase (cytochrome)Pyruvate ferredoxin oxidoreductase, alpha subunitAcetyl−CoA decarbonylase/synthase complex subunit epsilonFumarate reductase flavoprotein subunitUDPglucose 6−dehydrogenaseMalate dehydrogenase, (oxaloacetate−decarboxylating)Succinate dehydrogenase flavoprotein subunit, iron−sulfur subunit, cytochrome b556 subunitGlutamate synthase (NADPH/NADH) small chain3−isopropylmalate dehydrogenase | Hp AtrophyHp AtrophyHp AtrophyHp AtrophyHp AtrophyHp AtrophyPPIPPIPPIPPIPPI |
| Autoimmune Atrophy | Ketol−acid reductoisomerase D−lactate dehydrogenase (cytochrome)Formate dehydrogenase, beta subunitPyruvate ferredoxin oxidoreductase, alpha, beta, delta, gamma subunitsAcetyl−CoA decarbonylase/synthase complex subunit epsilonFumarate reductase flavoprotein subunitUDPglucose 6−dehydrogenaseMalate dehydrogenase (oxaloacetate−decarboxylating)3−isopropylmalate dehydrogenaseSuccinate dehydrogenase iron−sulfur subunit | AutoimmuneAutoimmuneAutoimmuneAutoimmuneAutoimmuneAutoimmunePPIPPIPPIPPI |
| Hp Gastritis | Hp Atrophy | Alcohol dehydrogenase, (NADP+)(R-R)-butanediol dehydrogenase / diacetyl reductaseGlycerol dehydrogenaseD−arabinitol 4−dehydrogenaseL−iditol 2−dehydrogenaseMyo−inositol 2−dehydrogenaseHistidinol dehydrogenaseGlyoxylate reductaseL−lactate dehydrogenaseGlycerate dehydrogenase | Hp AtrophyHp AtrophyHp AtrophyHp AtrophyHp AtrophyHp AtrophyHp AtrophyHp AtrophyHp AtrophyHp Gastritis |
| Autoimmune Atrophy | Alcohol dehydrogenase(R,R)−butanediol dehydrogenase / diacetyl reductaseGlycerol dehydrogenaseD−arabinitol 4−dehydrogenaseL−iditol 2−dehydrogenaseMannitol−1−phosphate 5−dehydrogenaseMyo−inositol 2−dehydrogenaseUDPglucose 6−dehydrogenaseHomoserine dehydrogenaseShikimate dehydrogenase | AutoimmuneAutoimmuneAutoimmuneAutoimmuneAutoimmuneAutoimmuneAutoimmuneAutoimmuneHp GastritisHp Gastritis |
| Hp Atrophy | Autoimmune Atrophy | Glycolate oxidaseD−lactate dehydrogenase (cytochrome)3−hydroxyisobutyrate dehydrogenaseGlucose−6−phosphate 1−dehydrogenaseD−amino−acid dehydrogenaseHydroxymethylglutaryl−CoA reductaseAlpha−glycerophosphate oxidaseGlyceraldehyde−3−phosphate dehydrogenase (NADP)Pyruvate oxidaseDihydrofolate reductaseTrimethylamine dehydrogenase | Hp AtrophyHp AtrophyHp AtrophyHp AtrophyHp AtrophyAutoimmuneAutoimmuneAutoimmuneAutoimmuneAutoimmuneAutoimmune |