

Super Genius DNA #Chapter 1: Scientist Ryu Young-Joon (1) - Read Super Genius DNA Chapter 1: Scientist Ryu Young-Joon (1)

Chapter 1: Scientist Ryu Young-Joon (1)

Ryu Young-Joon, the Scientist of A-Gen, a pharmaceutical company, was walking tiredly down the hall. Just then, he got a call from Park So-Yeon, his girlfriend.

—Hey, did you really get disciplinary action from the company? Department transfer and suspension?

Those were her first words to Young-Joon.

“Yeah,” he answered dryly.

—How long is the suspension?

“A month.”

—You’re not quitting, right?

“I would quit right away if I could, but you know my family’s financial situation. If I quit, my parents are going to have to live on the streets.”

—*Sigh...*

So-Yeon sighed. After some thought, she spoke.

—Let’s take a break to think about this relationship.

“What?”

—Everyone whispers when they see me walk by. They talk about how I’m the girl that’s dating Doctor Ryu, the one who caused a big scene.

“No, wait. I didn’t do anything wrong. I was just trying to protect research ethics. Are you serious?”

—I’m serious.

Young-Joon was at a loss for words. He felt like his head was actually physically ringing from hearing something so unexpected and shocking.

“Seriously, I can’t believe it. How could you... So-Yeon, you know how hard this is for me, right? And you’re leaving me now? Instead of comforting me?”

—I can’t believe it either. We’re dating at work at the same lab, just on different floors and departments. How difficult of a position do you think you’re putting me in by taking on the Lab Director? Did you even think about me when you did that?

“You also know what that director and management did! Does being a scientist mean turning a blind eye to lowly things like that?”

—Being part of society means turning a blind eye to lowly things like that.

Park So-Yeon spoke.

“...”

—I think I told you several times, but I’ll tell you one last time. Control your temper... You’re not a kid anymore, you’re not even in your twenties anymore.

“...”

—Sorry, I’ll hang up now. Thanks for everything. Don’t call me anymore.

Beep.

The phone call came to an end. Young-Joon’s hand trembled as he tightly held his phone. He was furious; his head was ringing.

‘Lab Director Kim Hyun-Taek.’

This was all because of that despicable asshole.

“Ahhh!!” Young-Joon screamed. He raised his arm to throw his phone at the wall, but stopped just before he actually threw it. Even now, he was thinking about how much it would cost him to get his phone screen repaired. Young-Joon realized that poor people didn’t have the luxury to get angry easily.

‘Of course.’

He wondered why he had chosen to go up against Kim Hyun-Taek when he knew that well.

'Getting angry, following your dreams, and keeping your ethics all have a price tag in this shitty world.'

Young-Joon slid down the hallway wall. He buried his face in his knees and sobbed silently.

* * *

A–Gen was an extremely large international pharmaceutical company. They had six labs in the country and four internationally for a total of ten, and they had the rights to countless new drugs. They were a pharma-giant that had business in everything from makeup to healthcare products, new synthetic drugs, over-the-counter drugs, artificial gene synthesis and gene sequencing.

Young-Joon, a twenty-nine-year-old elite doctor, joined the company as the Scientist of the Anticancer Drug Research department. He was basically the assistant manager.

He was pretty successful when he first joined the company; he was good at what he did, had passion, and was also quite smart. He also knew a big network of people due to his education at a prestigious university. His seniors called him for drinks every day and Young-Joon went to all of them and got along. He also started dating Park So-Yeon, the prettiest scientist of the Mobile Diagnostic Device Research Department, who had joined the company around the same time as him.

Young-Joon was a researcher beloved by all.

The incident happened around a year after he started working in the Anticancer Drug Research department.

[It's a new drug for early liver cancer developed by a venture company, and it seems to be quite effective. It could be competition.]

Young-Joon gave his superiors a report. It was a treatment drug for early liver cancer called Celicure that was being studied. The problem was that A–Gen was also selling Iloa, another drug for early liver cancer treatment. It was obvious that a significant amount of Iloa's stake in the market would be taken by Cellicure if it was more effective.

“Doctor Ryu!”

A few days later, a man named Yoon Bo-Hyun, an assistant manager from the management department, came down and called for Young-Joon.

“Doctor, could you purchase a small amount of that drug and perform a comparative experiment between our drug and theirs?”

“Of course.”

A scientist did not avoid comparing their own product to a competitive product. Young-Joon contacted the venture company himself and acquired thirty milligrams of the new drug for academic purposes. An experiment on live cells showed that the new drug was much more effective.

[Cellicure, the competitive product, is performing better than Iloa. Please see attached data for more details.]

~

About four months after sending that report in, Young-Joon heard surprising news.

“Doctor Ryu, did you hear? Our management bought Cellicure.”

He was shocked when he heard the news from Kim Hyun-Seok, the Senior Scientist.

“What?!”

“It’s like I said. They bought it for ten billion won.’

“That drug is only in phase one of clinical trials though?”

“Yeah.”

“Then, we’re going to be the ones who develop it from phase two to production, right?”

Young-Joon’s face lit up. Kim Hyun-Seok smiled.

In an elevated voice, Young-Joon exclaimed, “Wow. What’s gotten into our management? Buying something as good as that.”

“Is Cellicure really better than ours?”

“That was the result of phase one. Iloa had side effects like rashes on patients and had problems like the treatment being needed to be administered for a long time to work, right? Cellicure had none of that.”

“Wow, really?”

Kim Hyun-Seok patted Young-Joon on the shoulder as he chuckled.

“I’m here.” Lead Scientist Hyun Mi-Ju came into the lab. Young-Joon bolted up from his seat.

“Lead Hyun! Did you hear? Our company bought Cellicure!”

“Oh, really?” Hyun Mi-Ju smiled brightly.

“Yes! Let’s finish it when we get it and put it on the market.”

“Ahaha, sure. The venture company might be a little disappointed since they’re losing the experience of developing a new drug, but it’s good to hear that we bought a good drug.”

“That’s right. It’s better for patients as well. I am confident I can get the clinical trials done properly. And our production pipeline is better, too!”

Click.

“Good morning, everyone.”

Scientist Park Yeon-Seo walked in.

“Scientist Park! Did you hear?” Young-Joon shouted as he ran out.

“He’s going to be like that all day.” Hyun Mi-Ju chuckled as she spoke to Kim Hyun-Seok.

“It’s the energy and passion of a young scientist. Well, I like it.” Kim Hyun-Seok smiled.

That evening, Young-Joon visited a columbarium near Seoul. There was a small silver vase of remains in slot 274.

[Ryu Sae-Yi]

Behind the vase was a small name plate and a picture of a girl who looked to be around nine years old. Young-Joon stared at the photo.

“Hey, Sae-Yi. Your older brother is here,” Young-Joon spoke calmly.

“Did you know? I can have your revenge soon. Amazing, right? Look how great your older brother is~”

Young-Joon grinned.

“A venture company made a good drug. Our company bought it and I’m going to finish it.”

Young-Joon stroked the vase.

Young-Joon was the firstborn son and quite a bit older than his two siblings; he was ten years older than Ji-Won, who had just gone to university, and fourteen years older than Sae-Yi. Sae-Yi, the sister born when he was in middle school, felt more like his daughter than sister. In fact, he had basically raised her... Until she died of pediatric liver cancer, a very rare case, seven years ago.

“I’ll make sure that no one dies of cancer, at least liver cancer.”

Scientific advancements were always good; if advancements in science came with problems, those problems didn’t go past things like hair loss that accompanied chemotherapy. Sometimes, it just meant that they brought already-existing problems to the surface. The only kind of wrong science was the kind that stopped advancing.

‘Science should always be advancing.’

Not advancing did not mean stagnation, but regress. It meant that the world did nothing while it lost kind, hopeful children like Ryu Sae-Yi.

* * * magic

It had been three weeks. The study hadn’t happened yet.

[I would like to begin phase two of the clinical trial of Cellicure, the drug purchased for ten billion won. A detailed schedule of experiments is as follows: ...]

Young-Joon had sent in a report multiple times, but he received no response.

“Why are they not experimenting with the new drug they spent so much money on?”

When Young-Joon’s frustration was at its limit, Lab Director Kim Hyun-Taek called him.

“Doctor Ryu, why are you so obsessed with that new drug for liver cancer?” Hyun-Taek asked Young-Joon in the director’s office.

“Pardon? Well, it’s because it’s a better drug.”

“In what ways is it a better drug?”

“It has a higher clinical cure rate, right? It also has less side effects...”

“Then, it’s a worse drug in a way, no?”

“....”

Young-Joon was at a loss for words. It was cheaper to produce and more effective; it had no side effects and had a shorter treatment duration.

‘How can it be worse?’

As Young-Joon looked at him in confusion, Hyun-Taek smiled.

“Let me tell you. It takes two years for complete recovery with that drug. Iloa, our drug, takes five.”

“I... am not sure that I follow. What’s the problem?”

“A patient has to take either the Iloa or the new drug. Which do you think would be better for our company’s sales?”

“....”

Young-Joon's face went pale and froze like a corpse. That was the first time he realized that words could cut open his skull and shake his brain. He felt like everything that he believed in was being destroyed.

"Fr... From the beginning..."

Hyun-Taek said it for Young-Joon as he stuttered.

"We bought it because of that reason from the beginning. So, stop getting distracted and do what you've been told to do. And forget about that drug."

"..."

Young-Joon gulped. He opened his mouth several times to speak, but nothing came out. He bit his lips.

"Do... Do other people know?" Young-Joon asked.

"Of course. Do you think there would be another person as foolish and rigid as you at our company? It seems like no one told you because they didn't want to rain on your parade, but look. Doctor Ryu."

Taking off his glasses, Kim Hyun-Taek moved closer to Young-Joon.

"Science takes money."

"..."

"Your salary takes money, and it takes money to buy the reagents you use in experiments. Do you understand? This isn't a university; it's a company that works for profit."

Young-Joon's shoulders trembled.

'He's fake.'

This person was not a scientist.

'Everyone knew? Kim Hyun-Seok, Hyun Mi-Ju, and Park Yeon-Seo... All of them?'

Principal Scientist Kim Joo-Yeon, Lead Hwang Chan-Mi, Lead Park Shi-Joon, and dozens of scientists under the seniors in the Anticancer Drug Research

department knew about it, but no one raised a problem. Scientists who were developing anticancer drugs had gotten rid of one and turned a blind eye. Everyone was fake.

“You... frauds...”

Young-Joon murmured.

“What?”

Young-Joon felt like betrayal pumped in his veins and up to his cerebrum every time his heart beat. He felt like vomiting from the disgust and anger; he felt his hands tremble from the unjustness and despicable behavior. His seniors whom he had respected and followed, and A-Gen, the best pharmaceutical company in the world, were all fake. The science they did at this company was no different from politics. And what did the venture company do? They would've fought for over ten years to get that one drug on the market. They trusted A-Gen and sold it to them!

The materialistic ploy for money by these greedy businessmen had gotten rid of a more advanced drug.

‘They made science regress.’

The thing that enraged Young-Joon, who had first reported about the new drug and started this, the most was that he had taken part in this as well.

“Hey, Doctor Ryu?”

Kim Hyun-Taek waved his hand in front of Young-Joon as he stared into space.

Crash!

Then, Young-Joon slammed his fist on Hyun-Taek's desk.

“Director... You are a fucking asshole.”

Young-Joon blurted out the anger that he swallowed back several times. Tears fell from his eyes.

“Don't ever call yourself a scientist.”

Young-Joon opened the door with trembling hands and left the office. Several people from his department glanced at Young-Joon, then turned back to look at their monitors. Young-Joon walked out of the office with heavy footsteps.

Four days after that incident, Young-Joon was handed a month of suspension and departmental transfer.

Chapter 2: Scientist Ryu Young-Joon (2)

The one-month suspension flew by.

All Young-Joon could remember about how he had spent most of his time was drinking Chamisul[1]. He didn't have a great alcohol tolerance, but the huge disappointment and heartbreak from the company made him an alcoholic. He drank at least three bottles every day from day one to twenty-seven of his one-month suspension. If he were to add up all the bottles he drank, it would be a few cases at least.

The reason he stopped drinking from day twenty eight was not to get ready to go to his new department; it was because he went to the hospital after feeling an excruciating pain in his abdomen. The doctor told him he had hepatitis and prescribed him medicine. He also warned Young-Joon that he could get cirrhosis and die if he didn't stop drinking.

'Life is shit, but it's not enough to kill myself.'

More than that, the lives of his parents and brother would go wrong if he were to fall now.

From that point on, Young-Joon pulled himself together. And today was the first day going to his new department.

The Life Creation Department: this was what his new department was called.

"Hello. I'm Ryu Young-Joon from the Anticancer Drug Research Department."

Young-Joon walked into the office early in the morning and introduced himself. However, the only person who was in the office was a man who lay back in his chair, sleeping. His feet were on the desk and he was blocking the light from hitting his eyes by covering his face with his jacket.

Not long after, Young-Joon walked over to the lab. It was a tidy and clean lab. Huge centrifuges and freezers were covering the walls and on the benches

and shelves were all kinds of reagents, flasks, and pipettes. On the shared table was a kit for DNA electrophoresis and a Gel Doc.[2]

'They have everything that's needed.'

Young-Joon looked around the lab before moving further inward. A small plastic tube with a volume of 1.5 milliliters was reacting on a heat block, a device with slots for test tubes that allowed for precise control of the temperature. Looking closely, Young-Joon could see a milliliter of red liquid bubbling inside.

Beep! Beep! Beep!

The alarm for the heat block suddenly rang; it meant that the reaction time was up.

"Oh..."

Flustered, Young-Joon took out the sample from the heat block. It was almost reflexive.

[Rosaline v4.87]

That was what was written on the sample tube.

'Rosaline...'

The department Young-Joon was transferred over to was the Life Creation Department. What would they do in this department? Of course, they would create life. It seemed like fantasy, but they were actually studying that. They were putting chemicals such as fatty acids, nucleotides, and a few types of electrolytes together and attempting to artificially synthesize a living cell by giving the mixture the appropriate amount of stimulation.

This was the superficial purpose of this department; what was meant by superficial was that the Life Creation Department had a different, true purpose: it was to punish and exile people like Young-Joon, people who were cancerous to the company. Creating life was impossible, after all. Pressuring people to get results that were impossible and grilling them about it was basically the same thing as the company telling them to quit.

"An artificial cell..."

Now, Young-Joon really felt like he was in the Life Creation Department. He felt the strength leaving from his hand, which was holding the sample.

'Maybe let's take a look?'

Young-Joon took the sample to the microscope and examined it. After focusing the lens, he observed a few circular cell-like things. However, they were disappearing rapidly.

"I think it needs more salt..."

Young-Joon added ten microliters of 10X PBS to the tube. For a moment, it seemed that the cells were doing better, but then, they began dying again.

'What a failure.'

The moment he put his hand on the stage of the microscope to remove the sample...

"Ack!"

He felt a sharp sensation from beneath his fingernail. He had cut his finger on a broken glass fragment beside the stage.

"Ouch..."

Young-Joon held his bleeding finger and carefully removed the sample with his other hand. The cut stung.

"Why is there a piece of glass on a microscope?" Young-Joon complained.
"They don't take care of equipment properly..."

Young-Joon put the sample of [Rosaline v4.87] back into the tube and stared at it.

'My blood didn't go in here or anything, right..?'

He couldn't even tell as the sample was bright red to begin with.

Young-Joon stared at the cut on the tip of his finger, and he could see some kind of white foam on it. He glared at the cut, clicked his tongue, then washed his hand under running tap water.

When he returned to the office, a few more people had shown up.

“Huh? We have a newbie.”

The man who was sleeping with his jacket on his face reacted as he saw Young-Joon.

“Hello, I’m Scientist Ryu Young-Joon from the Anticancer Drug Research Department.”

As Young-Joon introduced himself, the man slowly got up and held out his hand to him.

“I’m Senior Scientist Park Dong-Hyun.”

The position of Senior Scientist meant that he was basically a manager in terms of office titles.

Young-Joon shook his hand.

“Nice to meet you.” Dong-Hyun greeted.

“I look forward to working with you,” Young-Joon replied.

“You know what kind of place this is, right?”

“A department where we study creating life.”

“No. It’s an exile. Let’s stick together as fellow outcasts. Otherwise, we won’t be able to endure it here.”

“ ... ”

“So, what did you do, Doctor Ryu?” Dong-Hyun asked.

“I put myself up against Lab Director Kim Hyun-Taek.”

“Ah, are you the famous celebrity that cursed at Lab Director Kim?”

Dong-Hyun chuckled.

“I heard about that incident, too. You probably hate the company now, so how come you didn’t quit?”

“It’s because of financial reasons.”

“Are you married?” Dong-Hyun asked.

“No,” Young-Joon replied.

“I’m forcing myself to tolerate this place because of my wife and kids, but it’s really difficult. It would be better for you to go to a different company now, Doctor Ryu. Even if you don’t get your salary for a little bit until you get a new job, it’s better in the long run.”

“Is that so?”

“There are a lot of small companies that pay as much as these guys. The merit of A-Gen is that they give you a lot of performance bonuses, but it doesn’t apply to the Life Creation Department, which cannot perform.”

Young-Joon nodded. What Dong-Hyun told him was true; their pay had indirectly decreased because there was no performance to be rewarded for, and their will to come to work decreased the more the superiors grilled them. On top of that, the other employees in the company either smirked at or took pity on them, as being part of the Life Creation Project Team came with a certain... image. Not a lot of scientists held out long under that kind of humiliation.

“Just let me know whenever you want to quit. It’s fine. I think there were around fifteen people who came in and disappeared while I held out here.” Dong-Hyun smiled bitterly. Then, as if he had just remembered something, “Oh right! Did you see the sample in the heat block?”

“Oh, I took it out and looked at it. I added some 10X PBS because it looked like the cell membrane kept bursting.”

“Oh, how smart. You’ve probably never done an experiment like that. I see that we’ve received a great scientist,” Dong-Hyun exclaimed.

“Haha...” Young-Joon laughed awkwardly.

“It’s surprising that they sent a gifted person like you into exile just because you defied them. These A-Gen assholes...”

“But the cells still died even with PBS.”

“Did they?”

“Yes.”

Dong-Hyun shook his head.

“Well, what can you do? It’s not like it’s the first time we failed. It’s okay, even the superiors don’t expect this project to succeed here in the first place.”

“Is that so?”

“They come down and give us an earful every week about not having results, but just sing a few songs in your head and ignore it.”

“...”

“Well... The year-end seminar coming up soon is a little important, but...”

Dong-Hyun clicked his tongue as he thought about the company-wide year-end seminar.

“*Sigh*, how am I going to tolerate it this time?”

“...”

Dong-Hyun glanced at Young-Joon and tilted his head in confusion.

“Doctor Ryu? Are you alright?”

“Pardon?”

‘Now that I think of it, I was a little dizzy before.’ magic

“Doctor Ryu? You’re completely pale. It looks like you’re breaking out in cold sw...”

The last part of Dong-Hyun’s sentence was silenced by the sound of wind. Everything in front of Young-Joon was going dark as he fell to the ground on his side.

Thud!

Young-Joon lost consciousness.

“Woah, Doctor Ryu!”

Dong-Hyun shook his shoulder in surprise, but Young-Joon did not respond.

“Hae-Rim! Call 119!”[3]

The young woman that was sitting next to Dong-Hyun called 119 in shock.

~

Soon, paramedics arrived. Young-Joon was transported to the emergency room right away. However, his condition was extremely strange. His brain activity appeared to be completely suspended, as he was unable to answer any questions.

Even at Stage 4 on the coma scale, people were able to respond verbally if asked something repeatedly. Being as unresponsive as Young-Joon was usually correlated with Stage 5—total loss of consciousness—or even worse. However, all his reflexes were intact. This was odd. Even in Stage 2, a mild lethargy, reactions to stimuli were bound to be slow, but Young-Joon’s pupils constricted very rapidly when shone with light, and he was extremely sensitive to very mild pain and loud sounds. In fact, in terms of reflexes alone, he was doing better than a normal person.

In cases like this, unconsciousness was usually determined to be just deception. Sometimes, criminals summoned to the police station or court faked being sick and were taken to the emergency room.

The doctor at the emergency room swung Young-Joon’s arm and made him slap himself on the face. No matter how limp one made their hand, they were bound to control the power in their hands without intending if they were conscious. However, Young-Joon ended up hitting his cheek really hard. Then, he twisted his body and wrapped his hand around his face as if he was reacting to the pain he inflicted on himself or was fighting back against someone that was hitting him.

Young-Joon acted the same even with multiple tests. He slapped himself hard enough to make his cheek quite red, then reacted to the pain. It really did seem like he was unconscious.

As the confused doctors were about to do some more precise tests, Young-Joon opened his eyes.

“Hello? Are you awake?”

The young doctor asked as he shook Young-Joon’s shoulder.

“... Yes... I think I’m okay.” Young-Joon put his hands on his throbbing temples and raised his head.

“Do you have any chronic illnesses?”

“I was diagnosed with hepatitis four days ago.”

“Hepatitis.” The doctor nodded.

“Hepatitis can sometimes cause anemia. You should stay and get tested more precisely.”

Young-Joon did not reply. The doctor tapped him on the shoulder.

“Sir?”

“...”

Ryu Young-Jun stared into space with a black face.

“What is this...?”

“Pardon?”

“Something is floating in front of my eyes.”

It was a turquoise, translucent, rectangular window. On it were some sentences.

[Creating life is God’s domain.]

[You have created an artificial cell and have become the first ever Player of Life in human history.]

1. A brand of soju. ?

2. A DNA electrophoresis is a method used to separate DNA fragments based on their size and charge. It is usually done in a type of gel, like agarose. A Gel

Doc is a lab equipment that records and analyzes the results of a gel electrophoresis. ?

3. 119 is the emergency number in Korea. It's equivalent to 911. ?

Chapter 3: Scientist Ryu Young-Joon (3)

“What can you see?” The doctor asked.

“Uh... Some weird letters,” Young-Joon answered.

“What does it say?”

“... I don't know.” Young-Joon found this too absurd to explain, and he also felt a little embarrassed for some reason.

“Are you hearing things as well?”

“No.”

Ring! A notification popped up as soon as Young-Joon answered.

[The artificial cell has recovered your body.]

Then, a Siri-like voice read him the message.

“...I am hearing things.”

“What are you hearing?”

“It keeps beeping... like notifications or something.”

“Ringing...” The doctor wrote down a few more things on his chart. In the meantime, Young-Joon tapped the message windows with his hand with caution. With the sound of paper flipping, the windows disappeared immediately.

The doctor asked, “I think it would be best for you to go home today and then be evaluated by neuropsychiatry tomorrow. Would you like me to make you an appointment?”

“Yes, that would be great.”

“Do you feel discomfort anywhere else?”

Young-Joon opened his hands and slowly examined his body; it didn't seem too bad.

“I'm okay.”

“Alright. I didn't see any major issues when I was examining you either, so let's have you booked in for tomorrow afternoon.”

“Thank you,” Young-Joon replied and got up.

“The admission office is that way.”

Young-Joon walked in the direction the doctor pointed toward and paid his bills. It was already the evening when he exited the hospital. As Young-Joon pulled out his cellphone to see if he had missed any calls, a nurse ran out and called him.

“Sir!”

Young-Joon did not know this, but she was a new nurse. She had promised herself that she would be as kind as she could be to her patients among her scary and picky superiors. All she would have to do was do the little things that no one really noticed, such as keeping her patient's contact lenses safe and returning them.

“Yes?” As Young-Joon turned when he heard her, the nurse approached him with his contact lens container.

“These are your contact lenses.”

“Oh...” Young-Joon took the case.

“Get home safely.”

The nurse smiled and walked back into the hospital. However, Young-Joon just stood there, staring into space.

‘Contact lenses? So, I'm not wearing them right now? And I can still see clearly?’

Young-Joon tried to calm the thoughts that were racing through his head. Now that he thought of it, he *did* feel better. He just assumed it was temporary from getting some fresh air after being in the hospital for so long. But he wasn't mistaken. He was full of energy, and he could definitely feel that he was healthier. magic

His vision wasn't the only thing that was better. His chronic lower back pain he had acquired from getting his degree in graduate school was completely gone. His bad and forward head posture he gained from having a job where he had to stare at a screen for eight hours a day was fixed. Young-Joon could feel it; his neck didn't hurt anymore and all the joints in his body were flexible. The pain in his upper abdomen he had even before being diagnosed with hepatitis was gone. His gut felt fine, and even the lower belly fat he had gotten from putting on a little weight in graduate school was gone, too.

Young-Joon's body felt light. He felt like he had gone back to his body in his twenties: flexible, toned, and full of energy.

"Haa." Young-Joon took a deep breath. He could feel the oxygen fill his healthy lungs. His strong heart was beating fiercely.

Young-Joon took out his phone again and went through it. He saw two missed phone calls and a message.

[Doctor Ryu, it's okay if you come in late, so rest well. Call me when you are feeling better tomorrow. I hope it's nothing and you get better soon.]

'It should be fine, right?'

Young-Joon thought he could just get treated at the hospital again tomorrow morning if there was anything wrong.

* * *

A little while later, Young-Joon returned to his house, where he lived alone.

'I should take my medicine first.'

Young-Joon took out the medicine he was prescribed from the hospital and swallowed his evening's worth.

Bleep!

He heard a sudden sound. Then, something popped up in front of his eyes.

[The artificial cell is beginning to break down the orally administered drug.]

[Has broken down 30 mg of Prednisolone.]

[Has broken down 400 mg of Pentoxifylline.]

'What is this?'

Young-Joon stumbled in confusion and flopped onto his bed. The message window followed him consistently as if it was at a certain fixed distance from his eye. He swatted at it, but nothing changed. Looking closely, Young-Joon could see two buttons on the side of the window.

[Status Window]

[Message Window]

“Status window?”

Young-Joon tapped the [Status Window] button with his finger. With the sound of paper flipping, a brown, translucent status window appeared in front of his eyes. It was like something that would happen in a fantasy novel.

Even though the status window was in front of Young-Joon, it was not *his* status that it was displaying.

[Artificial Cell Lv. 1]

-Metastatic Status: Heart (2%), Liver (46%), Brain (7%), Kidney (13%), Spinal Cord (4%)

-Synchronization: 3%

-Cell Fitness: 1.3

-Gene Expression Control: Suppression of CYP2E1 Expression (44%)

“What the hell... What is this...”

Young-Joon could see the status window clearly no matter how many times he blinked. Seeing that it didn't go away even if he swatted at it, it wasn't an actual object floating in the air.

'Are those letters engraved in my retina or something?'

As Young-Joon stared at the letters blankly, he began to wonder what would happen if he pressed the [Message Window] button. He pressed the button that was below the status window.

[Loading unread messages.]

...

[Congratulations, Creator. The artificial cell has become synchronized to your body.]

[Improve the metastasis and synchronization to increase the level of the artificial cell.]

[Your recovery speed and total amount of fitness will increase as the level of the artificial cell increases.]

[You, the owner of the artificial cell, can consume cell fitness to gain insight into processes of life or control the expression of genes.]

"What is this bullshit..."

Young-Joon rubbed his eyes.

"I became what?"

[The current message and status window is created by the artificial cell manipulating your cerebral cortex; it analyzes the memories in your hippocampus and presents information to you with the UI design most familiar to you.]

[I will remind you of the moment when you created life.]

A new message popped up. At the same time, light flashed in front of Young-Joon's eyes and he saw a hallucination.

There were artificial cells on the small container that was on the stage of the microscope. To be exact, it wasn't a living organism yet. It was still not living even after Young-Joon added salt to it with 10X PBS. However, a miracle happened when a few microlitres of blood fell into it as he cut his finger.

As Young-Joon's blood cells died from entering a new environment, they released a large amount of ATP. That ATP entered the artificial cells and created a large amount of energy, which stabilized the cell membrane.

Then, the artificial cell rapidly rose to the surface. That was the unique characteristic of this cell: the ability to move into the air from the culture medium.

'The ability to float through the air.'

The artificial cell entered his body through the cut on the tip of his finger. It traveled through his capillaries and veins and reached his heart.

"Ack!" Young-Joon screamed and shook his head.

[The artificial cell is now within you.]

[Creator, please name the artificial cell.]

"Fxxk, w-what..."

[Would you like to name it, Fxxk, w-what...?]

"No! This makes no sense!"

[Would you like to name it, No! This makes no sense!?!]

"..." Young-Joon thought about it for a little while, then said, "Rosaline."

It was the name that was written on the sample tube in the lab.

[Creator, you have given the artificial cell the name Rosaline. You can see everything about Rosaline by calling this name, and Rosaline forever belongs to you.]

[Also, life creation is an event that can only happen once. Remember that life will not appear even if you try to recreate Rosaline the same way.]

With this last explanation, all the message windows disappeared at once, and so did the strange-looking status window that read [Artificial Cell Lv. 1].

Young-Joon rubbed his throbbing temples and calmly called, "Rosaline...?"

Flutter!

[Rosaline Lv. 1]

-Metastatic Status: Heart (2%), Liver (46%), Brain (7%), Kidney (13%), Spinal Cord (4%)

-Synchronization: 3%

-Cell Fitness: 1.3

-Gene Expression Control: Suppression of CYP2E1 Expression (44%)

The same status window as before appeared. However, the name had changed from Artificial Cell to Rosaline.

"Okay, be calm."

Every strange phenomenon had a scientific explanation. The way Moses stained the Nile River with blood had a scientific explanation: a red tide. The way that this artificial cell was created was nonsensical, to be honest. It only seemed intuitively plausible because of the hallucinations and knowledge forced into his brain, but it was actually outside of the capabilities of current science.

'Let's think about that part later.'

If Young-Joon believed that a magical cell called Rosaline was actually created and if everything that he saw was true...

"Then is the change in my body because of this, too?"

Young-Joon focused on the part that was bothering him as he read the status window.

[Liver (46%)]

It was a particularly prominent value in the Metastatic Status category. The human body was made up of thirty-seven trillion cells, and since two hundred billion of them formed the liver, it meant that about a hundred billion Rosaline cells were covering his liver.

What was the liver? It was the cause of fatigue... No, it was the biochemical factory in the human body that detoxified all the toxins that occurred in the human body. This was the reason people got hepatitis, liver cirrhosis, or a fatty liver if they drank a lot, as the liver was the organ that broke down alcohol. The more alcohol one drank, the more they used the liver, which led to problems.

The condition of Young-Joon's liver was terrible. Having hepatitis meant that his liver cells were being destroyed and were dying from the infection in his liver. If it progressed further, it would turn into liver fibrosis and eventually liver failure.

Young-Joon opened the message window again. As he scrolled through the unread messages, he saw something surprising.

[Starting normalization of the body.]

[Detected a widespread infection reaction in the liver. Starting suppression of the infection and recovery of the organ. Prioritizing metastasis to this region. Discovered large amounts of lipids. Attempting lipase activation and removal of lipids.]

[Detected overexpression of CYP2E1 in large amounts of the liver cells. Suppressing at 57%.]

[Detected spinal disc herniation between L4 and L5. Controlling expression of steroid hormones. 27% overexpression.][1]

[Attempting reinsertion of the herniated disc. Starting recovery of nerve damage and contraction of muscle fibers.]

[Detected scalp fascia contraction due to nerve damage. Starting muscle relaxation.]

[Detected possibility of a posterior herniation of the spinal disc above C2. Degree of deviation: 71. Attempting to strengthen cartilage and recover nerves.][2]

[Initiating myocardial cell regeneration.]

...

Young-Joon's jaw dropped to the ground in shock.

'What is happening to my body right now?'

1. L1 to L5 are the vertebrae of the lumbar spine that is located in the lower back. ?

2. C1 to C7 are the vertebrae of the cervical spine located in the neck region. ?

Chapter 4: Scientist Ryu Young-Joon (4)

There were about eighty messages piled up. At the end of all those long messages, he could find these messages.

[Body normalization complete: 3h 44min.]

[All organs have been normalized to their optimal condition.]

[The expression level of CYP2E1 will be controlled continuously for 3 days.]

[Rosaline has broken down and destroyed the remaining 1.7 mg of Prednisolone and 22 mg of Pentoxifylline.]

[The liver is in optimal condition and does not require treatment.]

This was everything. Young-Joon read all the messages, then closed all the windows and just left the status window open. He was confused, but he decided to focus on one category of the status window first.

[Gene Expression Control: Suppression of CYP2E1 Expression (44%)]

One cell in the human body contained around twenty thousand genes, and CYP2E1 was one of them. It was a gene that was involved in the detoxification of alcohol. If this gene worked well, alcohol could be broken down rapidly. Young-Joon's liver had overworked this gene to detoxify the large amount of alcohol accumulated in his body due to drinking three bottles of soju every day during his one-month suspension.

Much like one's arm muscles would grow if they lifted weights every day, a gene would also grow into a monster if it was overworked. The CYP2E1 gene in Young-Joon's liver had become too powerful, and something being too powerful meant that it was harmful to the body. For example, someone who was using this gene too much could suffer a hemorrhage in their liver after taking a few tablets of Tylenol.

In fact, Antonio Benedi, from the Bush administration, who drank a glass of wine every night, had almost died because of that. He had fallen unconscious for a few days after taking the appropriate amount of Tylenol for his cold. That was why Rosaline had suppressed this gene; Young-Joon could have died after taking Tylenol because of a headache. Chills ran through his body now that he thought of it that way.

'Let's look at the messages again. The next message after everything about the levels and stuff.'

[You, the owner of Rosaline, can consume cell fitness to gain insight into processes of life or control the expression of genes.]

'I can consume cell fitness to gain insight into processes of life or control gene expression?'

Young-Joon glared at Rosaline's status window.

[Cell Fitness: 1.3]

Looking closely, Young-Joon could see a small gauge beside the number. The bar in the gauge kept getting longer, then returned to zero as soon as it reached the end.

[Cell Fitness: 1.4]

The fitness increased. The cell fitness value indicated how healthy the cell was: how strong the cell membrane was, whether the digestive organelles inside the cell were working properly, and if it was properly adhered to the plate if it was an adherent cell.

'You're saying I can use this fitness level?'

Young-Joon tried to find out how he could use it, but it wasn't easy.

[Cell Fitness: 1.5 (MAX)]

Soon after, the fitness of the cell reached 1.5. The bar did not increase anymore; it seemed like the maximum amount of the cell fitness was 1.5.

“Sigh.”

Young-Joon thought his head was going to explode from the amount of stress he had been under.

‘Am I mentally ill?’

Young-Joon was a scientist inside and out. The most reasonable explanation for this situation was that the extreme stress he was under had created some sort of disorder in his brain, causing him to go crazy.

It was definitely a possibility. With the betrayal of his company and colleagues, a month of suspension and departmental transfer, the dreadful burden of his debt, and extreme depression, he must have felt like he deserved something after all this; his reward system was probably in play right now. Wanting compensation for his recent troubles was probably what was creating these hallucinations and fantasies.

[I am going to get a close examination tomorrow morning. I’m sorry. I will return as soon as possible.]

Young-Joon sent a text message to Park Dong-Hyun.

* * *

On Tuesday morning, Young-Joon visited the psychiatric ward. Although it had only been about thirty minutes after they opened, there was already a patient waiting. He was in very thin clothing for the cold winter weather. He was pale and drawn, but he was a large man; he was quite chubby and looked to be about one hundred ninety centimeters.

Young-Joon stood behind him and waited for a little while before checking in.

‘I can’t even see the nurse’s face because of this guy.’

As trivial thoughts were going through his head...

[Schizophrenia]

A message window suddenly appeared in front of the man's back.

'Schizophrenia?'

It was commonly known as the mind-splitting illness. It was one of the worst and most horrendous mental illnesses, even being nicknamed the "Cancer of the Mind". It caused endless auditory and visual hallucinations, and people who suffered from it were known to do a variety of things when they were unconscious.

I keep seeing hallucinations of these messages... Do I have schizophrenia?'

Young-Joon smiled bitterly.

After waiting a little while, it was Young-Joon's turn to check in.

"Hello, have you been here before?"

The nurse at the counter greeted him. Young-Joon could tell that she had a cold because of her nasal voice, seemingly caused by a stuffy nose.

'The nurse has a cold and this patient has schizophrenia... It's truly a general hospital.'

"It's my first time here." Young-Joon answered.

"Please fill this out."

Sniffing, the nurse handed Young-Joon a small piece of paper. It had spaces for him to write his name, phone number, address, and a short medical history. As he was standing at the counter, filling it out, the nurse took out some cold medicine and swallowed it with a glass of water.

Bleep!

All of a sudden, a message popped up in front of his eyes.

[You can gain insight into the molecular biological phenomena using synchronization mode.]

[Synchronization Mode: Would you like to gain insight into the cold medicine?
Fitness consumption rate: 0.1/second]

Young-Joon squinted his eyes. The button on the message was blinking as if it was prompting him to press it.

‘Alright, I’ll keep note of this and tell the doctor that I’m having hallucinations like this when I see him.’

However, at the same time, Young-Joon was intrigued. Then, he poked the synchronization mode with the tip of his finger.

[Activate Synchronization Mode: Gain insight into the cold medicine.

A message popped up.

Bzzz!

“Ugh.” Young-Joon groaned. He felt like electricity was running through his head.

[Fitness is quickly consumed in Synchronization Mode.]

[You can observe things happening in the microworld in units of ?ngstr?m (?), dalton (Da), and picoseconds (ps).][1]

[You can call upon any molecular biological phenomena and understand it intuitively in Synchronization Mode.]

Young-Joon could see an image of the cold medicine traveling into the nurse’s stomach. This medicine was an all-in-one cold medicine; it contained a number of different drugs to control the various reactions that would occur while removing the cold virus from her body.

Ibuprofen, a type of fever and pain medicine, began circulating in her body; her fever would come down soon. Her body temperature was at 37.4 degrees Celsius, a mild fever. The white blood cells in her body were tracking the cold virus and removing it.

However, her body temperature would fall one degree when the fever medicine began to work, and soon, the efficiency of her white blood cells would decrease by twenty-eight percent.

It also contained carbocysteine, an expectorant and an anti-inflammatory; it would remove phlegm and alleviate the pain from the cold by suppressing the reaction to the infection.

Next, it contained chlorpheniramine maleate, an antihistamine; it suppressed nasal blocking and mucus.

Lastly, it contained dihydrocodeine phosphate as an agent for airway dilation; it was good for stopping coughs.

However, Young-Joon could see more than that right now: the codeine was turning into morphine in the nurse's body.

'Morphine!'

It was a type of addictive drug.

Bleep!

[You have consumed half of your fitness.]

A message appeared. Young-Joon flinched, startled, then raised his head.

[Synchronization Mode finished.]

Then, the analysis of the cold medicine came to a stop automatically.

“ ... ”

“Have you finished?” The nurse asked.

“Oh, give me a second.”

Young-Joon wrote the remaining information with a trembling hand and sat on the couch provided for patients to wait. He was lost in thought for a little bit, then chuckled.

'Codeine turning into morphine... That makes no sense. Of course, I am crazy.'

Then, Young-Joon pulled out his phone and googled codeine.

[Dihydrocodeine medicine, Why?]

There was a news article about it.

“...?” magic

Thinking that there was no way, Young-Joon clicked on the article.

[The European Medicines Agency has banned the use of codeine-containing medicine in children. Following the recent discovery that codeine turns into morphine inside the body, there is no way of telling what kind of effect it will have on children.]

“It... It’s true?!”

Young-Joon was bewildered. It was something that he did not know, but he had figured it out after taking one look at the cold medicine.

‘Wait, I still can’t believe it.’

Young-Joon looked around. He wanted to try it one more time. If he could activate this [Synchronization Mode] anywhere he wanted...

[Schizophrenia]

Young-Joon stopped when he reached the schizophrenia patient.

[Synchronization Mode: Would you like to gain insight into schizophrenia?
Fitness consumption rate: 0.2/second]

Young-Joon pressed the synchronization button.

Click.

The auditory hallucinations that the patient could hear began ringing in his head as well.

-Elvis ended up hitting Sammy at last. It is because you acted like an asshole.

-Hehehehehahahaha.

-Five. Twenty-three. Seven. Six. Forty. I’m behind you. No, not there, but beside. Yes, there... There’s a murderer there!

-I... miss you so much. I always think of you when I pass the cherry blossom tree and the lake we walked beside together.

-Cats. Books. The sole of a shoe. It’s stained. It’s dirty. Cat spit. Books. Ripped books. The sole of a shoe. It’s dirty.

-How did you find me? You're looking inside my head right now, right? How did you get in?

Thud!

[Danger!]

[Synchronization Mode terminated.]

Young-Joon's heart was pounding hard.

"Wheeze... Wheeze..."

It was shocking. Young-Joon had learned that this was the state that schizophrenia created. The sentences did not make sense at all. It was a completely random word vomit, but some of the thoughts made sense by chance.

'Hearing auditory hallucinations like that would make a normal person go mad in a few days.'

Young-Joon calmed his breathing and read the message in front of him.

[You are a novice in using the Synchronization Mode. Rosaline is guiding you with your safety as the priority.]

[You heard the auditory hallucinations of a schizophrenic patient. Your heart rate increased significantly from experiencing too much of a new kind of stress.]

[Rosaline has stopped Synchronization Mode in concern for your health.]

[Press the button if you wish to resume.]

Young-Joon gulped and pressed the button. He could hear auditory hallucinations once again; in addition, he could now see other things as well, such as the patient's brain. They were things that he could not pay attention to before because of the auditory hallucinations.

Young-Joon took a closer look. He could see that dopamine, a neurochemical used in signaling between neurons in the brain, was not functioning properly.

The patient was currently unconscious. He was epileptic and his hand was trembling. Too much neurotransmitter was being released from one part of his brain, including the temporal lobe, and it had paralyzed the brain. It was similar to when a city experienced a power outage due to a sudden surge of electricity.

Young-Joon was a scientist, not a doctor. He did not have the necessary knowledge to diagnose the man's condition. However, all doctors did was produce diagnoses based on things like seizures and EEG data and treat what they thought was the problem. What Rosaline showed him was something much more clear and specific than that.[2]

'A straight line is the closest distance between two dots.'

It was something that could be understood intuitively. Just like one did not need a mathematician to prove this axiom, Young-Joon also did not need a doctor to tell him what was going on.

'This patient is in danger.'

1. The Angstrom (Å) is a unit of measurement equal to one ten-billionth of a meter, a dalton (Da) is a unit of mass equal to 1/12 of the mass of one carbon atom, and a picosecond (ps) is equal to a trillionth of a second. So... extremely small. ?

2. EEG is an acronym for electroencephalogram, a test that measures electrical activity in the brain. It is used to measure the communication between brain cells. ?

Chapter 5: Scientist Ryu Young-Joon (5)

Young-Joon walked up to the counter and spoke quietly to the nurse.

"Excuse me, sorry. What does that patient over there have?"

"Pardon?" The nurse asked with a look of confusion.

"I cannot disclose any patient information." The nurse told Young-Joon.

"I'm a doctor, too. It's just because that patient does not look good and I'm worried for him. It could be an emergency."

Young-Joon was lying when he said that he was a doctor, but he felt like he needed to say something like this in order for this to work.

“I’m sorry,” The nurse replied.

“It’s schizophrenia, right?” Young-Joon asked again.

“... I can’t tell you.” The nurse adhered to her ethics. However, she could not hide her brief look of surprise; she was still human, after all.

In fact, that man was a patient who had been treated here multiple times, and the nurse knew his face. The patient did have schizophrenia. Everything that Rosaline had determined was true, meaning that the patient was unconscious, hearing auditory hallucinations continuously, and was in a state of extreme anxiety, nervousness, and panic.

“Hurry up and call a doctor. That man looks like he’s in a dangerous condition.” Young-Joon told the nurse.

However, the nurse dragged her feet to call someone as she stared at Young-Joon in doubt.

“... Wait here for a moment.”

It was the moment she stopped sitting on her hands and stood up to go get someone.

“Argh!” Suddenly, the schizophrenic patient suddenly got up and began screaming.

“Kyah!” As the nurse screamed in surprise...

Thud thud thud!

The patient began running with his feet stomping on the floor. He was headed towards the window; he was trying to jump out.

“No!”

The moment the nurse shouted, someone grabbed the patient from behind just as he was about to jump. The man was huge, about one hundred and ninety centimeters and around one hundred kilograms, but Young-Joon had

an average height and weight. It seemed like he wouldn't be able to grab and control the patient by himself, but Young-Joon had another power.

[Accepting specific stimulation to myofibroblasts of the brachioradialis, biceps brachii, triceps brachii, and extensor digitorum.]

[Emergency situation. Fitness consumption changed to autonomic consumption.]

[Overexpression of adrenaline.]

[Activation of actin.]

With those messages, Young-Joon felt a burst of strength in his arms.

Thud! Young-Joon tackled the patient onto the ground and held him down. The man struggled, but he could not overpower Young-Joon.

“What is it!”

At last, a doctor ran out, surprised, with a few male nurses. The chaotic situation quickly calmed down.

The doctor gave the patient a sedative and tied down the patient.

“Phew.”

The nurse at the counter sighed in relief as everything went back to normal. There could have been a dangerous situation if the man who said that he was a doctor did not act fast. The nurse looked around the waiting room for him, but he was nowhere to be seen.

“Where did he go?”

She looked back at the chart he handed her.

[Ryu Won-Joon]

[010-1111-1234]

[Hospital Room No. 101, 50-27 Jungyun-ro, Seodaemun-gu, Seoul]

“ ... ”

The nurse did not notice it before when she just quickly scanned it, but reading carefully now, she could see that all the information that man wrote down was false. There was no way a phone number like 1111-1234 existed, and Jungyun-ro only existed up to 37-1. Considering this, the name he wrote down was probably false, too.

“Who is that guy?”

* * *

Young-Joon left the hospital. He had gone through a truly shocking incident.

‘Rosaline is real.’

He had a brilliant source of knowledge that could understand molecular biology at the atomic level in his head. Young-Joon even saw the structure of dopamine in the schizophrenic patient’s head. Maybe he could develop a cure for schizophrenia. Also, how amazing was it that he figured out that codeine, a common ingredient in cold medicine, turned into morphine in the body? This ability that allowed him to understand those processes in the blink of an eye without any kind of experiments was an OP ability for a scientist.

“ ... ”

‘How can I use this?’ Endless possibilities filled his head.

Bleep!

Then, another message popped up.

[Rosaline’s fitness is currently low. Rosaline has found out the following things while recovering her fitness.]

[There is currently an imbalance of microbes in your gut. Rosaline requires the following in order to recover this: probiotics. Reward: 0.8 Fitness.]

‘Probiotics?’

Normally, probiotics referred to a mixture of live bacteria or yeast for your body; it was basically just lactobacillus.

‘It gives me fitness as a reward, huh?’ He was intrigued.

Young-Joon walked to the pharmacy on the first floor of the building.

“Hello.” The pharmacist greeted him as he entered. She was a young pharmacist who was quite pale and pretty. Young-Joon had come to this pharmacy, which was only about ten minutes from his house, often ever since he was a graduate student. It used to be run by an elderly woman, but Young-Joon was a little surprised as he saw someone unfamiliar.

“Can I have some probiotics, please?” Young-Joon asked when he approached the counter.

“Yes, just a moment.”

The woman rummaged through the shelves about the counter on her tippy toes. The name tag on her chest caught Young-Joon’s eye.

[Pharmacist Song Ji-Hyun]

“Does someone else run this pharmacy now?” Young-Joon asked.

“Oh, it was actually run by my aunt, but she went on vacation. Since I also took a leave of absence from my company as well, I told her I’d run it for a bit.” Song Ji-Hyun answered with a smile, then put something on the counter.

“Here. Probiotics.” Song Ji-Hyun pushed a box called Active Lactobacillin toward Young-Joon.

“If you’re a pharmacist and you worked in a company, I’m assuming it was a pharmaceutical company?” Young-Joon asked as he ripped the box open.

“Yes. It wasn’t a big company, just a venture company.”

“I see. Then, is this product from your company?”

“Haha, no, it’s not. Our company also works with probiotics, but we don’t have a product yet. The reason I gave you that one is because it’s the best one out there. I take it as well and it’s quite effective.”

‘It should be reliable if pharmacists take it too, right?’

Young-Joon checked the back for the manufacturer.

“Roche?”

“Yes. It’s from a company as big as A–Gen. They have good processing technologies and it also has a variety of bacteria in it. It’s also the benchmark that we aim to achieve.”

Young-Joon read the component label on the back.

“It has a lot of Bifidobacterium lactis in it. It seems like a type of bacteria... What does it do?”

“Um...” Song Ji-Hyun blushed a little. “It’s... good for constipation.”

“I see. Thank you... Huh?”

Young-Joon tilted his head in confusion as he ripped the rest of the box.

“What is it?”

“Oh, nothing.” Young-Joon gestured with his hand. However, there were incredible things in front of his eyes.

[*Lactobacillus acidophilus* AT0021, *Lactobacillus casei* AT0014, *Lactobacillus bulgaricus* AT0033, *Lactobacillus rhamnosus* AT0041, *Bifidobacterium bifidum* AT0051, *Bifidobacterium breve* AT0117, *Bifidobacterium lactis* AT0121, *Lactococcus lactis* AT0449, *Enterococcus faecalis* AT0511]

“ ... ”

The components list appeared in front of him automatically in their scientific names. It was definitely excellent, but it wasn’t anything incredible as it was the same thing as reading the label on the back.

‘*Wait.*’

He hadn’t used Synchronization Mode yet, unlike when he gained insight into the cold medicine.

‘*Then maybe...*’

Young-Joon gulped and stared at the label.

‘*Won’t I be able to know more about each component in this probiotic if I use Synchronization Mode?*’

Bleep!

[Synchronization Mode: Would you like to gain insight into these probiotics?
Fitness consumption rate: 0.02/1 second]

[Activation of Synchronization Mode!]

The number of bacteria, their biological activation, and mechanism in the gut appeared in front of his eyes.

“Ugh!” Young-Joon stumbled, crushing the box of probiotics in his hand. Song Ji-Hyun stood up in concern.

“A—Are you okay?”

She ran out from behind the counter; she was worried that he would faint or something. However, Young-Joon regained his balance in just a few seconds.

[No more fitness remaining.]

A message in red blinked in front of his eyes.

“*Wheeze... Wheeze...*”

“Are you alright?” Song Ji-Hyun asked in concern.

“I’m fine.”

Young-Joon swallowed the probiotics.

“You said that your company also studies probiotics, right?”

“Pardon? Oh, yes.”

“Is it going well?”

“We were studying something good we found before I left. It will go well, I’m sure.”

Young-Joon was immersed in thought after reading the data chart that was analyzed in Synchronization Mode. From about two years ago, there were many attempts from countless pharmaceutical companies to discover a new strain of Bifidobacterium. Most of them were still trying.”

“Is it about Bifidobacterium?”

“Pardon? Ahaha...”

Song Ji-Hyun scratched her head like she was a bit embarrassed.

“Well, it is the most popular fiend right now. It’s a well-known secret in the industry. Since it’s been a while since my leave of absence, I’m not sure how advanced the study...”

“It won’t.”

“Pardon?”

Finding a new strain of Bifidobacterium was meaningless as Rosaline was telling him that the strains that have already been developed have the most optimal conditions.

“Bifidobacterium is done.” magic

“But...”

People had to study a completely new strain of bacteria. All the pharmaceutical companies were all targeting a completely wrong type of bacteria.

‘*Clorotonis limuvitus.*’ Young-Joon thought about the secret strain of bacteria the Synchronization Mode showed him.

“What should we study if not Bifidobacterium?” Song Ji-Hyun asked

“Beats me. I have no idea.”

Young-Joon told her out of pity that they wouldn’t find any gold in the empty mine they were digging at, but he wasn’t going to tell them where the jackpot was.

He grinned and walked out of the pharmacy. His heart raced in excitement.

Young-Joon organized all the thoughts that were racing through his head on the way home. Biology was a field of study that was relatively underdeveloped. Comparing it to navigating the world, humanity was just at

the beginning of the Age of Discovery. Countless researchers were wandering through the sea of knowledge and drawing messy maps.

However, Rosaline's knowledge was like a high-resolution satellite; it was powerful.

"Kim Hyun-Taek... The new cancer drug..." Young-Joon mumbled. They were the ones who drove his career as a scientist to the ground.

However, lotuses bloomed from muddy ponds; if he had hit rock bottom, the only thing left for him to do was to jump up and soar into the sky.

Young-Joon downloaded the form for submitting his two weeks notice. He had already lost all loyalty to this place; he had nothing to give to an exploitative company like this that steals from the vulnerable.

The only thing that bothered Young-Joon was that he had left with Rosaline, the sample that the scientists from the Life Creation Department had studied for over ten years. To be honest, a normal scientist would not put his own blood into an artificial cell if they were reasonable and scientific. Rosaline probably wouldn't have been created in that lab for decades if he didn't accidentally touch the shard of glass. As such, Young-Joon didn't really have to feel guilty for the creation of Rosaline, which was purely coincidental. The reason he was bothered by it was probably because of his strict morality.

'Park So-Yeon also told me to let go of some, too... Should I really do that?'

Was Young-Joon obligated to return to A-Gen with a powerful force like Rosaline and fill the pockets of villains such as Kim Hyun-Taek and Management just because he felt guilty toward the Life Creation Department?

Young-Joon began filling out his two weeks notice.

'Where am I going to go if I quit A-Gen?'

The most prestigious and monopolistic pharmaceutical company in the country was A-Gen, so all the other companies were trivial. There was nothing Young-Joon could gain from going to places like that because they lacked the infrastructure for that kind of research. Rosaline did tell him the answers, but it was up to Young-Joon to create that in the real world.

Small companies did not have advanced equipment, such as a tool for flow cytometry, lattice light-sheet microscopes, or HiSeq sequencers. There would be a lot of obstacles to overcome when trying to obtain genetically modified organisms or human-derived materials required for experiments. It would be near impossible to be approved for a clinical trial.

“But there are a few companies that can compete with A-Gen in other countries.”

Huge pharma-giants such as Roche, Pfizer, Conson & Colson were big enough to be able to fight against A-Gen.

Chapter 6: Induced Pluripotent Stem Cells (1)

“Roche, Pfizer, Conson & Colson...”

Young-Joon, who was writing his two weeks' notice, stopped and took his hands off the keyboard.

‘Wait. Are they actually better than A-Gen?’

He started to remember all the bad stories he heard about them.

According to The Independence’s reveal on November 14th, 2011, Pfizer and several other transnational pharmaceutical companies began a large-scale clinical trial in India after restrictions regarding clinical trials were eased in 2005.

Young-Joon didn’t know just how recklessly they did it, but 1730 people died in three years. Of course, the subjects in the clinical trial were poor people, but there was something worse than that: there were minors in the study as well. There were kids who didn’t even know how to read yet.

The compensation that people received for each deceased individual was 5.4 million won. Even though Independence exposed them, the pharmaceutical companies were not punished at all; they actually sued Independence instead.

“ ... ”

What about Roche? Five thousand AIDS patients in South Korea have been protesting against Roche over the past few years. It was because they did not sell Fuzeon, a cure for AIDS, in Korea because the determined price was too low. Even though the average income in the United States was twice the

average income in Korea, Roche demanded the cure be sold at the same price.

Also, it wasn't like Roche would suffer a loss if they lowered the price, as the manufacturing price was a hundredth of what they sold it for. Roche explained that the surcharge was because they needed funding for research, but Young-Joon didn't really buy it. It wasn't that convincing considering that they brought in billions in profits every year just with Fuzeon.

The profits of transnational pharmaceutical companies were incomparably higher compared to any other industry: finance, manufacturing, and even IT. There were only ten pharmaceutical companies included in the Fortune 500, but their profits surpassed the rest of the other companies' profits combined.

In a way, this was natural. They held the lives of people in their hands and had a monopoly on their drugs; no one could say anything, even when they charged a hundred times more than the manufacturing price.

Because of that, a fair number of AIDS patients in Korea died, lost their vision, or became paralyzed. At least Korea was able to protest because they were a developed country. Some lucky patients were able to receive a small amount of Fuzeon from international relief organizations as well.

Africa, on the other hand, was a living hell. It was impossible for patients in Africa to buy treatment for AIDS, which was as expensive as their weekly living expenses. Because of that, they were using a replica drug that was secretly manufactured in India. Of course, a lot of African people died as the quality of the replica drug hadn't been verified.

In the midst of all this, many pharmaceutical companies, led by Roche, fiercely protested against the African and Indian governments about the issue, and they even had legal disputes over it. They did all this while recklessly conducting human experiments in India.

Moreover, these pharmaceutical companies concealed any negative results and data about their new drugs. They did this with a well-known flu medicine as well; this was basically a secret that everyone in the industry knew about.

Would companies really want to develop amazing drugs in turn for fifteen years of their frontline scientists' lives? Or would it be better for them to lobby the government officials who were in charge of the FDA approval? In this

case, it was easy for mediocre new drugs, created by hiding data about side effects, to be approved for the market.

Why were several countries in the Americas, including the United States, so ridden with substance abuse? People who thought that it was because poor black people or immigrants sold drugs were still naive about the pharmaceutical industry. Books that exposed transnational pharmaceutical companies as the bad guys were on every bookshelf in every bookstore. A-Gen was actually one of the better companies. Or so Young-Joon thought since he saw what they did with the new liver cancer treatment.

“Sigh...” Young-Joon covered his face with his hands. He didn’t like any of them.

‘What if I start my own company?’

Young-Joon was confident that he would not be swayed by A-Gen. However, he would probably waste at least five years, as registering and setting up a new lab was quite a picky process. It wasn’t easy to get approval from the government because they would be handling dangerous substances, and there was a chance of leakage.

“ ... ”

‘Let’s change the plan.’

There were no good pharmaceutical companies. Since they were all corrupt, he had to do it himself. However, it would take too long to build a start-up or a small company.

Click. Young-Joon deleted his two-week notice from his computer.

‘Let’s go back to A-Gen.’

Young-Joon was going to take advantage of the strong network A-Gen had already built and grow from there. He was going to give them amazing results, show them his potential, and launch an affiliate company. He could just build that company, but he could also go further.

‘Couldn’t I actually absorb A-Gen?’

It wasn't completely impossible. 7-Eleven had its headquarters in the United States, but the branch in Japan took over the headquarters, did they not?

The amount of power Rosaline held in the research field was close to infinite. How sad would it be if all he did with his power was build a mediocre company and sell a few drugs? This power wasn't just going to end with curing things like cancer or AIDS; it was a scalpel that was going to remove the vile and materialistic politics that had infected the entire pharmaceutical industry. It was a guillotine that would behead fake scientists like Kim Hyun-Taek.

* * *

Senior Scientist Park Dong-Hyun of the Life Creation Department was looking at the experimental data. He was used to being grilled by his superiors during the weekly project meeting. However, there was a far worse problem than that next week: the annual report seminar. It was a huge research meeting all the scientists at A-Gen participated, except for the interns. Here, each project manager had to report their performance and discuss the results. It was a hellish discussion that took eight hours, and the atmosphere always turned hostile when it was the Life Creation Department's turn to present. Everyone ignored them or looked at them with a condescending look, and some of the lab directors even cursed at them. The worst thing they heard last year was, "Look at what you've done right now. You could teach a monkey to do that!"

'Seriously, how could a monkey conduct an experiment?'

They said things like that because all they came to do was break the Life Creation Department's spirits instead of giving actual feedback and discussion about their study. Of course, that was because the goal of lab directors was not to hear the Life Creation Department's presentation but to make them quit.

"Phew..."

Park Dong-Hyun was frustrated that he had to go through that hell again.

"Hello, I'm here."

On Tuesday afternoon, Young-Joon greeted everyone and sat in his seat.

"Are you feeling better?" Park Dong-Hyun approached him and asked.

"Yes, they didn't find any abnormalities."

“That’s a relief.”

“Yes. Senior Park, our year-end seminar is soon, right? I think we should evaluate our current progress and discuss which result we should present.”

“Alright, follow me.”

Park Dong-Hyun and Young-Joon went to the conference room together. As Young-Joon made him a coffee and waited for a bit, two members of the Life Creation Department walked in. There were now four of them, including Young-Joon and Park Dong-Hyun.

“Well, everyone knows Doctor Ryu Young-Joon, right? He’s the new one. The one that cursed at Kim Hyun-Taek. Please welcome him,” Park Dong-Hyun introduced Young-Joon to his colleagues.

“Are you feeling better?” the woman with round glasses asked. It was the woman who called the ambulance when Young-Joon collapsed.

“Yes, I’m fine now.”

“Take care of yourself. I’m Jung Hae-Rim, and I’m a senior scientist. I was in the Protein Purification Research Department, but I was transferred here after some incidents. Welcome.”

After introducing herself, Jung Hae-Rim glanced at the man sitting next to her. He was quite chubby, and it was a little embarrassing because he was wearing a tight shirt that showed all the lines on his body. He had messy hair, wore square-frame glasses, and had an innocent-looking face. He was extremely focused on a Japanese animation playing on his phone.

“Koh Soon-Yeol, we’re going to have our meeting right now. You should introduce yourself since we have someone new,” Jung Hae-Rim said.

Then, without even glancing at her, Koh Soon-Yeol said, “There’s still a minute left until lunch is over.”

It was two o’clock.

‘Lunch?’

As Young-Joon looked puzzled, Jung Hae-Rim said, “Soon-Yeol went out for lunch a little after one o’clock. Haha... You can tell why Soon-Yeol is here, right?”

She shrugged her shoulders. “Companies don't like people who clock out at the minute.” magic

Young-Joon nodded.

“Apparently, he came here after confronting the executive manager about why he wasn’t allowed to leave when his shift ended at 6 pm,” Jung Hae-Rim said and shook her head.

“Is your name Koh Soon-Yeol?” Young-Joon asked the portly man.

“Yes, it is. Soon-Yeol, can you please introduce your—”

“Ack!”

Koh Soon-Yeol suddenly began ripping his hair out. He hugged his phone.

“Sonogo Kohaku *dame-yo!*”[1]

“Pardon?”

“Kohaku-chan is... *Sonna hazu wa nai...*”[2]

Jung Hae-Rim poked his shoulder, but Koh Soon-Yeol was already turning off his phone. He was like a robot who started working right at the hour.

“My name is Koh Soon-Yeol. Nice to meet you~”

“Are you Japanese?” Young-Joon asked.

“I am Korean-Japanese. But I’m currently a Korean citizen. I don’t think I really need to introduce myself. Kek. Hae-Rim-chan already introduced everything about me, right~?”

‘Woah, is this guy for real?’

Young-Joon could clearly tell what kind of guy he was even without an explanation. He felt like he could guess what picture he had on his pillow cover.

Jung Hae-Rim looked at Koh Soon-Yeol like she had given up. She said to Park Dong-Hyun, “Then let’s begin, Leader Park.”

“I’m not the team leader; we have our Executive Manager Cheon.”

“But he’s in Cheonan right now. And I don’t think he’ll come back... You know what he was assigned this time, right?”

Park Dong-Hyun looked stumped as Jung Hae-Rim spoke. He explained to Young-Joon, “Actually, there are two more people on our team. There’s Principal Scientist Cheon Ji-Myung, our team leader, and Lead Scientist, Bae Sun-Mi.”

“Are neither of them here today?” Young-Joon asked.

“You will see them sometime. You don’t have to remember their names for now. I’ll introduce them again once they’re here.”

Park Dong-Hyun opened the presentation file on his laptop.

“Sorry to have kept you waiting. As you all know, we are the Life Creation Department, and our goal is to create a living artificial cell out of chemicals,” Park Dong-Hyun explained. “And ultimately, we are thinking of using this to create artificial organs that will not be rejected by the patient’s immune system and using it in transplants.”

The creation and transplantation of artificial organs: it was one of the major issues of future medicine. Non-functional organs could be swapped out for functional ones, like swapping out a faulty or broken part in a car. Even if one was diagnosed with lung cancer from smoking three packs a day...

‘Don’t worry. We have a healthy pair of lungs right here!’

...They would be fine after receiving a transplant for a new set of lungs.

In current medicine, there had to be an organ donor in order to do a transplant. For example, patients with renal failure struggled on artificial dialysis to survive until there was a kidney donor. However, it would become a lot easier if an organ could be created as all they had to do was make it and put it inside.

Another obstacle an artificial organ could overcome was rejection. In 1936, a person named Voronoy in Russia performed the first kidney transplant. Then, the recipient died, and the cause was rejection. The recipient's immune system attacked the transplanted kidney, causing an infection, and eventually killing the patient.

Why was that? It was because the genetic material of the donor and recipient was slightly different. It was like someone wearing the wrong size glove and having it fall off while they were working. It meant that the recipient and the donor needed to have similar genes in order for the organ to work properly. Ultimately, even if there was a donor, a person with renal failure would die if the donor's genes weren't similar enough.

This problem could also be solved if artificial organs were invented, as they just needed to use the same genetic material when making it.

"But do we have to start with an artificial cell?" Young-Joon criticized.

"Then?"

"We can use embryonic stem cells."

"That's right. We do have something like embryonic stem cells, and it's also easier. However, those stem cells have a limit to how commercialized they can be."

Young-Joon nodded as he understood.

Simply put, embryonic cells were made by injecting the patient's genetic material into an embryo created from a sperm and egg. Embryos had the ability to differentiate into any kind of cell. As such, these stem cells could differentiate into whatever tissue the patient wanted, such as the liver.

There also wouldn't be any rejection from the patient as it was basically injecting their own genetic material into their bodies. If so, wouldn't people just have to make embryonic stem cells from the patient's genetic material, create a liver with that, and then transplant it into the patient? It would be the end of traditional transplants if that could happen.

However, the technology wasn't advancing even though it had been a while since this concept was proposed. The reason was that the one thing they absolutely needed for this was an embryo. What this meant was that in order

to treat a patient with renal failure with stem cells, the doctor had to go through a number of steps.

Inject hormones into a healthy female volunteer for approximately two weeks to induce ovulation, check them with an ultrasound, and then harvest the eggs from their ovaries with a syringe.

Collect sperm from a healthy male volunteer.

Use an ICSI, an IntraCellular Sperm Injector, to fertilize the egg into an embryo.

Remove all genetic material from the embryo.

Obtain somatic cells from the patient to obtain their genetic material.

Insert the embryo with the patient's genetic material.

Transplant into the patient after growing it into a liver or as a cell.

The doctor would have to do it all over again if even one step failed. This process was just incredibly difficult.

Let's say a doctor and a highly-trained technician who was extremely skilled successfully created a liver.

'Congratulations. You cured one patient.'

There were hundreds of thousands of similar patients waiting in line. They would have to start from step one to treat the next patient.

It was completely different from stamping out cold medicine from factories. Who would be able to do such a crazy thing like that? Because of these obstacles, this treatment method was still deemed scientific fiction.

Let's just say that somehow, the doctors and scientists were willing to go through that hell for each patient until everyone was cured. It would be for nothing if they didn't have a woman who would keep taking hormones for others and offer her eggs like Mother Teresa.

'Huh...?'

A message suddenly popped up in front of Young-Joon's eyes as he was lost in thought.

[Synchronization Mode: Would you like to gain insight into how to revert a normal cell into an embryonic stem cell? Fitness consumption: 2.0]

This time, it didn't take fitness by the second, but it consumed 2.0 at once. However, the merit of gaining knowledge like that was incredible.

'Reverting normal cells into embryonic stem cells...'

If that was possible, they wouldn't have to go through the seven-step process; all they would have to do is swab the inside of a patient's mouth, modify it, and then plant it into the patient's body.

"Would there be a way to revert a normal cell into an embryonic cell?" Young-Joon asked.

"A normal cell?" Park Dong-Hyun said.

"Yes."

"You mean like skin cells or blood cells?"

"Yes."

Park Dong-Hyun chuckled.

"If that was possible... It would be revolutionary."

"If we were able to make an embryonic stem cell from a normal cell, can we present that at the year-end seminar? It's a little different from our current project, though."

"Of course that's okay. It's not like it's completely different. Why? Did you hear something?" Jung Hae-Rim interrupted and asked.

"No... Nothing like that." As Young-Joon pretended like it was nothing, Park Dong-Hyun smiled.

"Young-Joon, if that happened, the Nobel Prize committee would come and beg us to take the Nobel Prize in Medicine."

1. *Dame* is Japanese for 'That's no good!' ?

2. *Sonna hazu wa nai* is Japanese for 'That can't be...' ?

Chapter 7: Induced Pluripotent Stem Cells (2)

"Yeah, that's Nobel Prize-worthy technology." Jung Hae-Rim agreed.

"Even if it's different from the work our department is supposed to do, some trivial lab directors won't be able to pick on us if we did that. But it's not feasible," Park Dong-Hyun spoke.

Jung Hae-Rim added, "Once a cell differentiates, it can't go back. It's like how we can't go back to being an undergraduate student because we already completed our doctorate."

Koh Soon-Yeol also added, "Back in the day, you couldn't reset your skill tree in RPG games once you choose one. The cell system of the body is a pro that's been working for about ten billion years. So, I don't think..."

Park Dong-Hyun went back to opening the presentation file on his laptop.

"Well, we're trying to focus on creating an artificial cell. Let's work on this a little more for now. I'll catch you up on the current results we have."

Young-Joon stared at the blinking message in front of his eyes.

[Synchronization Mode: Would you like to gain insight into how to revert a regular cell into an embryonic cell? Fitness consumption: 2.0]

Rosaline was telling him that it was possible. What kind of advancements would happen if this technology was invented? There would be no need to harvest eggs or sperm, and they would not have to make an embryo either. They also didn't need extremely precise micro-control to replace genetic material. Since it was the patient's own genetic material, there would be no rejection. This was like a technological leap from the days when women used to wash their clothes with a washing paddle to using a washing machine.

Click.

Young-Joon tapped on Rosaline's message.

“What are you doing~!” Koh Soon-Yeol tilted his head in confusion as Young-Joon tapped into nothing.

“Ah, just some dust.” Young-Joon made up some excuse. He pressed it, but as expected, nothing happened.

[You do not have enough fitness.]

The amount of fitness that Young-Joon had was 1.5; this was the maximum. To get it higher, he needed to upgrade Rosaline.

“...” magic

‘But how?’

Bleep! As Young-Joon was lost in thought, a message popped up with a notification.

[Improve Metastatic Status or Synchronization to upgrade Rosaline’s level.]

[The fitness limit and the recovery rate will increase with Rosaline’s level.]

They were messages that he had read before. It was information he already knew. The problem was how he could improve the Metastatic Status or Synchronization...

Young-Joon checked Rosaline’s metastatic status.

[Metastatic Status: Heart (2%), Liver (46%), Brain (7%), Kidney (13%), Spinal Cord (4%)]

These values were the result of what Rosaline did in order to recover his body when he was an alcoholic. She had corrected his herniated disc, forward neck posture, fatty liver, and all kinds of small discomforts.

‘...Should I take some cyanide or something?’

As Young-Joon was coming up with ridiculous ways, he heard Park Dong-Hyun presenting.

“4.87, the most recent version we tested, was destroyed because we could not get the cell membrane to stabilize.”

'4.87!'

Young-Joon's eyes widened. He remembered that when he first obtained Rosaline, the artificial cell that was reacting in the lab was labeled v4.87. It was just a blob of chemicals that wasn't living yet, but Rosaline was born as soon as Young-Joon's blood went into it.

'What happened? The ATP originating from my blood cells entered into v4.87. Maybe ATP is the source that Rosaline needs to grow?'

ATP was a very high-energy chemical entity; it was the fuel that was widely used in a variety of cellular functions in the body. And Rosaline, which was in Young-Joon's body, had also reacted strongly to ATP before. Then, wouldn't her Metastatic Status or Synchronization be improved with ATP?

"Does anyone have good ideas?" Park Dong-Hyun asked. However, Jung Hae-Rim and Koh Soon-Yeol all avoided his gaze and lowered their heads. Park Dong-hyun sighed.

"It's alright. It's not your fault that our project isn't progressing. It's because this project is too difficult and unrealistic."

"How long do we have until our year-end seminar?" Young-Joon asked.

"About two weeks..."

Young-Joon thought for a little while. It wasn't a terrible idea; it would cause huge waves in the scientific community if he could create embryonic stem cells from regular ones. If he presented this, it wouldn't be long before he entered stardom in the scientific community. It was a good way to gain some leverage at A-Gen.

Another benefit was that this technology was fundamental. If he was successful, it wouldn't end there. This technology would require further, more advanced experimentation, such as growing artificial organs or differentiating cells into tissues and nerves, which were all difficult for modern scientists. The ball would be in Young-Joon's court as he would also hold the key to solving those problems.

If he used that, he would also be able to make a deal about the percentage of royalties. Young-Joon had decided that he would not give any percentage of

the royalties to the executives or shareholders; why would he give them anything when none of them contributed?

Young-Joon would need a little deception after presenting the data, but he was confident he could do that. If he succeeded, the tables would be turned. He was determined to become the first author of the paper, the first inventor, and take the maximum share of the patent.

Young-Joon silently stared at Park Dong-Hyun, Jung Hae-Rim and Koh Soon-Yeol.

“I will study the de-differentiation of stem cells in the meantime.”

“I’m telling you, you can’t.” Park Dong-Hyun seemed irritated.

“But I think it might be fine to let him do whatever he wants since he’s new...” Koh Soon-Yeol told Park Dong-Hyun, to which the latter nodded after some thought.

“Alright. I guess it’s not a great time to assign you new tasks because we’re busy with the year-end report and you need time to get used to this place, too. Do whatever you want for two weeks.”

“Thank you. I appreciate it.”

The meeting ended not long after. The department hadn’t found an idea to use at the year-end seminar, but it didn’t matter; Young-Joon was confident he could make it himself.

As soon as Young-Joon returned to the lab, he searched for ATP.

‘Found it.’

He took out a small reagent bottle from the -20 degrees freezer.

[Adenosine 5'-triphosphate disodium salt hydrate]

Without the disodium salt hydrate, it was called ATP, adenosine 5'-triphosphate.

Young-Joon extracted about a milliliter of ATP from the reagent bottle. He sterilized it by filtering it through a 0.22-micrometer filter and then put it into a

five-milliliter syringe from the lab. Then, he disinfected the inside of his elbow with alcohol and injected the ATP into his veins.

'I can't believe that I'm conducting a clinical trial on my own body.'

To be honest, it was crazy. However, this much was definitely harmless to a healthy person. Even if it didn't affect Rosaline, it would end with no particular negative effects on Young-Joon's body as well.

'Let's take a look...'

Young-Joon opened Rosaline's status window and stared at it.

Bleep.

[Rosaline has absorbed the ATP.]

"..."

'Is this wrong?'

The moment Young-Joon, who was disappointed, was about to try something new...

[The fitness of the cell will increase momentarily.]

'Momentarily.'

[Rosaline Lv. 1]

—Metastatic Status: Heart (2%), Liver (46%), Brain (7%), Kidney (13%), Spinal Cord (4%)

—Synchronization: 3%

—Cell Fitness: 2.1 (+0.6: For 21 hours due to ATP)

—Gene Expression Control: Suppression of CYP2E1 (38%)

A value of 0.6 was added to fitness from the ATP. It seemed like it meant that 0.6 would be added to his regular amount and that it would last for twenty-one hours. Whatever it was, his total fitness amount was over two.

Young-Joon quickly opened the message again.

[Check how to revert a regular cell to an embryonic cell (Fitness consumption: 2.0)]

Click.

A solution appeared when Young-Joon pushed the button.

[You can revert a normal cell into an embryonic stem cell if you modify a few genes.]

[It is the most simple method you can use right now. Rosaline recommends the next four sets of genes.]

[SOX2, cMyc, OCT4, KTF4]

[Overexpress these four genes in the cell.]

'Woah...'

Young-Joon felt like he cheated off God's answers or something. How could someone discover that a normal cell could be reverted into a stem cell by modifying just four genes out of the twenty different kinds they have?

If Young-Joon were to pick genes randomly and experiment with them, this knowledge would be like hitting the lottery jackpot billions of times. Chills went through his spine again when he realized that Rosaline also knew all the numbers to hit that jackpot.

Young-Joon closed the message window and ran to his office computer. He searched [genbank.com] and logged in with his ID. This website sold genes. They sold individual fragments of artificially synthesized genes. He could order freeze-dried genes and use them in his experiments after melting them in some water. Young-Joon ordered those four genes right away.

* * *

The genes were delivered two days later, but Young-Joon needed to flesh out his experiment a little more. How was he going to put the genes into the cell, and in what cell was he going to add it? What was the right amount to add, and how long would he have to wait to observe it after inserting it?

Normally, he would have spent a month figuring out the best conditions for each component of the experiment, but Young-Joon didn't have to do that; Synchronization Mode provided him with the optimal conditions as well. He gained new messages as he regularly used his cell fitness.

[Recommends you to insert the genes into a human embryonic kidney cell (HEK293). (Click to see the characteristics of an embryonic kidney cell)]

[Insert the gene using a retrovirus. (Click to see how to produce viruses)]

[Grow them using the same method of growing embryonic stem cells three days later. (Click to see growing method)]

Young-Joon consumed cell fitness every day and executed the experiment as per Rosaline's instructions. He grew embryonic kidney cells and produced gene-carrying retroviruses.

A few days flew by while he was busy with his experiment.

And on Friday morning, Young-Joon finally infected the embryonic kidney stem cells with the retrovirus. Now, SOX2, cMyc, OCT4, and KLF4, the four genes Young-Joon put inside the cell, were going to start being expressed. Now, all he had to do was observe. The experiment would be a success if this cell reverted back into an embryonic state.

'Anyway, it's so simple.'

Comparing it to cooking, what scientists were basically doing was collecting unknown ingredients and creating a new recipe. But following Rosaline's orders was just like cooking by following the prepared recipe. The difference in the level of difficulty was unbelievable.

Finally, Young-Joon plated the genetically modified embryonic kidney cells onto a special STO culture dish. If the cells flourished on this plate and differentiated, it would mean that these were artificially crafted embryonic stem cells.

'Is it really possible?'

"What are you doing?" Jung Hae-Rim asked Young-Joon from behind as he was observing the plate through the microscope. She walked beside him and looked at the culture plate.

“What is this?”

“It’s a stem cell candidate.”

“Wow.”

“It can be called a stem cell if it grows from this culture dish. I’ll send you the details of the experiment by email.”

“I hope it goes well, but honestly, I’m not expecting anything.”

“It’s lunch. Are you not going to eat?”

“We’re heading out right now. We came to ask you to come with us.”

“Let’s go.”

As Young-Joon followed Jung Hae-Rim out, Park Dong-Hyun and Koh Soon-Yeol were already waiting for them in front of the elevator with their jackets on.

Young-Joon asked, “Do you have to bundle up like that when we’re going to the cafeteria?”

“The halls are cold. And we also have to wait a while when we’re getting our meal tickets, so bring your coat,” Jung Hae-Rim replied.

“I heard that the flu is going around. Your immune system gets weaker when you’re cold, so be careful, everyone,” Park Dong-Hyun added.

“Eek. The flu?” Jung Hae-Rim shuddered.

“Yes. Take your vitamins. And Doctor Ryu, our team usually has lunch together if there isn’t anything special,” Park Dong-Hyun told Young-Joon.

“Is that so?”

“Yes. I told you before, right? We outcasts have to stick together at least. We won’t last here if we don’t do that.”

Jung Hae-Rim and Koh Soon-Yeol laughed. Park Dong-Hyun went on.

“We couldn’t have lunch with you because you were busy with your experiment this week, but let’s have lunch together starting next week.”

Young-Joon nodded. They actually asked him to have lunch together a few days during the week, but Young-Joon turned them down because he had to work on a tight schedule if he wanted to have prominent results in two weeks. Now all he had to do was wait since he was finished with all the busy work, but for the past few days, he had brought kimbap from home and shoved them in his mouth.[1]

Young-Joon wondered why they made such a fuss about eating together, but he was able to figure out why.

Laboratory Six was used by seven departments in total. They didn't run into each other as each department worked with their own members, but everyone shared lunchtime and the cafeteria.

Bleep!

Young-Joon's profile showed up on the small monitor as he scanned his company ID to get his meal ticket.

[Scientist Ryu Young-Joon, Life Creation Department]

At the same time, Young-Joon could feel the scientists behind him stare with unfriendly gazes.

"Why are they at Lab Six anyway?" someone behind him murmured.

"Our lab's performance falls because of them during the year-end seminar. I heard that Director Kim Hyun-Taek from Lab One leads the Anticancer Drug Research team by himself. But we have *that* department... *Sigh.*"

"They probably have nothing again this year, right?"

"Ha. Think about it. Do you think they would have anything to show?"

"The atmosphere at the seminar is going to be bad, yet again. It always goes south when they present."

"It's because they are a collection of people that used to make things go south in their own departments."

1. Kimbap is often eaten as a quick meal, like a simple peanut butter jelly sandwich. ?

Chapter 8: Induced Pluripotent Stem Cells (3)

“ ... ”

When Young-Joon turned his head to look back, Park Dong-Hyun grabbed his shoulder.

“Don’t give them any attention,” Park Dong-Hyun spoke.

“But still, they’re talking so loudly that it’s impossible to not hear them. It looks like they’re doing that on purpose...”

“One of the biggest reasons people don’t last here and quit is because of that. But if you hear it for a month or so, you learn how to pretend like you don’t hear anything.”

Park Dong-Hyun smiled bitterly.

“*Sugoi!*”[1]

Suddenly, Koh Soon-Yeol, who was standing in front of the line, exclaimed. Young-Joon could hear him all the way from the back.

‘So that’s what happens when you get used to it.’

Young-Joon nodded at Park Dong-Hyun.

Koh Soon-Yeol turned to where they were standing and shouted, “Senior Park! I told you the menu today is freaking good! Dak-gang-jeong *itadakimasu-yo?*”[2]

“Oh, okay. Eat up,” Park Dong-Hyun replied awkwardly and waved his hand.

The cafeteria was like a buffet. Young-Joon put a few different things on his plate and grabbed a beverage as well. As he scanned the tables, he saw Jung Hae-Rim with her hand up. Everyone had gathered at that table except him. He walked over and sat down.

“Soon-Yeol-sunbae, why didn’t you get any dakgangjeong? You were worshipping it,” Young-Joon asked.[3]

“It’s not that he didn’t get any. He just ate all of it,” Jung Hae-Rim answered for him.

“*Sumanai na*~ I couldn’t stop myself because it was so good~”[4]

“Even if you ate it all, there isn’t any sauce left either. How did you eat it like this?”

Koh Soon-Yeol propped up his glasses with his pointer finger and grinned.

“Haha. I guess I can’t help it if I want to show this *ningen*. Wait for me to bring some more.”[5]

He stood up with his plate and walked away. The cafeteria was a buffet, and everyone was free to have as much as they wanted, so it didn’t matter if he grabbed more.

“He does that sometimes if there’s something on the menu he likes,” Jung Hae-Rim told Young-Joon, chuckling.

“Well, I also have more if there’s something I like on the menu, but the place where he put his *dakgangjeong* was clean as if he washed the sauce off...”

“He licked it off...”

“ ... ”

“Well, Soon-Yeol is a little strange, but he’s nice, innocent, and smart.”

Young-Joon nodded.

“Let’s take our time while we wait for Soon-Yeol,” Park Dong-Hyun said as he picked up his chopsticks.

Clang!

Suddenly, a loud sound of metal clashing together rang in the cafeteria. All three of them turned to the sound in surprise. Koh Soon-Yeol stood there, flustered, and a young woman stood there, staring down at her shirt in shock and anger. Her white shirt had a big red stain on the front of it.

“I... I’m sorry.”

“Damn it! What are you doing?!” the woman shouted while brushing off her shirt with her hand. “You. What department are you from?”

“L-Life Creation...”

“Ah, this idiot,” she mumbled under her breath.

Scratching his head, Koh Soon-Yeol looked like he didn’t know what to do.

“I-I’m sorry... But you bumped into me from behind when I was in front...”

Then, a middle-aged man who looked like an executive manager showed up behind her.

“What is it?”

“Sir! Look at this! This person bumped into me!” the woman shouted with a piercing voice.

The executive manager frowned.

Getting up from his seat, Young-Joon turned to face the table.

“We should go hel...”

Both Park Dong-Hyun and Jung Hae-Rim were not in their seats; they were already running toward Koh Soon-Yeol. magic

The Health Food Department was in A-Gen, a pharmaceutical company, but they didn’t make pharmaceutical products. Their main goal was to develop functional health products. Simply put, they studied things like Korean Red Ginseng. It wasn’t like they were giving red ginseng to a patient in clinical trials to see its effects or anything; rather, they developed and marketed products with vague functions, such as that it had health benefits, made people warm, increased metabolism, and more.

Choi Myung-Joon, the team leader of the Health Food Department, was extremely confident in this year’s annual seminar; they were about to commercialize a new product, which was made with pumpkin juice, bellflower juice, and pear juice, that was both delicious and nutritious. On top of that, the Health Food Department was already a crucial department in A-Gen as it brought in a lot of profits from its probiotic product.

It was obvious that the Health Food Department was going to carry Lab Six in the seminar again like last year, although it was unknown just how awkward the idiots at the Life Creation Department were going to make it. Still, there

was no way the Health Food Department would be criticized as they had already finished their presentation files, which were filled with information about their excellent performance.

The Health Food Department was excited and relaxed recently as they were able to go home without having to do overtime. Seo Yoon-Ju, one of the scientists on the team, was especially in a good mood, and she was even humming. She wore a white silk shirt, tights, and a tennis skirt to work because she was planning to leave at 6 PM sharp and go on a date with her boyfriend. She was in a good mood when she came out for lunch, but some fat otaku had ruined her day.

“Scientist Koh Soon-Yeol from the Life Creation Department.”

Choi Myung-Joon scoffed.

“ ... ”

“You all. Why is it that you guys are always causing a scene whenever I see you? You’ll be doing that in the year-end seminar that’s taking place in a few weeks too, right?”

“I-I’m sorry.” Koh Soon-Yeol apologized repeatedly.

“So what are you going to do about it?” Choi Myung-Joon asked in an arrogant tone.

“Ah... Um... C... Can I give you money for dry clean...”

“Dry cleaning? You think some dry cleaning is going to fix the damage you did to this shirt?” Seo Yoon-Ju shouted back with a piercing voice.

“T... Then I will reimburse...”

“Do you know how much this is?”

“B-But, it’s not like I bumped into you. You bumped into m...”

“Soon-Yeol!”

Jung Hae-Rim and Park Dong-Hyun hurried over to Koh Soon-Yeol and stood beside him.

“What happened?”

“I was waiting to get some more dakgangjeong, but this person bumped into me while talking on the phone and dropped her plate...”

“I bumped into *you*?” Seo Yoon-Ju frowned.

“I-It’s true. You were holding your plate with one hand and then you tripp...”

“Tripp... what?” Seo Yoon-Ju spoke in a demanding tone.

“...”

Koh Soon-Yeol closed his mouth and couldn’t speak out of fear.

“What? Why aren’t you finishing your sentence?”

“Sorry... I... I’m not used to talking to 3D women...”

“Ah, this damn otaku is pissing me off.” Seo Yoon-Ju glared at him in irritation. “If you’re done shoving food down your mouth, return your plate and go work. Trying to get more food like the pig you are...”

“What?” Jung Hae-Rim looked shocked.

“What? Am I wrong? He finished his plate and then lined up again! I let him get his ticket first and came in a while after to not get close to him.”

“Aren’t you being too harsh? No matter who bumped into whom, it was a mistake, wasn’t it? If it was Soon-Yeol’s mistake, he can give you money for dry cleaning or for the shirt. He even apologized, but is that the only kind of thing you can say to him?”

“Are you in the same department?” Seo Yoon-Ju asked.

“Yes, I’m Jung Hae-Rim from the Life Creation Department.”

Seo Yoon-Ju smirked. “How befitting as the troublemaker department. Did you all rush over here to protect your otaku?”

“What?” Jung Hae-Rim asked angrily.

“Wait.” Park Dong-Hyun stopped Jung Hae-Rim and faced them.

“Koh Soon-Yeol is not a liar. To be honest, I think you’re the one who bumped into him. If so, you should be the one giving him money for dry cleaning. There’s some on his shirt, too.”

“Dry cleaning? Do you even wash that rag of a shirt? I would just throw it away and buy a new one.”

“Seriously, why are you speaking to him like that?”

Jung Hae-Rim clenched her jaw in anger.

“To be honest, you all are just a nuisance to everyone during the year-end seminar. Can’t you just stay quiet and not cause any trouble in the lab at least? Do you have to ruin someone’s clothes and mood and then all rush over to pick a fight?”

“Let’s look at the surveillance footage,” Park Dong-Hyun said.

“There’s a camera in the cafeteria. Didn’t know that, right? It’s over there, above the spoons. I think it would’ve gotten this area.”

Seo Yoon-Ju frowned a little when he brought it up.

Park Dong-Hyun added, “I know a lot about Lab Six because I’ve been here for a long time. If we see that you bumped into him, you’re going to sincerely apologize to us and give him money for dry cleaning.”

“W-Why does it matter who bumped into who? Do you know how expensive this shirt is?” Seo Yoon-Ju said.

“So why would you wear an expensive shirt to the lab? And you’re also wearing tights and a skirt. That’s against the rules for using the lab.”

“I told her she could,” Choi Myung-Joon, who was silently watching the situation, interfered.

Park Dong-Hyun, Jung Hae-Rim, and Koh Soon-Yeol all looked surprised. A principal scientist, who was the equivalent of an executive manager, was telling them himself that he allowed her to violate the rules.

Choi Myung-Joon shrugged.

“Yoon-Ju isn’t doing any experiments right now. Do you know why she isn’t?”

“Pardon...?”

“You probably don’t. Since you guys don’t prepare for the year-end seminar, right?” Choi Myung-Joon looked at them.

“Yoon-Ju is the most talented person on our team. She has finished her experiments. She has exceeded this year’s goals. She was the one who made most of our team’s presentation slides. All Yoon-Ju is doing right now is editing those files.”

“ ... ”

“Yoon-Ju. How much is that shirt?”

“Two hundred thousand won.”[6]

“You have to go to the store again to buy it, right? That means a crucial member of the Health Food Department, the one responsible for Lab Six’s performance at the year-end seminar, is losing that much time. And it’s not like these employees in the Life Creation Department can do what Yoon-Ju has to do, right?”

“Yes.”

“Then, if these people have a conscience at least, they will reimburse you for the taxi ride to and from the store, right? You must be so sad that your outfit and your mood are ruined for your date today, huh? You should be reimbursed for that, too. Maybe about four hundred thousand won. Right?”

Jung Hae-Rim clenched her fists.

“No way... You’re going to make him pay four hundred thousand won for a used shirt that you bought for two hundred thousand won?”

Even Park Dong-Hyun clenched his jaw.

“Even though you were the one at fault?”

“We don’t know who was at fault yet,” Choi Myung-Joon argued.

If the Life Creation Department asked to check the surveillance footage, they would be harshly criticized for spending so much time slacking off when they

had no results. Choi Myung-Joon was basically threatening them to stop making this a big deal and crawl on the floor like the potato heads they were.

“I’ll give it to you...” Koh Soon-Yeol said.

“Soon-Yeol?” Jung Hae-Rim looked at him in surprise.

“*Sumimasen...* I’ll give you it right now, so please don’t be mad.”[7]

“There’s no need.” Young-Joon showed up from behind. Everyone stared at him in surprise.

“You said that you didn’t do anything, Soon-Yeol. But why are you giving her anything?”

“Uh... But...”

“Who are you?” Seo Yoon-Ju asked.

“My name is Ryu Young-Joon. I came to the Life Creation Department a week ago.”

“Oh, the one who cursed at Director Kim Hyun-Taek?” Choi Myung-Joon laughed.

“Yes, that’s me. I cursed at a lab director—an executive. I can do a lot more if the other person is in a lower position,” Young-Joon said.

Choi Myung-Joon flinched.

“Are you threatening me? You’re going to punch me or something?” Choi Myung-Joon said.

“No, of course not. But let’s look through that surveillance footage. You have to apologize if it’s your fault, Scientist Seo.”

“I think I told you to do some experiments if you have to go through that.”

“Don’t worry. I am already doing an experiment.”

“You have something to present at the seminar?” Choi Myung-Joon smirked.

“Yes, we do,” Young-Joon spoke confidently. The three people beside him, including Park Dong-Hyun, looked shocked.

“W-We have something...?” Park Dong-Hyun whispered quietly.

Young-Joon spoke firmly, “Health Food? Whatever results your department presents, I’ll show you something that is double that.”

1. Japanese for ‘Amazing’ or ‘Great’ ?

2. Dak-gang-jeong is small, bite-sized, fried chicken tossed in a sweet and spicy sauce. *Itadakimasu* is a Japanese phrase people say before eating, meaning ‘Thank you for the meal.’ ?

3. Sunbae refers to an upperclassman or senior. In this case, Koh Soon-Yeol is Young-Joon’s sunbae because he joined the company earlier than him and holds a higher position. ?

4. *Sumanai* is a Japanese phrase used when saying sorry, but in a playful and slightly embarrassed way. ?

5. *Ningen* is Japanese for ‘human’ or ‘mortal’. ?

6. About 150USD when this chapter was translated in Nov 2023. ?

7. *Sumimasen* is Japanese for ‘Sorry’ or ‘My apologies’. ?

Chapter 9: Treating the Flu (1)

“Haha!” Choi Myung-Joon laughed out loud.

“Oh, did you really create life or something?”

“Ahahaha!”

The scientists who gathered around to watch the situation burst out in laughter.

‘Well, actually, I really did create life, but that’s different since I can’t prove it.’

“I will do that for you next time,” Young-Joon said.

“If the Life Creation Department didn’t create life, what are you so confident about?”

“We will win the Award for Exceptional Performance at this year’s seminar.”

“ ... ”

Everyone went dead silent as if someone had thrown cold water on them. Even Choi Myung-Joon was dumbfounded at how confident Young-Joon was. It would be surprising if they won something just within Lab Six, but he was saying that the Life Creation Department was going to present the best results among all the labs at A-Gen.

“Are you serious?” Choi Myung-Joon asked Young-Joon.

“Why would I bluff when I have to show what I have in two weeks?”

“You. Did something go wrong in your brain because of what happened in the Anticancer Drug Research Department?”

“You’ll see for yourself in two weeks at the seminar.”

“Ha! Alright. I look forward to it.”

“You can’t just end it there. Get the footage and apologize.”

“You already know that this isn’t about the spilled food anymore. See you in two weeks. If you really win something, we will apologize *and* give Koh Soon-Yeol money for dry cleaning.”

Young-Joon glanced at Koh Soon-Yeol’s shirt. To be honest, it looked like something he would have bought for five thousand won at the flea market or something.

“Soon-Yeol, this is from Comme des Garçons, right?” Young-Joon asked.

Seo Yoon-Ju’s eyes widened in bewilderment.

“What are you talking about? How is that Comme Des Garçons? It looks like something he pulled out from clothing donations or something! Plus, it doesn’t even have the brand logo!”

“It fell off because it was a limited edition that was released with a vintage concept. The logo was barely sewn on. Even a worn one costs two hundred thousand won, right?” Although none of it was true, Young-Joon kept going. “Poor Soon-Yeol. You probably won’t be able to buy the same one since it was limited edition. You’re going to have to do the legwork to buy something that looks similar. It would be a huge loss to our team if a highly-valued employer like Scientist Koh Soon-Yeol were to get tired after looking for that shirt. Soon-Yeol, you should get like four hundred thousand won, right?”

“Hahaha!” Choi Myung-Joon burst out in laughter. He said, “I heard that the Life Creation Department was weird, but a really strange person joined the team, huh?”

“Well, I wouldn’t have cursed at Kim Hyun-Taek if I was ordinary. I am quite extraordinary.”

“Doctor Ryu Young-Joon, was it? I’ll remember your name. Let’s do what you said. We’ll give you four hundred thousand won if the Life Creation Department wins the grand prize.”

“Alright. Let’s do that.”

“We’ll see. Let’s go, Yoon-Ju.”

Choi Myung-Joon took Seo Yoon-Ju and walked away.

As the crowd dissolved, Park Dong-Hyun grabbed Young-Joon so strongly he was basically holding him by the collar.

“Are you crazy? Why did you do that?”

Jung Hae-Rim also shouted, “What are you going to do, Young-Joon!”

All Young-Joon did was smile.

“Just wait a little bit. Trust me.”

“No. Whether you are good or not, Doctor Ryu, how can you yield results when you’ve only been here a week?! How can we trust you?!” Park Dong-Hyun shouted in frustration.

“The Nobel Prize.”

“What?”

“You said it was Nobel Prize-worthy,” Young-Joon said.

“If I present results like that, getting the Award for Exceptional Performance should be a piece of cake.”

* * *

It was Saturday morning.

Young-Joon was working on Rosaline’s status window. During the week, he used his cell fitness for his embryonic stem cell experiments, but he had no use for them during the week as he had done everything he had to do. However, Young-Joon had no intentions of wasting time with his fitness fully charged.

He increased his maximum cell fitness value to 2.1 by injecting ATP into his veins, but it didn’t change the fact that Rosaline’s maximum fitness value was 1.5. As such, he decided to investigate all kinds of diseases within the range of 1.5 during the weekend. He was thinking about developing an important drug unrelated to A-Gen.

The way to develop a new drug without A-Gen’s help in a goshiwon with no lab equipment, let alone a TV?[1] All Young-Joon had to do was commission an agency that did experiments for the customer. He could create the drug by commissioning it to a chemical company, show its effectiveness through animal testing, and then patent it.

Young-Joon was thinking of selling it to another pharmaceutical company. He would get billions of dollars at the least. This was to get some money quickly as it would take too long for him to earn money from stem cells. He didn’t have the option to sell stem cells as they were too valuable to waste like that and because the only company in the country with the infrastructure to do stem cell research was A-Gen.

‘I will put an end to my poverty by this weekend.’

The reason he limited it to the end of the weekend was that he was going to be busy with his stem cell experiments and preparing the presentation from Monday.

“Tell me how to cure liver cancer,” Young-Joon ordered as he stared at Rosaline’s status window.

[You do not have enough fitness.]

[Liver cancer is too complicated to analyze at once.]

“Hmph. Then lung cancer.”

[You do not have enough fitness.]

[Lung cancer is too complicated to analyze at once.]

‘Maybe it’s too much to target cancer.’

Cancer was such a complicated disease. It was like a puzzle, as there were too many causes and variables intertwined.

What would be easier: curing every type of cancer or curing all diseases except cancer? Personally, Young-Joon thought it was the latter. It would be a different story if Rosaline’s maximum fitness increased as she leveled up, but it didn’t seem like cancer was something he could do with how much power he had right now.

‘I wish I could increase Rosaline’s level or something.’

Bleep!

Rosaline’s status window suddenly rang.

[Rosaline requires the following nutrients: Vitamin B6 0.7 mg, Zinc 3 mg. Reward: 0.8 Fitness.]

Currently, Rosaline’s fitness was at 1.5, the maximum value. That was why Young-Joon was intrigued.

‘What would happen if I didn’t use any fitness and took it?’

He could ingest vitamin B6 and zinc through food, but it would be difficult to measure the quantity like that, and he didn’t know when he would get another message like this.

‘Maybe I should get a multivitamin supplement from the pharmacy.’

* * *

Ring.

The bell on the pharmacy door rang.

“Hello!” Song Ji-Hyun shouted with a friendly voice. She recognized him when Young-Joon approached the counter.

“Oh, you were here last week, right? The probiotics?”

“Oh, yes, that’s right. Could I have a multivitamin supplement with vitamin B and zinc?” Young-Joon asked.

“Give me a moment.”

As Song Ji-Hyun walked over to the shelf and grabbed a bottle, she asked, “The probiotics you mentioned before... How did you know that stuff?”

“I work at a pharmaceutical company.” magic

“I actually asked the scientists at our company after what you said. They told me that there have been no advancements since I stopped working. They thought that bifidobacteria wasn’t working very well.”

“Is that so?”

It was just as Young-Joon expected.

“But there are still a lot of pharmaceutical companies that are going after bifidobacteria. The fact that it doesn’t work seems to be pretty important information, so why did you tell me that? Isn’t it a company secret?”

“Well, I don’t know if it’s important information or a company secret. I’m not part of the probiotics department anyways.”

“Then, what is your department?”

“Um... It’s related to stem cells.”

“Stem cells... That’s a totally different field from microorganisms.”

“Yes, that’s right.”

“Then how do you know so well about probiotics?”

Young-Joon pulled out his credit card and made up some excuses as he completed the transaction.

“Well, it was just a thought that came to mind as I was reading some papers.”

Young-Joon took out a pill from the bottle and popped it in his mouth.

[Vitamin B6 and zinc supplemented.]

[Rosaline’s Synchronization +1%]

[Rosaline has leveled up.]

[The maximum fitness value has increased. (1.8)]

[The Vitamin B6 is pure. Fitness is additionally increased. Rosaline Fitness: +0.1]

[Cell Fitness: 1.8]

‘Hm?’

Young-Joon looked satisfied as he read the unexpected messages.

‘Where are these vitamins from? I like them.’

“These are from Dongkwang Pharmaceuticals? Benefit Alpha?”

“Yes.”

“Doesn’t A-Gen have the best product in the vitamin market right now? I thought you would give me Power Nature. It’s advertised a lot, too.”

“There are a lot of people who come for that. But it has virtually the same ingredients as Benefit Alpha. But it’s twice as expensive. I can give you Power Nature if you want it.”

“Oh, that’s alright. And I don’t like A-Gen anyways.”

“Really?” Song Ji-Hyun tilted her head in confusion like she didn’t expect it.

Young-Joon said, "Like you said. Power Nature is expensive because of the brand name. It's not made out of anything amazing."

"Yeah, I agree. I don't like A-Gen either. But it doesn't affect what I prescribe or anything, though," Song Ji-Hyun agreed.

"Really? Why don't you like A-Gen? Their management is terrible, but they are good at what they do. They're not too bad from a pharmacist's perspective, no?"

"That's right. But I don't like them as an employee from another pharmaceutical company. A-Gen is good at doing bad things, too."

"Bad things?"

"Like making a competitive drug from a venture pharmaceutical company vanish."

Young-Joon was so shocked that he almost choked.

"They did that to our company," Song Ji-Hyun said as she stared out the window with a bitter face.

'No, it can't be, right? What if?'

Young-Joon sent a report on a new drug for liver cancer when he was part of the Anticancer Drug Research Department. And Kim Hyun-Taek, the lab director, and A-Gen's management bought it to destroy it. It was Cellicure, the new liver cancer treatment drug from Celligener.

"Um, are you..."

As Young-Joon was about to ask Song Ji-Hyun about her company...

Ring!

An old man entered the pharmacy. He was wearing several layers and was very pale.

"Achoo!" the old man sneezed quietly.

Zing!

“Agh!” Young-Joon's head throbbed. He grabbed his head with both his hands in extreme pain.

[Danger!]

A message blinked in front of his eyes. The saliva droplets that the old man spat out when sneezing came into his view. Young-Joon was dizzy. He could barely hold onto his consciousness as his head was throbbing with pain similar to very intense anemia.

When Young-Joon opened his eyes, everything looked white, as if it was covered in snow.

Song Ji-Hyun greeting the old man sounded like static from an old radio. But Young-Joon couldn't see her face; everything was white as if he had cataracts.

Crinkle...

Young-Joon heard the sound of paper crinkling from somewhere. His eyes hurt. Then, his focus returned but was slowly drawn to a black dot in the middle of his view. It was weird; it was as if he was looking through an extremely precise microscope. He saw a circular structure in front of him that had several receptors protruding from its shell.

[Flu A Virus]

A message popped up.

“Ack!”

As Young-Joon covered his eyes and screamed, Song Ji-Hyun and the old man stared at him in surprise.

“*Wheeze... Wheeze...*”

Young-Joon felt like blood was now getting to his brain. He could see clearly now.

“Oh my...”

‘What did I just see? The flu virus?’

1. A goshiwon is a single room occupancy in Korea. It is known to be very cheap and extremely small. ?

Chapter 10: Treating the Flu (2)

'A virus? Like the virus that I know?'

A virus was about 1/2000 of the width of hair. Some thought it was similar in size to bacteria, but it wasn't; if bacteria were elephants, viruses would be mice. That was how small viruses were.

Because viruses were so small and simple, it was confusing as to whether they were living things or not. It was true that the scientific community hadn't decided if viruses were living beings or not and that they were withholding their decision.

Viruses were primitive and dust-like, making it difficult to observe a virus, even through a microscope, if the scientist wasn't skilled enough, or if the lens was flimsy.

'But I saw it with my own eyes.'

Young-Joon tried to comprehend this insanity.

[Cell Fitness: 1.7]

His fitness fell by 0.1.

'Damn it. I didn't even want to see what the Flu A virus looked like, but it showed me it by using 0.1 fitness.'

Was Rosaline reacting with some defense mechanism because Young-Joon was exposed to this virus from a sneeze?

"Are you okay?" Song Ji-Hyun asked.

"I'm fine." Young-Joon shook his hand.

Song Ji-Hyun tilted her head in confusion.

The old man let out some air through his nose and said to her, "Please give me some cold medicine."

Song Ji-Hyun glanced back at the old man.

“What are your symptoms?”

“I have a cough and a stuffy nose.”

“What about a fever?”

“A little, I think.”

Young-Joon stared at the side of the old man’s face in bewilderment.

‘He can’t get normal cold medicine.’

Some people thought that the flu was just a bad cold, but they were strictly different diagnoses.

“Let’s see your temperature.”

Song Ji-Hyun took out a thermometer from a drawer and put it to the old man’s ear. It read 37.4 degrees.

“You have a mild fever,” Song Ji-Hyun said. “How long have you been sick?”

“About five days. *Cough!*”

The old man coughed at the end of his sentence.

“And you haven’t been to the hospital?”

“Yes. I had a fever, but it came down. I am coughing a lot, and I have a lot of phlegm.”

“Then I’ll give you some regular cold medicine. Some expectorant and...”

“Wait!” Young-Joon shouted instinctively. Song Ji-Hyun and the old man stared at him in surprise.

“Um...”

‘How do I explain this?’

Young-Joon couldn't just say that he saw the Influenza A virus in the saliva the old man spat out as he sneezed.

"If it's been five days... Shouldn't most cold symptoms... Go away?" Young-Joon stammered as he asked Song Ji-Hyun. "If you're still really sick, then... Um, the flu is going around now. Maybe you should go see a doctor..."

"Seeing a doctor would give you the most accurate results," Song Ji-Hyun told the old man.

"But if it has been five days, it's too late to prescribe something like Tamiflu, even if it is the flu. You probably won't get an antiviral drug even if you go to the internal medicine department above us."

"It's too late to use Tamiflu?" Young-Joon said.

"Yes."

Young-Joon was a little flustered.

This was the difference between a scientist, who developed drugs, and a pharmacist, who prescribed them. A scientist knew the detailed mechanism of the drug, as well as endless experimental data that most pharmacists and doctors have never seen. They also knew other competitive drugs as well.

However, their knowledge about a drug drastically declined if it wasn't in their field; they basically knew a little more than average. And Young-Joon, a biologist, knew almost nothing about something like the effects of Tamiflu, a new, synthetic chemical drug, as all he knew about it was what he learned about during his biochemistry class in university. Young-Joon's major was in synthetic biology.

"Tamiflu is only effective if it is given within forty-eight hours after infection. It's when the virus is actively replicating in the cell and causing high fevers," Song Ji-Hyun replied. "If someone recovered to a mild fever of about thirty-seven degrees, prescribing Tamiflu is meaningless because it means that the person has already recovered to some extent."

She gave the old man the regular cold medicine she was initially going to prescribe him.

"I'll prescribe you something that will help with the pain you're experiencing from the immune response. It's an antihistamine and an expectorant. Take this three times a day, two after each meal. And this one..."

Young-Joon was a little embarrassed as he watched Song Ji-Hyun prescribe the medicine like an expert. While he was reflecting on how he interfered so presumptuously, the old man took the medicine and walked out.

"Have a great day."

It was just Song Ji-Hyun and Young-Joon left in the pharmacy again.

"You, a stem cell major, knew so much about probiotics, but you don't know so much about new synthetic drugs like Tamiflu." Song Ji-Hyun snickered.

"I'm no good at chemistry." Young-Joon also chuckled.

"You only do bio, then."

"Yes."

"New biological drugs. It has huge potential."

"Really?"

"Of course. The bio-industry will turn the pharmaceutical market upside down." magic

"Hey. I've heard things like that ever since I was in high school, and it's been four years since I got my doctorate."

"The future has just yet to come. Hm, I wonder why?" Song Ji-Hyun asked with her arm on the counter and her chin resting on her hand.

"Our principal scientist said that it's because there hasn't been a revolutionary genius in the biology field."

"A revolutionary genius?" Young-Joon tilted his head in confusion.

"Yes. There were amazing biologists, but there were no geniuses who broke through all the frustrating problems in the field and brought out the potential. Someone like Einstein," Song Ji-Hyun replied. "What's the point of us

scientists at pharmaceutical companies making flu vaccines every year? The flu virus evolves every year, making the previous vaccines useless.”

“That’s true.” Young-Joon agreed.

“Did you know? Theoretically, we could eradicate the flu with the current flu vaccine,” Song Ji-Hyun said.

Young-Joon nodded his head.

“If we had enough vaccines and manpower,” Young-Joon replied.

If seven billion people, the entire world’s population, got the flu vaccine all at once, the flu virus would not be able to infect anyone as everyone would be resistant to it. Viruses could only replicate by infecting people, but what would happen if they had no one to infect?

Extinction.

Just like how the African Black Rhinoceros were wiped out, all populations of the Flu A virus would disappear from the Earth forever.

But why were new vaccines made and administered every year?

It was because seven billion people could not get vaccinated all at once. For example, if people began to vaccinate people in Asia after vaccinating people in the Americas with the newly developed vaccine, the flu virus in Europe would have already evolved. The vaccine wouldn’t work on the newly-evolved virus, so by the time they finished vaccinating Asia and starting in Europe, the new flu virus would begin to circulate in the Americas.

Simply put, the reason why humanity could not eradicate the flu virus was because the speed at which the virus evolved was much faster than the speed at which people got vaccinated.

“We need a solution that addresses the root of the problem,” Song Ji-Hyun said.

“Maybe an ingenious biologist will show up and revolutionize the concept of vaccines. Eradicate the flu just like that or something.”

Song Ji-Hyun’s eyes sparkled in excitement.

“Eradication of the flu...” Young-Joon said.

“Like how humanity eradicated smallpox and anthrax a long time ago.”[1]

‘Should I open something about the flu in Rosaline’s status window?’

“Oh, right. What pharmaceutical company do you work for? Can I ask?” Song Ji-Hyun said to Young-Joon.

“What about you?”

“It’s a company called Celligener.”

‘Just what I thought.’

Celligener was a small venture pharmaceutical company that only had about thirty people. People in the industry were shocked because they created an amazing treatment for liver cancer that passed stage one of clinical trials. Of course, Kim Hyun-Taek was one of the people who were shocked, and he had somehow made Celligener’s management do what he wanted and bought the drug.

“The drug A-Gen took from you. Was it a new drug for liver cancer?” Young-Joon asked.

“Oh? How do you know?”

Song Ji-Hyun’s eyes widened. She said, “We worked really hard to develop that drug. But A-Gen took it and destroyed it.”

“ ... ”

“At first, we thought A-Gen was going to develop it and use it. We thought they would do it better than us because they have more experience and have a good production pipeline. Although, there was also pressure from A-Gen’s management, and money problems, too,” Song Ji-Hyun said. “We were naive. A-Gen bought that drug to destroy it. If we knew that, we would’ve done anything to stop our company from selling it.”

“ ...I see.”

Song Ji-Hyun thought for a moment with a reminiscing look on her face, then said, "Phew. I can't believe I'm talking about something like this with a stranger. I'm sorry, it was stupid."

She chuckled.

"No, it's alright," Young-Joon replied.

"So what about you? Where do you work?"

"..."

Young-Joon could not answer. How could he just say that he goes to A-Gen in this situation? Even worse, he was the one who was responsible for the liver cancer drug; it all started with him giving management a report that a new competitive drug was developed. Should he talk about cursing at Kim Hyun-Taek and getting transferred... That whole ordeal?

Young-Joon couldn't open his mouth.

The fact that Celligener was a small company with about thirty people but still developed such an amazing anticancer drug suggested that most of the people there would have worked extremely hard to create it. And Song Ji-Hyun would have been one of them.

"Where is it? Hm?"

"Um... Actually..."

Just as Young-Joon was about to tell her, the pharmacy doors swung open, and a bunch of patients came in. There were four old women who had come down together after visiting the internal medicine department above.

"Wow, the pharmacist here changed to a young lady."

"Whatever happened to the one before?"

They all rushed over to the counter and pushed their prescriptions toward Song Ji-Hyun all at once.

"Just one moment. I'll make each one in order."

Song Ji-Hyun took all the papers and went into the production room.

Young-Joon had already left the pharmacy when Song Ji-Hyun was done making the patient's cold medicine.

* * *

Bzzz!

Young-Joon's phone rang on his way out of the pharmacy. A new article about the issues he had set notifications for sent him a message.

[The seasonal flu is going around. Vaccination...]

Young-Joon only read the first sentence of the article on the preview screen, but he remembered what happened at the pharmacy a little while ago.

'What if I cure the flu?'

Young-Joon remembered how much money the inventor of Tamiflu made.

After returning home, Young-Joon turned on Rosaline's status window straight away.

"I want to cure Flu A," He said.

[Microworld Focus: Would you like to gain insight into Influenza A? You have the following choices:

1. Biological mechanism of flu infection. (Fitness consumption rate: 0.05/second)
2. Cure for Influenza A. (Fitness consumption: 0.9)
3. Strategy for eradicating Influenza A. (Fitness consumption: 1.5)

'What?'

Young-Joon's eyes widened.

'Eradication?'

Young-Joon thought for a bit. Even if he selected the third option, there was a high chance that it would be something that he was incapable of doing. He

didn't have to use fitness on the first option because he could find that information by searching it on the internet.

'Should I go with the second option?'

However, he was too curious about the strategy to eradicate the flu. And his fitness was recovering 0.1 every half an hour. If things didn't work out, all he would have to do was save some fitness without using it for an afternoon or so.

After giving it some thought, Young-Joon selected the third option.

1. Anthrax isn't really eradicated in real life. ?