

**Whole-genome resequencing reveals domestication and signatures of selection in Ujimqin, Sunit, and
Wu Ranke Mongolian sheep breeds**

Hanning *Wang*^{1a}, Liang *Zhong*^{2a}, Yanbing *Dong*¹, Lingbo *Meng*¹, Cheng *Ji*¹, Hui *Luo*¹, Mengrong *Fu*¹, Zhi
Qi^{1*}, and Lan *Mi*^{1*}

***Corresponding Author: Lan Mi**

E-mail: lanmi_90@126.com

Zhi Qi

E-mail: qizhi@imu.edu.cn

¹ State Key Laboratory of Reproductive Regulation and Breeding of Grassland Livestock, School of Life Sciences, Inner Mongolia University, Hohhot 020020, China

² Hebei Provincial Key Laboratory of Basic Medicine for Diabetes, The Shijiazhuang Second Hospital, Shijiazhuang 050051, China

^a These authors contributed equally to this work.

Table S2 KEGG between SNT and UJMQ

| | <u>P-value</u> | <u>Term</u> | <u>Symbols</u> |
|----|----------------|--|---|
| 1 | 0.004536 | <u>Alanine, aspartate and glutamate metabolism</u> | <u>ABAT;CPS1</u> |
| 2 | 0.01322 | <u>Arginine and proline metabolism</u> | <u>AZIN2;CPS1</u> |
| 3 | 0.022065 | <u>Metabolic pathways</u> | <u>ABAT;ATP6V1A;DMGDH;AZIN2;CPS1;DGKB;MAN1C1;HSD17B12</u> |
| 4 | 0.057525 | <u>Vascular smooth muscle contraction</u> | <u>AVPR1B;ADCY2</u> |
| 5 | 0.063867 | <u>Axon guidance</u> | <u>PLXNA2;RGS3</u> |
| 6 | 0.066118 | <u>Dorso-ventral axis formation</u> | <u>ETS1</u> |
| 7 | 0.069313 | <u>Biosynthesis of unsaturated fatty acids</u> | <u>HSD17B12</u> |
| 8 | 0.07567 | <u>beta-Alanine metabolism</u> | <u>ABAT</u> |
| 9 | 0.078834 | <u>Nitrogen metabolism</u> | <u>CPS1</u> |
| 10 | 0.08513 | <u>Collecting duct acid secretion</u> | <u>ATP6V1A</u> |
| 11 | 0.091384 | <u>Butanoate metabolism</u> | <u>ABAT</u> |
| 12 | 0.103773 | <u>Propanoate metabolism</u> | <u>ABAT</u> |
| 13 | 0.10849 | <u>Protein processing in endoplasmic reticulum</u> | <u>MBTPS1;MAN1C1</u> |
| 14 | 0.116 | <u>Glycine, serine and threonine metabolism</u> | <u>DMGDH</u> |
| 15 | 0.122969 | <u>Calcium signaling pathway</u> | <u>AVPR1B;ADCY2</u> |
| 16 | 0.125067 | <u>Steroid hormone biosynthesis</u> | <u>HSD17B12</u> |
| 17 | 0.125067 | <u>Aminoacyl-tRNA biosynthesis</u> | <u>NARS2</u> |
| 18 | 0.139982 | <u>Valine, leucine and isoleucine degradation</u> | <u>ABAT</u> |
| 19 | 0.139982 | <u>Lysine degradation</u> | <u>SETD7</u> |
| 20 | 0.142936 | <u>N-Glycan biosynthesis</u> | <u>MAN1C1</u> |
| 21 | 0.157561 | <u>Glycerolipid metabolism</u> | <u>DGKB</u> |
| 22 | 0.16909 | <u>Cytosolic DNA-sensing pathway</u> | <u>RIPK1</u> |
| 23 | 0.197261 | <u>p53 signaling pathway</u> | <u>CHEK2</u> |
| 24 | 0.208274 | <u>Bile secretion</u> | <u>ADCY2</u> |
| 25 | 0.213726 | <u>RIG-I-like receptor signaling pathway</u> | <u>RIPK1</u> |
| 26 | 0.216438 | <u>Gastric acid secretion</u> | <u>ADCY2</u> |
| 27 | 0.232529 | <u>Salivary secretion</u> | <u>ADCY2</u> |
| 28 | 0.232529 | <u>Phosphatidylinositol signaling system</u> | <u>DGKB</u> |
| 29 | 0.243081 | <u>Glycerophospholipid metabolism</u> | <u>DGKB</u> |
| 30 | 0.245697 | <u>Dilated cardiomyopathy</u> | <u>ADCY2</u> |
| 31 | 0.248305 | <u>Apoptosis</u> | <u>RIPK1</u> |
| 32 | 0.253495 | <u>Progesterone-mediated oocyte maturation</u> | <u>ADCY2</u> |
| 33 | 0.263773 | <u>Rheumatoid arthritis</u> | <u>ATP6V1A</u> |

| | | | |
|-----------|-----------------|--|----------------|
| <u>34</u> | <u>0.266321</u> | <u>Gap junction</u> | <u>ADCY2</u> |
| <u>35</u> | <u>0.278938</u> | <u>Melanogenesis</u> | <u>ADCY2</u> |
| <u>36</u> | <u>0.283927</u> | <u>Pancreatic secretion</u> | <u>ADCY2</u> |
| <u>37</u> | <u>0.283927</u> | <u>GnRH signaling pathway</u> | <u>ADCY2</u> |
| <u>38</u> | <u>0.293806</u> | <u>Toll-like receptor signaling pathway</u> | <u>RIPK1</u> |
| <u>39</u> | <u>0.33899</u> | <u>Oocyte meiosis</u> | <u>ADCY2</u> |
| <u>40</u> | <u>0.359422</u> | <u>Cell cycle</u> | <u>CHEK2</u> |
| <u>41</u> | <u>0.374897</u> | <u>Hepatitis C</u> | <u>RIPK1</u> |
| <u>42</u> | <u>0.394271</u> | <u>Oxidative phosphorylation</u> | <u>ATP6V1A</u> |
| <u>43</u> | <u>0.402698</u> | <u>Phagosome</u> | <u>ATP6V1A</u> |
| <u>44</u> | <u>0.402698</u> | <u>Wnt signaling pathway</u> | <u>DAAM2</u> |
| <u>45</u> | <u>0.406869</u> | <u>RNA transport</u> | <u>NUP107</u> |
| <u>46</u> | <u>0.425301</u> | <u>Purine metabolism</u> | <u>ADCY2</u> |
| <u>47</u> | <u>0.460544</u> | <u>Chemokine signaling pathway</u> | <u>ADCY2</u> |
| <u>48</u> | <u>0.608066</u> | <u>Neuroactive ligand-receptor interaction</u> | <u>AVPR1B</u> |
