

Crisp(er) consequences

DECEMBER 2024



Dr. Kimberly Wells was the picture of a classic British female academic. At 38, she was not what one would call hot; she was cute but her attractiveness was muted by her sensible wardrobe of grey outfits and buttoned blouses. She had medium-length light brown hair that used to be blonde in her youth but had lost its shine, and blue eyes that would be pretty if not hidden behind glasses. She was polished but uptight, and had an air of serious dedication that bordered on dullness, a reputation she was well aware of but didn't seem to bother her. It wasn't that Kimberly didn't care for connection; she was simply more comfortable with controlled environments and predictable outcomes—qualities that also made her an exceptional researcher.

She was married with Alex, a British electronic engineer and had no kids.

She had grown up in a rather conservative family from Kent and lived in London since her college years. After so many years in the city, however, she was no stranger to diversity. Her students ranged across nationalities, with many hailing from Chinese expatriate backgrounds or second-generation Indian and Bangladeshi Londoners.

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One of Dr. Wells's students was Anaya Rahman, a young British undergrad of Bangladeshi descent with the nervous energy and determination of someone trying to succeed and blend in at all costs. Anaya was short, with thick black hair and pretty brown eyes. She was low-key cute but her insecurities hampered her natural charm. Intelligent and kind, Anaya was an easy target for teasing; the popular kids, mostly white but also Asian and Hispanic, at Imperial College targeted her and dismissed her as a try-hard, only increasing her determination to succeed and prove herself. Anaya simply accepted her place in society. She was a self-proclaimed geek who wore her nerdiness like a badge of honor and didn't do much to break out of the stereotype. She dreamt of one day making a significant contribution to genetics, of doing something that mattered, even if it meant enduring a bit of ridicule on the way.

Together, Kimberly and her students worked tirelessly on a project that used CRISPR technology to modify the DNA of patients to cure genetic diseases, possibly even life-threatening conditions. The device they were developing needed live testing, so they used a sample that would link a user's DNA with that of a subject.

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One afternoon, Dr. Kimberly Wells decided it was time to do a live demonstration of CRISPR's power for her students. She planned to modify a batch of human skin cells in vitro, visibly altering their pigmentation by switching DNA from one person to another. Searching for a volunteer, her gaze landed on Anaya, the timid student who lingered at the back of the group, watching with interest. Her darker skin tone would make the change even more visible.

"Anaya, would you like to help us out here?" Kimberly asked with a warm smile, encouraging the shy yet brilliant girl to step forward. Anaya hesitated, glancing nervously at her classmates, but nodded, barely meeting Kimberly's eye. She allowed Kimberly to take a small DNA sample, and they placed it in the device.

"Watch carefully," Kimberly instructed, her voice full of excitement as she guided Anaya through each step. "We'll be replacing my DNA with yours—see here? It should alter the pigmentation of these skin cells I have grown from a small sample of my own skin and show us just how fast DNA can overwrite traits, like skin color." As they initiated the modification, the batch of skin cells quickly darkened, taking on a rich brown hue. Anaya's eyes widened in wonder, as she watched her DNA override Kimberly's cells.

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"See that? Quite powerful, isn't it?" Kimberly said with a hint of pride, turning to her student. "Have a try!"

Encouraged, Anaya tried her hand, stepping up to the device. All the other students were staring at her with a mix of amusement and envy, and her nerves got the best of her. She fumbled with the controls, and suddenly, the machine emitted a small burst of energy, directing its focus on them both instead of the contained sample. Kimberly reacted first, switching off the power button. Startled, they jumped back as the machine powered down. Anaya's face paled, and she looked up at Kimberly, horrified. "I'm so sorry, Dr. Wells! I didn't mean to—". Some of the other students erupted in a laughter. Kimberly brushed it off, offering a reassuring smile. "Don't worry, Anaya. Lab accidents happen all the time. Besides, the good news is it could be much worse." She gave the girl's shoulder a comforting squeeze. "Fortunately, we were working with some in vitro cells, not with our own DNA!"

Anaya was extremely mortified but grateful for Kimberly's kindness. They had no idea that the machine had, indeed, altered their DNA. The professor tried to hide her concerns but that was a serious lack of safety measures. Hopefully, nobody would report her for her misconduct. After all, the responsibility was hers.

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Kimberly drove home after the demonstration, feeling a little off. When her husband, Alex, saw her, he was taken aback. He looked her over, raising an eyebrow. "Wow, trying out a new look, are we?" he asked, clearly amused. "I'm not complaining, but that's...unexpected."

Kimberly blinked, her confusion growing. "What do you mean?"

"Okay, I get it. This is because I never notice your haircuts, right?" Alex said with a chuckle. "I mean, you've got a tan—which, given the week we've had, I'm guessing you got from a salon. And the brown contacts! They're very convincing, actually."

Kimberly forced a laugh, even as a gnawing worry took root. "Oh, yes! Just thought I'd surprise you." She swallowed hard, trying to keep her voice steady. "Let me, uh, freshen up my makeup." She rushed to the bathroom, her mind racing. *No. No way. This couldn't be happening.* She closed the door and stared into the mirror. Her blue eyes were now a light brown. And her skin looked different too, she couldn't deny the warm brown tone spreading across her cheeks and arms. Anaya's genes were starting to show.

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Meanwhile, across town, Anaya lay on her bed, her stomach churning with worry. Ever since she'd left the lab, she'd felt off. Her skin seemed unnaturally pale, probably from the big scare, she thought. But it wouldn't go away. She stared at the ceiling, replaying the disastrous lab demonstration in her mind. She'd made a fool of herself, fumbled in front of everyone. Maybe she should cancel her plans, save herself the embarrassment, and sleep off the shame. A tear rolled down her cheek.

Her phone buzzed with a message from a friend: *"Can't wait to see you tonight! Party starts at 8!"* She hesitated, caught between happiness at the invitation and her urge to hide. It was rare for her to be invited to a party though.

Still feeling unsettled, she dragged herself to the bathroom to check her reflection before getting dressed. Staring back at her was a girl she barely recognized, her skin was far lighter than usual, just a bit tanned rather than brown. Her wide brown eyes were gone, replaced by exotic blue-green ones, and her cheekbones and jawline had taken on a more delicate shape. She looked mixed or even fully white. "Oh no!" Anaya whispered, her heart pounding. "I have Professor Wells's DNA! I'm... I'm turning into a younger version of her!"

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Anaya checked prof. Wells's website looking for her phone number and dialed it. After a few rings, she heard Kimberly's voice, professional as usual. "I'm sorry, I'm a bit busy right now" "Professor Wells, it's me, Anaya! Something terrible is happening! I think the device..." "Anaya! Are you noticing pigmentation changes too?" "Yes..." the girl replied, almost in tears. "I'm so sorry, Professor, I messed everything up and now you must have my complexion..." Anaya, don't mention it," Kimberly said firmly. "I was in charge. Now, where do you live? I need to come by and check on you."

Kimberly hung up and turned to her husband, clearly amused by her "new look." She muttered something about an emergency at the university before rushing out the door. As she drove, the changes progressed, her skin darkening to a deep brown hue and her hair turning black. Arriving at Anaya's building, she found the door to her flat slightly ajar and stepped inside. "Anaya?" she called, her voice echoing in the small space, sounding a little off. Anaya was hiding in the bathroom, unable to bring herself to face the professor. She felt guilty, afraid of what Kimberly would say, and terrified of how she now looked. When the two women finally came face-to-face, they froze. The South Asian woman sitting on the sofa looked like a stranger, only Kimberly's signature outfit made it possible to recognize her.

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"Professor Wells?" - she asked, her voice altered too. "Anaya?"

Kimberly's heart skipped as she realized how much her student had changed too. Her eyes were a light blue, her skin porcelain with a faint blush, her hair blonde, and her face softened and reshaped. "Oh my God, Anaya," Kimberly said, swallowing hard. "You're... you're white."

"How are you feeling?" The now brown-skinned professor reached out instinctively, touching Anaya's forehead, checking for any sign of fever or distress. Anaya looked away, her face flushing in embarrassment. "I feel fine now," Anaya replied, biting her lip. "But I'm... I'm so sorry, Professor. I didn't mean for this to happen. I feel terrible. I gave you my dark skin, and I stole yours I'm... fair and beautiful."

"That's irrelevant, Anaya," she said, dismissing her student's concerns. "The most important thing is that you're healthy and stable. We're lucky the change was quick enough to avoid major issues while our cells were in the middle of rewriting themselves." She paused. "The problem is that I did something really wrong and I might be radiated by the University. But that's also secondary." "Professor Wells, you should never pay for this! It was my mistake, not yours. You can't take the blame for me."

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Kimberly held up a hand, silencing her gently. "Anaya, listen to me. As your professor, I'm responsible. You only did what I asked. I'll deal with the university". Both women fell silent, the weight of their shared responsibility pressing heavily on them.

"So," Anaya began cautiously, "I got your DNA, and you got mine?" "Yes."

"And I look like... you did at my age, and vice versa?" Kimberly sighed. "Yeah, more or less. Our bone structure didn't change, but as far as soft tissue goes, yes." She paused, looking at Anaya with mild concern. "Do you have any medical conditions I should know about?"

"No... I'm healthy, just a bit short-sighted."

"Yeah, I noticed my glasses aren't sufficient anymore."

"Professor Wells, why is my hair blonde? I remember your hair was brown."

"I was blonde at your age," she replied, touching the black strands of her new hair. "It darkened as I got older." - the woman replied, realizing how ironic it was saying that since her hair was now jet black.

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Kimberly went to the bathroom to ring the dean and came back in a few minutes.

"Listen, I explained the situation to him. There are... implications. If word got out that a student at Imperial College was, well, 'whitewashed' as a result of a lab accident, the university's credibility would be irreparably damaged. After Brexit, we've already lost so many international students. If this leaked, we'd be a laughingstock. To avoid that, the university has agreed to offer you a substantial financial settlement on the condition that you don't sue or speak publicly about what happened. Additionally, you'll be issued a new student ID, under the name Ann Rayleigh. You would attend classes as... well, as a new student."

Anaya swallowed, processing the idea of living under a new identity. "Of course," she said quietly. "I'll accept it if it means I can protect you and the university. But... what about you?"

Kimberly looked down for a moment, then met Anaya's gaze. "Professor Kimberly Wells will be officially transferred to the University of Sydney." She smiled slightly, though there was a hint of sadness behind it. "Here, I'll begin a new role as Kutsiya Khan, a British-Bangladeshi geneticist. Not a professor though, just a researcher." "I'm sorry". "It's ok, it's a small price to pay."

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Kimberly had one more person to talk to, her husband. She came back home, looking nothing like herself anymore.

"Babe, I'm back home. There's something I need to tell you though. Please, don't freak out. There's been a lab accident, I'm fine but I... look different, I have the DNA of one of my students. I have been changing all day." - she told him, calling him by phone.

"Wow, ok. So that was no tan and contacts, earlier?"

"No. And I have changed more."

A moment later, she opened the front door, and Alex's jaw dropped. "Holy...! That's... that's insane! You look... fully Indian."

"Bengali," she corrected him, stepping inside. She explained the whole accident, sparing none of the details.

"Is there... any chance the device could swap you back?"

"The apparatus is being declared unsafe and decommissioned. I'm afraid this is it."

"It's alright. I'll support and love you, no matter what."

"Aww, Alex!" She smiled, feeling an unexpected warmth bubble up as he held her close.

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"But we need to be more open and closer now. From now on, please tell me everything, alright?" Alex said gently. Kimberly nodded. "Oh, and one more thing, this new persona you'll be should be different from you. We don't want anyone picking up that my 'new partner' has the same taste and personality as my ex-wife. It'd be too suspicious. And we might start from the looks."

Kimberly sighed "I guess you're right!". "What do you have in mind?"

Kimberly was reluctantly taken by Alex to a trendy beauty parlor she'd never have chosen on her own. She felt uncomfortable but she understood she needed to find a compromise to make her sudden change in looks palatable to her husband. She sat down in a cushy chair, watching her reflection as a young assistant draped a black robe over her shoulders. Meanwhile, Alex was talking to the beautician, a poised Asian woman in her 30s, who nodded at his suggestions, occasionally casting thoughtful glances in Kimberly's direction.

"Nothing too drastic, right?" - she asked the lady, nervous, when she came. She nodded, gently removed Kimberly's glasses, placing them to the side, and began by applying a skincare mask to her new brown skin.