

CHAPTER FIVE

I THOUGHT MY LITTLE TANTRUM MIGHT BACKFIRE, BUT LATER that evening I got a call from Ms. Greene. Her tone was very formal. "Mr. Yanakakis, we've arranged for a car to pick you up at eight A.M. and take you to the Progeria Institute. The director has been informed you're part of a program for exceptional high school students with an interest in medicine."

I frowned. "And he's fine with that?"

She cleared her throat. "I implied that YK was rather vested in the program, and that further funding might be related to this visit going well, so . . . yes. He's fine with that. I told him your name was EJ."

My initials. *Elijah John*. Clever. "Do I have a last name?"

"Smith."

Not so clever. "What kind of stuff does he expect me to ask?"

She began talking faster, as if she had a million things

to do and wanted to get the call over with. "Take a notebook. Make a show of writing information in it. And just ask whatever it is that you want to know. This is your game. Play it as you wish. You're simply on a tour of the facility. Stick to my plan and I highly doubt anyone will suspect who you really are."

"Thank you." I felt a little bad about my attitude earlier in the day. "I appreciate you arranging this so quickly."

She let out a harsh little breath. "You were quite clear about your wishes when you were in my office."

There was no point in me making an enemy of her. "Still," I said, "I appreciate your quick work. So . . . thank you. Again."

"Of course." Her tone had softened, but only slightly. "Please let me know if I can do anything else for you."

In the morning after my run and shower, I went into my huge closet and looked at all the clothes hanging there. After so many years of wearing the same sweatpants and T-shirts, choosing clothes to wear every day was still something I hadn't gotten used to. Hanging around the house made for easy choices, but what would an exceptional high school student wear?

I put on a black T-shirt, and then pulled a gray cashmere V-neck sweater over it. I'd seen Eddy wear a similar look one day, which is why I'd chosen the clothes during one of the online shopping sessions.

I ended up getting a bunch of clothes that were like some of his. Maybe it was because I liked them, but there was also another reason. Eddy just seemed to know what to wear,

how to act, who to be. And even if I had ever known all that, I'd been out of the game for six years. So I kind of figured copying him would be a sure thing.

Then I grabbed some jeans and socks, slipped on a pair of low black Chuck Taylors. I stood in front of the mirror. Exceptional high school student?

I shrugged. Maybe.

Teenage son of a billionaire?

I smiled. Obviously.

I had a quick breakfast of coffee and a banana. No one else was up besides Els.

As promised, a black sedan pulled in our gate at eight. There was a light drizzle so I jogged to the car, holding a leather journal and a pen in one hand. The driver was older, about fifty, with gray hair. He had just opened the back door on the passenger side when Lee showed up, putting himself between me and the car. Lee shut the door and turned to me. "I'll take you in the SUV."

I froze. "Why? This has all been arranged."

Lee shrugged a bit. "Orders from your mother."

The night before I'd told Mom about the whole thing. My shoulders slumped. No wonder she'd been so okay with it. She'd already been making plans to make sure she would be in control. "Fine."

I headed over to the SUV and got in the front. I brushed a bit of rain off my face, and fastened my seat belt. Lee must have figured I was pissed off, because he didn't try to start a conversation the entire ride.

I found it strange to be alone, none of my family with

me. Rain started hitting the car window as we headed over the Hadley Memorial Bridge, a long floating bridge that connected Mercer Island to Seattle. Westbound, it ran parallel to the eastbound Murrow Memorial Bridge. At that time of the morning, the lanes were full of commuter traffic. The Progeria Institute was almost to Olympia, and rush hour slowed us down the entire way. I wondered whether Ms. Greene had scheduled the early appointment on purpose.

Finally, we drove through the gate of a complex of red-brick buildings, all surrounded by high metal fences with ornamental, yet deadly looking, spikes on top.

Lee took me all the way to the first building, and stopped at the end of a short sidewalk that led to a large set of glass doors. "Thanks," I said, and reached for the door.

He held up his hand. "Hold on." Then he got out, walked around to my side, and opened the door for me.

I dropped to the ground. "You're not going in with me. I don't care what my mom told you, but you will totally blow my cover if anyone sees you hulking beside me." I swallowed. "No offense."

"None taken." He looked around at all the obvious security measures, then handed me a cell phone.

"What's this?" I asked.

"Your mother asked me to give it to you. Untraceable. I'm number two on speed dial."

I started to ask who was #1, then realized I didn't need to. I turned the phone over and looked at the screen. My first cell phone.

Eddy had one already, of course. What teenager didn't have a cell phone? He stayed in contact with his friends in Hawaii, I knew that. Sometimes it bugged me, and I'd thought about asking for a cell phone, but who was there for me to call?

Still, I felt a little thrill as I slipped it in the front pocket of my jeans.

"You've got an hour. Then I come looking for you." He got back in the SUV and didn't take his eyes off me.

I headed toward the front doors, which automatically swooshed opened before I got there, and I stepped inside. The floors and walls were white, and the place looked like a hospital. A short, stocky man with a graying, receding hairline came toward me. He wore a white lab jacket and black pants, and held out his hand. "I'm Dr. James Barkley." He had a slight accent, which I couldn't place.

I shook his hand. "Pleased to meet you. I'm—"

"EJ. Ms. Greene told me all about you. Perfect SAT scores at fifteen!"

What? Ms. Greene had certainly taken liberties with the truth in order to make me *sound* exceptional. I hadn't even taken the SATs, and was fairly sure I wouldn't get a perfect score when I did.

"Amazing." He smiled.

"I guess so." I hoped there wouldn't be any more surprises courtesy of Ms. Greene.

"I'm so glad to have you here on behalf of YK." He held out an arm. "This way, please."

We walked down a brightly lit hallway filled with closed

doors. It felt so familiar, so similar to the Compound that I shuddered slightly, and found myself relieved as I passed each door and found that none were painted yellow.

He stopped in front of one near the end of the hallway and opened it, then ushered me inside, where several people in white lab coats and plastic goggles stood over trays of test tubes. Some held eyedroppers and methodically added something to the test tubes. Others seemed to be recording data on laptops as the others worked.

Dr. Barkley spoke quietly. "This is one of our many labs. Research is where most of the funding goes."

"You're working on a cure then?" To complete the picture, I opened my journal and jotted something down.

He smiled. "That's the main goal. But just isolating data related to aging and the disease . . . that can be a victory, too." He lowered his voice even more. "Some years ago we had a fire that destroyed most of our research. We were so grateful to Mr. Yanakakis. He gave us enough funding to start over again. Although we'd lost so much, at least we were able to keep going."

My face had gotten hot as he talked about my father. Was I so sensitive that I couldn't stand to hear anyone speak about him?

No. I just couldn't stand to hear anyone talk about him, as if he were anything but what he had been: a madman. The thought of even admitting to anyone that I was his son . . .

I turned back toward the door. "Is that it? Just research?" My tone must have been a bit brusque, because

Dr. Barkley's smile wavered. "I can show you our therapy section."

I didn't know what that was, but I nodded. I wanted to get out of that lab that reminded me so much of my father. And my former life.

He led me down a hallway and outside. We dodged raindrops as we walked across a cobblestone road to another building. After a short hallway, he opened a set of double doors and we entered a glass-domed room, so high over my head I couldn't help but turn my focus upward. Plants were everywhere, and colorful butterflies flitted overhead. A large sparkling pool took up a major portion of the space, the rest of which was covered with grassy walkways and benches.

"This is amazing."

Dr. Barkley glanced at his watch. "Our first children should be arriving in a little while."

"What is this place?" I asked.

Instead of answering, he motioned to a nearby cushioned bench. As soon as I sat down next to him, the phone in my pocket felt too bulky and uncomfortable, so I took it out and set it on the bench beside me.

He asked, "Do you know anything about progeria?" I shrugged. "Just what I read in the prospectus."

"Well, these kids aren't going to recover. It's not like other childhood afflictions that they have the hope of leaving behind them as they grow up." He pulled out a YK tablet from the deep pocket of his lab coat and swiped a finger across it. "Do you mind?" he asked. "I find it much easier to make all this clear if I start from the beginning."

"Not at all," I said. "It's a really fascinating disease." I quickly backtracked. "I mean . . . not to make light of anything, I just—"

"I understand completely." Dr. Barkley set a hand on my arm. "Progeria is *fascinating*. And mysterious. Which is why I've dedicated my life to it." He held out his computer so I could see a photo of a newborn.

Dr. Barkley said, "Progeria is extremely rare, and only affects one in eight million newborns worldwide." He pointed at the photo. "As newborns, children with progeria appear normal. But . . ." He tapped the screen and the photo switched to one of an older baby. "Within a year, their growth rate slows. Soon they are much shorter and weigh less than others their age." Again he tapped, and the photo of a boy, maybe five or so, in a navy-blue sweat suit, appeared. He was bald, with a pinched nose and wrinkled skin that looked very aged. While his head looked very large, the face and jaw seemed very small, too small for the size of his head.

Dr. Barkley said, "These children are of normal intelligence, but their appearance is very distinct."

I asked, "Are there other symptoms? Besides the ones you can see, I mean."

He pointed at the picture. "They typically have symptoms that you would normally only see in much older people. Stiff joints, hip dislocations, cardiovascular disease."

"Heart disease?" I asked. "Like heart attacks?"

He nodded. "Some children with progeria undergo

coronary bypass surgery. But it's just for more time, really. On average, most die around age thirteen. Usually from a heart attack or stroke."

I looked away, at the glistening pool. I couldn't imagine knowing you would die at such a young age. "And there's nothing you can do?"

He motioned at the pool. "Hydrotherapy seems to help a little with the stiff joints, much like it helps senior citizens."

It seemed so sad to me, that they couldn't do more for the children. Or prevent it from happening in the first place. "Can't they test for the disease?"

Dr. Barkley nodded. "Yes. But first let me explain how the disease works." He swiped a finger across the computer screen, and a diagram popped up of the cross-section of a cell. "There's a cellular protein known as Lamin A, which is encoded by the LMNA gene. Lamin A helps maintain the structure of the nucleus, which of course contains all the genetic information. Progerin is a mutated version of Lamin A, and it's what causes progeria to occur." He stopped for a moment and shook his head, as if in disbelief. "Twenty-five thousand base pairs of DNA make up the LMNA gene, but nearly all cases of progeria happen because of the substitution of just one base pair."

I said, "So that's why it's so rare."

He nodded. "The strange thing is, parents and siblings of children with progeria are almost never affected by the disease. Which means that the genetic mutation must occur

just prior to conception." He swiped across the screen until it was blank.

He held up a finger. "Now, this has all been around for quite some time. But what we discovered in our research about six years ago was this." He tapped and a diagram popped up of a tubular structure surrounded by what looked like small worms. "Here's a chromosome." He glanced down at the loafers on his feet, then over at my Converse. "Ah, good. Can I see your shoelaces?"

I nodded and crossed my legs, so that one of my shoes was right near my hand. Dr. Barkley reached out and pulled on my shoelace, untying it. He held the plastic tip at the end. "Do you know this has a name?"

I shrugged. "Um, plastic thing at the end of my shoelace?"

He smiled. "It's actually called an aglet." He dropped the shoelace and went back to the computer screen. He pointed at the tips of the chromosome. "Much like the ends of your shoelaces are bound by aglets, the ends of the chromosomes are bound by telomeres." He tapped again.

An animated video began, showing cell division. He said, "During cell division, those telomeres wear away. Eventually, they wear away so much that the cell stops dividing and dies. Our research has found that short or abnormal telomeres turn on the production of progerin, which, as we know, is related to cell damage caused by aging. Still with me?"

I nodded.

"As the telomeres shorten, the cell makes even more

progerin. But I wanted to know what was causing the production of the progerin."

"And did you figure it out?" I asked.

"In a way." He turned off his tablet and leaned back. He nodded. "As I was trying to answer this question, I stumbled upon something else. I had just figured out what I believed to be the gene that turns on aging." He didn't say anything else.

"That's amazing!" I said.

He looked down and sighed. "Yes, it could have been."

"What do you mean?"

"I was doing this on my own. Unfortunately, only I knew all my research. When my lab was destroyed in the fire . . . I had to start over." He smiled. "Which made YK such an absolute lifesaver. Mere weeks before the fire, I had applied for funding through YK. Starting over was bad enough, but starting over with all the funding we needed? Well, it lessened the sting a bit." He looked around, then raised a hand in the air. "All of this is what arose from the ashes of that fire. My research will get back to where it was. In the meantime, we do all the good we can."

Just then a door opened, and I heard the sound of a child giggling. A small bald boy came in through the glass door, wearing red surf shorts. He held the hand of a slim girl who looked about my age. Her dark hair was in a pixie cut, and she wore jeans and a long-sleeved Mariners tee. And she had the most beautiful brown eyes I'd ever seen. My heart sped up.

She saw Dr. Barkley, then smiled and waved.

Dr. Barkley took my arm. "Come. You can meet one of our patients."

The girl was watching me.

Trying to be as cool as possible, I stood up, took a large step, then immediately tripped on my untied shoelace and did a face-plant on the grass.