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SD4635
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（学校用）

様式 A-1
(FY2025)

2025 年　7 月　17 日

サイエンス・ダイアログ　実施報告書

1. 学校名：東京都立科学技術高校

2. 講師氏名：Gregoire J. PHILIPPE

3. 講義補助者氏名：Yuki Kashiwa

4. 実施日時：2025 年 7 月 17 日（木）　10：30 ～ 12：00

5. 参加生徒：　1　年生 65 人、　年生　人、　年生　人（合計 65 人）
　備考：（例：理数科の生徒）創造理数科と科学技術科の生徒

6. 講義題目：世界中の治療法研究

7. 講義概要：疾患原因たんぱく質を分解する U ボディによる新規創薬戦略

8. 講義形式：
　☑対面 ・ □オンライン （どちらか選択ください。）
　1)　講義時間　60　分　　質疑応答時間　10　分

　2)　講義方法（例：プロジェクター使用による講義、実験・実習の有無など）
プロジェクター使用による講義

　3)　事前学習
　　☑有 ・□ 無 （どちらか選択ください。）
　　使用教材：講師提案のキーワードを事前に配布

9. その他特筆すべき事項：

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Form B-2
(FY2025)
Must be typed

Date（日付）
23/7/2025 （Date/Month/Year：日/月/年）

Activity Report -Science Dialogue Program-
（サイエンス・ダイアログ 実施報告書）

- Fellow's name（講師氏名）: Gregoire Philippe （ID No. P23333 ）

- Name and title of the lecture assistant（講義補助者の職・氏名）
Mr. Kashiwa Yuki
- Participating school（学校名）: Tokyo metropolitan high school of science, Koto-ku

- Date （実施日時）: 17/07/2024 （Date/Month/Year:日/月/年）

- Lecture title（講義題目）:
Researching new therapies all around the world

- Lecture format（講義形式）:
  ◆☒Onsite ・ ☐Online (Please choose one.)（対面 ・ オンライン）（（どちらか選択ください。））
  ◆Lecture time（講義時間） 40 min（分）, Q&A time（質疑応答時間） 20 min（分）
  ◆Lecture style（ex.: used projector, conducted experiments）
  （講義方法（例：プロジェクター使用による講義、実験・実習の有無など））
  Presentation with projector

- Lecture summary（講義概要）: Please summarize your lecture within 200-500 words.

This presentation was a lecture in two parts, focusing on my personal experience as a researcher in drug design and biochemistry. In the self introduction part, I emphasised on the importance of learning english and the different aspects that have made my work in academia enjoyable and at times challenging. I have introduced my background and homecountry, with a follow up on the different places I have been to for studying and presenting my work abroad. The second part of the talk started with the definition of research and important notions of drug design (agonist and antagonists). I then explained why targeting protein-protein interactions is interesting, and made the link with what they have studied at school on how to get proteins from DNA (central dogma). I then explained how we can use ribosomes to make peptides and proteins from DNA much faster than with chemistry and how this helps us screen a very high number of different amino acid combinations. I then explained how the mRNA display that we use in the Suga lab works in theory and gave some details on how in works in practice and that it allows us to obtain peptide binders with high affinity for a protein. Finally, a gave a short introduction to my previous work, in which we take these high affinity binders, modify them chemically and assess their drug like properties using biochemistry and biophysic techniques.

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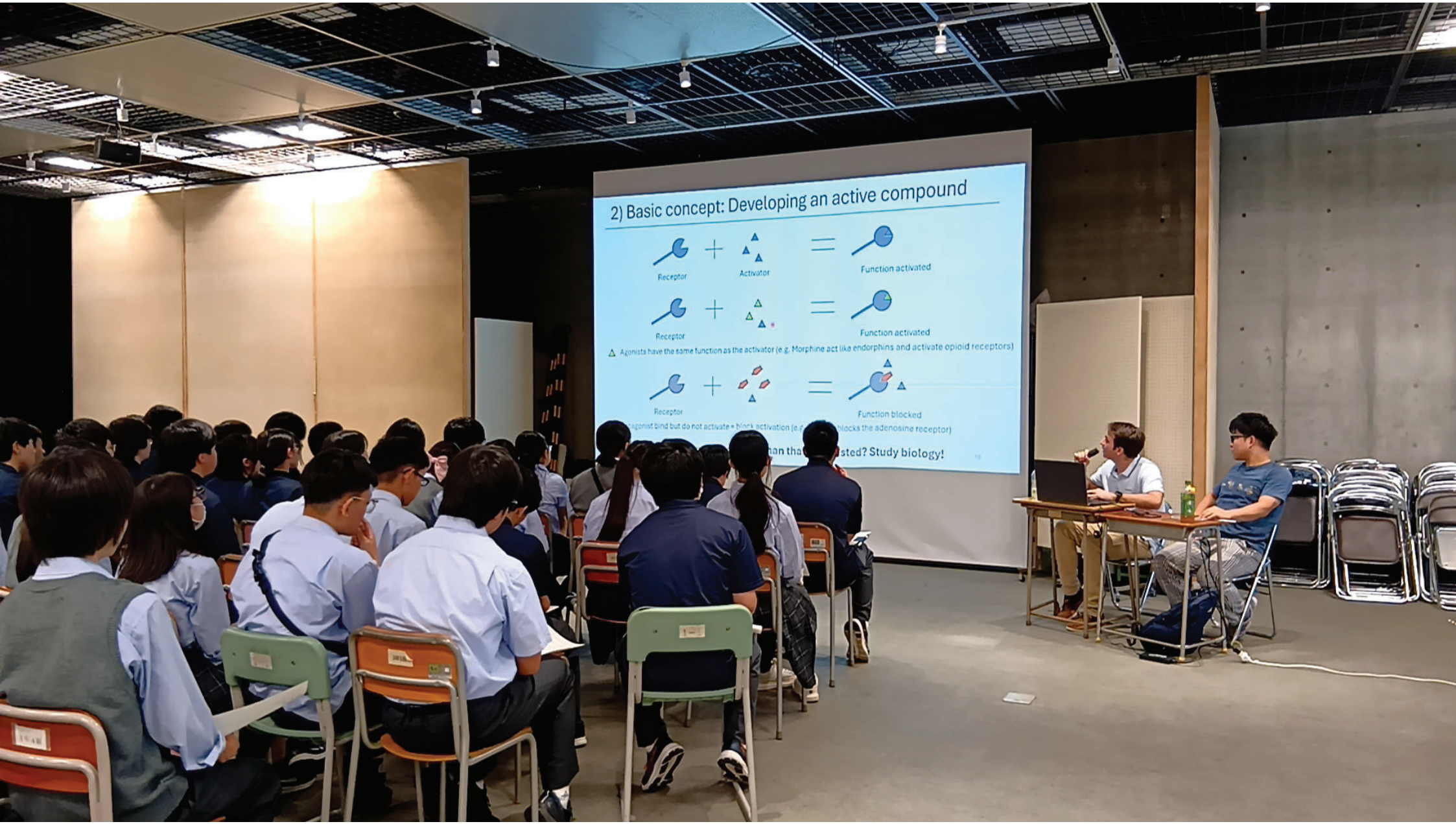
◆Other noteworthy information（その他特筆すべき事項）:

Everything went smoothly. The teachers and staff were very helpful for setting up the room. The students also demonstrated surprising maturity, remained focused and engaged during the whole talk, and made the Q&A session interesting. Although, it took a couple of minutes for them to warm up during question time, they eventually asked many questions both in English and Japanese about what it is like to be a researcher and the science itself. I was pleased by the fact that they spontaneously asked questions without much of an incentive from us or the teachers.

- Impressions and comments from the lecture assistant（講義補助者の方から、本プログラムに対する意見・感想等がありましたら、お願いいたします。）:

Kashiwa-kun's comment is as follow:

"More students asked questions than I had expected. About half of them were in English while the ones asked in Japanese tended to be more advanced and closely related to research topics. I was particularly surprised by the number of questions about being a researcher, which showed the students' strong interest in the profession"


2) Basic concept: Developing an active compound
Receptor
Activator
Function activated
Receptor
Function activated
Agonists have the same function as the activator (e.g. Morphine act like endorphins and activate opioid receptors)
Receptor
Function blocked
blocks the adenosine receptor)
sted? Study biology!