

***CAPNI* gene as a potential marker for growth performance and carcass characteristic in pigs**

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Table S1. The basic statistical characteristic of meat quality traits and the effect of CAPN1:g.1429G>A polymorphism on pork quality

WHC – water holding-capacity, meat colour: L* - lightness, a*- redness, b*- yellowness; pH₄₅ and pH₂₄– pH measured 45 min and 24 h after slaughter in *longissimus lumborum* (LL) or *semimembranosus* (SM) muscles, IMF – intramuscular fat content. N – the number of animals analyzed in each group; SD – standard deviation; effects are presented as means ± standard error

| Meat quality traits | N | Mean | SD | | Mean (LSM±SE) | Effects | |
|-----------------------|-----|------|------|----|---------------|-------------------|------------------|
| | | | | | | Additive | Dominance |
| WHC (%) | 714 | 35.5 | 6.33 | GG | 35.9 ±1.18 | 0.16 (±0.52) | 0.26 (±0.33) |
| | | | | GA | 35.2 ±0.43 | | |
| | | | | AA | 35.6 ±0.28 | | |
| L* | 629 | 54.6 | 2.64 | GG | 53.9 ±0.38 | -0.43 (±0.24) | -0.10 (±0.15) |
| | | | | GA | 54.6 ±0.43 | | |
| | | | | AA | 54.8 ±0.13 | | |
| a* | 329 | 15.9 | 1.32 | GG | 16.3 ±0.19 | 0.17 (±0.12) | 0.06 (±0.07) |
| | | | | GA | 16.0 ±0.09 | | |
| | | | | AA | 15.9 ±0.06 | | |
| b* | 629 | 3.21 | 1.59 | GG | 2.93 ±0.23 | -0.19 (±0.14) | 0.06 (±0.09) |
| | | | | GA | 3.01 ±0.11 | | |
| | | | | AA | 2.93 ±0.08 | | |
| pH ₄₅ (LL) | 672 | 6.35 | 0.27 | GG | 6.36 ±0.05 | 0.001 (±0.02) | 0.001 (±0.01) |
| | | | | GA | 6.34 ±0.01 | | |
| | | | | AA | 6.35 ±0.01 | | |
| pH ₂₄ (LL) | 672 | 5.63 | 0.13 | GG | 5.63 ±0.02 | -0.001 (±0.01) | 0.003 (±0.01) |
| | | | | GA | 5.63 ±0.01 | | |
| | | | | AA | 5.63 ±0.01 | | |
| pH ₄₅ (SM) | 418 | 6.30 | 0.19 | GG | 6.33 ±0.04 | 0.01 (±0.02) | 0.01 (±0.01) |
| | | | | GA | 6.29 ±0.01 | | |
| | | | | AA | 6.30 ±0.01 | | |
| pH ₂₄ (SM) | 418 | 5.63 | 0.11 | GG | 5.65 ±0.02 | 0.008 (±0.01) | 0.007 (±0.01) |
| | | | | GA | 5.62 ±0.01 | | |
| | | | | AA | 5.63 ±0.01 | | |
| IMF (%) | 704 | 1.61 | 0.11 | GG | 1.70 ±0.11 | 0.06 (±0.06) | -0.02 (±0.04) |
| | | | | GA | 1.69 ±0.05 | | |
| | | | | AA | 1.57 ±0.12 | | |

Table S2. The association of *CAPNI* genotypes and selected meat texture parameters measure in raw and cooked *longissimus lumborum* and *semimembranosus* muscles

N=127 for each muscle; R – raw meat, C – cooked meat; SD – standard deviation; effects are shown as mean ± standard error

| Texture traits | Mean | SD | <i>Effects</i> | | | | | | | |
|--------------------------------|-------|------|------------------------------|------------------|-----------------|--------------------|--------------------|-------|------------------|------------------|
| | | | | Mean LSM (±S.E.) | <i>Additive</i> | <i>Dominance</i> | | | | |
| Firmness_R | 27.7 | 7.49 | GG | 28.4 | ±2.67 | 1.58 (±1.97) | -1.70 (±1.24) | | | |
| | | | GA | 30.5 | ±1.18 | | | | | |
| | | | AA | 28.4 | ±1.18 | | | | | |
| | | | Toughness_R | 74.9 | 21.0 | GG | 80.7 | ±7.54 | 4.52 (±5.50) | -5.32 (±3.47) |
| | | | | | | GA | 84.3 | ±3.35 | | |
| | | | | | | AA | 75.3 | ±3.34 | | |
| | | | Firmness_C | 76.4 | 19.4 | GG | 68.9 | ±7.57 | -3.76 (±3.45) | -0.92 (±2.17) |
| | | | | | | GA | 73.8 | ±3.41 | | |
| | | | | | | AA | 79.7 | ±3.38 | | |
| Springiness_C | 0.68 | 0.06 | GG | 0.70 | ±0.02 | 0.001 (±0.01) | -0.002 (±0.01) | | | |
| | | | GA | 0.69 | ±0.01 | | | | | |
| | | | AA | 0.69 | ±0.01 | | | | | |
| Resilience_C | 0.26 | 0.03 | GG | 0.29 | ±0.005 | 0.01 (±0.006) | 0.002 (±0.004) | | | |
| | | | GA | 0.26 | ±0.006 | | | | | |
| | | | AA | 0.26 | ±0.01 | | | | | |
| Toughness_C | 180.4 | 49.5 | GG | 173.1 | ±19.45 | -7.12 (±8.76) | 2.20 (±5.53) | | | |
| | | | GA | 177.5 | ±8.80 | | | | | |
| | | | AA | 189.2 | ±8.73 | | | | | |
| Firmness_R | 25.4 | 6.06 | GG | 27.4 | ±2.16 | 2.46 (±1.13)* | -0.17 (±0.74) | | | |
| | | | GA | 26.7 | ±1.04 | | | | | |
| | | | AA | 25.7 | ±0.86 | | | | | |
| Toughness_R | 74.0 | 18.6 | GG | 77.7 | ±6.52 | 3.82 (±3.20) | -3.27 (±2.10) | | | |
| | | | GA | 79.0 | ±3.15 | | | | | |
| | | | AA | 74.2 | ±2.59 | | | | | |
| Firmness_C | 86.9 | 22.1 | GG | 95.3 | ±8.55 | 3.70 (±3.69) | 2.74 (±2.42) | | | |
| | | | GA | 86.7 | ±4.13 | | | | | |
| | | | AA | 86.8 | ±3.39 | | | | | |
| Springiness_C | 0.71 | 0.08 | GG | 0.77 | ±0.03 | 0.004 (±0.01) | 0.002 (±0.008) | | | |
| | | | GA | 0.73 | ±0.01 | | | | | |
| | | | AA | 0.73 | ±0.01 | | | | | |
| Resilience_C | 0.26 | 0.04 | GG | 0.26 | ±0.01 | -0.007 (±0.005) | -0.001 (±0.003) | | | |
| | | | GA | 0.25 | ±0.01 | | | | | |
| | | | AA | 0.26 | ±0.005 | | | | | |
| Toughness_C | 202.1 | 54.0 | GG | 206.0 | ±20.7 | 2.41 (±8.80) | 2.70 (±5.79) | | | |
| | | | GA | 203.3 | ±10.0 | | | | | |
| | | | AA | 206.8 | ±8.23 | | | | | |