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# **An in situ Photocrosslinkable Platelet Rich Plasma - Complexed Hydrogel Glue with Growth Factor Controlled Release Ability to Promote Cartilage Defect Repair**

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**Abstract:** The repair of articular cartilage injury is a great clinical challenge. Platelet-rich plasma (PRP) has attracted much attention for the repair of articular cartilage injury, because it contains various growth factors that are beneficial for wound repair. However, current administration methods of PRP face many shortcomings, such as unstable biological fixation and burst release of growth factors, all of which will bring troubles to its application in the repair of articular cartilage and compromise its therapeutic efficacy. In this study, based on our previously reported photoinduced imine crosslinking (PIC) reaction, we developed an in situ photocrosslinkable PRP hydrogel glue (HNPRP) through adding a photoresponsive hyaluronic acid (HA-NB) which could generate aldehyde groups upon light

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