★★★ ＜第27回知的財産翻訳検定試験【第13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。適切な箇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．**背景技術**
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START

Viral epidemics and pandemics represent increasing threats to global health as zoonotic diseases spread, jumping host species, recombining, and potentially mutating into more virulent forms. The need for additional anti-influenza drugs is important in maintaining active countermeasures against pandemics. As an example, when H1N1 flu virus swept the world in 2010, the two most popularly effective antivirals were Tamiflu.RTM. (Oseltamivir) and Relenza.RTM. (Zanamivir); which were useful, at best, for shortening the disease period by approximately a day. In less than one year, the novel H1N1 virus evolved to increasingly resist Tamiflu.RTM. applications, and the drug has largely become ineffective against downstream populations of the heritage H1N1 swine flu viruses. Although some antiviral medicines may be effective at present, it is vital that researchers investigate diverse therapeutic agents in order to combat viral outbreaks from rapidly evolving strains. The ease and speed with which numerous varieties of flu virus mutate to become drug resistant is particularly concerning.

END

問２．**実施形態**

STARTから***END***までを和訳してください。

START

In some aspects, the biomarkers disclosed herein can serve as diagnostic markers that predict healing versus non-healing DFU. In some embodiments, the signaling pathways in which these proteins reside and function are points of therapeutic intervention, wherein combinations of therapies targeting these interrelated pathway signaling proteins is identified. In some embodiments, the patterns of protein expression and activation are useful in guiding treatment decisions on an individual, per-patient basis. In some aspects, the present disclosure provides a comprehensive assessment of protein signaling cascades related to proliferation, migration, inflammation, and apoptosis/senescence in diabetic wounds.

（中略）

The term "treatment" or "treating" can refer to cure or ameliorate a condition or disorder including a disease. For example, an effectiveness of a cancer treatment, such as administration of an anti-cancer drug, may be an assessment of the anti-cancer drug to reduce tumor or cancer cell invasiveness, to kill cancer or tumor cells, to eliminate a cancer or tumor in a subject, to reduce a size of a tumor, to weaken or make more susceptible to apoptosis a cancer cell or tumor cell, to reduce or prevent metastasis, or others, or combinations thereof.

END

問３．**実施例**

STARTから***END***までを和訳してください。なお、panning については、以下の定義を参考にしてください（参考の部分は訳す必要はありません)。

START

Example 1--Identification of Anti-VpreB1 Fabs

Sea Lane's proprietary Fab fragment libraries were panned against human VpreB-1 for 4 rounds. Typically, after three to four rounds of panning, individual clones from enriched phage pools were analyzed by ELISA against human VpreB1, and the positive clones were sequenced to determine their heavy and light chain sequences. From these studies, Fab clonal analyses identified 16 unique human VpreB1 binders (Table 1). As further characterized in Table 2, both kappa and lambda light chains were identified with 4 different heavy chain frameworks.

Example 2--Characterization of Selected Anti-VpreB1 IgG mAbs

ELISA assays were performed to characterize the SgG-binding affinity, sensitivity and serum background of individual panned phage Fab antibodies having affinity for human VpreB1. FIG. 8 provides an overview of the characterization of anti-human VpreB1 IgG1. SgG proteins refer to surrogate light chain (SLC) constructs, also referred herein as a "Surrobody.TM.," and the two terms are used interchangeably.

END

参考：

The term "panning" is used to refer to the multiple rounds of screening process in identification and isolation of phages carrying compounds, such as antibodies, with high affinity and specificity to a target.

問４．**請求の範囲**

STARTから***END***までを和訳してください。但し、参考の部分は訳す必要はありません。なお、請求項１～４９、５１～６１、６３～１６２は省略されています。

START

50. A method of producing an enriched population of insulin producing cells, the method comprising:

obtaining a cell population comprising human multipotent or pluripotent cells differentiated into the pancreatic lineage;

providing the cell population with (i) an CXCR4 agonist, (ii) an EGFR agonist, (iii) an FGFR agonist, (iv) an Activin receptor agonist or an agent that stimulates SMAD3, (v) an IL11R agonist or IL6R agonist, (vi) a notch agonist, (vii) an RXR agonist or RAR agonist, or (viii) a BMP inhibitor for a time effective to allow the differentiation of pancreatic precursor cells from the human multipotent or pluripotent cells; and

providing the pancreatic precursor cells with a maturation medium that promotes differentiation of the pancreatic precursor cells to insulin producing cells.

62. The method of claim 50, further comprising providing the pancreatic precursor cells differentiated from the human multipotent or pluripotent cells with a cell growth medium comprising a Wnt signaling pathway activation agent prior to providing the pancreatic precursor cells with a maturation medium that promotes differentiation of the pancreatic precursor cells to insulin producing cells.

163. A method of treating a subject, the method comprising administering a pancreatic insulin producing cell produced by the method of claim 50 and administering the pancreatic insulin producing cells to the subject.

END

参考：“Multipotent” or “multipotent cell” refers to a cell type that can give rise to a limited number of other particular cell types. Multipotent cells are committed to one or more embryonic cell fates, and thus, in contrast to pluripotent cells, cannot give rise to each of the three embryonic cell lineages as well as extraembryonic cells.