The Myostatin Gene: Future Challenges in Animal Science

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Message from the Guest Editors

Myostatin (MSTN), also known as Growth and Differentiation Factor 8 (GDF8), is a member of the Transforming Growth Factor β (TGF-β) superfamily and is one of the major regulators of skeletal muscle development. The *MSTN* gene is highly conserved among mammalian species, and it acts in an almost unique manner to negatively control muscle development. A number of large animals, including cattle, sheep, goats, horses, pigs, and dogs display the so-called 'double muscled' (DBM) phenotype due to mutations in the *MSTN* gene. Therefore, *MSTN* and its regulation is becoming one of the hot spots for association analysis of growth and meat traits in the animal breeding. For these reasons, a greater understanding of *MSTN* induction, regulation, and overall function is needed to dissect and validate *MSTN* as a marker to consider in livestock production. This Special Issue aims to improve our understanding of how MSTN contributes to skeletal muscle metabolism, and or influences other traits, such as, reproduction, metabolic efficiency, immunity, and in general all the productive traits in livestock animals.

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Special Issue

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Message from the Editor-in-Chief

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