★★★ ＜第19回知的財産翻訳検定試験【第9回英文和訳】＞ ★★★

≪１級課題 -バイオテクノロジー-≫

【解答にあたっての注意】

１．問題の指示により和訳してください。

２．解答語数に特に制限はありません。適切な個所で改行してください。

３．課題文に段落番号がある場合、これを訳文に記載してください。

４．課題は４題あります。それぞれの課題の指示に従い、４題すべて解答してください。

問１．請求項

STARTから***END***までを和訳してください。

START

1.　A method of combining mesenchymal stem cells with an osteochondral allograft, the method comprising:

　　obtaining adipose tissue having the mesenchymal stem cells together with unwanted cells;

　　digesting the adipose tissue to form a cell suspension having the mesenchymal stem cells and the unwanted cells;

　　adding the cell suspension with the mesenchymal stem cells to the osteochondral allograft so as to form a seeded osteochondral allograft; and

　　allowing the cell suspension to adhere to the osteochondral allograft for a period of time to allow the mesenchymal stem cells to attach.

2.　A method in accordance with claim 1, wherein the osteochondral allograft is from a cadaveric donor, and the step of obtaining the adipose

tissue includes recovery from the same cadaveric donor as the osteochondral allograft.

3. A method in accordance with claim 1, wherein the step of digesting the adipose further includes aspirating a supernatant containing mature adipocytes so as to provide a pellet.

END

問２．背景技術

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START

Sleep has been implicated in the plastic cerebral changes that underlie learning and memory. Both rapid eye movement (REM) and non-REM sleep (NREM) play important roles in memory. Behavioral observations in rats show that periods of learning are associated with subsequent increases in REM sleep, whereas REM sleep deprivation impairs memory of cognitive procedural or implicit types of material previously learned. NREM was found to be positively correlated with the ability to retain a word pair-association list which was a declarative memory. In addition, the transition from short-term to long-term memories by reactivation of sharp wave-ripples in the hippocampus during NREM was important for memory consolidation. It has also been demonstrated that inducing slow oscillation-like potential fields by transcranial application of oscillating potentials (0.75 Hz) during early nocturnal NREM, enhances the retention of hippocampus-dependent declarative memories in healthy humans.

END

問３．実施の形態

STARTから***END***までを和訳してください。

START

The term "primer" refers to an oligonucleotide, whether occurring naturally as in a purified restriction digest or produced synthetically, that is capable of acting as a point of initiation of synthesis when placed under conditions in which synthesis of a primer extension product that is complementary to a nucleic acid strand is induced, (e.g., in the presence of nucleotides and an inducing agent such as a DNA polymerase and at a suitable temperature and pH). The primer is preferably single stranded for maximum efficiency in amplification, but may alternatively be double stranded.
If double stranded, the primer is first treated to separate its strands before being used to prepare extension products. Preferably, the primer is an oligodeoxyribonucleotide. The primer must be sufficiently long to prime the synthesis of extension products in the presence of the inducing agent.
The exact lengths of the primers will depend on many factors, including temperature, source of primer, and the use of the method.
As used herein a "nucleotide locus" refers to the location of a nucleotide in a nucleic acid molecule. A nucleotide locus of a methylated nucleotide refers to the location of a methylated nucleotide in a nucleic acid molecule.

END

問４．実施例

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START

Replicated groups of 15 termite workers were weighted for initial body weight, before they were placed in a 35cm Petri dish. To reduce stress, the bottom surface of each Petri dish was scratched using a utility knife to provide footing for termites. Testing materials were dried at 80 deg.C overnight and weighted. To examine the susceptibility of these testing materials to termites, they were used as the only food source (a "no choice" test). Materials were soaked in distilled water for 1 hour before being introduced into the Petri dish. The bioassay was performed in complete darkness for 10 days. A total of four technical replications were performed for each treatment in each colony (60 termites/treatment/colony).

Mortality and body weight of termite workers were monitored throughout the experiment. Cumulative mortality at the 5th and 10th day, as well as the body weight of survived workers at the 10th day was documented. Mortality data at day-5 is reported for the experiments.

END