



## Expression of the *RORα* gene in Inner Mongolian cashmere goat hair follicles

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**ABSTRACT.** The expression of retinoid-acid-related orphan receptor  $\alpha$  (*RORα*) was evaluated at the mRNA level using real-time polymerase chain reaction (qRT-PCR), and its expression localization was determined by *in situ* hybridization of adult Inner Mongolian cashmere goats at different times of the year. *In situ* hybridization demonstrated that *RORα* was expressed in secondary hair follicles of the hair shaft, inner root sheath, outer root sheath, medulla, and other parts that are target organs of the *RORα* receptor gene. qRT-PCR results showed that there was no significant difference in the *RORα* mRNA abundance in February, April, August, and October ( $P > 0.05$ ), and the only difference occurred in December relative to February, August, and October ( $P < 0.05$ ). This difference revealed that melatonin possibly promotes cashmere growth through the nuclear receptor *RORα*. This

study provides a good foundation for future studies on the relationship between the melatonin receptor and cashmere growth; in addition, it provides new insights for increased cashmere production and quality.

**Key words:** *ROR $\alpha$* ; *ROR $\alpha$*  expression; Cashmere goats; *In situ* hybridization; Real-time polymerase chain reaction