

1. Il/la candidato/a descriva le principali tecniche eletroforetiche: scopo della metodica, strumentazione, principi generali e applicazioni in campo biomedico.
2. Il/la candidato/a descriva come allestire colture cellulari e come utilizzarle per la valutazione di risposte molecolari indotte dal trattamento di ormoni.

Physical activity is an important part of human lifestyle although a large percentage of the population remains sedentary. Exercise represents a stress paradigm in which many regulatory endocrine systems are involved to achieve homeostasis. These endocrine adaptive responses may be either beneficial or harmful in case they exceed a certain threshold. The aim of this review is to examine the adaptive endocrine responses of hypothalamic-pituitary-adrenal axis (HPA), catecholamines, cytokines, growth hormone (GH) and prolactin (PRL) to a single bout or regular exercise of three distinct types of exercise, namely endurance, high-intensity interval (HIIE) and resistance exercise.

COGNOME \_\_\_\_\_

NOME \_\_\_\_\_

Firma \_\_\_\_\_

Roma, 17 ottobre 2023

1. Il/la candidato/a descriva l'allestimento di un laboratorio per colture cellulari con particolare riguardo alla descrizione delle cappe a flusso laminare.
2. Il/la candidato/a descriva le tecniche di amplificazione mediante PCR (Polymerase Chain Reaction): scopo della metodica, principi generali, strumentazione e applicazioni in ambito biomedico

In summary, a single bout of endurance exercise induces cortisol increase, while regular endurance exercise-induced activation of the HPA axis results to relatively increased basal cortisolemia; single bout or regular exercise induce similar GH peak responses; regular HIIE training lowers basal cortisol concentrations, while catecholamine response is reduced in regular HIIE compared with a single bout of HIIE. HPA axis response to resistance exercise depends on the intensity and volume of the exercise. A single bout of resistance exercise is characterized by mild HPA axis stimulation while regular resistance training in elderly results in attenuated inflammatory response and decreased resting cytokine concentrations.

COGNOME \_\_\_\_\_

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