

# ADVANCED OXIDATION PROTEIN PRODUCT LEVELS AS A MARKER OF OXIDATIVE STRESS IN MICE WITH HYPERGLYCEMIA

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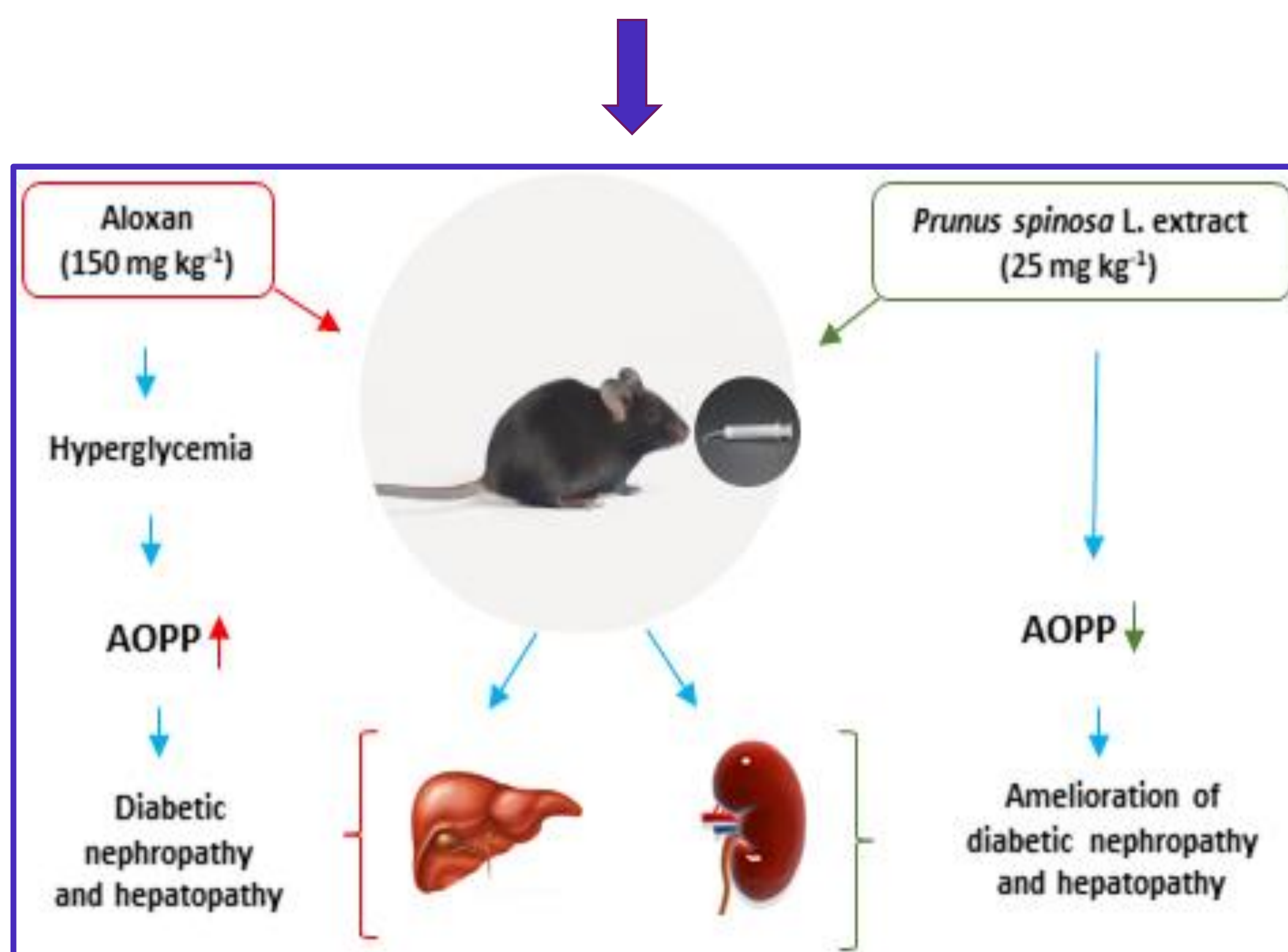
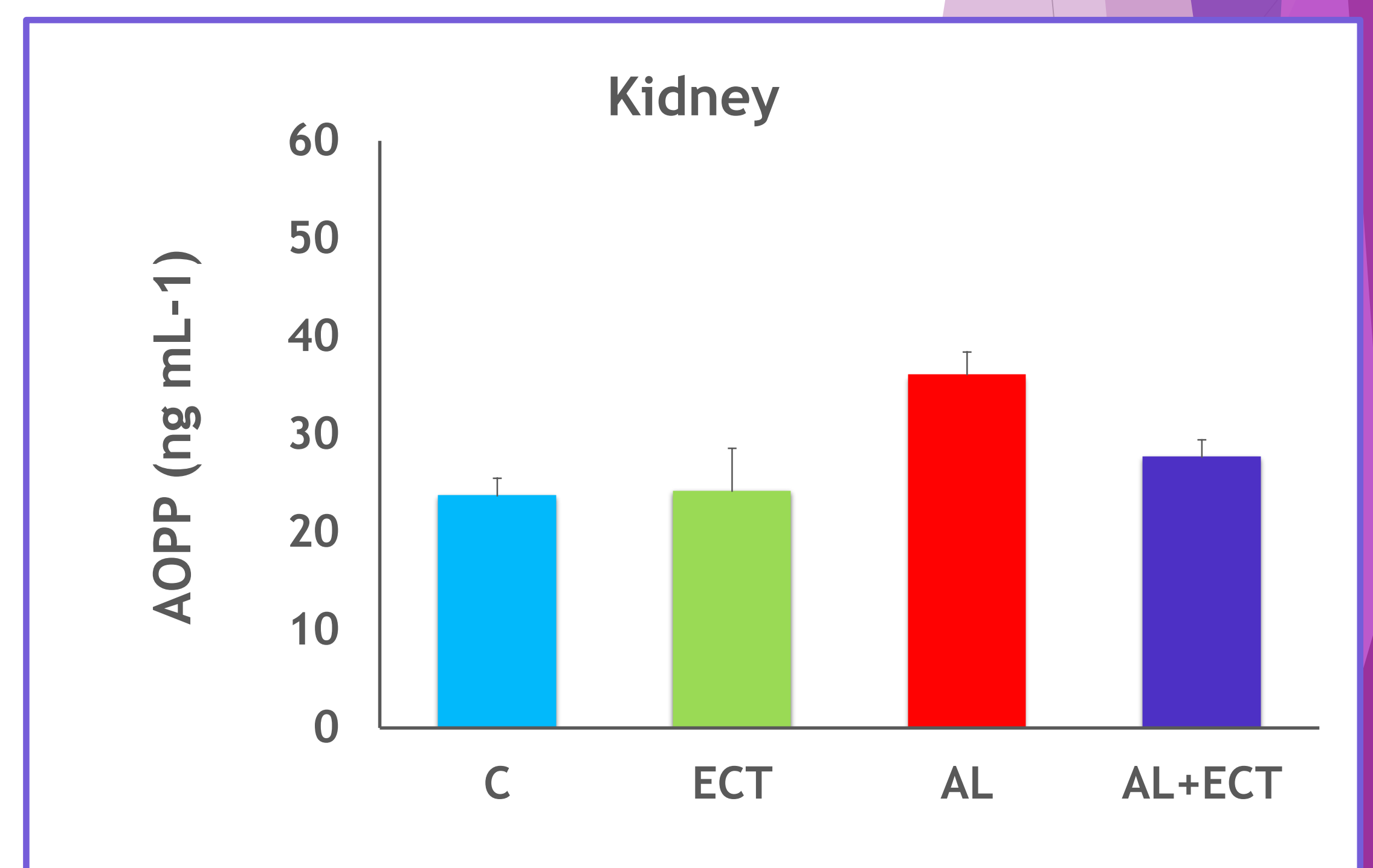
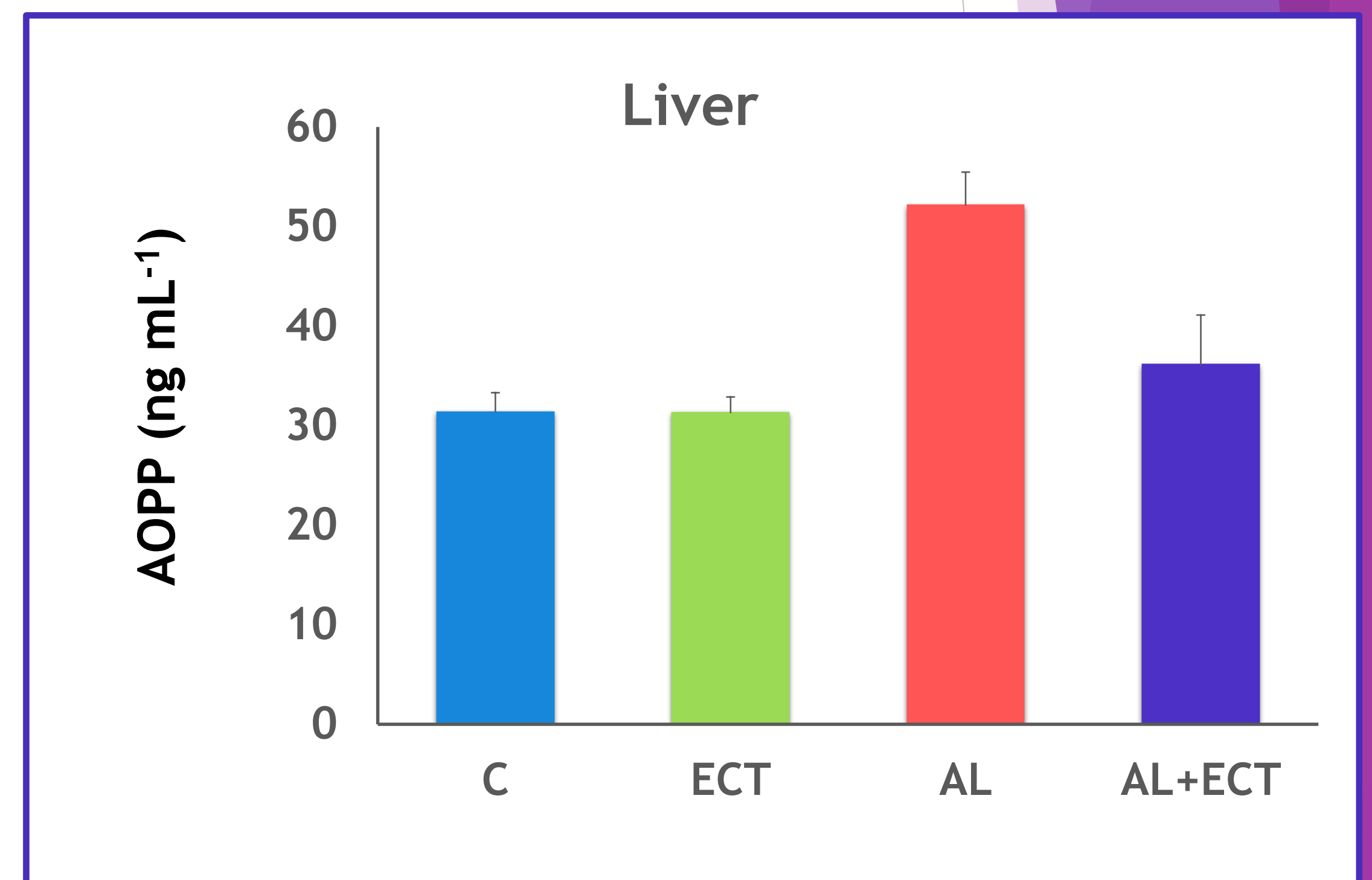
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**THE AIM** of this study was to establish the oxidation stress of *Prunus spinosa* L. flower extract (PSE) polyphenol glycosides in C57/BL6 mice organs after repeated subchronic (10 days) administration of entry dose of 25 mg kg<sup>-1</sup> bw of total polyphenols by gavage.

**Background:** We aimed to determine whether advanced oxidation protein product (AOPP) levels can serve as a marker of oxidative stress in mice with hyperglycemia.

**Methods:** Hyperglycemia in mice induced with 150 mg kg<sup>-1</sup> bw of alloxan. The experiment lasted 10 days using C57BL/6 mice divided in four groups: group 1 as control (C), group 2 as *Prunus spinosa* L. flower extract (ECT), group 3 as alloxan (AL) and group 4 as AL with ECT. AOPP levels in the tissue homogenate (liver and kidney) were measured by the spectrophotometric method (microplate reader).

**Results:** Tissue homogenate (liver, kidney) AOPP levels were significantly higher in the alloxan group (liver: 52.18±3.29 ng mL<sup>-1</sup>; kidney: 36.12±2.29 ng mL<sup>-1</sup>) than in the control group (liver: 31.4±1.91 ng mL<sup>-1</sup>; kidney: 23.73±1.78 ng mL<sup>-1</sup>; P < 0.001). In addition, the mean AOPP level in the homogenate tissue in the alloxan group was significantly higher than the mean homogenate tissue AOPP levels in the AL+ECT group (liver: 36.15±4,96 ng mL<sup>-1</sup>; kidney: 27.69±1.75 ng mL<sup>-1</sup>; P < 0.026).



**Conclusion:** AOPPs may represent a novel class of pro-inflammatory molecules that are involved in oxidative stress in hyperglycemia. AOPPs may be used as a marker of oxidative stress in patients with hyperglycemia.

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