# 平成１９年度　薬学研究科修士課程選抜入学試験問題

| 科　目　名 | 問題枚数 | 受験番号 | 氏　　名 |
|---|---|---|---|
| 英　語 | No. 1 / 4 枚 | | |

Ⅰ．次のa）～j）の英文は、薬学に関連したある英単語を解説したものである。その内容に最も適する単語を語句群から選び、その番号を解答欄に記入しなさい。（２０点）

a) Any of a group of compounds containing a characteristic aromatic trimeric heterocyclic nucleus, usually occurring in glycosidic form and widely distributed in plants, often as a pigment.

b) One of a pair of compounds having a mirror image relationship.

c) The separation of substances achieved by applying an electric field to samples in solution, depending on the different velocities with which the substances move in the field.

d) A single piece of cellular DNA, together with the protein that help to define its structure and level of activity.

e) The grafting of tissues taken from patient's own body or from another.

f) A specialized junction between two nerve cells or between nerve and muscle cell, across which signals are transmitted.

g) The outer integument or covering of the body, consisting of the dermis and the epidermis, and resting upon the subcutaneous tissues.

h) A written direction for the preparation and administration of a remedy.

i) A drug or agent that is used to abolish the sensation of pain.

j) A substance, as a flavoring agent, preservative, vitamin, added to another substance to improve its appearance, increase its nutritional value.

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|---|---|---|---|
| 英　語 | No. 2 / 4 枚 | | |

**語句群**

1）additive　2）adsorption　3）adverse reaction　4）agonist
5）allergy　6）anesthetic　7）chromosome　8）covalent bond
9）crystallization　10）electrophilic reaction　11）electrophoresis
12）enantiomer　13）equilibrium　14）flavonoid　15）genome
16）heart　17）lung　18）micelle　19）microscope
20）mitochondria　21）pill　22）potential　23）prescription
24）receptor　25）skin　26）solvent　27）steric hindrance
28）synapse　29）transplantation　30）ultraviolet

| | 解答番号 | | 解答番号 |
|---|---|---|---|
| a | | f | |
| b | | g | |
| c | | h | |
| d | | i | |
| e | | j | |

| 採点 | | [　] |
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# 平成１９年度　薬学研究科修士課程選抜入学試験問題

| 科目番号 | 科　目　名 | 問題枚数 | 受験番号 | 氏　　名 |
|---|---|---|---|---|
| | 英語 | No. 3 / 4枚 | | |

下記の英文は免疫抑制薬発見のエピソードを記述している。全文を 和訳しなさい。

A particularly noteworthy achievement in the field of empirical research was the discovery of cyclosporine A by the Swiss firm Sandoz. Like most other pharmaceutical companies, Sandoz was looking for new antibiotics by growing cultures from the microorganism found in different soil samples. In order to widen the range of soil samples being examined, Sandoz' research workers were encouraged to bring back a few grams of soil whenever they went abroad on holidays. In 1969 some soil from a region in Norway called Hardanger Vida was examined and it proved interesting because the microorganism in the soil secreted a novel polypeptide. This was evaluated in the usual manner but it quickly became apparent that there was no significant antibiotic activity. Neither had the substance any properties that might cause it to be considered as an anticancer agent. Unexpectedly though the polypeptide turned out to have potent immunosuppressive properties, its mode of action was to specifically and reversibly inhibit the production of lymphokines that stimulate T-cell growth. Since T-cell lymphocytes are part of the immune system, being concerned with attacking foreign, invading cells, the Sandoz research team had discovered a drug with a previously unknown and unforeseen mechanism. The polypeptide was found to consist of eleven amino acids arranged in cyclic fashion, and named cyclosporine A. Its discovery represented a landmark in immunopharmacology, and launched the era of organ and bone marrow transplant surgery.

訳註
immunosuppressive:免疫抑制の
bone marrow transplant surgery:骨髄移植手術

| 採点 | | [　] |
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| 科　目　名 | 問題枚数 | 受験番号 | 氏　　名 |
|---|---|---|---|
| 英　語 | No. 4 / 4枚 | | |

Ⅲ. 次の英文を読んで、各問に答えなさい。（30 点）

Aging is associated with major alterations in body composition and exercise tolerance. Muscle mass, immune defense, antioxidant function and glutathione (GSH) levels all decreased. As our immune system ages, exercise workouts tax us more and more. Performance suffers. So does our ability to recover. Older women and men who participate in regular exercise therefore require more antioxidants in general and GSH in particular.

Exercise appears to strengthen the immune system, but too much may have just the opposite effect. Many elite athletes come down with viral illnesses when they train intensely. A widespread virus ravaged the athletic community prior to the 2000 Olympic Games, upsetting years of hard work. However, few of us will push our immune resources to the limit. By using it in good measure, exercise can bolster our defenses against disease.

While working out, athletes may consume ten to fifteen times more oxygen than usual, so oxidative stress is a major factor in exercise. Physical activity increases oxygen consumption and intensifies numerous metabolic processes. The result is the creation and circulation of liberated oxidative breakdown products free radicals.

問１　下の語句群を参考にして、この英文に最も適当な表題を英語でつけなさい。

語句群：exercise, health, aging, athletic, maintenance, performance, oxidative stress

英語の表題 _____

_____

問２　英文を要約しなさい。

| 採点 | | [　　] |
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