

Super Genius DNA #Chapter 101: Laboratory One (3) - Read Super Genius DNA Chapter 101: Laboratory One (3)

Chapter 101: Laboratory One (3)

This happened around two weeks ago when Young-Joon was clinging to Lee Yoon-Ahs clinical trial. Yoon Dae-Sung, the CEO of A-Gen, called Kim Hyun-Taek, the lab director of Laboratory One, for a meeting. When Kim Hyun-Taek heard what Yoon Dae-Sung was saying, he trembled in anger.

Sir, what are you talking about? Kim Hyun-Taek asked.

Yoon Dae-Sung lowered his head like he was sorry.

Theres nothing we can do. Let Doctor Ryu do as he wants.

You want me to give Ryu Young-Joon the Mobile Diagnostic Device Research Department?magic

Were not transferring the department itself; Im saying that we send the scientists at the department like a task force. And its just for the duration of the project. Its two to three years at most.

That isnt a short period of time, right? And do you think they will adjust well when they come back to me if they work with Young-Joon for that long? That department is my department. This is complete nonsense.

Doctor Ryu said that he would share the commercialization strategy of the animal disease treatments he patented.

Damn it, of course he has to do that! Was he going to sell the commercialization strategy to a different company when hes a director at A-Gen?

Ryu Young-Joon is a director at A-Gen, but he is also the CEO of A-Bio, and those patents are all privately owned by him. From his perspective, it doesnt matter whether it is produced by A-Gen or Conson & Colson; all that matters is that it gets produced and he receives royalties.

But wouldnt he also be criticized by A-Gen shareholders if he handed that over to Conson & Colson?

Would he really be? What are we going to do if he says that he had no choice because we didnt meet his demands? Would the shareholders still attack Doctor Ryu?

...

And wasnt that demand of his asking us to lend him the manpower needed to carry out a huge project like the Genome Project of the entire race after he bought two hundred pieces of Illeminas equipment from the United States for cheap? The shareholders attacking a director who works hard and is good at his job? Do you think they will?

No, but

Who do you think the shareholders will criticize if Doctor Ryu, who was offended because you didnt cooperate with him to keep his power in check, decides to not align with A-Gen and sells the commercialization strategies of one hundred twenty-two patents to America?

...

Kim Hyun-Taek sighed.

Let Doctor Ryu do what he wants. We have no other choice.

Sir, I was fine when you asked me to hand over the building Lab One had so ABio could use as their company building, Kim Hyun-Taek said. I let him use AGENs Research Support Center, Experimental Animal Resource Center, and the Clinical Trial Management Center like they were his toys. I allowed him to use the facilities at Lab One. I even let him make that shitty diagnostic kit in our lab with our departments technicians!

Calm down.

Do you think I can? We let him do all that, and now, this snake is stepping on the line because of his endless greed. And now he wants a department?
A department?

Didnt Doctor Ryu do everything you said after paying the fair price? Dont talk about it like he stole it from you.

Sir, whose side are you on? How can you be so calm when this company that we sacrificed our life to grow is going to go into someone else's hands?

Doctor Ryu is proceeding with this not as the CEO of ABio, but as a director of AGen. It will help the reputation of AGen a lot if he makes the Genome Project in our name. It's not a bad thing for us either.

It is bad. This precedent, which shows him that he can steal other departments from us, is bad! Kim Hyun-Taek shouted.

Then what do you want me to do? What Doctor Ryu requested is logical. There is no way for me to refuse. And to be honest, the Diagnostic Device Department doesn't have any important projects going on, do they?

Important projects?

Kim Hyun-Taek's eyes widened.

Wait. Sir, let's think about this

He crossed his arms and tapped on his lip.

What are you trying to do? asked Yoon Dae-Sung.

I can't just let him do that to me, can I?

Don't try anything weird. Everyone who tried to keep Doctor Ryu in check all failed and were defeated.

This isn't even trying to do that. I can act in self-defense against someone who is trying to steal my hands and feet, right? Kim Hyun-Taek said.

After ending his meeting with Yoon Dae-Sung, Kim Hyun-Taek returned to Lab One. He went straight into the lab director's office, and immediately began looking through the project documents. He picked out a few useful ones among the random ideas and old proposals.

I am going to get a national project.

The contest that had the closest deadline was the one that was closing in three days.

20th MSIT[1] New Materials Competition 2020.

* * *

Park So-Yeon, who confessed everything to Young-Joon and wrapped things up, was now waiting to quit A-Gen. She only had two weeks left as an A-Gen employee, so she had to complete all the diagnostic kits within that time. And one additional task was created; this wasn't given to her by Kim Hyun-Taek or Young-Joon, but she made it herself.

As soon as she arrived at work, she looked through the departmental project documents file as she drank her coffee. Then, she began to carefully read through the most recently created project proposal.

[Development of a highly efficient waterproof new material based on the DNA of lotus leaves.]

Because there are fine protrusions on the surface of lotus leaves, water is not absorbed even when it rains. The water droplets trickle off the surface and wash off dust. This self-cleaning mechanism is called the lotus effect. Many studies have been conducted in the past to develop a material with the lotus effect, but no efficient new material has not been created. This research aims to transform the clothing industry by developing this new material through analysis of the DNA of lotus leaves and extracting the fibers in the structure of the leaf. This project

Hm.

Park So-Yeon rested her hand on her chin and thought. The idea itself wasn't bad; a new clothing material that had the lotus effect was a goal that many ambitious scientists dreamt of from a long time ago.

But its only a basic idea.

All that was in the proposal was that they were going to find the gene that created the epidermal fibers of lotus leaves and artificially express it. Ideas about how they were going to find that gene or how they were going to express it were flimsy. It was an incomplete document in the eyes of a doctorate-level scientist.

Park So-Yeon looked through the links that were on the proposal. A news article appeared.

[Selected proposal for the 20th MSIT New Materials Competition 2020.]

She was surprised.

Why is there a link to this proposal in the article?

When she pressed on the article, thinking that this couldnt be possible, she was shocked. Among the twenty selected projects, the [Development of a highly efficient waterproof new material based on the DNA of lotus leaves.] was nineteenth on the list.

No way.

The announcement of the selected projects was only a few days ago, but the submission deadline was two months ago as the decision took a long time. But how could the lotus leaf new materials project be selected for this?

How can a proposal that was written after the submission deadline be selected?

* * *

What technology among the ones A-Bio had were foreign countries most interested in? A-Bio had succeeded in curing huge diseases like Alzheimers, glaucoma, and diabetes, but there was a drug that was more popular than that. Its Cellicure, Young-Joon said to Park Joo-Hyuk.

Why?

Treatments based on stem cells are not exactly drugs, but therapies. It requires a technician who is skilled in complex cell culturing.

The diabetes cure or the pancreatic cancer one are drugs that dont need that, arent they?

The problem with the diabetes cure is that it has to be taken regularly, although that will be solved once we develop probiotics.

The administrations in charge of food and drug safety around the world were still a little reluctant about commercializing a live bacteria that had been genetically modified.

Anyways, since people have to take it every day when it is in the drug form, insulin injections still have a shot at competing even though oral drugs are more advanced.

Hm.

And for the pancreatic cancer cure, people are waiting around for more clinical cases to accumulate and looking for the right time since it uses live viruses.

People are more conservative than I thought.

The food and drug safety organizations in any country are one of the most conservative organizations in the world, although time will take care of it. But Cellicures safety has already been proven, and its a new drug that is overwhelmingly superior to all other liver cancer drugs. So everyone wants Cellicure.

Cellicure was already being called the miraculous liver cancer cure from places around the world. It was the drug that had succeeded in curing liver cancer that was so far along that nothing could be done; it was the drug that had no side effects even though it was highly toxic as it didnt touch normal cells.

Cellicure might finish Phase Three of clinical trials very quickly. Im going to release it as a product as soon as possible.

Hm.

And there was a lot that happened for the drug to get here, right? Investigate what illegal things happened at the point where Celligener completed Phase One and it was transferred to Lab One at A-Gen. From what I heard from Doctor Song in the past, I think Celligener was threatened as well.

Okay, Ill look into it. We have to set things straight so that there isnt any talk about it afterwards.

Yeah. I want to make sure that Celligener gets everything they rightfully deserve.

Young-Joon, who left his office after his meeting with Park Joo-Hyuk, found huge boxes that were piled up in the lobby. There were already thirty boxes stacked up, but more were coming in. The shipping company employees were carefully bringing them in, and a lot of A-Bio employees were watching the baffling situation.

Sir, what is all this? Park Dong-Hyun asked Young-Joon.

They are DNA analysis machines I bought from Illemina.

You bought thirty of these expensive machines?

I bought two hundred.

...

Park Dong-Hyuns jaw dropped to the floor.

Wait, why

We are going to do the Human Genome Project again. We are going to make a new, huge database that encompasses all races for future medicine.

Who is going to run two hundred of these?

Im going to bring in the Mobile Diagnostic Device Research Department from A-Gen. All of these experiments will be done at A-Gen. Dont worry Dong-Hyun-ssi, I wont make you do anything hard.

Park Dong-Hyun looked a little worried.

Sir, you know what kind of person Lab Director Kim Hyun-Taek is, right? Is he going to give up his department so easily?

Of course not, Young-Joon said.

He saw the article on the projects that the MSIT selected for 2020. From what he heard from Park So-Yeon as they developed the diagnostic kit and the other department scientists, there was no talk about a new project. But a national project all of a sudden? Of course, Kim Hyun-Taek had dug an escape hatch to protect his department from Young-Joon.

Actually, Im going to go to Lab One right now because of that, said Young-Joon.

Young-Joon walked past Illeminas equipment, which were being stacked neatly in the company lobby, and stepped into the K-Cops security teams car.

* * *

That's what happened, said Kim Hyun-Taek. Mr. Ryu, this is a national project. This research is being funded by tax money, and because it is a public project, I can't cancel the research just because I want to or send participating personnel to external services.

Young-Joon nodded.

I understand.

It will take a while to finish as it's a two-year research project. It is disappointing for you, but I think you will have to find different scientists or wait two years.

Two years?

Yes.

Kim Hyun-Taek smiled.

I'm disappointed as well, Mr. Ryu, that I can't help you with something as big as the Human Genome Project. I am also upset; why didn't you consult me in advance before planning something this huge?

To be honest, I heard a lot of things as I visited the Diagnostic Device Department frequently while developing the diagnostic kit, but all the scientists said that there weren't any projects that were going on or being planned, Young-Joon said. So, I thought that I would definitely be able to receive cooperation. I didn't know you would suddenly be put into a national project in such a short amount of time.

... That's what happened, Kim Hyun-Taek replied.

Young-Joon smiled. This was the first platform to present this chapter.

Director Kim.

Yes.

I believe the research on the development of a new material with the lotus effect is incredibly important. It will make people's lives more convenient and prosperous. Not only will it just be used in the clothing sector, it will be applied in many industries that require waterproofing.

Of course.

Yes. If we take two years for something like that, commercialization will be pushed back two years as well, right? If I can run this project, I can finish it in two weeks.

What?

Lets do it together and push back the Genome Project for about two weeks. I felt bad about borrowing a department in your hands for a few years, but I think I would feel a lot better if I helped you get huge results.

1. acronym for Ministry of Science and Information and Communication Technology

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Youre going to finish it in two weeks? Kim Hyun-Taek asked Young-Joon like he was shocked.

Yes. I can do it in two weeks.

Are you serious? I know that you have a way of making new drugs, but this isnt something like that. We are developing a new material.

I understand. Isnt that why its easy? We dont need things like clinical trials, right? Young-Joon replied like it was no big deal. Kim Hyun-Taek was even more flustered.

Even Kim Hyun-Taek, who proposed this project, had no solid ideas for experiments. Honestly, even the general supervisor couldnt be certain that this study could be completed within two years. But Young-Joon could do it? In just two weeks?

How in the world are you going to do it?

Lotus leaves have numerous bumps, which are three micrometers in diameter, on its surface, and the nanoparticles have a water-repellent coating. That is the key structure in achieving the lotus leaf effect. We just have to isolate the gene that codes for it, make it synthesize the biomaterials, and then refine them.

Its easy when you say it. The process to find that gene is

The gene is the three hundred second ORF[1] in chromosome seven, Young-Joon said. It doesn't even have a name since it's not really well-known in the scientific community, so should we just call it the lotus leaf gene from now on?

Kim Hyun-Taek took a sip of coffee as his hands trembled.

Are you being serious? Or are you messing with me?

Why would I mess with you? I am being serious. There's a paper that says the surface structure of lotus leaves were destroyed when that gene was broken.

A paper like that exists?

This data is from an on-campus paper published by Chengkun University.

Kim Hyun-Taek squinted his eyes in suspicion. He had never heard of this university before.

How did you find an on-campus paper from somewhere like that?

I did some research after I saw that the MSIT selected as one of their projects for 2020.

This was not information that could be found by just thoroughly looking through the literature. To be honest, Kim Hyun-Taek wasn't confident that he could find a no-name paper buried in the wilderness like him; it wasn't easy for any scientist to find that kind of literature.

Of course, it was different for Young-Joon. As he could figure out the answer first through Rosaline, he was able to search up the answer as the keyword. It was very difficult to find that the lotus effect was related to the three hundred second ORF in chromosome seven from huge databases of literature without any background knowledge, but it would be easy to find results if one searched up the exact gene.

But will the data be right when it's from a no-name paper like that? There are a lot of papers that cannot be reproduced. How can you believe that paper? Kim Hyun-Taek argued.

Because I tested it myself after reading the paper.

You tested it yourself?

Yes.

This was even more shocking. Kim Hyun-Taek froze.

Wait, Doctor Ryu, how is that possible? How could you have done an experiment when it just got selected? And it wasn't even an ordinary experiment, but a gene manipulation experiment.

Because I have Cas9, Young-Joon said. I bought lotus leaves, put in Cas9 through agrobacterium and cut the candidate drug. The surface of the leaf was destroyed in five hours, and it lost the lotus effect.

...

Kim Hyun-Taek had nothing to say. Even if he assigned this to a very experienced doctorate-level scientist, it wouldn't be easy for them to produce the data that Young-Joon just talked about. The Diagnostic Device Department would maybe be able to find that gene if they all participated and researched for a year.

What about the gene manipulation experiment? If Young-Joon didn't have Cas9, this experiment would have taken at least six months. Even if they did, it would take more than a month if they couldn't handle it as well as Young-Joon. But he skipped that entire process in a day and showed up with experimental results that would have taken a year and a half?

This monster

This was Kim Hyun-Taek's mistake. He should have thought of this beforehand. Young-Joon was this kind of person. He had easily taken over all kinds of major incurable diseases and humanity's long-standing enemies, and he had conquered HIV, one of the worst infectious diseases in human history, had he not?

Young-Joon was not exaggerating when he said he would do it in two weeks. Perhaps even that span of time might have been modest. When other people were planning the project and studying background knowledge, this man would be able to finish it and judge the results.

Well, I think even this much information would really help the research, Young-Joon said. And Director, to be honest, the Diagnostic Device Department's part in this project should be to discover the gene that causes

the lotus effect, right? I think their work is done if you just cross-examine that what I told you is right.

...

Then, the Protein Purification Department should work on synthesizing biomaterials with that gene. I will help you then as well, so please let me borrow the Diagnostic Device Department for a few years. Of course, once you cross-examine what I told you with experiments and prove that what I told you is correct.

Kim Hyun-Taeks fists trembled.

...

He slowly opened his mouth.

No

Pardon?

Doctor Ryu, stop it.

What are you talking about?

You have enough, dont you? Will you be satisfied if you take this company away from us? Or are you doing this because you have a grudge against me because of what happened with Cellicure?

Young-Joon raised his head like he was baffled.

No, what are you talking about? You know that I dont work emotionally. And isnt what I am suggesting now also helpful to you, too?

...

Director, we are using the same people at the same time and doing the Genome Project on top of developing a new material with the lotus effect, right? Of course, I would receive the reward for the Genome Project, but you will be given a department with the experience of working on a project like that. This alone would be a considerable asset.

Kim Hyun-Taek sighed.

Lets be honest here. I know the reason why you want the management rights to A-Gen. You are trying to stop unethical things that management does, like how I stole Cellicure and tried to get rid of it, right?

...

But now, you are big enough to do whatever research you want and not be controlled by A-Gens management. But why do you have to suffocate me and reach the top of A-Gen? Kim Hyun-Taek said. Mr. Yoon and I may not have ingenious research abilities like you, but we have been in this field for decades. You really want to fight head-on? Youre going to have to bleed in order to destroy us. Stop it now. Mr. Yoon, Ji Kwang-Man, and I lead this company and grew it. Even if you are a genius, you cant swallow this up in just a few years.

...

Young-Joon ran his hand through his hair.

Phew

He sighed. He looked a little irritated. He stared at Kim Hyun-Taek.

Director Kim, he said. To be honest, what you are saying is ridiculous.

What?

Current medicine is Eurocentric. All new drugs are tailored to the bodies of European people, and races like Asian, Hispanic, African, Native American, Latin American, and Oceanian are excluded, Young-Joon said. You know that since you are a scientist in pharmaceuticals and you do biology, right? Genetic differences between races exist biologically as well. Im not just talking about skin color; the expression level or number of replications of genes like KRT1 are different. In order for medicine to advance to be individually catered, one of the obstacles that must be overcome is the Eurocentric database.

...

Is it that hard to solve it? Young-Joon asked. Why are you talking about management rights? Did I ask for the CEO position of this company? Did I ask for your job?

...

Director Kim.

Young-Joon brought his face in front of Kim Hyun-Taeks. The look in Young-Joons eyes as he glared at Kim Hyun-Taek was exactly the same as the time he cursed at him, calling him a fxxking piece of trash.

Dont put politics into science, Young-Joon said.

...

This is exactly the same as Cellicure. The drug that you almost destroyed saved the life of a nine-year-old child. Do you know that? Food and drug safety administrations around the world are interested in this drug, and liver cancer patients are calling it a miraculous drug.

Ha

I believe that these things could one day act as a fatal weakness at a critical moment. Dont stop an important research like the Genome Project for such trivial reasons. Im saying this for your own good, Director.

...

I dont think this is a very good atmosphere to have a productive discussion. I will come again later. I hope to hear a good answer.

Young-Joon shut the door and left.

Kim Hyun-Taek, who was left alone, stared at the empty table for a while in thought.

Thud!

He slammed on the table with his fist. He felt like his blood vessels were going to pop from his blood boiling so much from anger.

Fuck!!

He stood up and kicked the sofa as hard as he could. This bastard quickly rose to become a candidate for the CTO position, and there was a high possibility that he would fill the vacancy when Nicholas left office. He was

threatened when he saw Young-Joons growth, but he wasn't angry. However, his emotions were too intense right now.

How dare a doctor that only graduated a year ago screw me over like this?

Crash!

He threw a tablet against the wall.

A thirty-year-old rookie is teaching me the attitude I should have when doing science? When I have worked in this field for over thirty years?

Ha

Huffing and puffing with a red face, Kim Hyun-Taek opened the window. He had to stop that monster as he was out of control.

What should I do?

What could Kim Hyun-Taek do to screw that asshole over? Did he have to use an extreme and violent method like Ji Kwang-Man?

When Kim Hyun-Taek was lost in thought

Knock knock.

Someone knocked on his office door.

Come in.

His secretary heard him screaming and throwing his tablet against the wall. Because of that, she was quite nervous. It was even worse as the news she was about to give him was horrible.

What is it? Kim Hyun-Taek asked when he saw that the secretary looked uneasy.

Um I think you should turn on the TV. The trailer for the next Unanswered Questions[2] is on.

What?

One of the employees from Lab One blew the whistle about Cellicure.

...

Kim Hyun-Taek froze.

What are you talking about?

They said that you bought that important drug from Celligener and tried to bury it

* * *

Park So-Yeon bought a plane ticket headed to the United States. She apologized to Young-Joon, and she was almost done with everything she had to do in Korea. There was one more thing left for her to do, and it was to report Lab Ones conspiracy that was behind Cellicure.

There were three main reasons behind why she was doing this. The first was because this was the just thing to do. Kim Hyun-Taek had yet to be punished from this; he deserved what he deserved. Secondly, it was for her own atonement. She was trying to wash away her shameful past when she betrayed Young-Joon and hid. Lastly, this was her last present to Young-Joon before she left. The research on a new material with the lotus effect was a project that was passed without the proper steps. The proposal wasn't even finished, and the development strategy was missing parts.

The reason why Kim Hyun-Taek was taking this as a national project was probably to stop Young-Joon from beginning the Genome Project. Park So-Yeon was going to destroy that see-through strategy.

Park So-Yeon was sitting on the couch at home and watching TV. Her interview was being aired with her face blurred out and her voice modulated.

This is the incident where the liver cancer treatment, Cellicure, the most popular topic in the medical community, almost disappeared. A-Gen was selling Iloa, a liver cancer treatment, and Laboratory One Director Kim Hyun-Taek, who usually worked on anticancer drugs, felt threatened. So, he bought Cellicure, which had gone through Phase One of clinical trials with Celligener, and tried to bury it without developing it further.

They didn't have to change my face or voice.

Park So-Yeon didn't feel that the program needed to as she was going to quit anyways. She gulped down her beer.

Doctor Ryu Young-Joon, the person who was against that and the current CEO of A-Bio, fought and exchanged curse words, and he was demoted and transferred to a different department in a different lab. You should be able to find it if you look through HRs[3] files. That was also the reason why he took the development rights to Cellicure from A-Gen and left after he succeeded and started A-Bio. Cellicure would have disappeared if it was left at A-Gen, so he tried whatever he could to save it since it is a very important and excellent drug as everyone knows.

Park So-Yeon glanced at her phone. The program wasn't even done airing yet, and the public was running wild.

Wait, is that true? Get a special prosecutor on this. We have to get to the bottom of this.

Fuck. My mom passed away from liver cancer three months ago. This is bullshit.

They tried to get rid of a new drug by even demoting Ryu Young-Joon?magic

He's supposed to be a scientist who studies new drugs. There's no way he is a human being.

The impact of this was going to be huge. This might even jeopardize Yoon Dae-Sung's position. Kim Hyun-Taek would be held accountable and be replaced, and the national project would either disappear into thin air or be taken on by the next lab director.

1. acronym for open reading frame
2. A popular Korean investigative journalism program.
3. HR is an acronym for Human Resources

Chapter 103: Laboratory One (5)

Burning with global humiliation and anger, the public swept over A-Gen. The world's interest in this drug called Cellicure was huge right now. It was the only cure that had succeeded in curing end-stage liver cancer. Additionally, it had

no side effects, it was precisely delivered to the liver, and it didn't even cause problems in cancer cells that had metastasized to the bone. Of course, it had to be monitored carefully as only data from Phase Two of the clinical trial had been released, but it seemed clear that Cellicure was going to save countless liver patients in the future as it was safe enough to be used on a nine-year-old child lacking immunity and strength. magic

It was one of the top items among the drugs that A-Bio conducted clinical trials on, but A-Gen tried to get rid of it. It was none other than a scientist who worked in the pharmaceutical industry who tried to get rid of a great drug with that much potential.

Remove Kim Hyun-Taek!

Remove him!

Remove him!

Investigate the research ethics violations!

Investigate it!

People had already gathered outside A-Gen and Lab One to start protesting. There was a signature campaign criticizing Yoon Dae-Sung, and the petition to the Blue House to start an investigation was instantly signed by three hundred thousand people. Foreign media like Fox News also covered this huge scandal in depth.

Simultaneously, another issue blew up as well. It was about the legendary thirty-year-old Scientist who had fought against the lab director alone when everyone at Lab One stayed quiet after it happened.

Is that actually possible? He's the CEO of A-Bio and the top scientist in the world now, but he was just a Scientist at the time, and he criticized the lab director to not do something like that?

This story came up in the fan club from time to time. It was the backstory of how CEO Ryu Young-Joon left Lab One at A-Gen. It was just like hearsay, but I can't believe it was real.

That seems even more amazing than curing incurable diseases. How can a thirty-year-old young man who just graduated from school and got a job have such courage?

Was he able to make a company like A-Bio because he had that kind of courage, or was he able to act that bravely because he was a genius smart enough to found a company like A-Bio?

Anyway, the one thing for sure is that we have to destroy Kim Hyun-Taek. They have to arrest him and investigate.

Seriously, Cellicure wouldnt have been able to come out into the world if it wasnt for Ryu Young-Joon.

Thoroughly investigate how high up this incident goes. If the CEO approved it, they have to cut off his head, too. How could scientists who make medicine try to erase a drug like Cellicure to keep their livelihoods?

I thought Schumatix were crazy bastards when they tried to attack Ryu Young-Joon by planting a tumor in a glaucoma patients eye, but Korea is the same fuck lololol the CEO of A-Gen should just go die.

This is how the public is reacting, Kim Young-Hoon said.

A-Gen was having an emergency board meeting. Rain was dripping down the window. The heavy, depressed atmosphere was the worst.

Key shareholders from Berkshire and SG Group glared at Yoon Dae-Sung like they were going to chew him up.

Mr. CEO, please explain, Kim Young-Joon said.

I dont know anything about this, Yoon Dae-Sung denied.

The CEO didnt know about purchasing all the rights of a new drug that completed Phase One?

Lab Director Kim Hyun-Taek had the final approval.

What Yoon Dae-Sung said wasnt wrong. Kim Hyun-Taek discussed it a lot with Yoon Dae-Sung when purchasing Cellicure, but Kim Hyun-Taek had the final approval. That was how Yoon Dae-Sung did business; it was a defense strategy to keep him from being blamed in the future. This was also the

reason why he threatened Celligener and lowered the price; it was to lower it enough so that Yoon Dae-Sung's approval was not required under company policy and it could be taken care of with Kim Hyun-Taek's budget.

This isn't something that you can get away with by just saying that you didn't know. As the CEO, you have the final responsibility, Kim Young-Hoon argued.

I know. Should I resign? Yoon Dae-Sung said.

... Eh.

Sigh.

The directors grunted disapprovingly.

It will be a problem if you suddenly let go of the CEO position. You have led this company for decades, so it will be difficult for people to get used to the new system and there will be quite a lot of knock-back, Alex said.

What if Director Ryu Young-Joon fills the CEO position? Kim Young-Hoon asked.

Yoon Dae-Sung flinched. However, Alex was against the idea.

I believe someone like Doctor Ryu would do a good job, but he cannot be the CEO of two companies at the same time.

We can merge.

Then it becomes a very slow response. Merging a big company like this doesn't happen overnight. The stocks of A-Gen will plummet while we're doing it.

The directors were all torn about what to do.

Yoon Dae-Sung lowered his head. To be honest, he wanted to let it all go. He was tired in a lot of ways. He felt doubtful about everything he had done in the past as he watched Young-Joon, who was growing rapidly. All the dirty things that were hidden in the shadow of the old A-Gen; it had festered for a while, and it was now like a huge infection that was difficult to fix. Yoon Dae-Sung wanted to let Young-Joon destroy it all and take control of the company, but Yoon Bo-Hyun, his son, always weighed on his mind whenever he thought of that.

Lets hold Lab Director Kim Hyun-Taek responsible and dismiss him. And appoint Director Ryu Young-Joon as the Lab Director for Lab One. We can calm down the public if we move fast, Yoon Dae-Sung said.

Can Director Ryu be the CEO of A-Bio and the director of Lab One? Kim Min-Hyung asked.

Its not a problem according to company policy.

I was asking whether the amount of work would be too much for him.

He has already used many of A-Gens facilities at his disposal. And as A-Bios office building was originally purchased for Lab Ones expansion, Lab One and A-Bio are close to each other.

* * *

Kim Hyun-taek was packing up his things at his office. This was before the board of directors made their decision. He already knew what was going to happen.

I lost.

This was it for Kim Hyun-Taek. He knew that Young-Joon was not behind the whistleblowing; he didnt show any signs of doing so when he came here before and got angry at him. The program blurred out the whistleblowers face and changed their voice, but a fellow scientist would be able to sort of make out who it was. Kim Hyun-Taek thought that it was probably Park So-Yeon.

Sigh Kim Hyun-Taek let out a deep breath.

He didnt know that she would stab him in the back with a huge knife right before she left. He knew that she broke up with Young-Joon, but maybe she still had feelings left for him. Or perhaps she was also the type of person to cause a fit about violations of research ethics since people date people similar to them.

It didnt matter what it was anymore. It was too late now.

Zip.

Kim Hyun-Taek zipped up his bag and sat on the chair. Professor Shin Jung-Jus weekly commentary was playing on the radio.

A lot of people are curious about what the Life Creation Department is, the department that CEO Ryu Young-Joon was demoted to when he was a Scientist.

Yes, Professor. What does that department do?

From what I have found, they artificially synthesize life, just like their name.

Is that possible?

Of course, its not easy. Its in Gods domain, is it not? Theoretically, it is possible to an extent. Professor Craig Venters team has already succeeded in rebooting a bacteria by putting in artificial DNA into a bacterial shell.

Shin Jung-Ju said.

Are you saying that they resuscitated bacteria?

Yes. And actually, the idea of a living thing is not a biologically defined word.

Is that so?

Yes. Biologists have defined a living thing over one hundred times, but there were always exceptions.

But Professor, we have an idea of what living things are. I mean, for example, whether they produce offspring.

Self-replication is one of the most basic characteristics of life. But thats not enough. If so, are infertile people nonliving things?

Ah

The interviewer was at a loss for words like she was shocked.

Shin Jung-Ju went on.

The most well-known example is a virus. The biological community still has not decided whether to classify it as living or nonliving.

Really?

Yes. Viruses are just huge molecular lumps made of protein and genes when they are floating in the air, but they suddenly perform biological phenomena when they go into the host cell. They also self-replicate.

That's fascinating.

Anyways, I'm saying that creating life isn't all that ridiculous. You can succeed if you find the exact boundary. If a genius like CEO Ryu Young-Joon stayed in that department

Stupid. If he stayed there, he would have ended up as a failure. How can you create life? Kim Hyun-Taek said mockingly. He grabbed his bag and got up, but paused.

The Life Creation Department

A strong sense of curiosity came over him. All of this began when Young-Joon, who left Lab One, came here and suddenly showed up with induced pluripotent stem cells. There was no logical explanation, but Kim Hyun-Taek thought that something must have happened there.

Maybe I should visit before I leave.

Kim Hyun-Taek wanted to slowly follow Young-Joon's trail at the Life Creation Department. Also, he had to go to Lab Six to drop off something anyway.

* * *

[Rosaline Lv. 16]

Metastatic Status: Heart (9%), Liver (47%), Brain (9%), Kidney (15%), Spinal Cord (8%)
Unravel the Unknown, Unleash the Unimaginable: N∞vεlBjn.

Synchronization: 20%

Cell Fitness: 10.0

Young-Joon filled the fitness, which recovered with time, to the maximum.

Should I try it? Young-Joon asked Rosaline.

Rosaline was sitting on the coffee table in front of the couch and stared at Young-Joon with a nervous expression. Simulation Mode: they needed to test it in advance as they didnt know how and when they would use it.

When Young-Joon was about to press the button, a message window popped up.

[You can eject a portion of Rosalines cells that exist in your body and gather information about the environment. They can move at the speed of sound and observe the microworld to identify biological phenomena.]

[Fitness consumption is extreme, and you will lose Rosalines cells if you consume more than your fitness limit.]

[In the case that you lose Rosalines cells, there may be losses to your metastatic status or synchronization, and Rosalines level may decrease.]

Theres quite a risk.

But since the mother cell will not disappear even if you really overuse it, you can still increase the level and recover your current condition with time.

Rosaline said.

Of course, I wont be able to leave until I grow that much

Ill be careful.

Reassuring Rosaline, who was dejected, Young-Joon pressed the button from the status window.

[Activate Simulation Mode.]

What are you going to look for?

The most dangerous infectious disease in the world right now.

This proximity cannot be analyzed with your current fitness. Please reset it in the Seoul and Gyeonggi[1] region.

Thats it? Even though I built my fitness to ten?

Thats right.

Didn't you say something about observing the number of possibilities globally and whatnot?

Then, you will have to level up a lot.

Alright. Let's focus on checking that this simulation works well, Young-Joon said. Activate it in the Seoul Capital Area. A-Bio will probably come up, right? Since we have HIV that we used for experimental purposes.

Pssh!

His vision completely faded out into black. Young-Joon could feel millions of Rosalines cells being ejected from his body. The topology information and senses they were obtaining in real-time came into his head one by one.

There were thousands of research institutes in the Seoul Capital Area. Rosaline searched for biological elements throughout them.

Shrrr

A big map formed in front of Young-Joons eyes. It was a circular map that included half of Yangpyeong-gun in Gyeonggi-do based on the current location of Young-Joon, which was A-Bio.

For the level of danger, I will comprehensively consider the infectiousness, and the individual and societal burden it could cause. Please individually set the weight of each element afterwards.

Bleep!

Gray dots began popping up one by one.

Each dot represents a pathogen that can cause disease in a person.

Rosaline said.

The dot increases in size as the amount of pathogens increases, and the color gets darker the more dangerous the pathogen is. And I won't mark diseases weaker than the common cold.

Dozens of dots showed up, but they were mostly very light gray.

Bleep!

This ones pretty dark, said Young-Joon as he looked at the brick-colored dot on A-Bio.

This is HIV.

Its not that big of a deal if you look at it like this.

It is because the virus here is for experimental purposes. If you go to Africa, the Sub-Saharan region will be completely gray.

Bleep!

A much darker gray popped out from A-Gens headquarters.

What is that? Young-Joons eyes widened.

There isnt a lab at A-Gens headquarters. Why is there such a dangerous pathogen over there? What species is that? Why isnt the name showing up?

I have never seen that pathogen either. And it is already dead. The corpses are preserved in a liquid nitrogen container.

Even if youve never seen it before, it must have a relationship with other organisms, right? What is it most closely related to?

The most closely related organism is *Bacillus anthracis*.

1. a province near Seoul in Korea

Chapter 104: Laboratory One (6)

Bacillus anthracis?

Young-Joon frowned. A sense of uneasiness swept over him.

Anthrax? Why is something like that at A-Gens headquarters?

I wouldnt know. But that is not actually *Bacillus anthracis*.

Then what is it?

Bacillus anthracis doesnt have a sex, but that bacteria does.

What kind of bacteria has a sex?

I dont know. It seems like a very evolved organism that began from *Bacillus anthracis*.magic

Did someone use *Bacillus anthracis* as a base and perform directed mutagenesis?

Perhaps. If so, they probably separated the males and females as a safety mechanism, so that it only has biological activity when the males and females are combined. But it is not dangerous because it is already dead. There are about one hundred thousand bacteria cells in that stock, but all of them are dead.

But why would they have

Bacillus anthracis was a dangerous aerobic, spore-forming, and gram-positive bacteria inside the bacillus. The fatality rate varied depending on the type of infection, but the fatality rate in the case of respiratory infections was ninety-five percent. It was higher than ebola.

Fortunately, it was not easily transmitted by coughing. But when an infected person died, the region became contaminated, and because the contaminated area was not easily cleansed, it continuously caused infections over a long period of time.

The reason the bacteria was difficult to cleanse was because of its incredible survivability. If the environment was not optimal, *Bacillus anthracis* would go into spore-form and defend itself; in that state, it was capable of surviving in the ground for more than one hundred years. It withstood dry heat above one hundred thirty degrees and survived in coal water slurry. It didnt die even when frozen, so it would be active again when the ice melted. It wasnt easy to kill this monstrous bacteria unless it was shot to death with radiation, like gamma rays. For this reason, anthrax had brought down the powerful Uighur Empire in Mongolia in a year in the mid-ninth century in Mongolia. HIV would surely bow at its feet. In bacteriology, *Bacillus anthracis* was like the Lord of Terror.

-But theres a vaccine, right?

Rosaline asked. She was right. There was a vaccine for anthrax. It was developed with the tremendous dedication of Pasteur, the greatest master in

bacteriology, and numerous junior scientists. Because not a lot of people died from anthrax in the modern age thanks to the vaccine, people didn't really get vaccinated against it.

Then, what happened to *Bacillus anthracis*? It would have been nice if this monster went extinct and disappeared forever, but it didn't; there were always two sides to science.

Countries all over the world tried to develop *Bacillus anthracis* into a biological weapon. It was called the M143 bomblet, and it was actually completed. About six trillion spores could go into an agent that was 0.3 kilograms, and it could kill up to three hundred million people if it spread. Of course, it was only a calculated value and it wouldn't actually spread like that, but it was true that it was a bomb that matched up to an atomic bomb.

Why would they make a weapon like that?

Rosaline asked like she couldn't understand.

It was created to subdue the opposing country during war. You don't need luxurious resources like uranium to make it, unlike atomic bombs.

Wow, it is a very stupid idea. They multiply bacteria, which is lethal to *Homo sapiens*, to kill people, the same *Homo sapiens* species? What kind of species does something this stupid.

It is stupid. So, we made an international treaty to ban biological weapons. Anthrax bomblets were almost ever used, Young-Joon said.

The problem was why something like that was at A-Gens headquarters. Even if they were just corpses, it wasn't something that should be in an office, not a laboratory.

No, it shouldn't even be in a lab. A genetic mutated organism with that danger level

Bleep!

The alarm rang again. This time, it was Lab One.

In Lab Director Kims room?

Young-Joons eyes widened.

That is also a variant of *Bacillus anthracis*. They are females. And all the bacteria in that sample are all dead.

Kim Hyun-Taek has *Bacillus anthracis*? Even worse, the dot began moving. From the speed of the dot, it seemed like he was in a car.

Where is he going?

The cells over there can share their visual information with you.

Young-Joon glared at the dot of *Bacillus anthracis*, which Kim Hyun-Taek was carrying. The middle of his eyebrows tingled. A pattern that was similar to dragonfly wings stained his vision and soon turned into a black and white image. It was Kim Hyun-Taek, who was driving.

Cell number 8 207 401 is sending you this video.

Rosaline said.

If you increase the level, the image will be more focused and be in color.

Young-Joon slowly turned his perspective and checked the GPS. The destination was Lab Six.

Why is he going to Lab Six?

Bleep!

The alarm rang again. It was Lab Six.

No way.

There were no dangerous organisms like that at Lab Six. They didnt even have a very high Biological Safety Level either. However, the dot that appeared on the map was pitch black. It was so dark that it looked like it was photoshopped like Vantablack, which only reflected 0.03 percent of light. The size of the dot meant the number of pathogens, and the color represented the danger level.

Rosaline, what is that?

... I dont know. I think you will have to go see for yourself.

* * *

Kim Hyun-Taek was taking Yoon Dae-Sung's call.

I'm sorry things went like this.

Yoon Dae-Sung said.

I understand. This was probably the best course of action from your perspective.

I will try to stop your prosecution as much as possible. I might not be able to do it right now, but I will try to secretly get you out or something when it dies down.

Sure. Thank you.

Other than that, what did you do with the item? Mr. Ryu is going to take your place after you leave. Then, we can't store it in the lab director's office.

I know. I am taking it out right now.

What are you thinking of doing?

I will give it to Director Gil Hyung-Joon.

Lab Six?

Yes. I am on my way.

With the item?

Yes. I was going to drop by because I was curious about something.

Can you trust him?

He is our only option. And he's someone who already knows the gist of this project. It's burdensome for you to have all two.

But the bacteria may already be dead. Those samples are decades old.

But if even one of the cells is alive, and it leaks and becomes active, a major catastrophe will happen in decades.

Hm What Im saying is, do we have to get Director Gils help because were worried about that low possibility? Even if I have both

We have to get Director Gils help. You know that something like this has to be separated by the lab, dont you?

Ha I dont know why the situation came to this.

If I were to go back to a year ago, I wouldnt touch Cellicure and let Ryu Young-Joon do whatever he wants.

Haha, its too late now.

Sir. If I disappear, you are the only person left for Ryu Young-Joon to tear apart. You know that, right?

I know.

Please be careful.

Screech!

Kim Hyun-Taek stopped the car and climbed out with his bag. He went into Lab Six and went to see Gil Hyung-Joon. When he went up to the lab directors office and explained while showing him the item, Gil Hyung-Joon screamed.

Wait, why are you giving me this?

You know we have to store it separately. Please keep it safe while Im gone; its an important sample.

Ha

You know that this was the hidden cash cow that grew A-Gen into a big company a long time ago. We are all indebted to this. We only have you to trust now.

With a sigh, Gil Hyung-Joon took the bacteria capsule. It was already in a sealed mini liquid nitrogen case, but he put it into another airtight container and sealed it again with parafilm. Then, he put it into his own personal safe. The initial posting of this chapter occurred via noovelllbbin

Click.

Gil Hyung-Joon, who locked the safe, stared at Kim Hyun-Taek like he was irritated.

You cant let me be criticized for this later on, okay?

Of course.

And I will request compensation from you about this.

Do as you wish. But I have something that Im curious about, Kim Hyun-Taek said.

What is it?

Can I see the experiment log from the Life Creation Team? The record after Doctor Ryu came here.

Um.

This kind of data wasnt shared very much, even between directors. But Kim Hyun-Taek was not only a colleague to Gil Hyung-Joon, but his friend. They had a long-standing friendship from working as a lab director at the same company for years.

Since hes leaving. Gil Hyung-Joon thought.

And the Life Creation Departments data was useless as all of it was about playing around with an artificial layer of bubbles. Since he was taking in the top-secret sample of the company, Gil Hyung-Joon decided to extend his favor a little more since he was doing it anyway.

Here it is.

Gil Hyung-Joon opened a file on his computer and printed it.

But you cannot take it out of this room. Take a look at it here and leave it here when you go.

Thank you.

Kim Hyun-Taek flipped through the documents and calmly read them from where he was sitting.

Huh?

Kim Hyun-Taeks eyes widened.

Director Gil, there was a medical accident?

Yes. Apparently, Doctor Ryu fainted on the first day. But they said it was nothing. He got anemic because of hepatitis or something like that. He came back to work after that.

...

Kim Hyun-Taek looked up the record of Young-Joons first day at this department. There was no data; he didnt do any experiments, but Young-Joons name was mentioned in Park Dong-Hyuns experiment notes.

[As Rosaline v4.87 died as shown in the provided microscope data, Scientist Ryu Young-Joon added ten microliters of 10X PBS. However, the sample was discarded due to continued apoptosis.]

Thank you.

Kim Hyun-Taek left the documents on the desk and got up. He took the elevator down to the Life Creation Department.

* * *

Ryu Young-Joon arrived at the Life Creation Department and went into the lab.

Kim Hyun-Taek slowly followed Young-Joons footsteps.

The sample was probably boiling on the heat block near the entrance of the lab.

Kim Hyun-Taek inspected the heat block that was at the entrance of the lab. When he turned his head to the right, the animal cell lab was right in front. The optical microscope that was inside caught his eye. This was what Young-Joon would have seen as well.

He probably observed the sample with the optical microscope.

Then, he would have put it back in the sample container.

Sample Rosaline v4.87?

Kim Hyun-Taek went to the liquid nitrogen tank and began looking through the samples. He found Rosaline v4.87. He organized the sample boxes and put them back in the tank. What are you doing?

He heard Young-Joons voice from behind.

Clang!

Surprised, Kim Hyun-Taek dropped the original cell of Rosaline.

Cling!

Young-Joon picked up the Rosaline v4.87 sample that rolled towards him.

Only authorized personnel should be touching lab material.

... Im sorry. I came to see Director Gil, but somehow I came all the way here. I was just curious and wanted to take a look at the sample.

Really?

[Activate Synchronization Mode.]

Young-Joon examined Kim Hyun-Taek. It was to check if he had found something and was playing a game with him. Young-Joon could track the neural response of lying if he read Kim Hyun-Taeks brain waves and blood flow.

Hes telling the truth. He was looking at it because he was actually curious. Although, he probably meant that he was going to take it to his lab, grow it, and look at it through a microscope.

Rosaline said.

You cant grow this. Its a failed sample, Young-Joon said to Kim Hyun-Taek.

Kim Hyun-Taek flinched.

There are a lot more Rosalines that were developed after this. Do you want me to take them out? Would you like to see it?

... Thats alright. Haha. I just looked at it out of curiosity because I wondered if your ingenuity might have something to do with this.

Young-Joon smiled. It was related, but he wouldnt be able to recreate it as the creation of life was a single event and could not occur twice.

... But Director Gil hasnt used this lab yet, and he left it empty, Kim Hyun-Taek said.

I asked him to do that. A few people including Principal Scientist Cheon were on the Life Creation project for so long that it has a place in their hearts. They said that they wanted to use this place again in the future.

...

Arent they passionate people?

I see. Are you also here to experiment something?

No.

Actually, Young-Joon was here to find the black dot he saw during Simulation Mode, but he couldn't find anything yet.

Im here to find you, Young-Joon replied.

Thats what he said as he couldnt say that he came here after viewing Simulation Mode. And he originally meant to meet Kim Hyun-Taek as well.

Director Gil?

No, Director Kim, Young-Joon said as he gestured in Kim Hyun-Taeks direction.

Me? Why?

Director Kim, do you know about *Bacillus anthracis*?

Kim Hyun-Taeks face froze as Young-Joon asked.

While observing the change in expression, Young-Joon said, There's something I heard.

...

Give it to me. You have it, right?

I

Kim Hyun-Taek gulped.

I don't know what you're talking

He almost said that he didn't have it.

How did he find out?

Kim Hyun-Taek felt cold sweat run down his spine.

-It's not with Kim Hyun-Taek.

Rosaline said.

It's not?

Yes. I would have been able to feel it at this distance.

But Kim Hyun-Taek was moving with it when we looked at the simulation?

You turned off the simulation after seeing the fitness drop instantly. Kim Hyun-Taek's hands are empty now.

If you don't have it right now, where did you leave it? Young-Joon asked.

Do you have to hear an answer? I can feel it from upstairs.

Rosaline said.

Chapter 105: Laboratory One (7)

Kim Hyun-Taek felt fear as he saw Young-Joon raising his head reflexively. Young-Joon was staring in the direction of Lab Director Gil Hyung-Joon's office.

“Mr. Ryu, about *Bacillus anthracis*... Who did you hear it from...?” Kim Hyun-Taek asked cautiously.

“Why?”

“Our company has never studied *Bacillus anthracis* before. I would like to know for sure if my name is also involved. As you know, I’m in a difficult position right now, and I have a lot of enemies as well. If someone who is holding a grudge against me is taking this chance to spread false rumors about me, shouldn’t I be prepared?”

Young-Joon just stared at Kim Hyun-Taek.

“Director Kim, this is also a kind of whistleblowing; do you think I would reveal who did it? The one thing for sure is that an organism based on *Bacillus anthracis* that underwent directed mutagenesis and is now separated by their sex is at the company. One of them is in Mr. Yoon’s office, and the other one is in your possession, Director Kim.”

‘What the hell? What is this bastard?’

Kim Hyun-Taek was more than shocked; he was terrified.

‘He knows that it’s in Mr. Yoon’s office? And that the bacteria are separated by their sex?’

Young-Joon said, “And I know that you don’t usually visit other labs, so you wouldn’t go out of your way to come to Lab Six the day before you cleared your office and visit the Life Creation Department before meeting Director Gil, right? You probably already met him.”

“ ... ”

“I think I have an idea of why you met with him.”

Kim Hyun-Taek wiped the sweat off his forehead.

‘Fuck, is he the Devil or something?’

At this point, the only people who knew that much information at the company were Yoon Dae-Sung, his son Yoon Bo-Hyun, Gil Hyung-Joon, Nicholas, and Ji Kwang-Man. magic

'Wait, Ji Kwang-Man?'

After having a conflict with Young-Joon, Ji Kwang-Man was arrested and imprisoned for hiring a hitman to kill Young-Joon. Although, there was a high chance that Yoon Dae-Sung would get him out however he could when the issue died down.

'If Ji Kwang-Man leaked it?'

It was a possibility as Ji Kwang-Man was a clever man. What if he tried to make a deal with Young-Joon by telling him this secret before getting arrested, but failed?

'Wait.'

This couldn't have been it. If this had happened, Young-Joon would have already turned A-Gen upside down a few months ago. Wouldn't he have shot everyone dead, whether it was Yoon Dae-Sung or someone else, with a machine gun and tried to build a new palace?

'Nicholas!'

Kim Hyun-Taek's mind blanked. Nicholas was recommending Kim Hyun-taek and Yoon Dae-Sung to turn themselves in. What if Nicholas saw that he was resigning from the Lab One Director position and told Young-Joon in advance since there was a possibility he would find out anyway?

"What are you thinking so hard about?" Young-Joon asked Kim Hyun-Taek.

Kim Hyun-Taek snapped out of his imaginary investigation. He wanted to ask Young-Joon if Nicholas told him about it, but he couldn't; he needed to give him as little information as possible.

Kim Hyun-Taek, who barely held back his words, held his breath and looked at Young-Joon.

"What did you do with that bacteria?" Young-Joon asked.

"... I don't know what you are talking about. We don't have that kind of bacteria," Kim Hyun-Taek replied.

"Do you regret the answer you gave me right now? I think the best way to minimize the damage that will come will be to tell me everything right now."

“... I don't know who told you that, but don't believe them. It's all nonsense.”

“Alright. I'll see you again,” Young-Joon said to Kim Hyun-Taek and turned away. He walked towards the elevator and pressed the button going up. Kim Hyun-Taek could also see Young-Joon waiting for the elevator through the lab's glass door.

'Is he going to Gil Hyung-Joon now?'

Considering Gil Hyung-Joon's reaction when he handed him the bacteria and the time it took for Young-Joon to get here, Gil Hyung-Joon wasn't the one who told him.

Kim Hyun-Taek quickly took out his phone and called Gil Hyung-Joon.

“Director Gil, Ryu Young-Joon is going up there right now. If he asks you about *anthracis*, just say that you don't know anything and that you don't know what this is about,” said Kim Hyun-Taek as fast as possible, then hung up.

Then, he called Nicholas.

“Mr. CTO, I have something to ask you,” he said.

—What is it?

“Ryu Young-Joon knows about the *anthracis*.”

—Pardon?

“Weren't you the one that told him?”

—What...

“What are you trying to do! Are you trying to destroy the company?”

—Wait, Director Kim. It wasn't me. I have never told anyone.

“ ... ”

—If Doctor Ryu knows, I feel like it leaked through Division Manager Ji Kwang-Man. What's the situation right now?

“I came to Lab Six to give Director Gil the sample I had. But Ryu Young-Joon came all the way here to find me and asked for the *anthracis*.”

—What is...

“All of this just happened right now. And Doctor Ryu went to meet Director Gil.”

—Does Doctor Ryu know that you gave it to him?

“I would be able to infer that if I was Doctor Ryu. What reason would I have to come to this lab at this point? He probably guessed that I came to give Director Gil that item since I have to clear the lab director’s office tomorrow.”

—Alright. I’m passing by Lab Six right now, so I’ll drop by.

* * *

At the lab director’s office, which was a few floors up from the lab, Gil Hyun-Joon was staring at his phone. Baffled.

[Lab One Director Kim Hyun-Taek]

“Wait, what is this guy talking about? Why would Ryu Young-Joon come here all of a sudden?”

Knock knock!

Gil Hyung-Joon heard his secretary’s voice from outside the door.

“Sir, Mr. Ryu from A-Bio is here.”

“Mr. Ryu?”

“Should I let him in?”

“... Fuck...”

His heart began beating hard. The first thought that popped up in his mind was that he was fxxked. He took out a bottle of cold water from the refrigerator and gulped it down.

“Phew...”

After a deep breath, he said, "Let him in."

Click.

Young-Joon, who came into the lab, sat down on the guest sofa with a calm face.

"It's been a while, Mr. Ryu."

Gil Hyung-Joon greeted Young-Joon with an awkward smile.

"Hello, Mr. Director. How have you been?"

"I've been well. You're very busy nowadays, right?"

"It's alright."

"What brings you here today?"

"The *anthracis*. You have it, right?"

"..."

Gil Hyung-Joon closed his mouth. After some thought, he said, "We don't have *anthracis* at our lab. Are you thinking of starting a new project with it?"

"No. The bacteria that Director Kim gave you. It's an organism that was created by applying directed mutagenesis on *Bacillus anthracis*."

"Director Kim gave me something like? I didn't receive anything. Did Director Kim say that?"

Gil Hyung-Joon pretended like he knew nothing.

Young-Joon just stared at him. Gil Hyung-Joon looked extremely nervous.

After a moment of silence, Young-Joon spoke.

"Director Gil."

"Yes."

“When Nicolas, the CTO, resigns and takes the government position, A-Gen will merge with A-Bio.”

“ ... ”

“The shares I will have then will be more than all of Mr. Yoon’s friendly shares combined.”

“I... see...”

“And since there are things I have achieved at A-Bio as well, don’t you think I would be supervising all the research that goes on in the newly merged company?”

“ ... ”

“Then, I will have the right to read all the past research notes. When that time comes, I will look for everything myself,” Young-Joon said. “I don’t know if the reason you decided to take in the bacteria was because you made some kind of deal with Director Kim or if it was just because of your friendship, but the easiest answer I can think of is that you were also one of the developers of that bacteria.”

“Uh... That is...”

Gil Hyung-Joon went pale.

“Don’t let me become the CTO and read the past notes with a negative mindset.”

“ ... ”

“Just tell me right now. Tell me what that bacteria is and where it was used.”

Gil Hyung-Joon picked up his bottle of water to put his answer on hold. He needed some time to think. He drank his water slowly for quite a while. He felt like his thoughts were becoming more complicated with every gulp.

Crackle.

Gil Hyung-Joon set the water bottle on the table and glanced at Young-Joon.

“... Mr. Ryu, I will tell you what I know,” Gil Hyung-Joon said in a diminishing voice.

“Please tell me.”

“That is a biological weapon. It was co-developed with the United States military. It was when A-Gen was very small.”

“*Sigh...*” Young-Joon let out a deep sigh. “I thought so. There’s nothing to profit from creating an organism like that except for military purposes.”

“ ... ”

“It’s a violation of the Biological Weapons Convention (BWC). This isn’t just an internal problem at A-Gen; this could become a national problem as well. Does our government know?”

“As far as I know, they don’t...”

“This is frustrating. This was co-developed with the U.S. military?”

“Yes. It was created in secret and supplied to the U.S. military. We received a lot of money from it, and I believe that it became the funding for growth for A-Gen in the early days.”

“Has that weapon ever been used?”

“I do not know that.”

“Why is A-Gen holding onto that dangerous bacteria sample instead of disposing of it?”

“Because it’s evidence that it was co-developed with the U.S. military and that we supplied it to them.”

Having the actual bacteria was the most powerful piece of evidence they could have; if a bioterror occurred somewhere, they could compare the DNA and prove whether the bacteria used was this one or not.

“If we destroy all the samples and the United States argues that they know nothing about it, A-Gen would take sole responsibility for it. If we’re unlucky, other international pharma companies might attack us by swaying the media and saying that we might have sold it to terrorists or something.”

“So, it’s to take them with you if it’s ever revealed?”

“Yes. Then, if we reveal the bacteria sample, match the DNA, and release the co-development and supply documents, a significant amount of the responsibility goes to the United States military.”

“ ... ”

“Even if a situation like that doesn’t happen, this is also the U.S. federal government’s weakness. Corporate executives don’t dispose of these cards easily, no matter how dangerous they are.”

Young-Joon put his hand on his forehead and thought hard.

‘What do you think?’

—They are idiots.

Rolsaine said.

“But Mr. Ryu, from what I know, this bacteria was not developed as a weapon.”

“Then?”

“The development period was in the late twentieth century when extreme Muslim militarized powers were highly influential. I believe that it was made as research in concern about the risk of biological terrorism using anthrax.”

“ ... ”

“Don’t despise Director Kim so much. We did not commit any crimes with this,” Gil Hyung-Joon said cautiously. “Mr. Ryu, things are difficult for Director Kim right now, and it’s a difficult time for A-Gen as well. Please let it go just this once. If you reveal something like this and add illegal research charges on Director Kim, it will be difficult for him to ever come back. The bacteria are carefully kept through safety mechanisms like separating males and females, so...”

—He is not lying.

Rosaline said.

'I can tell that he is being sincere even without analyzing his cerebral blood flow.'

However, it didn't mean it was right because it was sincere.

"Developing a biological weapon is a violation of the Convention, and it is also a violation of research regulations because you worked on it in secret. You said that you didn't commit a crime with that or anything, but the research itself is a crime."

"..."

"And the fact that a pathogen like that exists is far from safe. The fact that you are carefully keeping cannot be an excuse," Young-Joon said. "Director Gil, biological weapons are of a different nature compared to other weapons of mass destruction. The range of damage can be calculated even for nuclear weapons, but the reason why biological weapons are dangerous is because there can be variables you can't calculate."

"..."

"No one can predict what kind of mutation that bacteria, which has spread to nature, will gain and how it will spread. It will threaten the life of mankind as a whole."

"That... is right."

"Give it to me." Young-Joon held out his hand. Gil Hyung-Joon thought hard with his eyes closed, then got up from his seat. There was no way for him to know if Young-Joon was going to execute Kim Hyun-Taek with this right now, but he didn't have the power to decline his request.

Click.

He opened the safe.

Chapter 106: Laboratory One (8)

The door of the safe opened. The bacteria was in a sealed tank containing liquid nitrogen, and it was sealed two more times with the casing Gil Hyung-Joon put on it. As Gil Hyung-Joon was about to take out the bacteria

Slam!

The office door flew open. Kim Hyun-Taek appeared with an angry face. Beside him, Gil Hyung-Joons secretary stood beside him, flustered.

Gil Hyung-Joon was startled at first, but dropped his head like he was ashamed.

Director Kim Im sorry.

...

Kim Hyun-Taek glared at Gil Hyung-Joon silently, then walked right up to Young-Joon. Then, at that moment

Paa!

Rosaline suddenly popped out and stood between them with her arms spread out like she was defending Young-Joon from something.

What?

Young-Joon was more surprised by Rosalines reaction than Kim Hyun-Taek.

Get out of here!

Rosaline shouted.

What is it? What are you doing all of a sudden?

Its a pathogen. But I cant figure out what it is.

A pathogen? Lab Director Kim Hyun-Taek is a pathogen?magic

A pathogen entered Kim Hyun-Taeks body. I dont know what it is for sure, but what I am sure of is that Kim Hyun-Taek is infected.

Young-Joon distanced himself from Kim Hyun-Taek slightly.

Can Director Gil or I get infected?

There is no pathogenic response from the aerosols coming out of his body right now. You wont get infected because youre here right now, but Its better if you leave this room. Im worried.

I have to know Kim Hyun-Taeks condition. I cant leave by myself.

Then Ill use some fitness.

Rosaline said as she glared at Kim Hyun-Taek

Pzzzzz.

Young-Joons fitness, which had recovered to five, began falling in seconds.

Rosaline looked through Kim Hyun-Taeks entire body. His immune cells were running wild all over his body. If his body was a country, this was like a state of disaster; it was like a huge tsunami hit, or like ashes were pouring down all over the country due to a large volcano erupting. His immune cells couldnt even clearly discern the enemy; they were just excited due to the emergency and were running around, destroying places at random. His organs were damaged in places, and internal bleeding was happening.

If hes infected, is it anthrax?

No, its not a living thing. I would be able to feel it if it was a living thing.

He was healthy just a moment ago. Can this happen so suddenly?

That is also strange. However, it is certain that he will be in danger if this continues. We need to suppress the immune response first.

Wait The black dot we saw during Simulation Mode Is it that?

It could be.

Lets check the infectiousness. Turn on Simulation Mode.

It is an unknown pathogen, so you may not be able to see it accurately. And you will not be able to see a wide range because you dont have much fitness left.

Still, lets try.

[Activate Simulation Mode.]

With the message window, a shocking image appeared. The only range that could be observed with the remaining fitness for Rosaline was Gil Hyung-

Joons office. Within that range. Kim Hyun-Taek appeared as a black dot. It was as dark as a black hole; compared to this, the *Bacillus anthracis* that was in the safe beside him was white.

What is this

Gil Hyung-Joon approached Kim Hyun-Taek with caution.

D-Director Kim You dont look so good

Kim Hyun-Taek ignored him and spoke to Young-Joon.

Doctor Ryu, dont touch *anthracis*. This is connected to the United States military. Just bury it as a secret. Dont poke around.

Blood trickled down from his nose.

Director Kim! Your nose is bleeding! Gil Hyung-Joon shouted in surprise.

Young-Joon slowly rose from his seat.

You touched the cell line tanks downstairs. Did you touch something dangerous? What did you do? Tell me the truth, Young-Joon said.

... I didnt do anything. I havent been feeling well ever since meeting Doctor Ryu earlier, Kim Hyun-Taek said as he wiped the nosebleed.

He is not lying.

Rosaline said in a trembling voice.

Ryu Young-Joon, I dont have a good feeling about this. Get out of here.

Rosalines shoulders trembled slightly. She was terrified.

Ugh

Kim Hyun-Taek suddenly grabbed his chest, then began coughing severely.

Cough!!

He coughed up a handful of blood. Then, he slid down and collapsed onto the floor. He was most likely unconscious. Gil Hyung-Joons secretary was calling 119.[1]

* * *

Young-Joon was watching the security camera footage from the CCTV in front of the Life Creation Department at Lab Six with Gil Hyung-Joon. Cameras werent installed inside the experiment lab, but there was footage of the front of the elevator and the hallway. Young-Joon was recorded getting on the elevator after meeting Kim Hyun-Taek in the experiment lab. As soon as the elevator began going up, Kim Hyun-Taek appeared in the hallway. He took out his phone and called someone for a while before shaking abruptly and dropping his cell phone. He coughed and flopped down, but managed to get up by using the wall and barely walked to the elevator. Kim Hyun-Taek had come to Gil Hyung-Joons office like that.

Knock knock.

Someone knocked on the office door. Nicholas came in with a serious face.

Mr. CTO?

Gil Hyung-Joon was surprised.

Where is Director Kim?

He was taken to the hospital in an ambulance just a moment ago, Young-Joon replied.

What brings you here, Mr. CTO?

I got a call from Director Kim. He told me that Doctor Ryu knew about the *anthracis* and demanded to know whether I told him. Then, he began coughing severely and hung up, saying that he was feeling horrible, Nicholas said.

He glanced at Young-Joon with a bitter face, then said, Mr. Ryu, can I have a word with you outside?

He went to the executives rest area and began talking.

I heard that you already know quite a lot about the *anthracis*, Nicholas said.

I only know that it exists. They said it was a biological weapon, Young-Joon replied. Who told you?

I just happened to hear about it.

...

Nicholas quietly stared at the side of Young-Joons face. He seemed to be focused on something and looked like he was lost in thought.

Nicholas smiled.

You already dont care about the *anthracis*.

Pardon? I heard that Director Kim collapsed.

... Yes.

Youre wondering what kind of disease would put someone in such a bad condition that they bleed and faint all of a sudden when they were completely healthy when you met them a couple hours ago?

Um

That seems like you, Mr. Ryu. I came here to talk about the *anthracis*, but should we talk about it next time if theres a lot on your mind?

... Its alright. I will ask you something since youre giving me the opportunity to. Were you involved in developing that?

No. It happened a long time before I came to A-Gen. I knew about it, but I kept it buried.

You cant do that.

I know.

Nicholas calmly nodded.

Mr. Ryu, why dont you leave this to me?

To you?

As you may already know, CEO Yoon is an old friend of mine. I have been recommending that he confess to all these illegal research projects.

...

It is something that I was going to take care of before I left the CTO position. Director Kim and CEO Yoon will all be punished for their part in the research.

Are you asking me to pretend I didn't see it and wait? I cannot do that.

You are the new wind in science. In the past, there were a lot of people in the scientific community who wrote papers with experimental data that could not be reproduced and poor statistical methodology and committed fraud.

...

A lot of the time, science sought after money rather than the truth, and it sometimes combined with politics or ideologies and yielded horrendous results like the Holocaust or nuclear weapons. This bioweapon is one of them, Ni choals said. You have continuously fought against that, but honestly, I have always wanted you to use your strength to create something new rather than spend energy fighting those things. You are the future of the scientific community. I wish that you wouldn't dirty your hands with blood to fight with the powers in the messy past.

...

Even old people like me can clean up the past. However, the only person who can make the future is you, Mr. Ryu. You understand what I'm saying, right?

Young-Joon frowned and thought about it hard.

Mr. CTO, I do not enjoy fighting against huge powers like A-Gens management. Who in the world would like that? But the reason I have insisted on research ethics and conflicted with them is because it's right. This isn't something I can just turn a blind eye to. Troubles always happen afterwards if you don't correct the wrongdoing in science early on.

I know. I'm not asking you to ignore it. I am only asking you to let me finish it since my term as the CTO isn't over yet.

...

I have only sought honor when doing research. Please let me cleanse the dirty things with my own hands before I resign.

After thinking about it, Young-Joon said, Alright. Please make me a promise that Mr. Yoon, Kim Hyun-Taek, and those involved in this incident will be arrested before you leave your position.

I promise you.

Then I will leave it all to you, Mr. CTO. Since you are still the CTO and the chief officer, I think its right for you to finish this. However, I will keep an eye on this incident. If any problems arise, I will do it myself.

Alright. Thank you for understanding. I will repay this debt in the future.

* * *

Kim Hyun-Taeks condition was much worse than expected. He was declared brain-dead.

Young-Joon went to visit Kim Hyun-Taek and monitored his condition with Rosaline.

This guy. He was touching Rosaline v4.87?

Young-Joon said to Rosaline.

Hes not going to get up all of a sudden and say that he can see messages or something, right?

Never.

Rosaline said, horrified.

Creating life is not that easy. It is also not an event that can happen twice at the same time.

Really?

The point where the common ancestor for all living things on Earth appeared was 3.8 billion years ago. A new living thing has never been created during the 3.8 billion years. There is no way that it would be made twice in a year. Its a miracle that I happened as well.

I guess the probability is too low.

And Kim Hyun-Taek is basically dead already. The machines are maintaining his breathing, but it will be difficult to cure him with current medicine.

And you can?

I dont know. You dont have enough fitness.

Rosaline popped out in the form of Ryu Sae-Yi, then climbed up onto Kim Hyun-Taeks bed. She observed his face up close. She frowned.

Ugh Theres so much grease.

She quickly came down.

Do you have any predictions about what this disease could be?

I wouldnt call it a prediction, but Just IMO[2]

Where did you learn things like that?

I heard Park Dong-Hyun use it before.

... So, what do you think?

This is the pathogenicity of my existence that was created at the same time I was born.

Young-Joon squinted.

Pathogenicity?

Young-Joon asked like he was confused.

What are you talking about? Explain it in detail. Youre pathogenic?

I am the second creature that has been created on this planet. It can be said that I am a competitor to all existing populations of life in that I have a completely different set of genes.

...

Lets say that at the end of the Cretaceous period that reptiles dominated, a powerful competitor called mammals appeared.

Rosaline said.

Its a mouse fighting a T-Rex if you look at it closely, but from afar, it is a battle between a class called reptiles and a class called mammals. From a macro-perspective, all mammals are competitors to reptiles.

Hm

This perspective may be awkward for humans as it is too vast. Anyways, from the point of my appearance, I became an enemy to all living things on Earth.

Rosaline said.

But Ryu Young-Joon, reptiles are enemies to mammals, right?

Thats true

But why have I been cooperating with you to increase the lifespan of humans all this time? Mankind is the most powerful opponent among my enemies. I didnt feel any aversions. Why was that? And the countless living things I have met did not show any signs of rejection towards me. That was also fascinating.

...

What if the pathogenicity I had separated and split off in the early stages of the mother cell development? What if that is the reason why the living things on this land do not recognize me as an enemy and I feel no aversion in helping you?

Then, that pathogenicity was left at the Life Creation Department and later infected Kim Hyun-Taek?

Yes. Because it is not a living thing but the property of causing diseases itself, it will just keep destroying everything.

I cant really imagine it with the knowledge that I have.

Think of it as a Player of Life, not as a scientist. This chapter was originally shared via N0/vel/Biin.

And the Life Creation Department was used for a long time after you were created. No one had any problems.

Im not sure of that. But since I kept growing, if we think that the pathogenicity has also grown

Young-Joon rested his chin on his hand and became lost in thought. After contemplation, Young-Joon asked Rosaline a question.

If everything you said was right, can we cure Kim Hyun-Taek?

You dont like him. Youre going to cure him?

I have to save him to make him take responsibility and get punished for the incident.

Youre not normal either.

Rosaline said like she was baffled.

1. 911 is 119 in Korea
2. IMO is an abbreviation for in my opinion.

Chapter 107: Laboratory One (9)

But Ryu Young-Joon, I dont know for sure if I will be able to cure Kim Hyun-Taek or not.

Rosaline said.

I still havent accurately diagnosed what this pathogen is. I have to inspect it closer.

Closer?

I am going to go inside Kim Hyun-Taeks body for a moment.

Can you do that?

It should be fine. Theres nothing that will mess with me except that pathogen anyways. Do you think something like Kim Hyun-Taeks immune cells can go up against me?

Rosaline said.

Its kind of gross that I am going inside the body of a man in his fifties whose body was wrecked by alcohol, cigarettes, lack of exercise, and chronic tiredness, but this is the only way.

Alright.

Then Ill be back.

Rosaline climbed onto his bed again and stuck her finger in Kim Hyun-Taeks mouth. Then, her body slipped right in as if she was being sucked in by a black hole.

Ugh.

Rosaline groaned. He stunk of cigarettes right from his esophagus. Before moving into the stomach, she dug into the mucous membrane at a good point and moved into the blood vessels.

I will share my perspective with you.

Rosaline consumed one point of fitness and showed Young-Joon the inside of Kim Hyun-Taeks blood vessels. It was filled with cholesterol and fat.

Youve never seen something like this before, right? Its probably horrible.

Dont be like that. Its because of the average Korean mans work stress and company dinner.

Young-Joons voice came through.

To be honest, Ryu Young-Joon, your body was no different.

Really?

It was similar to this when I first arrived. Well, it was bound to be like this since you were an alcoholic back then. Anyways, Im cleaning your blood vessels every morning and evening. Be grateful.

...Thanks.

Rosaline took the vena cava and moved to the heart.

The pathogen has not been found yet. Maybe it doesn't have a physical entity?

If everything Rosaline thought was right and it was the pathogenicity that fell off her body that infected Kim Hyun-Taek, it may not have a clear physical entity. There was nothing that she could be certain of.

All the immune cells have stopped working.

It was because the doctors had injected an immunosuppressant. If it wasn't for that, Kim Hyun-Taek's body might not have been able to withstand it.

Rosaline passed by the huge white blood cells. This time, she took the artery to cross the blood brain barrier and went to the brain.

Oh!

Rosaline was startled.

What is it?

A significant part of the brain has been destroyed. Ugh This will be difficult to reconstruct even with stem cell therapy.

When you come out, tell me how damaged it is. Let's think of a way to cure him.

Okay. But it will be difficult to find a way to cure someone who is basically a corpse at my level.

We'll have to increase your level a lot as well.

Oh, wait. I found something.

Rosaline stopped moving. A cloud of black gas was floating around in front of her. It was a strange substance that looked like a coccus or like a protein lump.

So this is the pathogen.

Rosaline observed it more closely. It was definitely not a living being, so it wasn't active in the body and it also didn't multiply. As such, it was normal for it to not be that harmful to the body. The reason that Kim Hyun-Taek's body was this ruined wasn't actually because of this substance, but the immune cells

that reacted to it; it was a type of allergic reaction. However, it was odd that it was so intense that it led to brain death.

What is this thing?

It wasn't easy to discern what it was even from Rosaline's perspective, which could analyze the microworld. It felt cloudy, as if something was covering her eyes.

Rosaline cautiously touched the object.

Pff!

Suddenly, steam shot out with the burnt smell of coal.

Crash!

Rosaline, surprised at the sharp protrusions flying towards her, fired an attack reflexively.

[Perforin overexpression by 420%]

Boom!

A hole was blasted through the black, empty ball. With a sound of air deflating, the ball turned white and evaporated. At the same time, a few pieces of debris popped out. They were very small chemical molecules. Rosaline knew these structures.

Prednisolone?

Rosaline tilted her head in confusion. Another type of chemical flowed out. It was pentoxifylline. However, it looked like a tangled mold. She pulled in some water molecules and hydrolyzed them. After cleaning up her area, she went into the blood vessels again. She traveled for a long time and went back the way she came.

Phaa!

Rosaline, who came out of Kim Hyun-Taek's body, took a deep breath.

It was so suffocating in there.

What happened? Young-Joon asked.

I met a pathogen in there.

And?

I touched it, and it tried to attack me.

Attack? You? So?

I got rid of it. It disappeared when I put a hole through it with perforin. Little thing didnt know who it was up against.

Rosaline puffed up her little chest.

... Then is Kim Hyun-Taek all better now?

You cant do anything about the explosion just because you caught the terrorists. Its over for Kim Hyun-Taek.

Really?

It was a little upsetting.

Well, we might be able to cure him if we develop stem cells further. But I cant think of a good way because my level is too low.

And the pathogen has been completely destroyed?magic

The ones that were in his body, yes.

* * *

[Kim Hyun-Taek, Laboratory One Director of AGen, declared brain-dead due to a sudden stroke.]

The news began spreading. The story that Kim Hyun-Taek collapsed at Lab Six while raising his voice due to having a conflict with Young-Joon was pretty provocative.

Its Gods punishment.

I don't even feel pity for him because he's a bastard who doesn't think other people's lives are precious.

Just take him off the ventilator. He's a waste of oxygen.

The public was cold.

An in-house board meeting was held at A-Gen's headquarters. Young-Joon was now the lab director of Lab one; it was the best of the best that had seven departments including the Anticancer Drug Research Department, Mobile Diagnostic Device Research Department, Plant-based Pharmaceutical Research Department, and the Protein Manufacturing Research Department. The best research personnel who could be considered the main force of A-Gen was now under Young-Joon.

The scientists at the Anticancer Drug Research Department were having an emergency meeting.

Principal Kim, what do we do? said Lead Scientist Hwang Chan-Mi as she grabbed her hair.

They all remembered the day Young-Joon fought with Kim Hyun-Taek at the department and left for the Life Creation Department. When he came out of Director Kim's office in anger, everyone in the department glanced at him and ignored him. Here, Young-Joon was quite a controversial person; a lot of seniors liked him because he was smart, had passion, and finished his work perfectly, but there were quite a lot of people who didn't like him because of his tunnel vision and stickler attitude.

CEO Ryu probably feels betrayed by us, too, Senior Scientist Kim Hyun-Seok said with a sigh. But there was nothing we could do about Cellicure. What, would we have embraced Doctor Ryu and fought with Director Kim? How could we do that? Even his girlfriend broke up with him, Hyun Mi-Ju argued like it was unfair.

But we could have given him a heads-up about why Cellicure was purchased. No matter how badly we were stepping on his excitement, said Principal Scientist Kim Joo-Yeon. I should have carried the ball and done that as the head of the department, but I didn't pay attention. I should have at least pretended to intervene and protect Ryu Young-Joon when he was being sliced up by Director Kim.

It's not your fault, Hwang Chan-Mi said.

Do you think CEO Ryu has any feelings towards us? Lead Park Shi-Joon asked.

I don't know.

Click.

The door opened and someone walked into the office.

Hello.

It was Young-Joon.

Oh!

Uh

All the document folders that were on the table fell off as Kim Hyun-Seok, Hyun Mi-Ju and others scrambled to get up in surprise. In that chaos, Hwang Chan-Mi's elbow hit Kim Joo-Yeon's phone, and it slid off the table.

Snatch!

Young-Joon, who caught the phone like it was nothing while coming their way, held it out.

It's been a while.

H-Hello.

Kim Joo-Yeon took the phone. The scientists all greeted him nervously.

Sir, I thought you were in a meeting with the other departments

I'm done now. I had about thirty minutes left before my last meeting, so I decided to stop by.

Young-Joon was having meetings with every department at Lab One. It was to see the new projects that were going on at each department now that he was appointed as the new director.

Oh, yes Haha Kim Joo-Yeon laughed awkwardly. There was a heavy silence in the room.

Since I know the research data of the Anticancer Drug Research Department until six months ago, I think I just need a short briefing for about twenty minutes. Shall we just have the meeting now? Young-Joon asked.

Right now? We dont have a presentation ready.

Lets just do it verbally.

Uh Just a moment please.

And theres something I want to tell you just in case youre worried, Young-Joon said, I dont have any feelings about you. All I want to do is do good research together. Since I was in this department, I know how talented you are.

...

But you will have to be more careful about research ethics when youre working with me.

Alright, said Kim Joo-Yeon after taking a deep breath. Alright, Director Ryu, well begin the briefing.

Sure.

The Anticancer Drug Research Department has four anticancer drugs right now.

And Iloa, the cash cow, will now retire because of Cellicure.

Yes.

Are you developing Iloa further?

No.

Good choice. Cellicure is no regular drug. It wont be easy to top it.

Two of the three remaining drugs have good efficacy and no side effects, so they do not need to be developed further. However, Tagvix, our inhaled lung cancer treatment, is the problem, Kim Joo-Yeon said.

From what I remember, I think that was our main project when I was here about six months ago, Young-Joon said.

That;s right.

The problem then was that Tagvix kept causing immune reactions in the lungs because of its high immunogenicity.

Thats right. That hasnt been resolved yet. We have been using A-Bios genetic scissors, Cas9, to get rid of the substance that causes immunogenicity, but weve failed.

Does it not work well?

We believe the problem is our proficiency. Were not familiar with Cas9.

Then I will support you with A-Bios Cas9 technicians. You can co-develop it with them, Young-Joon said.

Kim Joo-Yeon nodded. This was something she predicted. Things would become much simpler if scientists who were in charge of Cas9 at A-Bio would come and help.

And the other two anticancer drugs are treatments for malignant lymphoma and kidney cancer, right? Clutinib and Alimap?

Thats right.

Those two need to be developed further.

Develop them more?

Kim Joo-Yeon was confused.

But sir, the clinical trials for them have already been completed, they are effective, and they have no side effects. Why do

Because it is expensive.

Expensive?

Cancer patients pay over a hundred million won for these treatments. Its burdensome, even if it is insured, to the patient and the country.

...

But there is a way to solve the problem about the price of the drug. Not just Clutinib or Alimap, but all biosimilar medicine.

What?

There are two reasons why I took this position as director of Lab One. The first is that I can get a lot of talented scientists like all of you. And the other is Young-Joon said. because the Plant-based Pharmaceuticals Research Department is here. It is a unique department that only exists at A-Gen in Korea, and one of a few in the world. Well use that department and significantly lower the cost of biosimilar drugs.

The plant team?

Yes. We should be able to lower it to at least one thousandth of the original price or one hundred thousandth at most. As long as we plan a good strategy.

What?!

The scientists were filled with shock. Kim Joo-Yeon was especially shocked. There were instances when companies, like Roche, would purposely set new drugs at a high price so that they could profit. But Clutinib and Alimap werent drugs like that; the reason why they were expensive was because the manufacturing cost was high. And that manufacturing process was the fruit that modern science had optimized. But he could reduce it to below one thousandth of the regular price?

What What are you going to do?

He probably said these crazy things at A-Bio every day, right? And he probably succeeded in doing all of them, right?

Kim Joo-Yeons hands were sweating.

Young-Joon said, The reason why anticancer drugs, along with vaccines and biopharmaceuticals are expensive is because we have to grow animal cells in

order to produce it. A lot of money is spent because the culture liquid is quite expensive. And if a culture facility is infected with bacteria or viruses, they will suffer tremendous damages.

...

I am going to put in a gene that synthesizes biodrugs in tobacco so that the drug is highly expressed in the leaves of the plant. If you grind one leaf into a blender and make it into a juice, you will get enough for ten patients. The ultimate goal is to ensure that the cost of treatment per person doesn't differ much from the price of vegetables at the supermarket.

What does That makes no sense. The expression level of a foreign gene won't be that high.

Hwang Chan-Mi refuted.

That is true if you put the gene inside the plant cells genome, Young-Joon said. I'm thinking of putting in the chloroplasts of the plant cell. One plant cell has more than two hundred chloroplasts.

Chapter 108: Plant-based Pharmaceuticals (1)

Confusion swept over Principal Scientist Kim Joo-Yeon. It was the same for the other scientists. The department that had the worst performance at Lab One was the Plant-based Pharmaceuticals Research Department. Just like Young-Joon originally thought, this department was created to produce pharmaceuticals from plants. However, their initial goal was not to mass produce pharmaceuticals; it was just an attempt to become free from bacteria and viruses that usually infected animal cells.

"All that department has been doing for the past ten years is making vitamin-rich lettuce... You know that, right?" Hwang Chan-Mi asked.

"Of course," Young-Joon replied.

They weren't even purifying vitamins or anything, but just growing lettuce that was bred to contain a lot of vitamins. Honestly, it wasn't much different from what the Health Food Department was developing. It was an awkward research direction considering that the name of their department was the Plant-based *Pharmaceuticals* Research Department.

“To be honest, the reason they have been doing that for ten years is because our lab has given up on making pharmaceuticals in plant cells,” Kim Joo-Yeon said.

“The Plant team said that during our meeting. I am thinking of restarting the business they gave up on,” Young-Joon replied while calmly nodding.

“But... Director, I’m sorry, but it’s not going to work well. I know this because my colleague who joined the company with me is the head of that department, but they all tried really hard back then. But it doesn’t work. The process of expressing genes in plants is very different from animal cells.”

“I know.”

“The reason that most viruses and bacteria that infect animal cells do not have pathogenicity against plant cells is because their environments are completely different. The pattern of sugar chains attaching to peptides translated from RNA is completely different in plant cells compared to animal cells. Even if you put in the same gene, the results will be different. To analyze that pattern and put in a gene that matches it? That is... That is incredibly difficult. It’s harder than getting an anticancer drug like Cellicure to Phase Three of clinical trials.”

“But we can’t just let antibody drugs or biopharmaceuticals be produced and sold at extremely high prices, right? A lot of money is going into the vaccines that are being used for HIV eradication as well. There is progress being made for that project because the WHO is backing it up and numerous charity organizations are pouring money into it,” Young-Joon said. “I have no intention of being satisfied with just HIV eradication, and along with the extinction of mosquitoes, I am going to eliminate countless infectious diseases from this planet. For this, it is essential to lower the unit price of biopharmaceuticals overall.”

“ ... ”

“I will give you the direction for the basic research, so don't; worry and follow me.”

“Have you discussed this with the Plant team?” Kim Joo-Yeon asked.

“Of course. They are burning with passion right now.”

“ ... ”

Kim Joo-Yeon was at a loss for words. This was the democratization of drugs. There were actually a lot of expensive pharmaceuticals that cost hundreds of millions of won until complete recovery, but they just didn't receive a lot of attention because the number of patients was so small. With Young-Joon, these highly expensive drugs may all become as cheap as vitamin supplements.

'Wait. Can vitamins be produced this way as well? Then, the supplements on the market right now will...'

A chill ran down Kim Joo-Yeon's neck.

“We might be shooting ourselves in the foot with this,” Kim Joo-Yeon said. “Director, if we succeed in what you said, there will be a revolutionary change in the price of pharmaceuticals. There will be pharmaceutical companies that go out of business if the prices drop that low. We don't know the changes that happen to A-Gen's financial structure. There may no longer be a merit to the pharmaceutical industry itself, and...”

Kim Joo-Yeon stopped talking mid-way. It was because Young-Joon was staring at her.

“Um... I would like to reduce the prices, but I just wanted to tell you that I am worried that management will not like it.”

“From now on, we will call this the plant-based pharmaceutical production method. In five years from now, the trend in pharmaceutical companies will change to this,” Young-Joon said. “And as you said, it will become a huge variable in the management budget of many pharmaceutical companies. There will be companies among them that will go bankrupt.”

“ ... ”

“We can't do anything about those that cannot adapt and collapse. For people who lose their jobs, we can hire them if they are talented and someone we need. But we can't not develop cars because we are worried about coachmen, right?” Kim Joo-Yeon nodded in confusion. Conversely speaking, they were developing cars in a time when people rode carriages. What she meant was that it would be too difficult.

'Maybe it's not a big deal to Ryu Young-Joon?'

Kim Joo-Yeon could not guess how confident Young-Joon was in starting this project as he was a person who had done incredible research like it was nothing. free(w)ebnovel(.)com

* * *

In the pediatric ward at Sunyoo Hospital, a group of children were joking around and playing. A ten-year-old boy put on a white mask that he got from somewhere and pretended to be a doctor.

"Where are you feeling pain?" A girl who looked to be about eight-years-old lied down on the bed and touched her stomach.

"My tummy hurts."

"Let's take a look."

The boy put the wire of his earbuds on his friend's stomach instead of a stethoscope.

"Hup! This is a stomachache!"

"What's a stomachache?" the girl asked with wide eyes.

"A stomachache is a very scary disease. You need to get a needle this big."

"Stupid, a stomachache means that your belly hurts. She came because her belly hurts, but how can you say that she has a stomachache?"

A nine-year-old girl who was beside them interrupted. She was one of the legendary patients of Sunyoo Hospital. She was the child who had survived an extreme situation where cancer cells spread to her pelvis during her end-stage liver cancer. To put it strongly, she had crossed the River of Styx halfway and returned. And now, she had recovered enough to join the relatively healthy group of kids and play with them.

"No, Yoon-Ah. I diagnosed her with a stomach ache because her belly hurts. That's what my doctor said, too. He said I have a stomachache," said the boy.

"He was talking about your symptoms. A symptom and a disease are different things."

Lee Yoon-Ah flinched. She would have been hurt by that statement in the past, but she was not that surprised now. All she felt now was a little bit sorry and disappointed.

“I’m getting discharged tomorrow,” Lee Yoon-Ah said.

“You’re getting discharged?”

“Discharged?”

Surprised, all the children gathered around her.

“You’re all better now?”

“Yeah.”

“Then you’re going home?”

“Yeah...”

“It’s fun when Yoon-Ah is here. She’s going because you said that your tummy hurting is a stomachache, Ho-Taek-oppa.”

The girl who pretended to be the patient got up and scolded the boy.

“Don’t go home, Yoon-Ah. Play with us, okay? I’ll be good,” the boy said in disappointment.

The adults who were watching them smiled slightly.

“He said that he’ll be good. My husband always says that, too.”

The women chatted playfully.

“I’ll visit often,” Lee Yoon-Ah said.

Creak.

The door to the patient room opened. A nurse and Kim Hyo-Jin appeared and looked for her.

“Come here, Yoon-Ah.”

This was her last examination before being discharged. Kim Hyo-Jin was overwhelmed to the point where she felt emotional. She took Lee Yoon-Ah's hand and went to the examination room. There were two scientists sitting beside Kim Chun-Jung, their doctor. It was Young-Joon and Song Ji-Hyun. They were reading the data that checked how much Cellicure and the chimeric immunotherapy was discharged from the body and the presence of any side effects.

"There aren't any problems so far," Song Ji-Hyun said.

"There is a lot of clinical data that Conson & Colson had about chimeric immunotherapy. It hasn't been tested on a lot of children, but since all the values are consistent with clinical data, it shouldn't cause any side effects if everything has been okay so far," Young-Joon said to Kim Chun-Jung.

To be honest, that data was additional, and Young-Joon actually examined Lee Yoon-Ah in Synchronization Mode. Being extra cautious, Rosaline came out herself and observed her condition up close.

—She is cured. There aren't any cancer cells left. None.

Rosaline said as she patted Lee Yoon-Ah's shoulder. Lee Yoon-Ah didn't feel anything, but Young-Joon was relieved.

"There isn't a lot of clinical data on Cellicure, but the results are generally consistent with Phase One data of the old version," Song Ji-Hyun said.

Kim Chun-Jung thoroughly examined the data sheet, then talked to Lee Yoon-Ah.

"Do you feel any discomfort anywhere?"

"No."

"And it doesn't hurt?"

"No."

"..."

Kim Chun-Jung smiled.

"Mrs. Kim."

“Yes!” Kim Hyo-Jin replied right away.

“We don’t know what kind of aftereffects she will have because Yoon-Ah resected a lot of her liver. If possible, try not to eat anything heavily seasoned, and if you ever need to go to the hospital, make sure to let them know that her liver has been resected when they use medicine.”

“Yes, I will make sure to do that.”

“And because she’s still developing, we don’t know how her liver will recover. It will be best for her to come in regularly and be examined for the next five years.”

“Of course...”

“Anyways, I’m very glad that Yoon-Ah has become much better. You’ve worked so hard. You can leave tomorrow morning. And I want to especially thank Doctor Ryu and Doctor Song,” said Kim Chun-Jung as she gestured to them. magic

Kim Hyo-Jin quickly bowed.

“Thank you so much. All three of you have saved my daughter’s life. Thank you so much. Especially Doctor Ryu... Chimeric immunotherapy is really expensive, but you gave it to us free of charge... How can I thank you...”

“I can’t take money since it’s a clinical trial. We should actually be the ones paying you,” Young-Joon said.

To be honest, Lee Yoon-Ah was a reason why he was determined to develop the plant-based pharmaceuticals production method. He was interested in research related to this from before, but it was less important compared to other things; he thought that developing drugs for incurable diseases was first. However, the emails he received after successfully treating Lee Yoon-Ah showed him the reality.

[Hello, I am a father in my forties living in Chungcheongnam-do. My son has pediatric cancer that has metastasized to the bone, but I heard that you have succeeded in curing this with the chimeric immunotherapy. I am asking if we could receive the treatment. I heard that not anyone can get the treatment as it is still in clinical trials, and that it is very expensive, but...]

Young-Joon received hundreds of emails like this, and they weren't just from Korea; he got countless emails regarding this from overseas as well. However, he could tell that everyone struggled with the financial situation as he was classifying the emails. This situation was actually ironic as the clinical trial was completely free. The patients and their families weren't talking about money because they didn't know that.

When Young-Joon read their logic, it was usually in this order:

1. Not everyone can get into the clinical trial.
2. This treatment was extremely expensive.
3. Then, won't they include us in the clinical trial if we pay money?

However, the chimeric immunotherapy was an ultra-expensive treatment that cost over four hundred million won for one round of the treatment. How could regular people pay that? As such, there were usually two kinds of people. The first were people who were financially well-off. The best of them was an oil king from the Middle East, and they wrote Young-Joon an email.

[To Doctor Ryu. I am Aziz, and I live in Saudi Arabia. I have seven sons, and my first son is very sick from pediatric cancer. He received treatment in America, but he was declared terminally ill. We thought about receiving chimeric immunotherapy through Conson & Colson, but they didn't do it because they thought the success rate would be very low and if it failed, it could be a problem when getting approval from the FDA. However, I know that the child you successfully treated with this treatment was in worse condition. I can donate over thirty billion won to A-Bio, and if you would like to expand your business to Saudi Arabia...]

And as expected, the other type of people were regular folks who didn't have a lot of money. Unexpectedly, there weren't a lot of people who appealed to human compassion. They actually told him not to worry about the cost of treatment, saying that they would steal, or sell their house or organs for it. They were scared that they would lose their opportunity to be treated if they acted timidly.

'The problem isn't other pharmaceutical companies going out of business when this is the situation...'

Young-Joon thought about what Kim Joo-Yeon said again. To be honest, other pharmaceutical companies weren't really where problems could occur in this ambitious business.

* * *

"We have to prepare to fight insurance companies," Young-Joon said. Park Joo-Hyuk squinted.

"With who?"

"Insurance companies."

"Woah... Now that you've killed all your competitors in the STEM,[1] you're going to take over business and economics?"

"Do you think I'm a gangster or something?"

"But why are you fighting insurance companies?"

"I'm in charge of Lab One now, right?"

"Yeah."

There are two big projects that I can start from here," Young-Joon said. "One is the revolution in drug prices. The other is the Genome Project through the Diagnostic Device Department."

Park Joo-Hyuk had heard a general explanation about the way he was going to lower the price of pharmaceuticals. He had also heard about the Genome Project, but he didn't understand them completely.

"But what does that have to do with insurance companies? Because the prices of drugs will fall?"

"Do you know that Angelina Jolie had surgery to resect her completely normal breasts?" "Really? She cut them off even though they were fine?"

"Yes. The probability of breast cancer was high according to her DNA test."

"Just because of that..."

“It’s not just because of that. She predicted it and dealt with it before the tumor formed. It’s one of the most common things we’ll see in future medicine. But it would have started in the West.”

“ ... ”

“If we conduct the Genome Project on all races and build a dense DNA database, that future will start in Korea.”

“Oh, I get it. It’s because insurance is a business where you bet on the uncertainty? If we can predict diseases, insurance has no place to stand?”

Young-Joon nodded.

“It will take time to predict it precisely, but in addition to that, we have powerful, rapid, and cheap diagnostic kits, treatments that are the price of vegetables, and a next-generation hospital armed with a future technology called regenerative medicine.”

“Woah...”

The big picture was already completed: they would predict the disease, quickly diagnose it with a cheap diagnostic kit, rapidly cure and discharge the patient by using the next-generation hospital system, which is based on cheap pharmaceuticals and regenerative medicine. What point could insurance companies target if the uncertainty of disease development significantly decreased, treatments became so cheap that even poor people could buy it, and patients could quickly recover and return to their everyday lives?

It was obvious that this major structural reform that was going to happen in medicine was going to cause huge changes in the insurance market.

“We have to begin preparing for that future,” Young-Joon said.

1. acronym that stands for Science, Technology, Engineering, and Mathematics ?

Chapter 109: Plant-based Pharmaceuticals (2)

“These are the forty completed kits that diagnose thirty-two diseases in groups or individually,” said Park So-Yeon as she pushed the box containing forty kits towards Young-Joon. “I backed up all the research notes of the development process on the company’s cloud, and I left the hard copy in the laboratory

archive, so you can use it when you need. And this is an explanation of each project. I just wrote the basic things.”

Young-Joon took the explanation that Park So-Yeon handed him. He flipped over each page and read through it.

“Wasn’t yesterday your last day? I heard that you left everything in my secretary’s office when I wasn’t here,” Young-Joon said.

“I did, but I had a couple of things to add to this explanation and data, so I came for that. I dropped off all the products here in the secretary’s office yesterday.”

“I see.”

Young-Joon organized the explanations and put them on one side of his desk.

“So, are you leaving now?”

“Yes. I’m going straight to the airport because my flight is soon.”

“Do you want me to go with you?”

“Oh, it’s okay...”

“Let’s go in my car.”

Young-Joon took Park So-Yeon and went to the parking lot. He shook his hand as the K-Cops security team was about to escort them to their van.

“It’s alright. I will drive.”

Young-Joon declined and went into the driver’s seat.

“Then we will follow you in a different car,” Kim Chul-Kwon said.

“Alright.”

Young-Joon took Park So-Yeon, who was sitting in the passenger’s seat, out of the company. On the way to Incheon Airport, he asked, “Where are you going now?”

“America. I’m going into the WHO,” Park So-Yeon replied while staring at him as the strictly formal tone he had been keeping with her disappeared.

“The WHO?”

“Yeah. I’m already confirmed to join them.”

“It’s not easy to get into there. It’s amazing.”

“They took me as soon as I said that I was one of the developers of the diagnostic kit.”

“Haha, I guess it was a valuable project. Then what are you going to do there?” “I’m going to go to Switzerland after I finish a few things in America. The WHO headquarters are there. After that, I’ll probably be dispatched to Africa.”

“Africa?” “The place where the diagnostic kit is being used the most is Africa. They’re using a lot for HIV eradication.”

“So, you’re doing something related to the diagnostic kit in Africa?”

“Yeah. I think they talked about the need to produce the diagnostic kit within Africa. I’ll probably go there and work on optimizing the production process in their conditions.”

“ ... ”

Young-Joon thought for a moment, then said, “So-Yeon, the Diagnostic Device Department is going to start the Genome Project.”

“The Genome Project? You’re talking about collecting DNA data from different races?”

“That’s right.”

“You’re going to find disease-related mutants based on the DNA data you obtained from the Genome Project?”

“Yeah.”

“It’s not going to be easy. The relationship between gene mutations and diseases is clear, but the data will greatly vary between individuals. The same mutation can present differently in different people.”

“Probably. So, I’m thinking of gathering the genomic data of at least one hundred million people.”

“What?”

Park So-Yeon was filled with shock.

“How many people did you say?” she asked again.

“One hundred million.”

“ ... ”

“Individual differences will gradually fade as the sample size becomes enormous. If one million people out of one hundred million are skin cancer patients, I can get values beyond individual differences if I compare their genetic variation against the remaining ninety-nine million people.”

Chills ran down Park So-Yeon’s spine.

“You’re probably the one person who can start a project that big.”

“I am going to request cooperation from other companies and universities that work on DNA analysis. It’ll be an international project like HIV eradication.”

Of course, Young-Joon could find genetic mutations with Rosaline. However, the fitness consumption to scan the entire DNA of humans, which was about three billion letters, would be too great. Additionally, it would be difficult to convince people if he found mutation points like that. In this project, it would be most effective to use Rosaline to overcome the important obstacles.

“Come back any time if you are interested in the Genome Project,” Young-Joon said.

“This is why you offered to give me a ride, isn’t it?”

Park So-Yeon smiled.

“That’s not why. It’s just... I wanted to see you off.”

“I know how you feel. Thanks.”

“It’s easy for former employees to join the team because the process isn’t very picky. And you can come back whenever you want, especially because you were a key person in developing the diagnostic kits.”

“Thank you, but it’s okay. I am going to find what I should do in Africa.”

“Okay.”

“We might meet again someday because of how small this society is. I look forward to working with you.”

Young-Joon drove to Incheon Airport. Their romantic relationship ended long ago, and they had settled all their old feelings last time. The project they worked on together as an employee and executive was over as of today. Their emotions and power would be equal the next time they met; they would just be another colleague working in the same field.

Young-Joon waved goodbye to Park So-Yeon who was going into the airport terminal and returned to A-Bio.

* * *

The most powerful technology that existed in manipulating genes was Cas9, the genetic scissors. The Cas9 and RNA complexes were going to be wrapped in double lipids and introduced to the chloroplast. If they put in the desired gene at this time, the gene would be inserted into the sliced part, which was cut by Cas9, through homologous recombination. It couldn’t be described as sophisticated work, but a chemical probability game. The success rate was very low, but it wasn’t that difficult for Young-Joon.

‘Finished.’

Young-Joon completed the experiment and cleaned up the sterile hood. There was no way to observe the molecular phenomenon even with a microscope, but he confirmed that he succeeded with Synchronization Mode.

“Please grow this cell,” Young-Joon said as he handed a scientist a cell culture plate.

“Yes, sir!”

Lead Scientist Jang Jin-Ho of the Plant-based Pharmaceuticals Research Department took the plate. He was a little amazed. This department was the one that lagged behind the most at Lab One. Then, someone huge called Young-Joon just burst onto the scene. Lab Director Kim Hyun-Taek berated the Plant Department a lot in the past, but he didn't really provide any good directions for their research.

However, Young-Joon was different. He actually came into the lab himself and started off this major project himself. Dozens of department members were watching Young-Joon's experiment behind Jang Jin-Ho with a tense expression.

"It was a simple transfection, but it looks different than us," Scientist Lee Shin-Ju said.

"It looks like the pipette is shining..."

"Will the target gene really be expressed from that?"

The other scientists murmured.

Before leaving the lab, he said to them, "I am going to come to this lab for the next three weeks. Let's correct the tobacco plant genome together. We have to manipulate a few genes that affect the sugar chain with Cas9 for the target gene to be properly expressed."

Young-Joon actually came to the lab for the next three weeks. He was probably constantly busy as he held big titles like the CEO of A-Bio and Lab One Director, but he never left the frontlines of research. Since the project was in its beginning stages, the employees needed to become familiar with improving plants using Cas9 at the least. They were smart people, so they would follow along well if Young-Joon just showed them once.

However, Young-Joon was not only focused on this experiment.

"The Diagnostic Device Department will be divided into two teams. One team will work on the Genome Project. It will take at least two years, and they will be analyzing the DNA of over one hundred million people of all the races in the world," Young-Joon said to the entire department. "You will obtain some skin tissue cells from subjects all over the world and use the Illumina equipment to analyze their entire DNA. There are two major points: one is to

collect the entire three billion letters of DNA data of each subject, and the other is the subject's disease information."

"Disease information? I don't think we can collect that information because it's private information," Song Yu-Ra said.

"That's right. Because of that, we cannot record any personal information when conducting this study. Only write the age, sex, and race. Destroy all personal information like their name or contact information," Young-Joon replied. "The Genome Project can be done because it is an academic study as long as it remains anonymous. We will also distribute all the data we have free of charge."

"What will the other team be doing?"

"All academic studies are bound to be used commercially." Young-Joon grinned.

* * *

SG Life was one of the oldest insurance companies in Korea's private health insurance industry.

Senior Managing Director Lim Gil-Won was doing a presentation at the board meeting. He had become a senior managing director in his late forties, and he had quickly predicted problems for the company's future with his unique sense of insight and danger detection skills. And recently, he had been focusing on Young-Joon's new technology parade.

"The item I am bringing up today is regarding CEO Ryu."

"Ryu Young-Joon again?" fr eeweb novel

Executive Vice President Baek Joong-Hyuk frowned.

"I keep bringing up this item because we have not come up with a concrete alternative," Lim Gil-Won explained.

"Now, stop with all this."

"CEO Ryu bought DNA analysis equipment."

"DNA analysis equipment?" Chief Executive Officer Hwang Jun-Young asked.

“Yes. I heard he bought two hundred of them. Where would CEO Ryu use that? I believe that he will use that to start a gene analysis business.” “A gene analysis business?”

This time, the directors’ faces changed. The gene analysis market was one of the future industries that was quite worrisome among insurance planners. Of course, the insurance industry still required information such as family history when customers subscribed to insurance products. However, if gene analysis data became commonplace, the probability that was previously lumped with family history would become much more accurate. From the perspective of insurance companies that developed and sold products based on uncertainty, the future of more accurate predictions was burdensome.

“Is that information accurate?” Hwang Jun-Young asked.

“I am certain. Dozens of Illemina’s equipment came into A-Bio,” Lim Gil-Won said. “And I don’t think that is all. We need to come up with countermeasures against the huge structural changes that CEO Ryu will make in the...”

“Stop,” Baek Joong-Hyun cut him off. “Director Lim, you’re talking about CEO Ryu like his work is going to cause some sort of structural reform in the whole insurance industry, but have there been any kind of changes to our work even though he has been on the news countless times?”

“ ... ”

“Now there are only people who think that glaucoma is no longer one of the three major eye diseases. Now, our insurance covers glaucoma stem cell therapy. That’s all the change we’ve seen.”

“That is because the only kit that has been commercialized is the glaucoma cure kit. If you look at the business that CEO Ryu is doing...”

“You keep bringing up that item every time we have a board meeting, but I don’t think we need to be that nervous. Let’s keep watching. Slowly. Let’s hear the next item on the agenda,” Baek Joong-Hyuk said.

“One of the new cancer insurance products that Boryung Life has released provides living expenses...”

The next director began presenting.

An hour later, the board meeting came to an end. Lim Gil-Won, who returned to his office, couldn't calm down his anger and kicked his sofa.

Thud!

"Damn it, these grandpas..."

He swung his fists in the air. He felt like he was going to die from frustration. Stagnant water was bound to rot; those senile old men were so stuck in the old-fashioned insurance industry and could not predict the future.

'The entire medical insurance industry is on the verge of chaos. What good is the new product that Boryung Life released?!

Knock knock!

"Mr. Director!"

Executive Manager Lee appeared outside.

"Yes."

"You have to see this."

He handed Lim Gil-Won his tablet. A news article was on it. As soon as he saw Young-Joon's name in the headline, he thought that the time had come.

[Ryu Young-Joons succeeds at producing Alimap, a kidney cancer treatment, from plant cells.] *freewebnovel.com*

"Plant cells?"

He was expecting something about the Genome Project, so he was a little surprised when he saw that it was completely different. However, his fingers trembled as he read the news.

[... As such, it is predicted that Alimap's production price will fall to less than one-thousandth of the original price, and Director Ryu Young-Joon stated that he would apply this production method to other drugs as well. Each drug will need its own optimization process, but theoretically, there will be a major drop in the price of all kinds of bio-based drugs, and...]

“No way.” Lim Gil-Won turned off the news. The diagnostic market was not the only problem; he could also reform the price of treatments like this.

“Damn it.”

He sighed.

“I didn’t even think of this... Anyways, thank you for giving me this important information, Mr. Manager.”

“Um... Sir, there’s more news after it.”

“There’s more?”

Lim Gil-Won turned on the news again.

[Ryu Young-Joon begins Genome Project for one hundred million people.]

[Ryu Young-Joon provides genetic testing services.]magic

Chapter 110: Plant-based Pharmaceuticals (3)

There was a gene named BRCA. It was one of the most famous genes in the world of genetics. There were two types of BRCA that existed in the body: BRCA1, which existed on the seventeenth chromosome, and BRCA2, which existed on the thirteenth chromosome. The reason why they were famous was because they were cancer inhibiting genes.

Human DNA was continuously destroyed by ultraviolet rays, chemicals, and naturally occurring reactive oxygen species in the body. Because cells with destroyed DNA died, there was a mechanism in the cell to repair damaged DNA to prevent death, and the BRCA gene was one of the genes that repaired DNA damage. But if there was a mutation in the BRCA gene and it could not function properly, the cell would be left with damaged DNA and just die. However, there were some unlucky cases where the DNA would repair itself in a slightly misaligned shape with BRCA. Then, those cells would turn into cancer cells.

“... As such, there is a high chance that cells with broken BRCA will become cancer cells,” Young-Joon said.

The members of the Diagnostic Device Department were taking notes in their notebooks while listening to Young-Joon’s presentation.

Young-Joon continued with his lecture.

“The probability of cancer occurrence changes depending on where the mutation is in the BRCA gene, but women who have a mutation in BRCA have a fifty percent chance of getting breast cancer and a fifteen percent chance of getting ovarian cancer. In Angelina Jolie’s case, there was an eighty-seven percent chance of her getting breast cancer and a fifty percent chance of ovarian cancer. Ultimately, she got surgery to remove her breasts, ovaries, and fallopian tubes.”

“Are you going to begin BRCA gene testing services with this diagnostic project?” Song Yu-Ra asked.

“That’s right.” Young-Joon nodded.

“As you all probably know, according to WHO statistics, four hundred fifty-eight thousand people die of breast cancer each year. If we can recognize the risk of developing it by genetic testing, it will help us control the incidence of cancer.”

“ ... ”

“What I want is for people to receive our services and test genes like BRCA, and I want people with a high chance of developing it to receive preventative surgeries or check frequently with the diagnostic kit. The survival rate will increase dramatically if it is diagnosed early and they receive treatment right away.”

Young-Joon handed out documents to the department members.

“There are twenty-four famous gene mutations in the data provided. This data includes three BRCA mutants. From now on, we will start a business that diagnoses twenty-four of these target mutations.”

The scientists looked over the documents and checked the list of mutations.

—P53

—KRAS

—EGFR

They were all famous ones like BRCA, and they were genes that controlled the apoptosis signal of cells or growth signals. And everyone knew that these twenty-four targets weren't all of them. Young-Joon began a huge Genome Project, and it was to discover new targets; he was trying to find indicators of cancer that the scientific community did not know yet, but were as important as the BRCA mutation. If the mutation of an unknown gene A was only found in lymphoma patients, it could be called a sign of lymphoma, couldn't it? A huge genome project that decoded the DNA of one hundred million people. The big data to be obtained from it may be able to read all cancerous species that occurred in the human body.

“ ... ”

Song Yu-Ra's hands trembled in shock.

There were a lot of changes that happened to the disease treatment market after Young-Joon began induced pluripotent stem cells. Now, a lot of developed countries were building next-generation hospitals and investing in stem cell technicians. The treatments and cures that were in clinical trials right now were soon going to become products and pour out.

Additionally, a major structural reform was happening in the disease prediction market.

“You are the best technicians at DNA analysis, and there are two hundred of Illemina's DNA analysis machines here, the best equipment in the world. Let's begin the genetic testing business as early as next week,” Young-Joon said.

* * *

The Anticancer Drug Research Department and the Plant-based Pharmaceuticals Research Department were both in shock. It had already been a week, but their shock seemed to not go away. “How did he do it...?” Kin Hyun-Seok mumbled.

Young-Joon had succeeded in producing Alimap from plant cells; it really worked.

“Seriously, this makes no sense. What do you think?” Kim Joo-Yeon asked like she was dumbfounded.

“We tried to express animal genes in plant cells for ten years, but we have never succeeded once,” Jang Jin-Ho replied.

“But the director did it in one month?”

“Yes...”

“...”

Young-Joon picked out around a dozen locations from the hundreds of millions of target locations in the tobacco plant, as if he knew it all and it was obvious to him to manipulate them. After he cut them and stuck them together with genetic scissors, he put the new genes in the chloroplast. Then, all of a sudden, Alimap began coming out of the leaves. It was like looking at AlphaGo put together a one hundred thousand-piece puzzle in ten minutes; no matter what piece he picked up, he put it into the right location as soon as he picked it up.

“Can a human be like that?”

“...”

Click.

“Oh, you were using the conference room. I thought it was empty.”

“No, we’re done now. We were just leaving,” Jang Jin-Ho said as he got up. “You can use it, direc... Hup.”

The end of his sentence was stopped by bewilderment. It was because a guest was standing behind Young-Joon. It was Yoon Dae-Sung, the CEO of A-Gen.

“Sir!”

Surprised, the employees all greeted him.

“They are the scientists who were responsible for and drove the expression of Alimap in plant cells. A word of encouragement, please.”

Young-Joon introduced them to Yoon Dae-Sung.

“Great work, everyone. Thanks to you, we are able to produce Alimap very cheaply. Honestly, I don’t know if this is good for the company, but... Hahaha.”

Yoon Dae-Sung laughed awkwardly.

“Hahaha.”

Young-Joon laughed with him and let him into the conference room.

“T-Then we’ll be on our way.”

The members of the Anticancer Drug Research Department and the Plant-based Pharmaceuticals Research Department bowed to Young-Joon and Yoon Dae-Sung, then quickly ran outside. Young-Joon closed the door and sat across from Yoon Dae-Sung.

“Mr. CEO, there was a plan to build a large GMP facility in Pyeongtaek, right?”
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Young-Joon got straight to the point.

“There was.”

“What if we set that up as a plant-based production facility?”

“And mass-produce Alimap from there?”

“Yes. I am thinking of taking all biodrugs to a plant-based production system from now on. The possibility of contamination is low, and the amount of production is much higher. In particular, antibody types that were previously produced using eggs will be produced more efficiently if they are made from plants,” Young-Joon said. “As you probably know, producing biodrugs based on plants will be the new trend in drug production because we succeeded in producing Alimap from plants. To be ahead in this field, we need a huge GMP plant-based production facility.”

Yoon Dae-Sung already knew that Young-Joon would propose this. As such, he was not that surprised at this request. However, he was worried about something else.

“But Doctor Ryu, will it be okay to reduce drug prices this sharply? I think we might be destroying our livelihood with our own hands.”

“We could be. However, we need to adapt and change our livelihood if science advances. We can’t take swords to a battlefield when tanks have been developed, right?” Young-Joon said.

“ ... ”

Yoon Dae-Sung closed his eyes and thought. After a moment of silence, Young-Joon spoke.

“And there is something I would like your help with.”

“My help?”

“The genetic testing business and cheap treatments might pressure insurance companies.”

“Probably.”

“I am also working with the legal team and preparing a response. But I need your help in this process.”

“Hm.”

Yoon Dae-Sung’s worries about their livelihood disappeared completely from his mind. This project was not being done by A-Bio; they were participating in this business by lending Illemina’s equipment, and it was Lab One of A-Gen who was in charge of the project. This meant that if insurance companies attacked this business, they would not only be shaking up Young-Joon, but Yoon Dae-Sung as well.

‘What a shrewd man...’

Yoon Dae-Sung clicked his tongue in his head. Young-Joon, who was eating away at A-Gen’s shares and at odds with Yoon Dae-Sung, was now trying to throw Yoon Dae-Sung in front of him as a shield

“How can I help?”

However, Yoon Dae-Sung couldn’t ignore him, as this project was being done by the Anticancer Drug Research Department and the Diagnostic Device Research Department, the two most well-known and high-performing departments among all the research departments at A-Gen.

Plus, Yoon Dae-Sung didn't dislike Young-Joon. Even if they were going to end up fighting for the management rights to A-Gen, it bothered him that other people were attacking Young-Joon right now.

"I will support you fully if it is something I can help you with."

* * *

A new board meeting was held.

"CEO Ryu... is moving faster than we thought," Baek Joong-Hyun, the executive vice president, said cautiously as he glanced at Lim Gil-Won in guilt.

Lim Gil-Won felt like his head was going to explode from stress as he listened to his frustrating voice.

'He's moving faster than we expected? Is he kidding? How can he say something like that when he knows the number of drugs that Ryu Young-Joon put into clinical trials in a year?'

Young-Joon's research was completely different from other scientists. Lim Gil-Won evaluated him as more of a trend of advancement or a social phenomenon, such as the Bio Revolution or the Fourth Industrial Revolution, rather than an individual concept of a genius scientist.

'We could have ridden this wave well if these old gits listened to me earlier.'

Lim Gil-Won sighed.

"Um... It is a little late, but do you have any good ideas, Director Lim?" Baek Joong-Hyuk asked.

"Not anymore. I kept giving reports of this since Doctor Ryu Young-Joon came up with a cure for glaucoma. We should have dealt with it from then," Lim Gil-Won replied as he pushed down his irritation.

"... What if we challenge the credibility of genetic testing and do media play?"

"We cannot do that!" Lim Gil-Won screamed in shock. "The credibility of genetic testing! That's a scientific problem! That is something that can be calculated with experiments and be in papers!"

'Is this grandpa crazy? I know that he is old-fashioned, but he wants to go into that monster's home ground and fight?'

"We will end up like the HIV opposition, one hundred percent. We will be completely destroyed if he proves it in front of everyone's eyes with a crazy, unimaginable experiment. And Ryu Young-Joon is someone who is capable of doing that." magic

"... Is he?"

Baek Joong-Hyuk scratched his head.

"Phew..." Lim Gil-Won sighed. "What if we just give up on keeping him in check? Let's actually get close to him, learn about his genetic testing business and support it. Then, we can develop a new insurance product based on that."

"Develop a new insurance product?"

"We'll design an insurance product that fits the generation of genetic testing. I don't know what it will look like but..."

"Let's do this," Hwang Jun-Young, the CEO, said. "Let's do what Director Lim said, and on the other side, let's put pressure on the government to legalize and regulate genetic testing because it violates the Personal Information and Privacy Act."

Next chapter will be updated first on this website. Come back and continue reading tomorrow, everyone!