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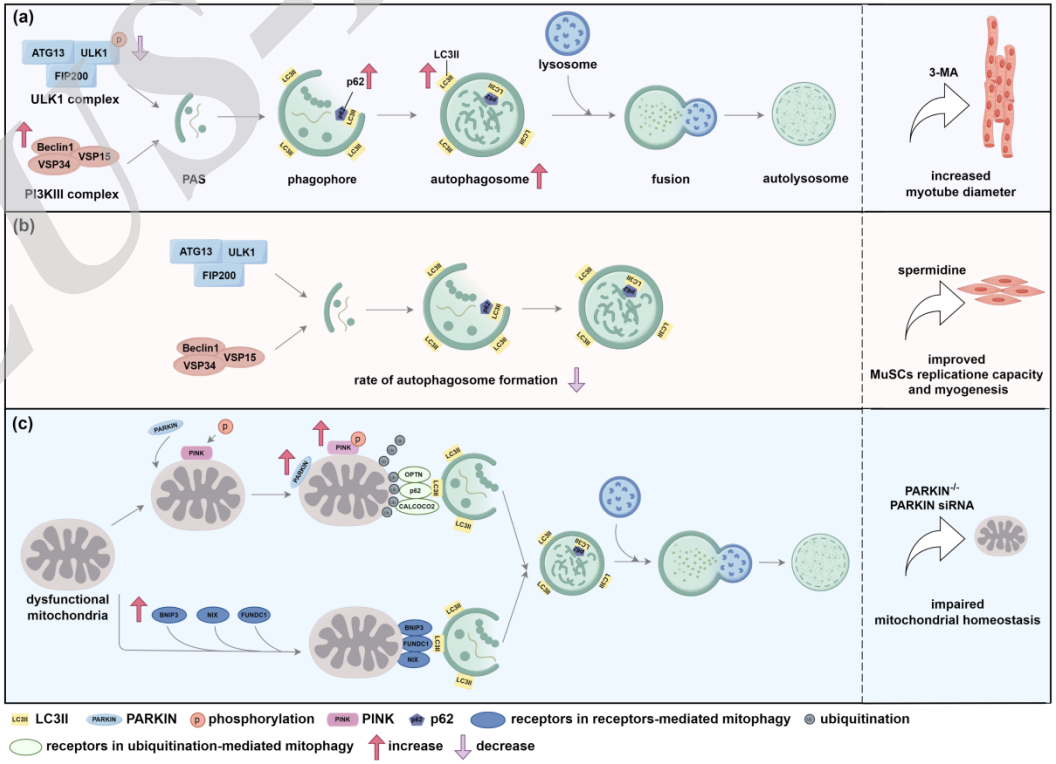
Autophagy in skeletal muscle dysfunction of chronic obstructive pulmonary disease: implications, mechanisms, and perspectives

Key words: Autophagy; Skeletal muscle dysfunction; Chronic obstructive pulmonary disease; Mitochondria; Muscle satellite cells

Research Summary

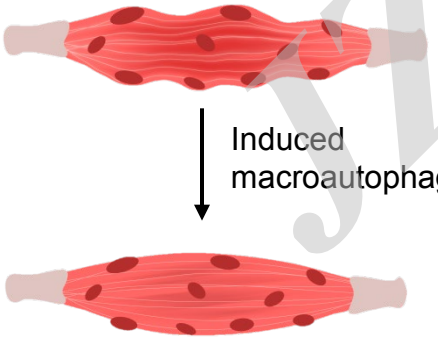
This review mainly focused on the role and mechanism of autophagy in skeletal muscle dysfunction of chronic obstructive pulmonary disease (COPD), and summarized the key roles it played in the following aspects:

- **mitochondrial homeostasis**
- **myogenesis and replication capacity of muscle satellite cells**

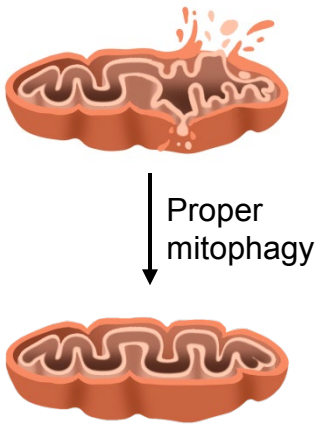


Innovation points

- **Introduce of the changes of autophagic indicators in skeletal muscle of COPD**
- **Summary of the mechanism of autophagy mediating skeletal muscle dysfunction of COPD**
- **Emphasis of the gaps hindering our understanding on the role of autophagy in skeletal muscle dysfunction of COPD**



Improved myogenesis and replication capacity



Mitochondrial homeostasis

Innovation points

A comprehensive table was generated to summarize the latest knowledge about autophagy in skeletal muscle of COPD.

Table 1 | Studies on skeletal muscle autophagy changes in COPD in the past 5 years.