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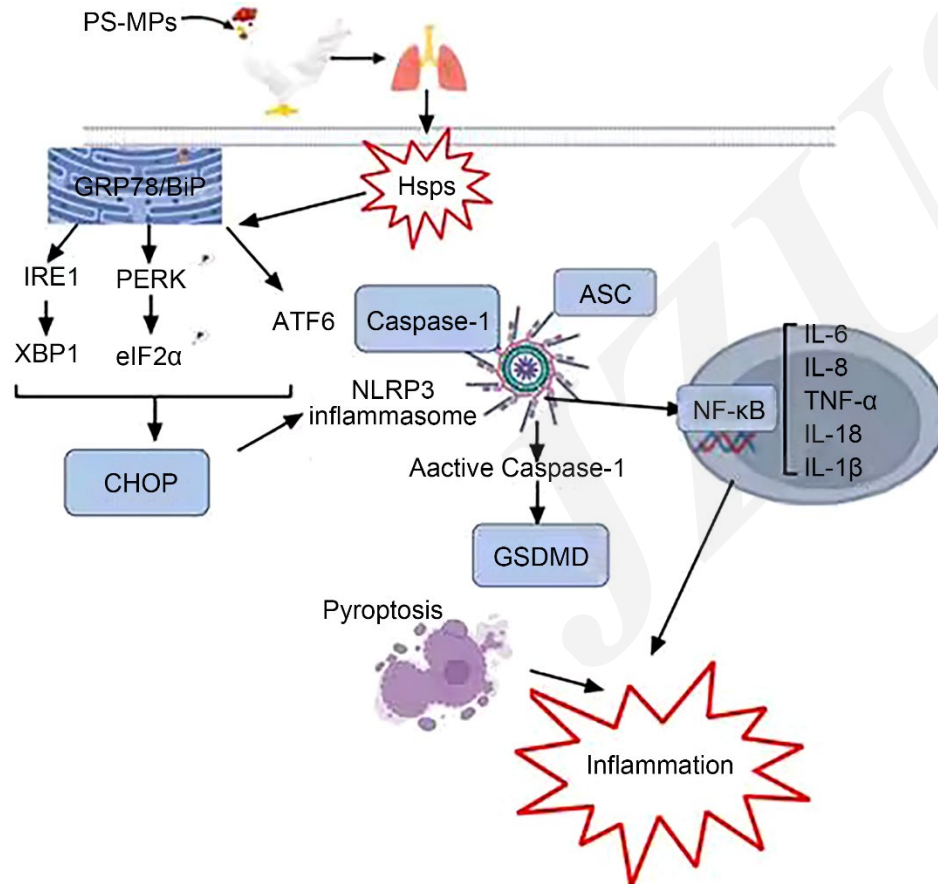
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Endoplasmic reticulum stress-induced NLRP3 inflammasome activation as a novel mechanism of polystyrene microplastics (PS-MPs)-induced pulmonary inflammation in chickens

Key words: Polystyrene microplastics; Endoplasmic reticulum stress; Lungs; NLRP3 inflammasome; Inflammation

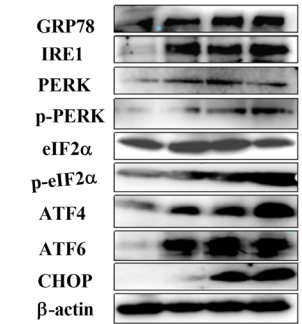
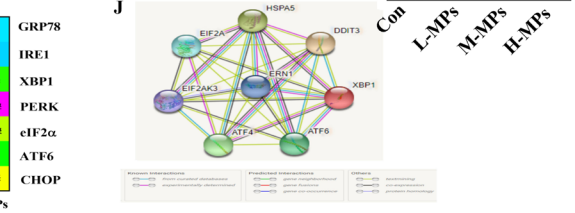
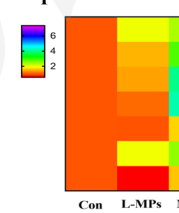
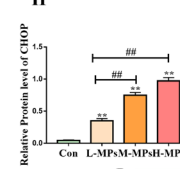
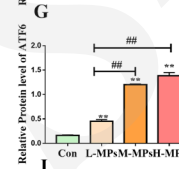
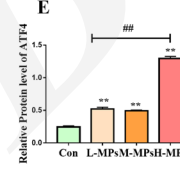
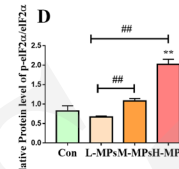
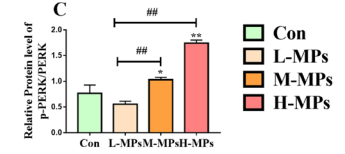
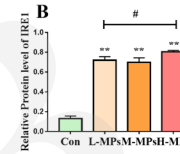
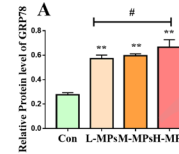
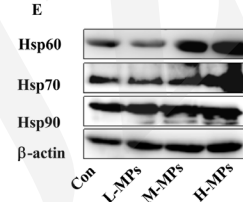
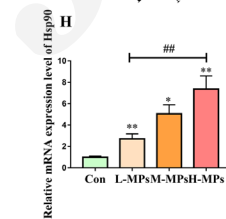
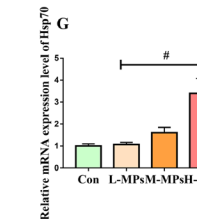
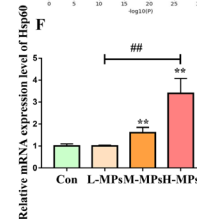
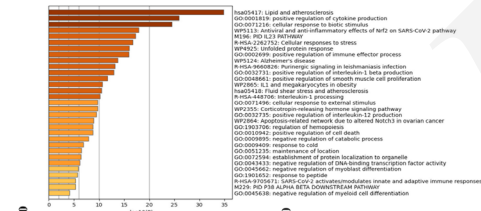
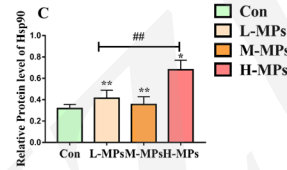
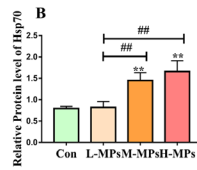
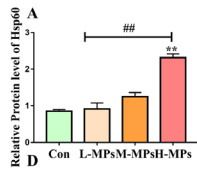
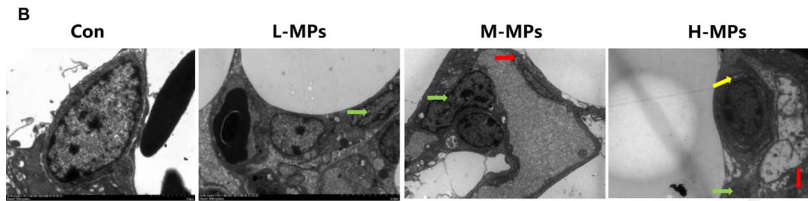
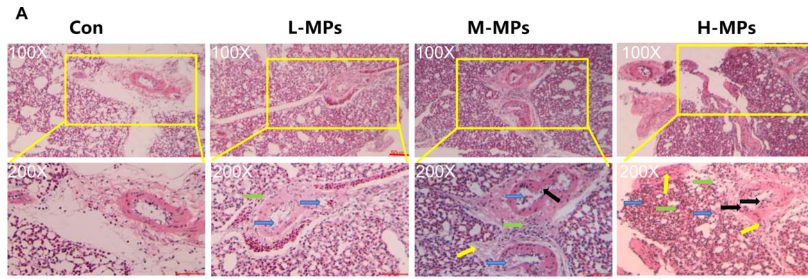
Research Summary

This paper mainly discusses the exposure of polystyrene microplastics (PS-MPs) to induce protein stress toxicity, trigger ER stress, induce the activation of NLRP3 inflammasome, and lead to lung inflammation in chickens. The following aspects are summarized and discussed:

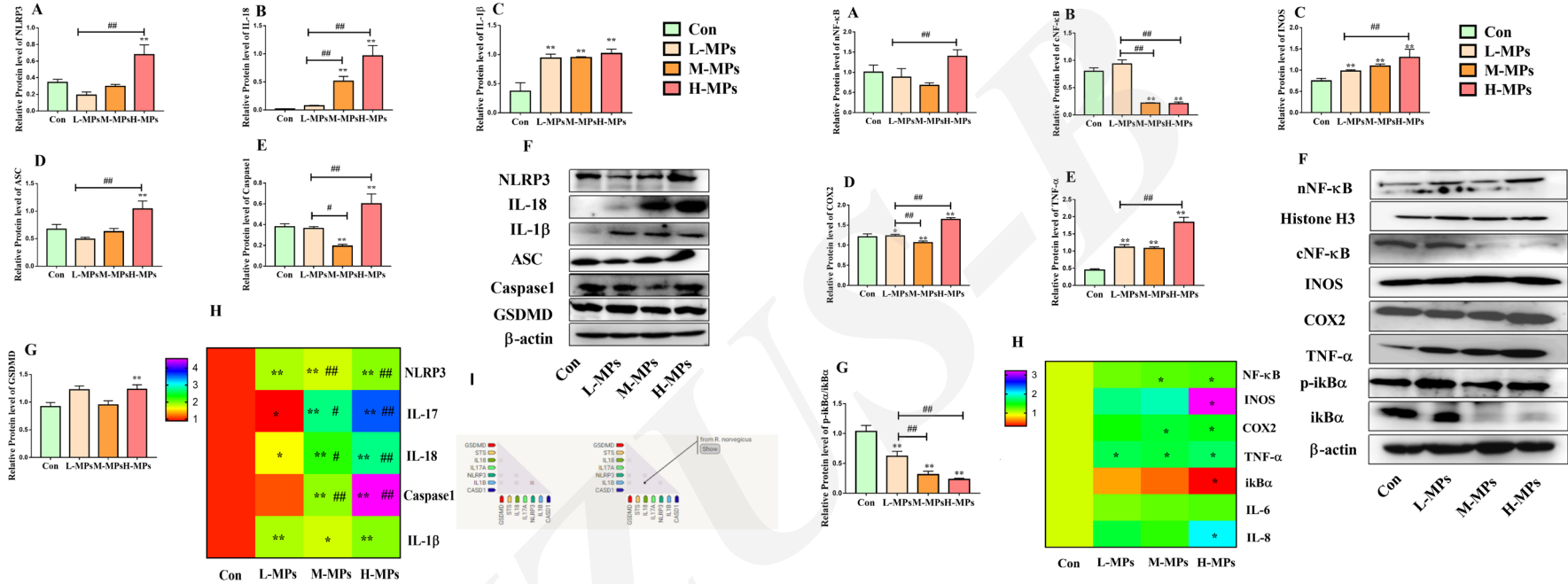


- Protein stress toxicity
- Er stress
- activated NLRP3 inflammasome
- Inflammation

PS-MPs causes lung tissue damage, protein stress toxicity and endoplasmic reticulum stress



Endoplasmic reticulum stress induced NLRP3 inflammasome activation, leading to inflammatory response



Innovation points

A series of experiments have been conducted to investigate and verify that PS-MPs exposure causes lung injury.

- PS-MPs exposure leads to lung stress and triggers endoplasmic reticulum stress.**
- PS-MPs induce activation of NLRP3 inflammasome through ER stress.**
- PS-MPs induce activation of NLRP3 inflammasome leading to pyroptosis accompanied by inflammatory magnification.**