**CALI**

**Results for Paper**

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| Trait | SNP | CHR | Pos | Gene | Name | Function | Refs |
| Ultrasound yield | Gga\_rs14707919 | 27 | 3464674 | GIP | Gastric Inhibitory Polypeptide | Mediates insulin secretion. | Strong reference:  Delfino et al. (2010) |
|  | GGaluGA204479 | 3 | 4747377 | LOC421259 | FLRT3 (143KB, nearest gene) |  | Moderate: Karst (2011) |
|  | Gga\_rs16469122 | 5 | 13236314 | IGF2 | insulin-like growth factor 2 |  | Strong: pigs. Nezer et al. (1999).  Very strong: chickens: Tang et al. (2010). |
|  | GGaluGA300550 | 6 | 18419595 | LOC101747695 | ERCC6 (44KB) |  |  |
|  | GGaluGA108350 | 15 | 6107174 | SH2B3 | SH2B adaptor protein 3 | This gene encodes a member of the SH2B adaptor family of proteins, which are involved in a range of signaling activities by growth factor and cytokine receptors. | Moderately Good. Growth factors in chickens. RNA seq analysis. Ref: Resnyk et al. 2015 PLOS one |
|  | Gga\_rs13595487 | 7 | 21658410 | DES | Desmin | This gene encodes a muscle-specific class III intermediate filament. | Very Strong reference – desmin important in muscle formation. Ref:CapetanakiPNAS1984  Costa et al (2004) |
|  | GGaluGA283510 | 5 | 36631051 | SSTR1 | Somatostatin Receptor 1 |  | Strong Reference: SSTR1 important for growth traits metabolic systems. RefL Jin et al. (2011). Mol Biol Rep. |
|  | Gga\_rs14027776  (not sign) | 11 | 16106920 | HSBP1 | Heat Shock Factor Binding Protein 1 |  | Strong reference: meat quality traits in cattle. Ref: Sevane et al. (2014).  Important during stress conditions : ref Huang et al. 2007. |
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| WT1 | Gga\_rs14707919 | 27 | 39369 | GIP | Gastric Inhibitory Polypeptide |  | Strong Ref |
|  | GGaluGA200018 | 27 | 39368 | IGF2BP1 | Insulin Like Growth Factor 2 MRNA Binding Protein 1 |  | Strong ref. Broiler chickens. QTL study. Ref: Stainton et al. (2014) |
|  | Gga\_rs16549985 | 6 | 21473 | ARHGAP22 | Rho GTPase Activating Protein 22 | implicated in endothelial cell angiogenesis and increased capillary permeability | Weak ref: Diabetes study in humans. Liao 2014 BioMedicine |
|  | GGaluGA332912 | 8 | 25296 | LOC101750009 |  |  |  |
|  | GGaluGA163907 | 2 | 10341 | CYP7A1 | Cholesterol 7-alpha-hydroxylase | Rate limiting enzyme for converting cholesterol into bile acids | Strong ref. High fat area in pigs. Cholesterol catabolism. Ponsuksili et al. Journal of Lipid Research |
|  | GGaluGA200017 | 27 | 39367 | IGF2BP1 | Insulin Like Growth Factor 2 MRNA Binding Protein 1 |  | Strong ref. Broiler chickens. QTL study. Ref: Stainton et al. (2014) |
|  | Gga\_rs14072102 | 14 | 30994 | SDK1 | Sidekick Cell Adhesion Molecule 1 | cell adhesion | WEAK: relating to RFC Ref: Barendse et al. Genetics 2007. + Strong Ref:: Assoc study. intramuscular fat in pigs. Ref Davoli et al J of Animal Breeding and Genetics 2016 |
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| GAIN |  |  |  |  |  |  |  |
|  | Gga\_rs14707919 | 27 | 3464674 | GIP | Gastric Inhibitory Polypeptide |  | Strong Ref |
|  | Gga\_rs15021603 | 15 | 6970325 | LOC768701 | Uncharacterized protien |  |  |
|  | Gga\_rs13763055 | 2 | 116097139 | SLCO5A1 | Solute Carrier Organic Anion Transporter Family Member 5A1 | A member of the intestinal solute carrier gene family. Intenstinal development has long-term influence on digestive and absorptive capacity in chickens. | Strong: chickens, feed efficiency  Li, Gilbert et al. (2008) Animal Genetics. |
|  | Gga\_rs14657353 | 8 | 27258704 | LEPR |  |  | Very Strong: Richards 2003 |
|  | GGaluGA000581 | 9 | 14440336 | TNK2 |  |  | Moderate: found a ref on obesity. Ref: Sinha BMC Systems Biology 2014. |
|  | Gga\_rs14313385 | 3 | 10416895 | MEIS1 |  |  | Moderate: body fat qtl study in pigs – ref: Pant World Congress. Puig-Oliveras PLOS One |