

Ηράκλειο 21 Φεβρουαρίου 2022

## Η ΠΑΡΟΥΣΙΑΣΗ ΔΙΠΛΩΜΑΤΙΚΗΣ ΕΡΓΑΣΙΑΣ

Της φοιτήτριας Μαρίας Παπαδά, θα γίνει τη

**Δευτέρα 28/02/2022** και ώρα **11:00**

στην αίθουσα Α210 του Κτηρίου Μαθηματικού

**Θέμα Διπλωματικής:**

**«Biocompatibility studies of graphene-based scaffolds for neural regeneration»**

Για την παρακολούθηση της παρουσίασης δια ζώσης, το κοινό θα πρέπει να έχει τα απαραίτητα δικαιολογητικά (πιστοποιητικό εμβολιασμού, νόσησης ή rapid test).

### **Abstract:**

Neural tissue regeneration is limited especially in the Central Nervous System (CNS) because of its high complexity in structure and function. The use of biomaterial-based scaffolds for neural regeneration is promising as these scaffolds can mimic the naturally occurring microenvironment of the CNS. The ideal scaffold for neural regeneration needs to feature a combination of optimal characteristics in material, size, architecture, and surface properties in order to recapitulate the complexity of neural tissue. Therefore, the fabrication of biomaterial-based, biomimetic scaffolds that support neural regeneration is crucial. In this study, embryonic neural stem cells (NE-4C cell lines) were cultured in scaffolds fabricated from three different concentrations of reduced graphene oxide (rGO) material supported in a porcine adipose-derived extracellular matrix (ECM). After immunofluorescent staining and observation with confocal microscopy, a comparative study was performed to determine the role of graphene in cell adhesion, proliferation, and differentiation.