Dear editors,

We are submitting an article entitled “Preparation and characterizations of three-dimensional porous collagen/graphene oxide/hydroxyapatite nanocomposite scaffolds for bone tissue engineering” to Open Science Journal for consideration for publication. The reasons we submitted this work to Open Science Journal are as followed: Three-dimensional porous scaffolds prepared by various biocompatible polymers, especially the natural polymers (such as collagen (Col), gelatin, chitosan, and alginate, etc.), are widely used to restore or regenerate damaged tissue in tissue engineering. These scaffolds provide a framework for cells to attach, proliferate, and form extracellular matrix of the targeted tissue. Therefore, it still remains one of emergent challenges to prepare three-dimensional porous scaffolds with adequate mechanical properties and excellent bioactivities. Graphene oxide (GO) has been well demonstrated with its extraordinary mechanical properties, biocompatibility, and bioactivities. Hydroxyapatite (HA) is mostly calcium phosphates in natural bone and widely used in various bone tissue engineering scaffolds to improve the cellular attachment, proliferation and differentiation on the scaffolds. In this study, a series of three-dimensional porous Col/GO/HA nanocomposite scaffolds were successfully prepared using the feasible freeze-drying technique. SEM images revealed that the scaffolds were porous with the pore diameter inversely proportional to the concentration of HA. XRD patterns showed that HA nanoparticles was incorporated into the scaffolds. The rBMSCs were able to attach and proliferate on the scaffolds during the 21 days of the experiment, indicating that the as-prepared scaffolds are cytocompatible. The Alizarin red staining results demonstrated the presence of calcium deposits as there were orange-red stains on the samples after culturing the cells using the osteogenic differentiation medium. These results demonstrate promising potential of the three-dimensional porous Col/GO/HA nanocomposite scaffolds for applications in bone tissue engineering. Based on these reasons, we hope that this work is reported by Open Science Journal. The manuscript is not under consideration for publication and has not published elsewhere in any medium. The submission of this manuscript has been approved by all authors.

Sincerely,

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