

The ~~major final~~ objectives of this study are to ~~perform a visually~~ evaluate the crystallization mode ~~observation~~ ~~evaluation of the crystallization mode~~ of Octacalcium phosphate [OCP: $\text{Ca}_8(\text{PO}_4)_4(\text{HPO}_4)_2 \cdot 5\text{H}_2\text{O}$] ~~in the~~ porous molded bodies ~~made~~ from biocompatible polymers and the bonding state of biocompatible polymers and OCP crystal interfaces. ~~Further, this study intends to evaluate and a evaluation of~~ the mechanical properties of biocompatible polymers crystallized ~~using~~ by OCP; to gain foundational knowledge ~~with respect to the formation on the mechanisms of~~ ~~for forming~~ bone and bone-like ~~bone~~ graft materials. ~~In this present study~~ Here, as it was a 1-year-long ~~study investigation~~, we selected gelatin, which ~~is a~~ biocompatible polymer, ~~s based and for on~~ which ~~the protocol for the preparation of porous bodies with of~~ cancellous bones ~~porous body preparation method~~ has already been established. ~~Subsequently, and we~~ focused on the evaluation of ~~the~~ OCP formation mechanism, ~~which This mechanism~~ is an essential part of ~~calcification in~~ bone formation ~~calcification~~ and is ~~of considerably pivotal~~ important ~~tee in case of for~~ bones that exhibit ~~acquiring~~ high mechanical strength in bones and ~~degree manifestations of~~ flexibility. ~~Furthermore, Not only this the aforementioned mechanism, it is also essential to for the~~ preparation of the high ~~performance~~ ~~functionality~~ biomaterials ~~to which it is applied~~. Therefore, by ~~combining the two evaluations of the evaluation of the crystal interface on a and micro scale level with that, and evaluation of the mechanical strength of macro scale bodies formation, mutual feedback could be provided on the influence that micro generated phenomena have on bulk, we could obtain knowledge over a wide range not possible with a unidirectional investigation. Therefore, we should be able to obtain a broad range of knowledge that cannot be achieved by separately conducting each of the investigations. This can be achieved by combining the evaluation of the crystal interface on a micro-scale level with that of the mechanical strength of the macro-scale bodies and obtaining feedback with respect to the bulk influence of the micro-generated phenomena.~~

OCP is ~~one of the~~ main inorganic components of ~~young~~ bones, and is ~~a mainly composed of~~ highly biocompatible materials. ~~Moreover, Not only that. a~~ As this unique crystalline structure is able to ~~carry drugs inside the crystal structure, it shows promise as a raw material for new combination medical materials.~~ Further, OCP is promising as a raw material for the fabrication of new combination of medical materials because this unique crystalline structure can carry drugs within the

Comment [Editor1]: [Level 5]

[Clarity and Readability]

[Language]

Clarity and readability was greatly enhanced by breaking down large sentence into smaller parts and improving word choice.

Comment [Editor2]: [Level 5]

[Conjunctive Adverb] [Grammar]

A conjunctive adverb is a part of speech that is an adverb by design but has the characteristic of a conjunction. It can be used to link different clauses or sentences.

Comment [Editor3]: [Level 5]

[Redundancy] [Language]

The sentences which have redundant information aren't necessarily grammatically incorrect, but they have unnecessary words, which affects overall readability of a sentence.

Comment [Editor4]: [Level 5]

[Clarity and Readability]

[Language]

Clarity and readability was greatly enhanced by rephrasing sentences and using more appropriate and clearer word choice.

~~crystal structure. -However~~~~On the other hand,~~ with the use of OCP and, -and above all, with OCP incorporating or carrying pharmaceutical components~~drug-carrying OCP itself,~~ it has beenis difficult to obtain molded bodies with the appropriate size and strength that can be to be utilized as a bone graft material. When OCP powder is ~~simply~~ kneaded into biocompatible polymers, the resulting material~~it~~ does not acquire the ~~become a material with the~~ flexibility of bones, therefore, it is very important to ensure ~~so~~ the crystallization of OCP directly onto~~process on~~ the bone is very important. ~~Controlling OCP crystallization promises to enable preparation of biomaterials with “suppleness” like bone.~~ The control of OCP crystallization enables the preparation of biomaterials characterized by bone-like “suppleness.”

Comment [Editor5]: [Level 5]

[Spelling error] [Language]

Spelling error rectified