# Intraosseous injection of calcium phosphate polymer-induced liquid precursor increases bone density and improves early implant osseointegration in ovariectomized rats

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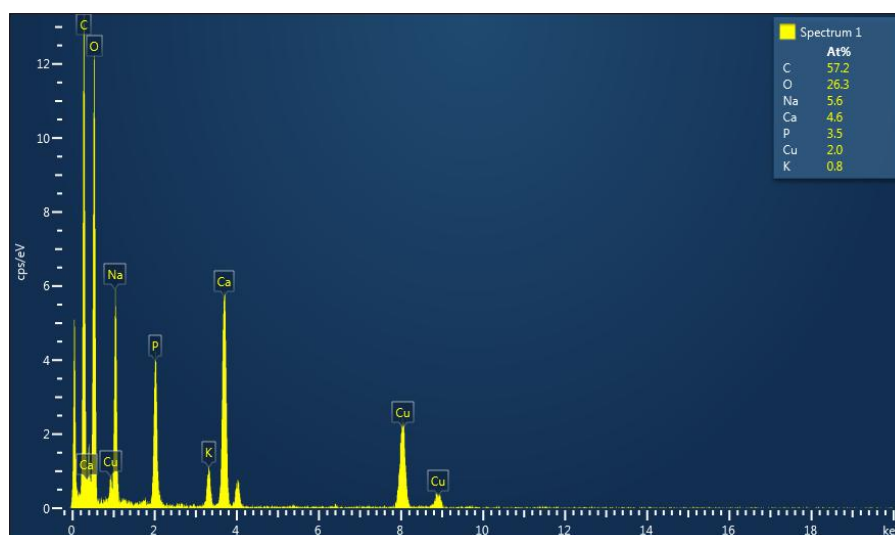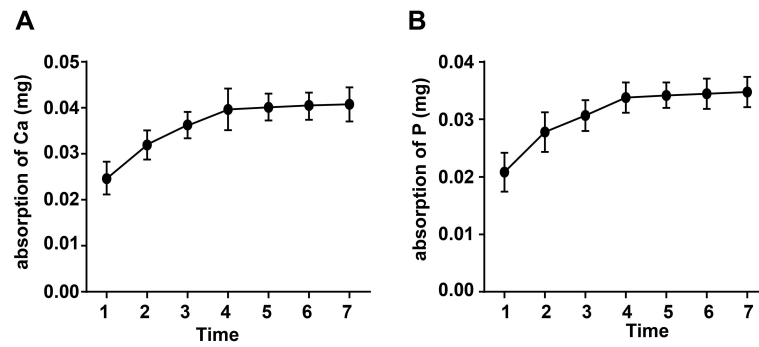
**Figure S1** EDS of CaP-PILP

**Figure S2** Absorption of calcium(a), phosphorus(b) of CaP-PILP in collagen gel. The absorption of Ca and P was a slow process before 4 days and tended to be stable. The percentage of Ca and P adsorption was approximately 50.95%, 51.11% respectively over 7 days, which was consistent with results in vivo experiment.
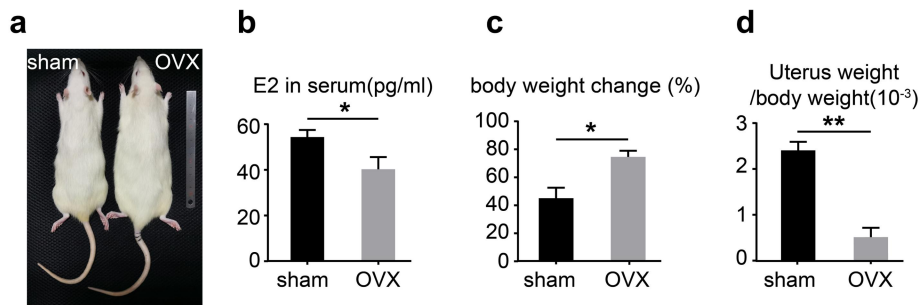


**Figure S3** Establishment of an osteoporotic rat model. a) General morphology of the OVX rat compared with sham rats, . b) Comparison of body weights between the two groups. c) Comparison of serum estrogen levels between the two groups. d) Comparison of uterus weight to total body weight ratios between the two groups. OVX rats were clearly larger than sham rats by visual inspection, with decreased serum estrogen levels. OVX rat body weight was higher while the ratio of uterus weight to total body weight was significantly lower than those of sham rats. Data are expressed as mean ± SD (n = 4); *P < 0.05, **P < 0.01 (T text).
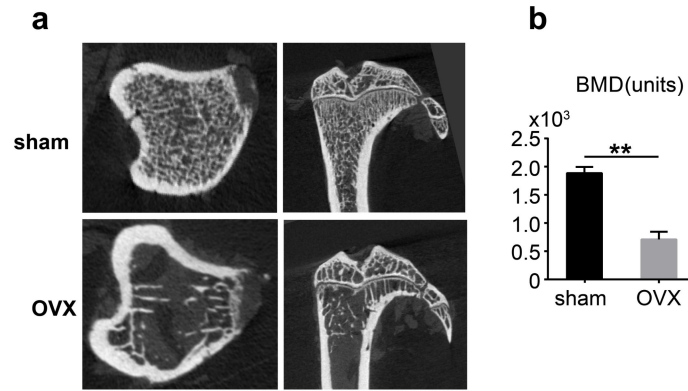
**Figure S4** Micro-CT evaluation of bone microstructure. a) Micro-CT of the proximal femora; transverse and longitudinal planes. OVX led to significantly lower bone mass compared to sham rats. b) Comparison of bone volume percentages between OVX and sham group. BMD of sham rats was 1.90 (± 0.08) x 10³ units, while that of OVX rats was 0.69 (± 0.05) x 10³ units, which was a significant decrease. Data were expressed as mean ± SD (n = 4); **P < 0.01 (T text).