Scenario Writing Champion

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Superbugged

The larvicide quadcopter drones zoomed like giant mosquitoes overhead. Sarah blocked out their high- pitched humming as she walked home. Suddenly, she felt a spray of larvicide on her face and grimaced. It must be from the drones as they flew over the city 24 hours a day spraying larvicide on water bodies and disease hotspots. Given the drastic climate change in previous decades which led to global warming and increased rainfall, the volume and frequency of insect-borne diseases like malaria, and other infectious diseases have tripled by 2060, spurring public health measures like the fumigating drones.

Sarah was sweating profusely under her “NuSkin” suit which fitted hermetically to her entire body like a latex second skin. She was itching from the heat and sweat trapped under her NuSkin. How she longed to scratch but she resisted as she might break her body protector and expose herself to the antibiotic-resistant disease-carrying bacteria in the air. She felt a tear which she could not wipe away seep between two skins and clenched her teeth. She inhaled the stale smell of rubber, the sickly menthol-perfumed antiseptic spray used to wash her NuSkin and the pungent larvicide and resisted the urge to puke.

Looking cautiously around her, she noticed that a few pedestrians were in Nu-Skins like her but the majority were in cheap, early-generation skin suits which were thick and cumbersome. Sarah shuddered. If she found her NuSkin a nuisance, it must be hellish for those who could only afford those cheap skin suits. Worse, a few scruffy-looking pedestrians in their seventies were only wearing flimsy, greying face-masks, with headscarves wrapped around their faces, bodies exposed to the disease-ridden atmosphere. She knew that their days were numbered.

Sarah kept her head down. Even though she knew they could not see her face, she could feel their eyes staring longingly at her NuSkin. She glanced away, guilty and confused. She had to endure this ‘guilt-trip’ whenever she commuted between home and university in the city centre. In the 2060 “post-antibiotic apocalypse” world she lived in, the income inequality

between the rich and poor did not just result in differing access to luxury goods. It determined one's survival rate and life-span by controlling access to medical care and health technology. The rich could afford NuSkins to protect themselves against 'Superbug' diseases and live in low density "disease-protected enclaves'' while the poor were left to fend for themselves in densely populated 'disease ghettos' with weak health care systems and little or no access to medical technology. These ghettos were heavily patrolled by surveillance officers to ensure that the unprotected, and often disgruntled, poor did not wander into the protected enclaves.

Sarah sighed. How she wished she was indoors, back home in her disease-safe enclave which her parents, both highly-paid researchers, could afford. Always wishing she was indoors.

Soon, Sarah reached her membrane-covered residential community. It was akin to living in a giant Nuskin bubble. "Home at last!" she thought happily. With gloved fingers, she grasped the medical clearance "green card" in her pocket and waved it at the guard who put her through a body scanner to check for Superbugs. He glanced at her suspiciously through the scuffed plexiglass of his goggles as he waved her through. Sarah walked through the revolving airlock doors into the pristine, infection-free foyer of her exclusive enclave and heaved a sigh of relief. It was a sterile oasis within a city riddled with antibiotic-resistant plagues.

Upon entering her apartment, she got into a "Quick Clean Capsule" and ripped off her NuSkin. Naked, she was enveloped in an antiseptic shower bath before getting into her sterilised clothes. Her heart leapt with joy as she embraced her younger sister Mia. Like other families in her neighbourhood, her parents worked from home and Mia was home-schooled by medically-cleared teachers and robot teacher-assistants. The family's food and groceries were screened for Superbugs and home delivered.

Mia hobbled towards Sarah in her microprocessor prosthetic legs. Sarah's throat constricted as she glanced at the amputated stumps on Mia's hands and feet. She remembered how Mia had caught septicaemia, a blood poisoning disease at birth in the hospital, which led to limb amputation and brain damage. There were no antibiotics then to treat the disease. By 2060, the city was better prepared for the fight against antibiotic resistant diseases with technological advances like NuSkin, disease-free residential enclaves and a strict public health system that enforced strict antibiotic treatment regimes, quarantine measures and health surveillance systems.

“Can you help me do my probiotic therapy?” Mia asked Sarah with pleading eyes. Sarah laughed and injected vials of genetically-engineered benign microbes into Mia’s arm. Mia squealed in delight as she watched the computer screen and saw the new, wriggly bacteria ‘battle’ with the existing bacteria in her body to reach an equilibrium state. “Why do they do that?” she asked, pointing to the tiny organisms growing extra heads and new limbs to fight off human medicine. Sarah paused and replied quietly, “I suppose the bacteria want to live too, as much as we do.” Such treatments, though expensive, signalled the city’s shift of focus from conquering infectious diseases to training the human immune system to live harmoniously with them.

“I spent the day studying soil samples from Mars to identify new bacteria. I am confident of creating new antibiotics to fight the superbugs”, Sarah’s father said excitedly. “If I succeed, we will be rich. We can move into a residential enclave with better health safety and more effective probiotic therapies.” he added. Sarah smiled weakly. She could imagine the pain of shifting home again and the increasing number of unsightly soil culture farms the city would have to produce to germinate the new bacteria.

“Ring!” the piercing sound of the medical alarm went off and broke the peaceful calm in the room. Sarah’s eyes shifted to the computer screen. To her horror, she saw three words “New Superbug Detected” emblazoned in large red lettering across the screen. This couldn’t be happening! Sarah thought to herself. The government authorities had checked each vial of probiotic bacterial concoction to ensure non-contamination.

Dad shouted, “Sarah! Quick! You have to bring Mia to the countryside where it is safe! The health authorities in the quarantine centre will kill her if her virus is antibiotic resistant. We have received government orders not to let any new antibiotic resistant virus spread! If there is a need to eliminate the host, the health authorities will not hesitate to kill.”

With lightning speed, Sarah grabbed Mia, and carried her into the “Quick Clean Capsule”. Within minutes, they were encased in their Nuskin suits. Mia sobbed hysterically as Sarah said goodbye to their panic stricken parents and ran out of the apartment.

Unfortunately, the health police were waiting outside their apartment block in black armoured NuSkin suits and assault rifles. Sarah broke into a run but was no match for the agile policemen. The policemen caught hold of Sarah and dragged Mia, screaming in horror, towards a quarantine van.

Through her angry tears, Sarah saw the policemen push Mia into the van. She knew that she could not let the police take Mia to the quarantine centre on her own. She was left with only one choice. Reaching into her pocket, she grabbed her old, rusty pen knife and with one swift move, slashed and ripped her artificial NuSkin apart at her arms. The policemen stood rooted to the ground and watched in horror as Sarah exposed her pale white skin in the moonlight with thick red blood oozing out of her slash wound.

"Quick! The older girl's wound is exposed! God knows what kind of resistant bugs have entered her. She has to be admitted into the quarantine centre together with the younger girl!" the police captain shouted to his teammates. Without hesitation, the police grabbed hold of Sarah and shoved her into the van. Sarah reached out for Mia and hugged her tightly as the van sped off. Their uncertain futures lay intertwined, bound by their love.

As the police brought Sarah and Mia to the quarantine centre, Sarah could not help but reflect on what society had become. Fifty years ago, while medical science was still developing, the overuse of and poor compliance with antibiotic treatment regimes led to large numbers of people succumbing to antibiotic resistant diseases. However, there was at least, joy in living – joy in living in mixed residential areas, in living in one's natural skin. However, by 2060, while rapid medical advances have stemmed the spread of infectious diseases, life had unfortunately become segregated and devoid of 'colour' and humanity.

There and then, she decided that she would devote her talents and efforts to developing more sustainable and humane public health systems in response to the spread of infectious diseases. This is the most urgent clarion call of this century- a duty she cannot ignore if only, given the chance to live.