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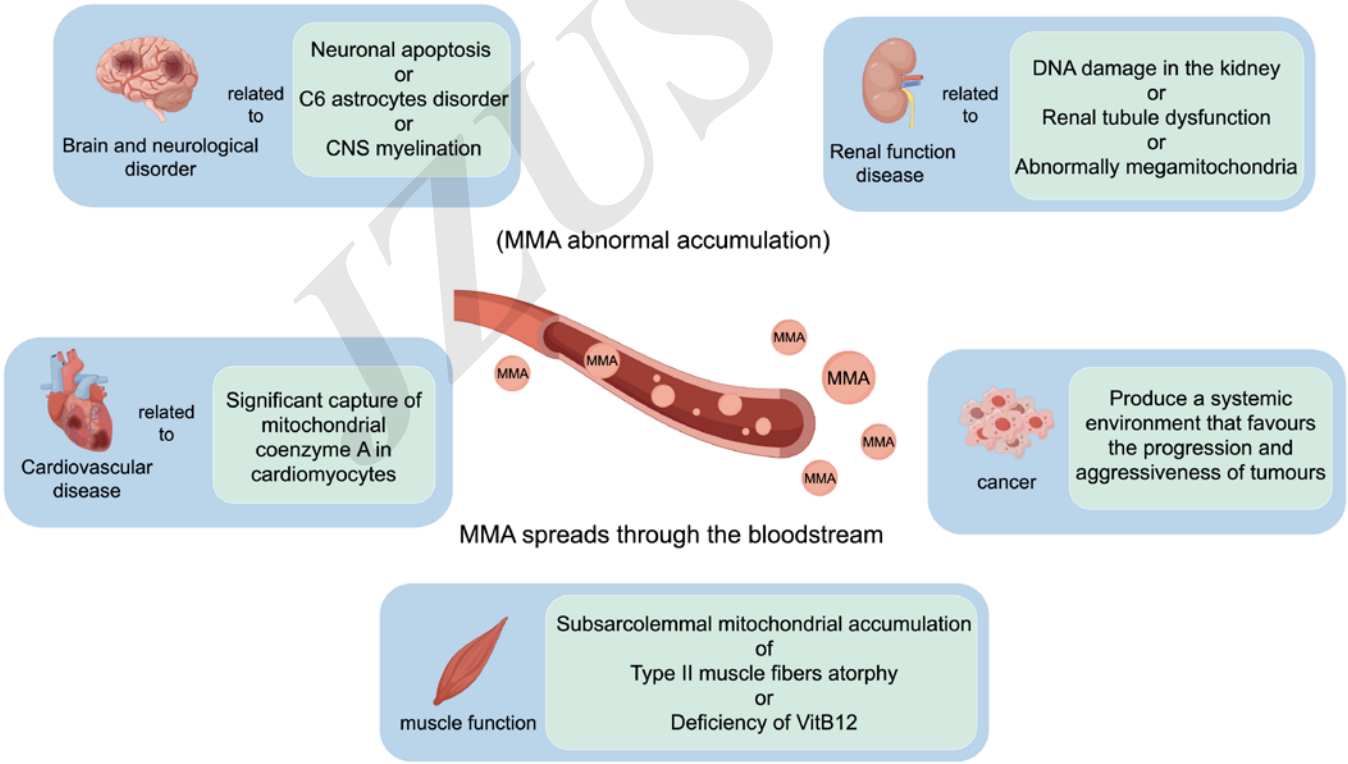
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Recent research advances in the biological function and molecular mechanism of methylmalonic acid

Key words: Methylmalonic acid (MMA); Mitochondrial dysfunction; Oxidative stress; Post-translational modification of protein; Muscle atrophy

Research Summary

This review mainly focused on the relationship between the metabolic abnormality of MMA and disease occurrence, concerning the brain, kidney, cardiovascular system, cancer, and skeletal muscles, and summarized the key roles they played in the following aspects:



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Innovation points

- **Introduction** of the causes of abnormal MMA accumulation and the damaging effects of abnormal MMA accumulation on tissues and organs.
- **Summary** of the molecular mechanisms of damage to tissues and organs by abnormal MMA accumulation are summarized, including mitochondrial dysfunction,Oxidative stress, post-translational modification of proteins.
- **Emphasis** on the importance of identifying MMA target proteins and future gene therapy for MMA diseases.

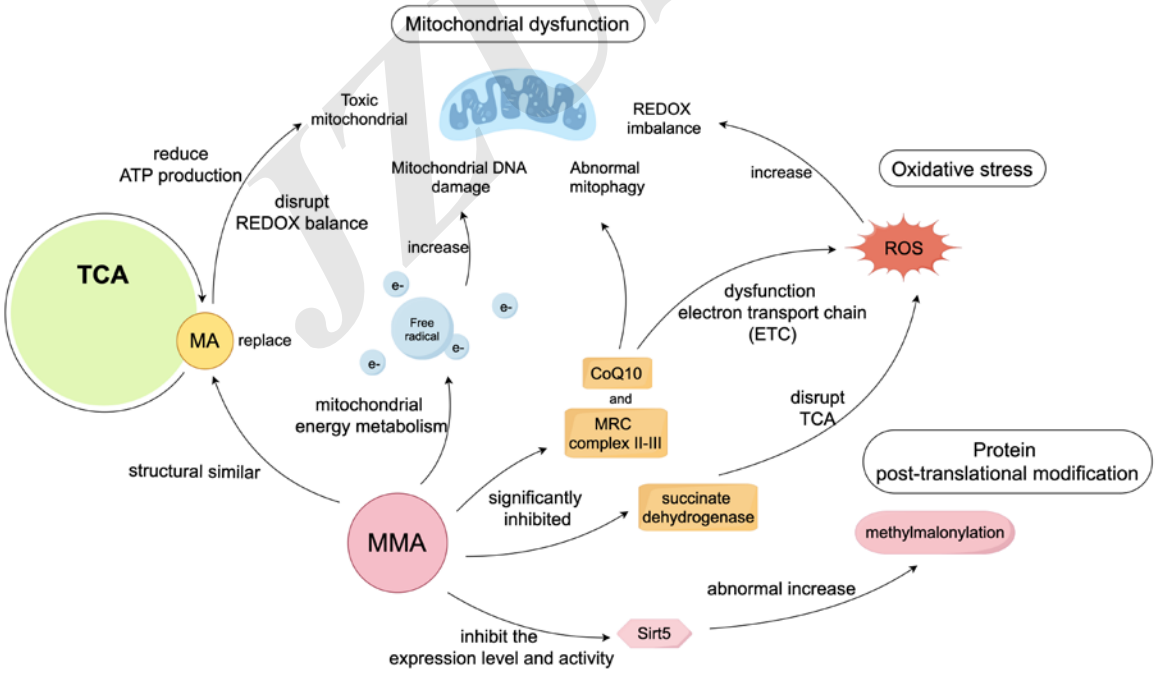


Figure 4