

I Can Meet with Dead Scientists #Chapter 49 - 47: Calling Reinforcements! - Read I Can Meet with Dead Scientists Chapter 49 - 47: Calling Reinforcements!

Chapter 49: Chapter 47: Calling Reinforcements!

After completing the laboratory application form, Xu Yun no longer disturbed Tian Liangwei and found an excuse to leave the Medical Center.

The approval and filing of the drug chemistry laboratory generally takes 7-15 working days, counting weekends, it's almost two weeks. But with the intervention of an academician-level boss like Tian Liangwei, it's estimated to be completed in three to four days.

As for the funds, they would be transferred to a card set up in the School of Life Sciences' public account, and Xu Yun would need to list the expenditure items when withdrawing, and it would be subject to regular audits.

If it were a normal doctoral advisor, the process would be much more relaxed, with some even directly transferred to a card with the project group's name, which is actually a private account, giving rise to many dark sides.

All right, back to the point.

What Xu Yun needed to overcome this time was the binding barrier of the fourth-generation of imidacloprid, a very complex process.

Therefore, in addition to the experimental site, there was an indispensable core element that needed to be resolved:

That is researchers!

It's true that Xu Yun is a top student, but even the most talented person needs a helping hand. In many cases, the two are complementary.

Like Little Niu has John Conduit, Einstein had Shirley Wright, Dirac had Tiraji Reddy, Meledi has Jacqueline and a convertible, etc...

Although there is an aura of mystery, whether Xu Yun wants to do pure research or venture into entrepreneurship in the future, he will definitely need some strong helpers for assistance.

Long term it has been so, and it is naturally the same now; solo ventures are simply too unrealistic.

As for the candidates for this experiment...

Xu Yun already had a few target candidates in mind.

Getting some help was simple, just call a few graduate juniors to lend a hand. Research on biological agents has always been a big direction, and many people never get the chance to conduct related experiments.

Afterwards, everyone could have a meal costing them around four or five hundred each, and if there are any technical breakthroughs, give a small red packet, I'm sure many current students would be willing to sign up.

After all, Xu Yun's application had Tian Liangwei's supplementary quota attached to it, which could be considered a good project on one's resume. For those who are a bit shameless, they might even claim it as a national-level project on their CV.

Besides the task-handling assistants, Xu Yun also planned to find a strong partner.

Thinking of this, Xu Yun couldn't help but stop in his tracks, casually finding a quieter corner, dialing a phone number.

"Ring ring ring——"

A moment later, a male voice came from the other end of the phone:

"Hello? Old Xu?"

"Yeah, it's me."

"What's up? I'm at the badminton court with a junior sister."

"Old fiery bone soup, my treat, want to come?"

"...okok, give me fifteen minutes! See you at the South District entrance!"

"...."

After hanging up the phone, Xu Yun couldn't help but shake his head:

"This guy..."

Then he tucked the phone back into his pocket and turned to head towards the South District.

About twelve or thirteen minutes later, when Xu Yun arrived at the South District entrance, a loud voice suddenly called from behind him:

"Old Xu! Old Xu!"

Xu Yun looked over, only to see a man with a buzz cut waving at him from a distance.

This man was about twenty-seven or twenty-eight years old, with the collar of his sportswear slightly open, shirt sleeves rolled up to midway on his arms, sporting a short hairstyle, a square face, distinct brows, and a somewhat handsome face, but still not as good-looking as many of the readers.

This person was Xu Yun's close friend, also a Ph.D. student in the School of Life Sciences, Qiu Sheng.

Hearing Qiu Sheng's greeting, Xu Yun waved at him and quickly walked over, curiously glancing behind him:

"Old Qiu, weren't you playing badminton with a junior sister? How come I don't see the racket or the junior sister?"

Qiu Sheng jogged over, already a bit sweaty, shaking his shirt collar as he said:

"I had the junior sister take the racket back to the dorm. Hey, Old Xu, you weren't joking, were you? Really treating?"

"...."

Xu Yun silently glanced at this guy, sighed wearily:

"Real treat! Let's go!"

Old Fiery Bone Soup is known as one of the most famous snack bars near Ke Da.

It's a Hu cuisine restaurant, the owner is very enthusiastic, the prices are quite friendly, fifty bucks per person will do the trick.

Plus, if you secretly present your USTC One Card when paying, the owner will give you an 0.85 discount on the computer.

Many Ke Da people jokingly call Old Fiery Bone Soup near South District the single force challenging the entire snack street at the West District East Gate.

The restaurant door of Old Fiery Bone Soup is at the intersection of Tongcheng South Road and Shangpai Road. Xu Yun and Qiu Sheng walked for about a little over ten minutes to reach the entrance.

"Boss, one pot of bone soup, one Neptune vermicelli pot and one Oxford beef, and also some pickled cucumbers!"

Upon entering, Xu Yun skilfully ordered a few dishes, walked over to the drink cabinet to grab four cans of Budweiser, came back to the table, and opened them with a click:

"No Huiquan, just make do with Budweiser."

Both Xu Yun and Qiu Sheng are from Min Province and have liked drinking Huiquan beer since childhood. However, after coming to Lu Prefecture for studies, the chances to see hometown beer became much less, usually only Snowland or Budweiser.

The kind of restaurant specifically catering to campus gatherings serve food quickly, and within a few minutes, the dishes Xu Yun ordered were served.

After the food was served, Qiu Sheng first took a soup spoon, stirred the pot that was still heating, then picked up a small piece of cucumber, crunched it, and asked:

"Old Xu, spill it, what's the deal?"

Xu Yun smiled as he looked at him, joking:

"Why, can't it be that I hit the jackpot and got rich, inviting you for a nice meal?"

Qiu Sheng snorted, disdainfully said:

"With your face from Africa? Three numbers and you can see the black moon, only a ghost would believe you won a prize. Alright, alright, hurry and spill it, or I can't even enjoy my meal."

Seeing this, Xu Yun no longer joked, cleared his throat tactically, and recounted in detail his meeting with Tian Liangwei:

"...That's about it, the teacher has already submitted the application, and the research group will be formed in about three days."

Qiu Sheng nibbled on a bone, slurping the marrow, giving him a surprised look after listening:

"Alright, kid, how did you think of putting transition metals in there?"

Pheromones contain olefins, if you can cyclize that CH₃ directionally...

Wow, there might really be something there!"

Xu Yun took a sip of Budweiser and said:

"What's up, willing to help your buddy out?"

You're more familiar with directing group assistance than me; if it works out, I'll give you second author on the paper."

Second author, as the name implies, is the second most important author after the first or corresponding author in a paper.

Qiu Sheng, whom Xu Yun had known since high school, was a genius who entered the young class at the first attempt. During a time when Xu Yun only recalled sparse memories of his previous life, Qiu Sheng helped him out a lot when he was at his lowest.

Xu Yun later succeeded in transitioning to the tea industry, thanks in part to the contacts introduced and funds lent by Qiu Sheng.

In this project, Xu Yun would be responsible for the main research tasks, meaning he had to be the first author himself, and Tian Liangwei would definitely be the corresponding author, leaving Qiu Sheng with only the option of second author.

Qiu Sheng didn't seem too concerned about this, hesitated only a little before saying:

"Alright, but you'll need to give me a couple more days, I've got a project here that's wrapping up, I'll try to make a trip to the lab next week and aim to wrap it up by Thursday."

Xu Yun nodded, gladly agreeing:

"No problem, my matter is not that urgent, a few days is acceptable."

Qiu Sheng took another bite of the meat bone, chuckling:

"Tsk tsk, if the fourth-generation imidacloprid can be accomplished, maybe it can get into PLOSOne, although the page fee for that isn't cheap, \$1400 USD, and you can't apply for a discount domestically. I suggest you check with Director Tian at the end if the academy can reimburse that part of the money..."

Looking at Qiu Sheng, talking so passionately, Xu Yun couldn't help but slightly shake his head inwardly.

Oh Qiu, you've got it wrong, my target is definitely not to publish in water journals like PLOSOne.

After all, what I'm really researching this time is not the fourth-generation imidacloprid, but the fifth generation...

Chapter 50: Zhang 48: The research team starts working!

Five days later.

USTC Medical Center Building, a drug chemistry laboratory on the fourth floor.

At this moment, Xu Yun was wearing a cotton lab coat, standing at the workbench, with six men and women of varying heights standing in front of him.

"Since everyone is here, I'll just say a few words."

Xu Yun waved a stack of bound documents in his hand, his gaze quickly sweeping over the people in front of him:

"Yesterday morning, I received the project initiation receipt. Now, we have results for procedures, venue, and personnel, so our research group is established.

Our research group doesn't have a supervisor leading it; I'm the applicant and the person chiefly responsible. The lab usage period is two weeks, and the participation records will be noted in your files. Whether there's a result or not, it can count as a commendable credential, which should help all of you to some extent in the future."

Upon hearing this, two of the six people in front of him instantly showed an uncontrollable hint of delight on their faces.

As a member of C9, USTC's annual research funding is about a hundred billion, ranking domestically around ninth or tenth.

Although this number seems large, after deducting projects like 973 Program, 863 Program, National Science and Technology Support Program, and International Science and Technology Cooperation and Exchange Special Program, the funding and spots allocated to each department are far less than they appear.

Then, after being divided by some big shots, there is funding left, but not many high-quality project slots.

Many graduate students toil away for one or two semesters and still may not touch the edge of major projects, silently used by their supervisors like a donkey.

Thus, when Xu Yun came with Tian Liangwei's subsidiary project initiation slip, several struggling graduate students immediately nodded with excitement, their vibration frequency like a massager, almost needing Xu Yun to say that Huaxia People don't deceive Huaxia People.

To put it bluntly, participating in such a level of project group, regardless of the end result, one can ask for at least an additional five hundred yuan a month when reporting pay after graduation!

Then Xu Yun paused and continued:

"The goal of our project is quite simple—to try synthesizing pheromones and third-generation imidacloprid into a new substance, to verify and explore the direction of fourth-generation imidacloprid. The ultimate goal is..."

As soon as the words fell, several juniors and seniors shouted in unison:

"Exterminate cockroaches!"

After saying this, everyone laughed joyfully.

In the laughter, a girl with short hair raised her hand, looking curiously at Xu Yun and asked:

"Senior, why do you have such a big grudge against cockroaches?"

Xu Yun lightly glanced at her; this girl was named Tang Yiqiu, an undergraduate senior with good grades and reputation:

"...To me, it's a sad story, but if spoken out it would make you very happy, so I refuse to answer."

Finishing, he waved the documents in his hand, the paper rattling in the air:

"Okay, that's enough chit-chat. We have limited time. Everyone check your gas masks and organic vapor filter cartridges. Wear your protective gowns; we'll start the experiment in fifteen minutes!"

Then he gave Qiu Sheng a look:

"Old Qiu, check the machines and circuit breaker, I'll go distribute the materials."

Qiu Sheng nodded:

"Understood."

Fifteen minutes later, everything was ready.

The main experimental reagents for Xu Yun and others this time were 2-phenylpyridine, 4-hydroxymethylphenylboronic acid, 2-naphthylboronic acid, 3-furanboronic acid, 3-benzothiophene boronic acid, N-phenylpyrazole, benzoquinoline, $[\text{Ru}(\text{p-cymene})_2\text{Cl}_2]_2$, etc.

Moreover, there were over thirty reagents including 2-bromopyridine, 2-bromo-4-chloropyridine, THF, DMF (N, N-dimethylformamide), DMSO, 1,4-dioxane, et cetera (specifically written in the author's words).

Meanwhile, the others also took position in their respective spots.

"To combine pheromone with imidacloprid, the first step is to cyclize CH₃. I plan to complete this via the hydrogenation reaction of epoxide end alkynes and 1-bromo-2-pentyne coupling."

At the workbench, Xu Yun expressed his thoughts while addressing one of the underlings...oops, juniors:

"Li Yi, this task is yours."

"Understood!"

The Li Yi Xu Yun mentioned was a graduate student, 24 years old, with a crew cut, and he immediately began the operation upon hearing.

Meanwhile, Xu Yun looked at Tang Yiqiu:

"Xiaotang, you track and attempt to capture the optically active fragment of epoxide sulfonate!"

"Understood!"

It is well-known.

Under the catalysis of L-(+)-diisopropyl tartrate and tetra-isopropyl titanate, allyl alcohol undergoes Sharpless asymmetric epoxidation, yielding (2S, 3R)-2,3-epoxy-1-tetradecane alcohol.

Epoxy alcohol (2S, 3R)-9, after p-toluenesulfonylation and perchloric acid ring-opening, flips the absolute configuration of the 3-carbon atom from R to S, yielding (2S, 3S)-p-toluenesulfonic acid 2,3-dihydroxy-1-tetradecane alcohol ester; then, after potassium carbonate cyclization and p-toluenesulfonylation, it further yields (2S, 3S)-p-toluenesulfonic acid 1,2-epoxide 3-tetradecane alcohol ester, with a yield of up to 89%.

Very simple, and very easy to understand.

A few minutes later, Tang Yiqiu raised her hand again, but this time she didn't ask about why Xu Yun wants to exterminate cockroaches:

"Senior, we've captured the epoxide sulfonate!"

"Great, what's the ee value?"

"Still measuring.....epoxy alcohol and dinitrobenzoyl chloride are still reacting...oh, it's out, 93%!"

Upon hearing this, Xu Yun couldn't help but let out a breath.

The so-called ee value refers to enantiomeric excess; the theoretical ee value of chiral epoxide sulfonate is 90%. Xiaotang measured 93%, which is above the standard line, currently marking a successful small step.

After synthesizing the critical optical active intermediate, the next step is the asymmetric synthesis of targeted pheromones.

This step involves reacting epoxide sulfonate with trimethylsilyl acetylene, undergoing epoxide ring-opening, and after potassium carbonate treatment, cyclizing and de-TMS, yielding (4S, 5R)-4,5-epoxy-1-hexadecene alkyne, with a yield of.....

60%.

That's right, first step 89%, second step 60%.

Almost halved the yield.

This is a very common situation in biochemistry; the yield gets lower as it goes forward, from 90% to 60%, then continuing to 30%.

Through seven or eight cycles, very abnormal compounds might have single-digit yields.

That's why research is money-consuming—Xu Yun and his group spent at least 1000 yuan in the first ten minutes, including machine wear, a whole Alliance Leader.

The preparation of 5-epoxy-1-hexadecene alkyne went smoothly, and just when Xu Yun and others were about to proceed to the next step...

Another graduate student responsible for nucleophilic substitution suddenly let out an "ah", sighing:

"Senior, the nucleophilic substitution reaction failed..."