

## Rejuvenation by R Brent Smith

[Jeff Bezos Invests in Anti-Aging Biotech Start-up Altos Labs \(marketrealist.com\)](#)

By Rachel Curry, September 7, 2021

*‘Bezos Expeditions—Jeff Bezos's investment office—has funded Altos Labs alongside Russian-Israeli venture capitalist Yuri Milner's foundation. Milner himself has talked about "rejuvenating" humans and other animals. Given Bezos's investment, he might be of the same dogma.’*

*‘In 2013, billionaire Google co-founder Larry Page announced a similar company called Calico Labs. To date, any progress that Calico has made is speculative, although the company has admitted it's dabbling in reprogramming as well. That means healthy competition for early-stage Altos Labs, which started with an idea but has quickly turned into a well-funded venture.’*

The knock on the door is forceful. There is a door bell but whoever it is at the door wants to send a message with their knock. It does. It immediately grabs the attention of Dr. Theodore Kingsley, interrupting his dinner, steaming and delicious after a long day in the lab. His heart jumps. The message in the knock is anything but friendly. Kingsley contemplates hiding or escaping through the back door. He is too slow. The unlocked front door opens and two men enter. They are big men, in business suits that strain to fit over their muscled forms. One, his head shaven, has a crooked nose, like a boxer. He is a stereotype of a tough guy, a mob enforcer. The other is young, full head of silky black hair, chiseled features, looks like he should be an action star in the movies. The doctor instantly understands what this is about. This is no random house invasion, but the consequence of his argument with Buford. Still sitting at his dinner table, the doctor has to clench to stop a sudden urge to urinate. He subconsciously grips his knife more tightly. He had hoped that he and Buford had just agreed to disagree but this interruption of his dinner indicates that Buford wants to impose his will. Kingsley had expected at worst, their disagreement would involve lawyers, not thugs. He expected men in suits, carrying briefcases, not hired muscle in suits with the ability to maim.

The two men walk slowly toward him, checking adjoining rooms for any unexpected visitors. They take up positions on either side of Kingsley. Sitting there, he feels small, child-like, in the presence of these two behemoths. The bald one reaches a beefy hand into the doctor's plate and extracts piece of meat. This is a clear signal that they are now in charge. Kingsley's dinner is no longer his. As the thug grinds the meat in his molars, he explains to Kingsley the reason for their visit. "Doc, you are messing with people who are used to having complete control. They *want* complete control of what you have. You agreed to it in the contract. We are here to remind you to honour your agreement."

Kingsley's head is spinning. The reality that he has suddenly been thrust into a surreal gangster movie has him confused and terrified. Why this? Why threats from goons? Surely there are legal means.... Then it comes to him. These hired brutes probably don't even know what the issue is. Lawyers would need to know what the details of the disagreement are. Buford would have to let them in on his secret. These goons will do his bidding without asking questions. He wonders what they will do to him. Perhaps a broken finger; bent the wrong way until it agonizingly snaps. Perhaps a beating. He imagines himself curled up into a tight ball on the floor while these two lay their pointy leather dress shoes into him. Perhaps a bullet to his kneecaps, crippling him forever. The bald thug helps himself to another piece of meat. Kingsley flinches slightly, mistaking the reach for the start of his imagined beating. The bald man grunts, "You are lucky today, Doc. No violence this time. This is just a warning. If you release any of the information covered in the agreement, there will be no messing around. The punishment will be brutal and permanent."

Kingsley was about to reveal to them Buford's secret. Entice them into his conspiracy in order to avoid the imagined beating. With the man's assurance that there would be no beating, he abandons this desperate ploy. Instead, he lies to them, "Okay. I get the message. I will stick to the terms of the agreement. Tell Buford that his secret is safe."

At that very moment William T. Buford III is in Davos, high in the Swiss Alps. He is there for the annual gathering of those who matter to the world. Those who are rich enough or politically powerful enough to change the world. But why change a system that gives you advantages; is making you rich beyond imagining. Why fix what isn't broken? Buford is attending fancy dinners, cocktail parties, meetings and conference presentations. Enjoying all the perks of being fabulously wealthy with his equally rich cronies. It is a place for the ultra-rich to pat themselves on the back for their specialness, for their superiority over mere humans. A place to bathe in their special status as apex humans.

At this annual conference, the rich and powerful are discussing the state of the world, and what their next steps should be. There are those who think they can make the world better by giving the ordinary man a bigger piece of the pie. Such altruistic dreams are not of interest to Buford. He and his close friends want more, a bigger share of the pie. In private, they laugh at such infantile altruistic ideas and plot ways to sabotage such efforts. These are men and women whose money is inherited, so-called old money, they cling to the old ways. They have an entitlement, raised on a class structure that sets them apart from the 'working man'. Their view of the world involves keeping the ordinary man just well enough off that he knows and accepts his place in the order of things. Keep him happy enough that he doesn't challenge the economic order that sees the sixty-three wealthiest families controlling more of the world's wealth than the poorest four billion people.

One seminar that morning is particularly well-attended. It is all about tax shelters to ensure that the bulk of one's estate goes to one's heirs rather than to the government. Billionaires tend to be old. It takes a lifetime to accumulate that sort of wealth. Ensuring that the government doesn't get its hands on their wealth upon their demise is of great interest to this group of old farts. Although in his mid-sixties, William T Buford does not attend this seminar. He has no intention of leaving this mortal coil any time soon. He intends to live a long, long life. He still has plenty of time later for estate planning, thanks to the medical miracles of that damn Kingsley. Buford checks the time, does a quick time zone conversion

and thinks, “Kingsley should have gotten the message by now. That should set him straight, get those ideas of sharing his treatments with others out of his head.”

Buford is enjoying this year’s gathering more than usual. He gets to show off the results of his investment in Kingsley’s magic potions. Despite being in his sixty-seventh year, Buford is feeling and looking like he is in his thirties, a man half his age. His old acquaintances are marvelling at the change in him, asking how he does it. Buford is coy, attributing it to diet, exercise and good genes. No one believes him. Buford is getting stares from the uber-billionaires, jealous of his sudden youth, wondering when their boys in the lab are going to provide them with a youth elixir.

The Davos meetings are also infested with journalists; there to record the proceedings and ask uncomfortable questions about wealth inequality, taxes, and political interference. One such journalist is Daniella (Dani) Holmes. She is at Davos to cover the event for a business journal. She knows many of the actors through past interactions and interviews. She interviewed Buford several times some years back when he rose up to be the tenth wealthiest person on the planet. At one of the formal dinners, she is sitting at a table reserved for journalists. Sitting across from her at a nearby table is Buford. She spots him but doesn’t recognize him. Something about the man is familiar and draws her attention. She can’t put her finger on it. She asks the colleague next to her, pointing with her knife. “Who is that man?”

The colleague gazes over to the next table and replies, “That’s William T Buford the Third. Life must be good when you are that rich. He looks ten years younger.”

She doesn’t believe the man at first, staring at Buford, trying to match this youthful countenance with the fifty-something man she interviewed so many years ago. The resemblance is there. “Good God. The man looks thirty years younger!” She says to her colleague, “I’ve got to get the name of the spa he goes to.” This is journalistic code for ‘there is a story here and I am going to dig into it’.

At that moment, a man approaches Buford. Obviously, a dear friend or business partner, Buford stands and gives the man a big hug. Buford’s movements are smooth and strong, not those of a man

who is nearly seventy. It doesn't go unnoticed by the sharp eye of our journalist. It is her nature to be inquisitive and suspicious. Buford has her spidey-sense tingling.

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In Kingsley's kitchen, the message has been delivered. The bald man turns toward the front door. "Come on, Eddie. I think the Doc here got the message." Eddie follows his cohort out the front door. As he closes the door, the bald thug calls through the opening, "Remember Doc, you don't want to see us again."

The latch on the door clicks. Kingsley gets up from his chair and steps quickly to the door and turns the lock. He stands there for several seconds, leaning against the door. His knees are shaking. His palms are wet. His shirt is soaked, now chilly in the arm pits. He curses. "So much for lawyers. Buford means business." Kingsley shakes his head and wonders how things got to this point. Sure, he never liked Buford as a person, but he was a useful dupe. Kingsley hadn't realized that in making the deal with Buford, he was making a deal with the devil. He was feeling the pointy end of that devil's pitchfork now. Kingsley gives a nervous laugh. It was all his fault for picking Buford in the first place. Maybe he should have done a little more research on the man before signing away his future to him. But he was desperate at the time...

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Coming out of graduate school some years earlier, Kingsley had his pick of interesting positions in biomedical research. Places where he could make his mark – demonstrate his genius and get the recognition he so desired. But life had a different plan for him.

Kingsley was raised by his grandmother. She took him in as a boy after his parents were killed in a car accident. She gave the boy love and encouragement. He became driven by the recognition his academic achievements earned him from his grandmother. She was so proud of him. She would tear up and say, "Your parents would be so proud of you too." This was what fired his soul. It was his fuel.

Upon graduation from post-graduate studies, about to light up the world of biomedical research, he hit an unexpected detour. His grandmother was suffering from a number of age-related illnesses, including worsening dementia. They could not afford to place her in a full-care facility so Kingsley decided to move in with his beloved granny and take care of her. In order to earn enough income for them to pay rent and buy food and meds, he took a job as a forensics expert with the local FBI branch. Caring for his grandmother gave him an education in the horrors of getting old, losing one's abilities, physical and mental, becoming as helpless as a baby. With his medical background, he watched how her systems slowly failed, causing new life-threatening conditions. Medication after medication was prescribed to her to cover over the failures, to give her back some semblance of a working system. It frustrated Kingsley to see his grandmother slowly wasting away while he could do nothing to change her trajectory. Death from old age can be a slow and terrible thing; better a stroke or heart attack to get the thing done. Kingsley's grandmother was a tough old woman and she hung on for years despite multiple age-related diseases. By the time she finally passed, it had been seven years since Kingsley had graduated.

It took Kingsley some months to get over his grandmother's death. It never occurred to him during this time that now free of his obligation, he could again pursue his goal of biomedical research. This realization came slowly but when it did, he submitted his resume to the finest research facilities, confident that his credentials would be instantly recognized and lucrative offers would come his way. But things move fast in the world of biomedical research. No one was interested in a stale resume, no matter how glowing it was in its time. There were plenty of freshly graduated researchers available who were trained in the latest techniques and discoveries. No offers came his way. Much to his dismay, Kingsley's dreams had passed him by. He was past his 'best before' date. No one was interested in a stale genius.

Kingsley was embittered by the experience, by the rejections. He knew that he still had the spark, still had the genius, but now no one would give him the time of day. Stuck in his situation, opportunity one day knocked.

*In 2012, Sauk Villeda et al. of Stanford University found that blood from young mice, infused into older mice, reversed some effects of aging in older mice. Learning and memory scores improved for the older mice. Something carried in the younger blood endowed 'youthfulness' on the older mice.*

*NewsScientist, August 13, 2022: by Chris Stokel-Walker: "Young mice age when given blood from older animals: Transfusing young mice with blood from older rodents triggers cellular aging, suggesting aging isn't all down to wear and tear. Irina Conboy at the University of California, Berkeley, and her team transfused blood between young mice, aged 3 months, and old mice, which were nearly 2 years old. Two weeks later, the young mice have an increased number of senescent cells, ones that are damaged and stop dividing but don't die. These cells accumulate as a normal part of aging, beginning after a few years of life in humans. Strength tests also revealed the young mice became weaker after receiving the older rodent's blood..."*

One night, an underachieving, disillusioned Kingsley was called out to an apparent suicide. A young woman had jumped or been heaved from a sixth story balcony of a posh high-rise just outside the town. It turned out to be a suicide but the circumstances were very peculiar. They learned many strange and distressing things about that high-rise that night. Eye brows raised when it was learned that the building was only occupied by young women, many foreign with no immigration status. The place was set up like some sort of luxurious dorm. A central cafeteria provided all their nutritional needs. There was a fully loaded gym, theatre, games room and a pool. A dream place to live, if you never wanted to go anywhere else. It emerged that the women were never allowed to leave the place. It was a luxurious prison. The women were pampered and well cared for but still they were prisoners, unable to leave the building. Curiously, the first floor of the building contained a high-end spa, a spa with a difference. This was one of those rumoured longevity clinics. Using barely published science on the youthful properties of young blood in rats and mice, these 'spas' applied it to rich people desperate to cheat aging and maybe even death by receiving infusions of youthful blood from the young woman living there. This was a longevity clinic with a dark twist. They were keeping, trafficking, in young

virgin women as their source of young blood. The fallout in the press was explosive. It resulted in attention grabbing headlines such as; “Old Rich Feed on the Blood of Young Virgins”, “Wealthy Boomers Stealing Life from Millennials.” While investigating the place, Kingsley was the first to find the client files. Thumbing through, he found it to be a who's who of the rich and famous. He came upon the file of a notable local billionaire, William T Buford III. An idea struck him. These people are paying extravagant sums to receive this questionable treatment, risking terrible damage to their reputations if ever caught. He might do better. With a proper research facility, he could isolate and manufacture those elements in the young blood that endow youthfulness. No trade in young virgins. No distasteful harvesting of youthful blood. Just a medical treatment. Such a serum would put his name on the medical research map, perhaps even make him fabulously wealthy. When he left the building in the wee hours of the morning, he had Buford's file with him.

Within days, the client list from the clinic was leaked, posted on the internet. Those names were now associated with trafficking in young women for the purpose of stealing their youth. A new class of heinous crime. Reputations and careers were ruined. A terrified William T Buford read through the leaked list, dreading but needing to know if his name would appear; to know if he was exposed and ruined. Inexplicably to him, his name was not anywhere in the leaked list. He was to find out why shortly.

Just days after the story broke, Buford received a call from Kingsley. Kingsley had a proposition – fund a research lab for him to do longevity research and his name will never be associated with the longevity clinic. Buford wasn't given much of an option. To a billionaire of his stature, a hundred million on a research lab was a good investment compared to the ruination of being linked to blood slavery. Buford became Kingsley's reluctant partner. Buford thought he knew a scam when he heard one. This particular scam came with a steep price. Buford didn't believe that this FBI forensics guy had a hope in hell of developing anything useful. But maybe he was wrong and he would get something out



of it. More importantly, he can keep his name out of the muck that has resulted from the discovery of the clinic.

*NewsScientist March 19, 2022: Clue to rejuvenating effects of young blood:*

*Extracellular vesicles are little bags of chemicals that cells shed. These bud off from a cell and can travel in the blood and fuse to distant cells, releasing their contents. The proteins and RNA from the vesicle can turn on and off genes in the destination cell. Recent studies suggest that these vesicles are involved in aging in good and bad ways. The content of vesicles can change as the cell ages. Those from senescent cells may accelerate aging. A study injected vesicles from young stem cells into old mice twice, a week apart. A month later, the mice showed increased grip strength, more endurance. Even regrew hair faster. 2 months after the injections, the effects had faded.*

Kingsley extracted a handsome salary from Buford. Buford saw it as hush money, he was used to paying out exorbitant sums to protect his reputation. Kingsley saw it as fair compensation for his innate genius. Kingsley dove into the research journals, catching up on the latest discoveries in longevity research. He ordered the high-tech equipment needed to reproduce the results in the papers. Some months after striking the deal, the lab was ready. Kingsley got himself some two dozen mice, and started breeding them, reproducing the previous studies on how young mouse blood rejuvenates older mice. Through his own bio-chemical wizardry, he managed to identify the mechanism of the mysterious effect and extract the key components of it. It turned out that the young blood is carrying compounds that control the expression of youthful genes. Cells in the young mice leak these proteins and RNA strings into the blood and they act throughout the body to express genes that give the mouse a youthful boost in physical and mental abilities. It took over a year but Kingsley managed to isolate the key compounds that bestow youthfulness and developed techniques to generate them in the lab. But he needed a way to administer these to his subject.

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William T Buford III was sitting down to lunch at a high-end vegan restaurant in New York. Just as Buford was digging into his organic, non-GMO salad, a man entered the restaurant. He was a thirty-

something man, dressed in a long coat, short cut blond hair, thin. His spectacles had fogged up on entering the warm restaurant. He tore them from their perch on his long thin nose and wiped them with the end of his red scarf. Placing them back on his nose, he scanned the room carefully until he spotted Buford. Buford had not looked up from his salad and so did not notice the man until he arrived at his table. Buford glanced up when he sensed the man's presence. In a cheery greeting he motioned to a chair opposite him, "Kingsley. Please have a seat."

Kingsley nodded in greeting and removed his coat and scarf before taking the proffered seat. Kingsley pointed toward the salad in front of Buford. "You really think eating that stuff is going to keep you alive?"

Buford shrugged, "That's what they tell me. Does wonders for your waistline and blood pressure though." He glanced at Kingsley. "You are one of those skinny guys. You can eat as much as you want of anything, right?"

Kingsley had picked up a placard listing the daily specials. In answer to Buford's assertion, he replied, "Pretty much."

Buford raised his head from his plate and put his fork down. He reached for a glass of water. Kingsley saw a piece of dark green kale stuck to one of Buford's front teeth. He wondered how long that would stick there before Buford noticed it or someone said something to him. In his disdain for Buford, Kingsley didn't enlighten Buford about the piece of kale.

Buford held Kingsley in a steady gaze. "So how is my investment coming along?"

Before answering Buford, Kingsley tossed down the placard he was perusing, seeing nothing of interest. "You will be glad to hear that testing of the blood alteration is a rousing success. We have figured out the components that are responsible for the youthful effect of young blood. We can manufacture these compounds and deliver them to you by injection using one of those insulin pumps. You wear the pump and replace the cartridge with the 'youth juice' in it once a month. Other than that,

it is all automated. The elixir of youth in an arm patch.”

“So, who are you going to test it on?”

Kingsley gave Buford a look that said, “Think about it.” They both knew that human testing was impossible – and illegal. Testing on a human would require making them young again – giving up the secret. Buford would never consider this. Kingsley, on the other hand, would gladly test on anyone. Then there was the ethical bit about testing unproven treatments on humans. It just wasn’t done.

Buford got the message. He was stuck between his own need to keep the elixir a secret and his doubt that Kingsley actually knows what he was doing. He asked Kingsley, “This will work?”

Kingsley nodded forcefully, “Absolutely. Better than those blood transfusions you were getting. I can fix you up now. I have everything with me.”

Buford was never before interested in the details of the treatment. His distrust of Kingsley now compelled him to ask more questions. “So how is this different, you say better than the blood infusions?”

“Well, we have isolated the important elements in the blood of younger people. These consist of proteins and bits of RNA that turn on genes in cells all over your body. It keeps the cells operating at a youthful vitality. It encourages your immune system to continue to remove senescent cells that drain vitality from your tissues.”

“Senescent cells? What are they?”

“Cells that have accumulated damage and are no longer functioning properly. Protective processes in the cell put it into an inactive state. But that doesn’t always completely shut them down. They can continue to release compounds that damage cells around them. Accumulate too many of them, and they start to affect the vitality of the tissues around them. They can even turn cancerous. Best to get rid of them altogether. This treatment will do that. I have also added some senolytics to the treatment to help your boosted immune system remove these old cells.”

Buford was still suspicious, “And what are the side effects?”

Kingsley decided to have some fun with Buford, test his commitment. “Unknown.”

Buford puffed for a few seconds. He looked Kingsley in the eyes. Kingsley seemed so damn cock sure of himself. Nobody would hire this guy. Does he really know what he is doing?

Kingsley continued, “You may feel fatigued for a few days as your immune system fires up. Your body has a lot of catching up to do in this regard – cleaning out all those faulty cells. Your immune system will be running hot.” Then as a reassurance to the worried look on Buford’s face, “In mouse testing, there were no side effects that you don’t want. Within days of the injection, the mice were acting and performing like mice half their age.”

“So that’s it then. This thing will keep me kicking well into the future.”

Kingsley was cautious, “Let’s monitor you closely for the next few weeks and see how it goes.”

Kingsley’s cautious tone bothered Buford. “What is it? What aren’t you telling me?”

Kingsley shrugged, “Relax, the rodent testing shows that these treatments are safe and effective, but you do realize that when it goes to trying this on humans you are a guinea pig for this. When you muck with nature, it has a way of hitting back at you. I am just being cautious. If it is any comfort to you, if we discontinue the treatment, you go back to being your old, very old, self. The biological clock is strong and determined.”

Buford agreed to let Kingsley install the pump, a patch on his upper arm. Two days later, Kingsley received a call from an angry Buford. “What the hell did you do to me doc? I’ve never felt this sick in my life!”

A chill ran up Kingsley’s spine. Had something gone wrong already? “Give me details, Buford.”

Buford whined, “Headaches, I can’t get warm, I am chilly all of the time. All of my muscles ache.”

Kingsley chuckled in relief, “I warned you that your immune system was going to kick in big time. This is what it is. It is flushing out all your old, barely functioning cells. That takes a lot of effort,

ramping up your immune system. The chills and headaches are a result of the fever your immune system is creating. The muscle aches are because the immune system is in the tissue destroying the senescent cells. This causes some inflammation. Get yourself some hot soup and stay in bed for a couple more days. I'll see you at the end of the week."

Buford was pissed. He felt that Kingsley did this to him and was now being dismissive of his condition. He groaned back into the phone, "You're trying to kill me Kingsley."

Kingsley responded, "No, I am giving you youth. It's what you wanted. You didn't think it would come without a price, did you?"

Referring to the vast sums he was spending on Kingsley's research lab, Buford grumbled, "I thought I was already paying the price."

Kingsley ended the conversation with, "I'll see you in four days, ten am."

On Friday, Kingsley made the long trip into the city to meet Buford. He hadn't heard from Buford over the past few days. It could mean that Buford was feeling better or that the treatment killed the old fart. Kingsley was anxious to see the results, collect the data. Arriving at Buford's office tower, he checked in with the commissioner in the lobby and was directed to the elevators, the penthouse. The commissioner gave him a special key to unlock the limit on the elevator so that it would go all the way up to the penthouse. Arriving on the top floor, Kingsley entered the now familiar opulence of Buford's work space. It was all glass and shiny metal surfaces, polished daily to keep away fingerprints. Through the walls of glass, Kingsley could see Buford, at his desk. "Well, not dead," he thought to himself. Kingsley checked in with the receptionist.

Buford spied Kingsley approaching. He bounced up from his chair, a huge smile on his face. He greeted Kingsley at the doorway, hands extended, giving him an enthusiastic two-handed hand shake. Kingsley was taken aback. He had never seen this side of Buford. The man was overflowing with energy, joyous energy, no, it was more like youthful exuberance. The change in Buford was shocking.

Kingsley took a seat on a chrome and leather couch in Buford's office. The leather creaked as he sat on it. Buford flopped down beside him. The smile was still on his face. "Damn it Kingsley. You are a fucking miracle worker. Look at me! I feel half my age."

Kingsley had to admit that this version of Buford is more delightful than the one he knew previously – energetic, joyful, almost likeable. "Is this what you were like as a younger man? I like this version of you much more."

Buford ignored the backhanded slight. "This is what it is like for a man to regain capabilities that he hadn't even realized that he had lost. I am fleet of movement, nimble, agile, like a cat." Buford did a sort of clumsy jujitsu move with his arms to poorly illustrate his point. "My mind as sharp as a whip." He snapped his fingers to add emphasis. "You don't realize how much you have lost until you get it back. I feel like a man in his forties, but wiser and still physically and mentally on top of his game."

It was Kingsley's turn to smile. The positive energy coming from Buford was impossible to resist. "I guess it is true then. Youth is wasted on the young."

Buford laughed and slapped Kingsley on the knee. "So, let's get on with it. I have a meeting at 11:00."

Kingsley was a little disappointed that Buford apparently squeezed him in between appointments. His ego thought that he deserved at least a full morning of Buford's time. Well, the less time spent with Buford, the better. He said to Buford, "I need to take a blood sample, test your blood pressure and grip strength. Just a repeat of what we did before the treatment. I also need to take a look at your pump to make sure it is working properly." The testing and taking of blood took about ten minutes. Kingsley packed up his equipment and asked Buford some general questions about how he felt. Buford gave enthusiastic answers. The fever broke a couple of days ago and the muscle aches shortly after. All of Buford's chronic age-related aches and pains, physical limitations were gone. Kingsley liked what he heard. The treatment was working as well as he could have expected and there appeared to be no side

effects. Less than a full week and Buford was feeling, no being, twenty-five years younger than his chronologic age. He asked Buford to get a full body CT scan. Kingsley didn't have the credentials to prescribe this but Buford had the money and influence to just book one at a local private clinic.

Leaving Buford's office, Kingsley was excited to get to the blood test results – to see the changes in Buford's blood chemistry. He also had a nagging concern; this just seemed too good. His fear was for the appearance of cancer. The aging process is a concert where every piece plays a part in synchronicity. Put a single piece out of tune or off beat and you ruin the concert, you get cancer.

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Kingsley sent Buford's blood out to be tested. The results took two days to come back. When the e-mail arrived, Kingsley excitedly pulled up the results from the previous blood test for Buford. This one was done before the treatment. Kingsley compared the results of the two blood tests, item by item. The results were astounding. Previously Buford had a number of key marks out of nominal range – typical for a man his age. A few, well out of nominal range – indicating age-related disease. Buford was headed for diabetes; his insulin and blood sugar levels were trending the wrong way. The new result showed everything but the insulin and blood sugar back in nominal levels. Except for these exceptions, his blood could be that of a healthy twenty-something. This was pure gratification for Kingsley. It all pointed to the effectiveness of his treatment. Now to tackle the insulin issue. It was early in the disease, Buford's pancreas was still producing insulin, just not enough of it.

***NewsScientist, December 3, 2022, Gut Reactions by Jessica Bond: "If the gut microbiome is like a pharmacy, postbiotics are the medicines it dispenses.....Patrice Cani at the Catholic University of Louvain in Belgium and his colleagues conducted a clinical trial involving 32 overweight or obese volunteers. It showed that regardless of whether the bacteria were dead or alive, they led to improved insulin sensitivity, which can reduce the risk of type 2 diabetes, lower blood cholesterol and lower body weight compared to people who took a placebo."***

Kingsley had been preparing for the next step in the process. The gut microbiome ages as we age. It becomes less efficient at processing the stuff we consume, less capable of moderating what gets passed from our digestive system and into our blood. There appears to be an important link between the

health of the gut microbiome and that of the immune system. The changes to the microbiome as we age, the altered bacteria content of our guts promotes inflammation, declining tissue function and susceptibility to age-associated chronic diseases. Very much like the aging of the blood, the aging microbiome allows biochemical processes that are deleterious to our overall health. The obvious question from such studies is whether having a younger microbiome will reverse the effects.

More recently, studies of the post-biome – the tail end of the microbiome suggest some intriguing potential for altering one's path to oldness. This post-biome is filled with the waste from the microbiome, dead bacteria and bacteria waste products consisting of many compounds created by the microbes as they munch on our gut contents. Some of these compounds have been shown to boost the performance of our immune system, some apparently providing protection against colon cancer, some boosting the energy of our cells. Kingsley set about creating a regime that would transform Buford's gut bacteria – turn back its chronological clock and in so doing give Buford a youthful kick in the butt.

Fecal transplants and dietary supplements to ensure that the good bacteria get the nutrients they need to thrive were his recipe. Harvesting youthful poop and processing this into treatments for old people was not something Kingsley was keen on doing. He did a deep dive into the science of the human microbiome and determined the key ingredients, the right mix of bacteria, the right nutrients and brewed this in a bio-reactor. The result was a treatment, an elixir of youth that had to be sprayed up Buford's behind. Kingsley modified a colonoscope to deliver his elixir to Buford. The quantities delivered in this way were mere millilitres, the stuff must be allowed to grow. Too fast a change, too large an injection and Buford would just suffer from diarrhea and the treatment would be lost, flushed from his system. Kingsley tested the treatment on pre-diabetic rats. The results were self-evident. The old rats seemed to be suddenly supercharged. Their blood sugar levels returned to normal. These pre-diabetic rats lost excess weight and became more active. They had shaken off the disease and doldrums of their old age. Inflammatory markers in their blood were also decreased, a sign that their immune



system had been kicked back to a more benign state. It appeared that a common, debilitating condition of old age – that of inflammaging had been halted in these rats. Inflammaging refers to the damage to the tissues, the joints, the brain, and other organs that inflammation does. It robs one of strength and agility, dulls the memory and speed of thought and movement.

Kingsley called Buford in for a treatment with his new elixir. The man arrived on time, looking even more energetic and youthful than the last time Kingsley saw him. Kingsley explained the process to Buford. As Buford heard the details, his enthusiasm dropped, his smile turned to a frown. He questioned the need for the treatment, “Really, Kingsley! Is this really required? Your blood modification has done wonders. Maybe we should leave it at that.” There was a note of hope in Buford’s statement. He was thinking that perhaps he can avoid this new and disgusting treatment.

Kingsley shook his head. “If you want to live long and healthy, you need to take this treatment. Without it, your race toward type 2 diabetes will continue. You want to spend your reclaimed youth dealing with a restricted diabetic diet and blood sugar monitors, insulin pumps, deterioration of your nerves and sight? This is where you are headed, especially with your new diet.” Kingsley was referring to the fact that with his new youthful energy, Buford had discarded the kale salads for burgers and steaks. Buford relented. Kingsley instructed Buford to take the laxative drink to clean out his colon before the procedure, scheduled for the next day. Buford reluctantly cancelled all of his appointments for the next day and hunkered down in his hotel room and his new porcelain friend.

Kingsley performed the procedure the next day. It was his first time doing this. It was unpleasant for Buford and himself but he got it done. After the procedure, Buford was surprisingly jovial. Kingsley gave Buford a box with powdered nutrients in plastic bottles. “These are your gut supplements. Dissolve the powders in your drinks as instructed on the labels. These will feed the new bacteria and then they will get on with the job of making you even healthier.”

Buford was examining the bottles, shaking them, hearing the powder inside swishing around. “And

I can eat whatever I want?”

“Yes, just avoid overdoing it or eating anything that might give you the runs. We don’t want you washing out your new friends before they get a chance to get comfortable in their new home.” Kingsley added, “I’ll come by your office in a month to collect another blood sample. If this treatment is working, we should see better blood sugar and insulin levels.”

#

*The Hayflick Limit. Scientists in the 1960’s noticed that cells cannot go on dividing forever. After a certain number of cell divisions, they stop dividing and die. Human cells at birth have the capacity to divide between 40 and 60 times. This phenomenon, poorly understood at the time, was called the Hayflick limit. Since the maintenance and regeneration of our tissues throughout our lives depends on this cell division, it is thought that the Hayflick limit puts a hard stop on human (or any animal) longevity.*

*Telomeres: Research on our chromosomes identified a section of repeating DNA bases at the ends of each chromosome. At an initial length of over ten thousand bases in humans, this stretch of DNA forms the telomere, a protective cap on the ends of our chromosomes. Our chromosome is a long string of DNA, wound up tightly, folded in on itself many times. At the ends of the chromosome, the ends of these folded strands are exposed. Like the end of a shoelace that is missing its little plastic tube, the aglet. Without the aglet the threads of the shoelace will unravel and be damaged. The same is true for the ends of the chromosome. The telomere forms the cap or aglet of the chromosome.*

*Further research revealed that the Hayflick limit appears to be tied to the telomere. Each time a cell divides, the telomere gets shorter. Eventually after many divisions, the telomere has become too short to properly protect the ends of the chromosome. The cell stops dividing and dies.*

*From [www.nobelprize.org/prizes/medicine/2009/blackburn/facts/](http://www.nobelprize.org/prizes/medicine/2009/blackburn/facts/) In 1982, Elizabeth Blackburn, Carol Greider and Jack Szostak discovered an enzyme in cells that seem to have unlimited ability to divide. This enzyme restored the telomere to its original length, avoiding the Hayflick limit. They called this enzyme telomerase. The genes to make telomerase lie dormant in all of our cells, being active in our germ cells, and places in the body where a continuous production of cells is essential such as in the bone marrow to make blood cells. This raises thoughts of by-passing the Hayflick limit if we could just figure out how to reactivate the telomerase genes in all of our cells to reset the length of our telomeres.*

#

A month later, Kingsley was in Buford’s office to collect a blood sample. At the sight of Buford, Kingsley was smiling, not something he usually did in the presence of the man. “My God man. Everything about you is noticeably different, your posture, the way you move, the light in your eyes.”

Buford accepted the complement with a huge smile and puffed out chest. “You’re a freaking miracle worker Doc. If I get any younger, my acne will come back.”

Kingsley collected the blood samples. This done, Buford offered him a drink and Kingsley accepted. Kingsley had something on his mind. A relaxed social drink with Buford in a good mood was a perfect setup. Sitting on the leather sofa, Kingsley accepted the glass of spirits from Buford. He took a sip of the drink, ice cubes tinkling in the glass. He placed his glass on the coffee table before them. “I want to talk about what’s next and I don’t mean further treatments. This treatment clearly works.”

Buford laughed, a deep rumbling laugh. “You know Kingsley. I took you for a con artist, a swindler. But I had no choice. You blackmailed me. But dammit, you came through. You really are a genius.”

Kingsley smiled at the complement. “That’s what I was telling you.” Kingsley then broached the subject that had been on his mind since he started his research; giving the treatment to others. “Your results from the treatments prove the effectiveness of it. This treatment could do a lot of good, relieving people of the diseases of old age. It would give these people their quality of life back. It would remove the burden that seniors place on the healthcare systems.”

Buford grunted, “That it would, but it is not going to happen. I want a return on my investment. A bunch of old seniors can’t afford what I would charge for this treatment.”

“So, it is all about profit to you?”

“Of course, Buford laughed. “My entire life has been about profit. I’m not going to change now. This treatment, if we make it available, will only go to those who can pay for it.” Buford saw the look of disappointment on Kingsley’s face. “What, you want to make the whole world immortal?”

“Not immortal, just living a better old age. There are parts of this treatment that would erase the diseases of old age. Release people from the burden of being old and sick. Not extending their lives immensely but lessening the effects of age-related disease.”

“You want to eradicate old age?”

Kingsley was hopeful. Buford seemed to be understanding what he wanted. “Yes, exactly, it is a

terrible state to be in, a constant, slow spiral of system failure. Today we treat the symptoms of those diseases, keeping sick people alive but at what quality of life? We can erase all of that. People can stay healthy and active until they drop dead from a heart attack or stroke – quick and relatively painless.”

Buford was not moved by Kingsley’s plea, “I agree that it may be time to extend the treatment to others but only those capable of paying for it. Besides, if you give it to everyone, how are you going to administer it. You’re talking about millions, hundreds of millions of people.”

Kingsley shook his head, “My idea is to generate scientific papers on what I have done and let the medical establishment develop them and apply them.” Here was the second part of Kingsley’s ambition. Not only did he want to end the suffering of age-related disease but he too wanted immortality. But not the kind of physical immortality that Buford so craved. Kingsley wanted immortality of genius. Like Newton, Galileo, Darwin and Einstein. These men had immortality of spirit, of achievement. Their names will forever be remembered for their achievements.

It was Buford’s turn to shake his head, more vigorously, “Just give it away? Are you crazy? I, we can make billions selling this treatment to the wealthy and you want to just give it away to every fool?” This last bit had some venom to it. Buford’s disdain for the plight of the common man was visceral. These people were failures as far as he was concerned, wasting their chance to achieve great wealth, wasting their gift of life. They deserved what they had and no more. Buford was not willing to show charity to such people, regardless of their suffering.

Kingsley was not giving up. “These people are suffering needlessly. I can rid them of the pain, weakness and dementia of old age. This is my mission.”

Buford, in his self-entitlement, thought that Kingsley was doing all of this for him. “Your mission? When did this happen?”

Kingsley clenched his teeth, “It has always been my goal, ever since my grandmother died slowly from old age. You get the benefits of the research but the end goal has always been to end the suffering

of old age.”

Buford grunted, “I paid for this work. I own it. I am the guinea pig. I get to decide who benefits from it.”

This was the wrong thing to say to Kingsley. In his mind, his genius was his. Buford did not own this or control it. Kingsley was not averse to a little blackmail. He pointed a shaking finger at Buford. “You have experienced, no, *are* experiencing the result of my work. But it is not finished. Not by a long shot. The treatments you have received have made you younger, more vital, more energetic. You are speeding down the tracks but there is a problem. Ahead of you, the bridge is out. You are heading toward a crash.”

Buford, reliving his physical and mental youth had found that youthful belief that he will live forever. This ‘crash’ was news to him. “What are you talking about? Just keep giving me that youth juice.”

“It’s not enough. There is a limit to what your cells can do. Nature has given them a limit to life, a limit on how many times they can divide. When they near this limit, they will slow down, start dying and there will be no new cells to replace them. You will waste away. No one has ever reached this limit, diseases of old age kill them first, but this must be a horrible way to die. It is called the Hayflick limit.”

Buford was dumbfounded, “When will this happen?”

Kingsley shrugged, maybe when you are 120 years old, maybe you will get to 150. Not sure.”

“Can’t you do anything about it?”

“Sure, this is my next miracle treatment. This is the treatment that can make you immortal, like a cancer.” Kingsley couldn’t resist the dig.

Buford ignored or didn’t notice the dig. He was only thinking about his immortality. “So when will you have this new treatment?”

“Relax, you have 50 years before you need it. But that is not my point. There is a difference

between improving the quality of life in old age and extending life. You want the latter. I want the former.” Kingsley paused. Here comes the blackmail part. “Allow me to release those parts of the treatment that will benefit the aged and I will continue to work on your immortality.”

Buford turned red. He stabbed a younger looking finger toward Kingsley. “What? You are going to blackmail me again? I won’t stand for it. You don’t want to go there with me. You’ll regret it. Now, get out.”

Kingsley saw that he had lost the argument. Buford had no interest in anyone besides himself – unless those ‘anyone’s’ can make him richer or younger. Kingsley stood and walked out of the office. He muttered to himself, “If you won’t do it with me, I’ll do it without you.”

Buford yelled at the back of the retreating Kingsley, “When can I expect the next stage in the treatment?”

Kingsley heard him and ignored him, continuing on his determined way without Buford.

It was several days later that the goons show up at Kingsley’s home.

#

The warning from Buford’s goons gives Kingsley little pause. He embarks on his plan to publish his work, gain his rightful recognition. Prove to all those who thought his resume too stale, that they missed genius. But he will not be so obvious about it that Buford will find out. He will publish under a pseudonym. No one knows who Theodore Kingsley is so any name will do. Despite his disagreement with Buford, Kingsley will also continue his work on making Buford truly immortal or kill him in the attempt. It is not that Kingsley wants to make Buford immortal, but he wants to prove that it can be done. The success of his treatments so far has Buford convinced of his genius. Buford is the perfect willing guinea pig for Kingsley’s new treatments. Kingsley gets busy writing his papers which he publishes under the pseudonym Theodore McSwain. In them, he never reveals that the results have been tried on a human subject. He always ends his papers on the suggestion that such a treatment could

be used to relieve the suffering of age-related disease. The use of his discoveries for creating longevity is never explicitly mentioned in his papers. The papers stun the longevity research community. His work is years ahead of any other published results. His papers are cited hundreds of times by researchers from all around the world. Invitations to attend and speak at longevity research conferences flood into Kingsley's fake mail box. Kingsley is trying to maintain his secret identity and appearing at a conference would reveal too much. Researchers from his past would surely recognize him. He has to regretfully decline the invitations. In lieu of these appearances, he arranges video presentations in which his face never appears.

*Newscientist, January 21, 2023, Ultrasound Rejuvenates Cells by Michael Le Page:*

*Low frequency ultrasound appears to have rejuvenating effects on animals. As well as restarting cell division in aging human cells, it has reinvigorated old mice, improving their physical performance in tests such as running on a treadmill and making one old mouse with a hunched back move around normally again. Michael Sheetz at the university of Texas Medical Branch, whose team is planning to start a small trial in people to see if the technique is safe and can help treat age-related diseases.... Sheetz's team has found that low-frequency ultrasound makes senescent cells from monkeys and human resume dividing and halts the secretion of chemicals that promote senescence.*

Kingsley is sitting down to dinner one night when his doorbell rings. He has a flashback to the visit from Buford's goons. His heart is pounding, his nerves taught. Could Buford have linked the papers written by his pseudonym back to him? Are the goons back to inflict the consequences they promised during their previous visit? Kingsley is frozen to his seat. He expects the door to come crashing down at any instant but instead the doorbell rings again. Kingsley realizes that this is different, no knock with a message, no rude intrusion, just polite bell ringing. He gathers his wits and approaches the front door. He can see the outline of two men through the semi-transparent window. He hesitates. Maybe these are different goons from Buford; polite but with a deadlier mission. A man peers through a small section of clear window and sees Kingsley standing, hesitating in the hallway. The man calls, Dr. McSwain, we'd like to talk to you about your research."

The man is using Kingsley's pseudonym. Kingsley approaches the door and opens it with the chain still in place. Through the crack in the door, he scans the two men there. They are dressed in khakis and

sweaters, business casual. They are in their fifties. Nothing about these two projects enforcer or assassin. Kingsley speaks through the narrow opening in the door, “What can I do for you gentlemen? You said something about my research?”

The man closest to the door speaks, “Yes, I am Dr. Smith and this is Dr. Brown. We are also involved in longevity research and we would like to talk to you about your published papers.”

Kingsley doubts immediately that these are their real names. It strikes him as very odd, that these researchers made the trip to his home rather than contact him through the information provided in the publications. Despite his suspicions, his ego convinces him that those concerns are misplaced. After all, he too is not using his real name. He wants to hear what they have to say about his work. He opens the door and invites the two in. The men enter and follow Kingsley into his living room where there is an old, thread bare couch. Kingsley motions toward the couch, “Please have a seat. Can I get you something to drink?”

The two men exchange glances and one says, “No, that won’t be necessary. We won’t take too much of your time.”

Kingsley sits in a chair opposite the two. While the men sit, it occurs to Kingsley that he has never linked his address with his pseudonym. How did these men know to find Dr. McSwain here? He leads with this question. “I keep my personal information close to my chest. How did you two find me?”

Dr. Smith sighs, “It wasn’t easy. We went to the journals that you published your papers in and got your PO box address from there. We then visited your local post office and managed to get your address from the post master.”

Red flags go up for Kingsley at this admission. These two apparently, and quite easily, surpassed two supposed secure gates keeping his personal information hidden. What influence or power did these two have to get past both of these gates? Kingsley asks, suspicion in his voice, “Who exactly are you?”

Dr. Brown replies, “We are longevity researchers like you. We work for Astra Labs, perhaps you



have heard of it.”

Kingsley knows of this lab, funded by some of the richest men in the world. Those billionaires are seeking the same thing as Buford. Kingsley imagines for a second that these men are here to offer him a job, stroke his ego with an outlandish salary offer. “Yes, I know of it. Well-funded. But you don’t publish any of your work.”

“Indeed. Our board does not want any of our work released. They want to control the results of our research.”

Kingsley rolls his eyes, “Sounds familiar.” Meanwhile, he is thinking that these two have sold their scientific souls to Astra.

Dr. Smith looks serious, “Which is what brings us here. Your publications reveal great advances in the field. You seem to be getting very close to unlocking the secrets to immortality. Excellent work on your part. You are ahead of the field in many areas.” Kingsley appreciates the compliment but he senses that there is a big ‘but’ coming. He doesn’t have to wait for long as Smith continues, “These publications have our backers concerned. They don’t want you to spill the beans prematurely. If word gets out that we or you have cracked the secrets to immortality, we are afraid that the government will move to shut us all down or control the use of the technology. The implications for society overall are immense. Our backers don’t want this to happen until they have benefited from our research. You are putting them, their investments, at risk. They want you to slow down with the publication of your work. Keep the rabbit in the hat, so to speak.”

Kingsley is amused. Like Buford, their billionaires want to keep it to themselves; have complete control over the technology. He gives Smith and Brown a scolding. “There are a very few people in this world who have the unlimited funds to drive this type of research. They can use the results in three ways. They can keep it to themselves, become super-human, immortal. They would be a part of an exclusive club. With unlimited life, they can gain unlimited wealth and power. Another option is to

monetize the technology. Sell it to whomever can afford it. But what is the price for an extra 50 or 500 years of life? Here they could extract funds that are currently locked up in retirement savings and real estate holdings of the middle class. Those who control the technology would become wealthy beyond imagination, trillionaires. Lastly, they could follow proper research protocols, publishing the results for the benefit of all of science and to the benefit of all people. I take the latter road. As I say in my papers, I want my research to lead to the eradication of age-related disease.”

The two researchers sitting across from Kingsley seem unimpressed by his painting himself as the selfless researcher. Dr. Brown asks, “So, who funds your research? Who is your rich benefactor who allows you to publish the work he has paid for?”

Kingsley is taken back by this question. Does Brown know something that he is not revealing? They are quite correct in guessing that his benefactor would also not want his research published. Kingsley stammers, “That is my business.”

Brown has a sly smile on his face. “He, or she, doesn’t know, do they? But that would only be possible if McSwain isn’t your real name.”

Kingsley just shrugs. The man has figured out his illusion.

Smith asks, “So why risk so much by publishing?”

“Like I said. I want to eliminate the diseases of old age.”

The two researchers look at one another. Brown nods, “Personally, I like what you are doing, but you need to be aware that the people funding this research are watching you. Don’t push it much further or there will be consequences. We won’t tell our people where you are or that McSwain doesn’t really exist but please take our warning seriously.”

The warning has been delivered. These two have done their job. As a parting gift, Brown decides to throw a bone to Kingsley and see how he reacts. “We see that you are using senolytics to purge senescent cells from the body. Have you tried using low frequency ultrasound? Our results with this are

astounding. Eighty percent of senescent cells resume normal functioning after exposure to these sound waves.”

Kingsley grunts, “Waking the dead? Nature designed a system to put those sick cells into an inactive state for a reason. Waking them back up doesn’t sound to me to be a smart option. I say let sleeping cells lay until you can eliminate them altogether and replace them with new healthy cells.”

Dr. Brown shrugs, “So far, we see no ill effects. It is such a simple method to rid the body of senescent cells, such a non-intrusive method. You should look into it.”

Kingsley is non-committal. “I don’t know. Do you really want these re-activated, these zombie cells in your tissues? I’ll check it out when I have time.” Kingsley glances at his watch; a sign that he has better things to do than continue this conversation. He stands.

It is an obvious signal to Brown and Smith that the conversation is over. Kingsley leads the men back to his front door, shakes their hands and wishes them luck with their research. As they walk down the driveway, Smith calls back to Kingsley, “McSwain, think about what we said. It could save you a whole lot of trouble.”

Kingsley, standing in his doorway feels anger rising. Was that a threat? Christ, everybody is on his case.

In the car, driving from Kingsley’s home, Smith asks Brown, “What was that bit about the ultrasonic waves? You know it’s been a disaster.”

Brown chuckles, “Just a little sabotage. If I can send McSwain down that rabbit hole it could derail his efforts for a while.”

The men laugh at this.

Alone once more, Kingsley returns to his kitchen where he retrieves his cold dinner from the table and pops it into the microwave. He is shaking his head. “First Buford’s goons and now the competition’s researchers. It feels as if there is a conspiracy to keep this from the world.” This thought

steels his conviction to publish his research for the benefit of all.

#

Dani can't get an appointment with Buford. The man has so many barriers to access. Well, it is not really Buford that she is interested in anyway. It is the treatments that are giving him back his youth. She hires a detective to follow Buford, find out if he goes to any sort of clinic or medical centre. This particular detective is a dog on a bone. He collects information. He photographs everyone going in and out of the tower where Buford's office is. He trails Buford to his lunches, dinners, home in the evening. No pattern emerges, he has no regular visits to a spa or medical clinic. Those who visit him periodically can all be found in his company profiles or on the Forbes lists. The man is getting nowhere. Then one afternoon, Buford takes a trip out of the city, to a commercial unit on the outskirts. The location is a typical, poorly maintained mall of industrial units. A place for car parts suppliers, failed entrepreneur's offices, real estate offices, obscure businesses and the like. Buford is on his phone as he approaches a unit with no signage, no identifying marks on the doors. All of the windows are covered over with opaque films. As Buford arrives at the door, a man opens the door and greets him formally. The two enter the building. The detective takes pictures of the place and waits. Buford emerges some ninety minutes later. He hops back into his car and drives back to his office. The detective stays put, watching the unknown unit for the unknown man to emerge. It is late, getting dark when the man finally exits the building. He ensures that the doors are locked before getting into his car and driving off. The detective follows the man. A short distance away, the unknown man enters the driveway of a very ordinary looking bungalow. The house is vintage, like the one your granny used to live in. The detective stops on the street a couple of houses down and waits. He takes photos of Kingsley as he exits his car and walks up to his house. The detective wonders, "So who are you? What is your business with Buford and why the secretive business unit?"

The detective records the address of Kingsley's house and runs it through a search algorithm of

names and addresses. It comes up with Theodore Kingsley. A search of the name comes up with many matches, there are 54 people named Theodore Kingsley, mostly in the UK. The detective begins the process of weeding out the real Kingsley of interest from all of the others. He narrows it down to two men, one who worked for the local FBI forensics unit and an older link to a research student in the biomedical department of MIT. The latter catches his interest. He sends a summary and link to Dani.

#

Dani knocks on the front door, a forceful, confident knock. Kingsley does not come to the door even though she knows he is in his house. She tries the door bell. She can hear it's 'bing-bong' through the door. There is still no response from inside. She tries a ruse and shouts through the closed door, "Dr. Kingsley, Mr. Buford sent me here with a message."

Kingsley, inside, staying out of sight of the windows, shakes his head. The ruse is so obvious. Buford would just call him up; he wouldn't send a messenger. Dani tries a more direct method, "Dr. Kingsley, I know about your longevity research and your treatments of Mr. Buford. Please can I talk to you about it?"

Kingsley remains hidden. This woman knows more than she should but meeting with her would just confirm what she thinks she knows. Dani tries the front door. It is locked. She walks around the back of the house and tries the door there. It too is locked. "Geez, this guy doesn't like visitors." She gives up. Kingsley is not going to respond. She has a better idea.

The next morning Kingsley arrives at his lab and sees a vehicle parked in his usual parking spot. As he parks beside it, a woman emerges from the car. Kingsley groans to himself. "It's that woman from last night. How did she know my lab is here?" Kingsley thinks about backing out of the parking spot and leaving but the woman is now standing behind his car, blocking him in. He turns the car off and exits his vehicle. The woman flashes a brilliant smile at him, "Finally, we meet. I am Dani Holmes, a journalist with the Financial Times."

Kingsley nods at her introduction. He is thinking, “Now what?”

Dani has her phone on audio recording. “Dr. Kingsley, I want to talk to you about Mr. Buford; about the treatments you are giving him to make him younger.”

Kingsley tries, “I don’t know what you are talking about. You should talk to Buford about it.”

Dani responds, “I have tried but the man is impossible to get hold of.” Then she adds, “You’re not all that easy either. You’re like a ghost.”

Kingsley grunts. “You should know that I like it that way. Now, I have work to do.” He steps toward the lab door but Dani blocks his way.

“And what work would that be? Care to give me a tour of your lab?”

Kingsley tries to push past her, “Excuse me, I am going inside.”

Dani moves to block his way once more. Kingsley puffs in frustration. “Please, leave me alone.”

She responds with, ‘I am writing an expose on Mr. Buford, how he has cheated old age. I’ll be certain to give you credit for that.”

“Then you have all you need. Now excuse me.”

Dani moves to block Kingsley once again. “What is the plan Dr. Kingsley? Is Buford going to keep the secret to youth to himself? Is he going to sell the formula?”

“That is up to Buford. You are asking the wrong man.”

“Some say that what you have done with Buford is a major miracle, a breakthrough in longevity medicine. Don’t you want credit for that? A modern-day Ponce De Leon, discovering the fountain of youth?”

Kingsley holds out his arm to try to block her from getting in his way again. She ducks under his arm and steps back in front of him. “Others say that you are playing at a dangerous game – giving these untested, unreviewed treatments to the man. Some want you disciplined, even thrown in jail.”

Kingsley is losing his patience. He stops and drops his arms to his sides. “Listen, I don’t want to

talk to you about my work. Please leave me alone.” Kingsley is surprised when the woman steps aside and lets him pass. To Kingsley’s back she says, “Thank you Dr. Kingsley. You have confirmed my suspicions. I hope you enjoy the article. Financial Times – August issue.”

Kingsley enters his lab and locks the door. He breathes a sigh of relief, “I thought that woman would never go away.”

#

The article on Buford and his new found youth comes out as promised, in the August edition of the Financial Times. It starts with a review of what is commonly known about billionaires and their investments into longevity research. These labs are still in the hunt to crack the secrets of youth; make their investors young again. The investors are still patiently waiting for the payback on their investments. The article goes on to give a brief review of what is publicly known about the current state of the art in longevity research. Concluding that we are not yet there.

Then the article turns to Buford and his amazing transformation. ‘But then there is William T. Buford the Third. This billionaire has a secret genius working for him. One who appears to have solved the secrets of youth. Under this man’s care, Buford has been transformed.’ Inset in the article is an archival photo of Buford taken some years back – a pasty, balding sixty-year-old man with jowls and bags around the eyes. Beside this photo is one of the present-day Buford. There is a twinkle in his eyes that are now rimmed with smooth, youthful skin, not a wrinkle in sight. The jowls are gone and there is a blush of colour in the cheeks. His hair is dark and thick, could be a hairpiece. The differences in the photos are stunning to the point of disbelief. Perhaps the later photo is of a younger Buford or it is enhanced using tricks of makeup and lighting, and photo modifying software. The article talks about how Buford has been recently transformed. He looks like a thirty something with a spring in his step and a mind as quick as a cobra. ‘But Buford is now sixty-seven, an old man by anyone’s measure. His secret researcher, a Theodore Kingsley appears to have found the secret to reversing old age. The

solution they have remains a mystery, neither is talking. For now, Buford is the only known benefactor of these treatments.'

The article ends with a number of questions: The treatments have never gone through proper testing for safety and efficacy. Buford remains the sole benefactor of these treatments – is he going to keep the secret to himself? Will he share it with his billionaire pals? Perhaps he plans to sell it at eye-watering prices. Will he make it public so that all people can benefit from this – banish old age from the population?

The article causes an outcry. There is a visceral response from many that this rich guy now has apparently cheated aging. How much more can one man have or deserve? Experts on medical ethics decry the treatments as unethical and dangerous, even though they don't know what the actual treatments are. Those involved in longevity research complain that Kingsley is by-passing long established protocols for testing and proving such treatments before trying them on a human subject. Congress appoints a special committee to examine the matter.

Buford's phones are jammed with people calling to ask for the treatment, for themselves, for an elderly relative, for a terminal loved one. Kingsley's home is besieged by people who found his address on the internet. They are demanding that he release the treatment. Kingsley has to hide out in his lab, trekking there on foot in the middle of the night.

Buford is worried by the sudden attention. He still needs additional treatments from Kingsley to achieve his goal – immortality. The public outcry just may threaten this plan – Kingsley could be sanctioned, possibly arrested for his by-passing of proper testing protocols. If that happens, the next treatment, the one that defeats the Hayflick limit may not happen.

Kingsley is annoyed by the sudden attention. It is a distraction, and possibly worse if they bring charges against him. Hiding in his lab, he is able to focus on his science and ignore the maelstrom outside. Only two people know where his lab is and neither is talking. Dani hasn't admitted that she



knows where it is. Kingsley is not sure why she is protecting him. Buford has his own reasons to keep Kingsley hidden. Buford calls Kingsley almost daily, to ensure that he is safe and unmolested by anyone. Kingsley assures Buford that everything is normal at the lab. No one knows where it is. The work on the solution to the telomere limit is progressing well. Kingsley is unaware of the detective that Dani hired to trail him. This man also knows the location of the lab.

Several days later, the media moves onto the next big story, and the attention dies down. Kingsley is in his lab when he hears the buzzer for the shipping door. This is a common occurrence as he has to order his lab supplies on line. Opening the shipping door, he is surprised to see Dani standing there. Without asking, she slips in through the door, encouraging Kingsley to quickly shut the door behind her. Door closed, Kingsley turns to face Dani. “What are you doing here?”

“I want to make a deal with you. I will protect your secrets if you will give me the treatments you are giving Buford.”

The light of understanding goes off for Kingsley. “So that is why you haven’t revealed my location.”

She nods, “This was always about the treatments. The article was just a way of making the two of you vulnerable so that I could play my cards.”

“You have to do a lot more than that. Buford will want all of your savings, your house and your first born.”

“Who said anything about Buford? I was thinking we could keep this to ourselves. Buford doesn’t need to know.”

Kingsley shakes his head, concern in his eyes. “You don’t know Buford. He will skin me alive if he ever finds out about this. He has already had goons threaten me to ensure that I do not to publish any of my work.”

“Well, if I reveal your location, you will be out of business. Is that what you want?”

Kingsley can see that Dani has boxed him in. He sees no way out and agrees to secretly treat her.

“Buford knows that he is a guinea pig for these treatments. So far, everything has gone according to expectation with no apparent side effects. Are you willing to be guinea pig number two?”

“If you can do for me, what you have done for Buford, I’m all in.”

“Come back here on Thursday. We can start the treatments then”

“What exactly are these treatments?”

Kingsley laughs, “If I tell you, I will have to kill you.”

Dani leaves the lab, an energetic kick in her step, the energy of a job well done, a scheme well executed. If all goes according to plan, that energy will be from a youthful version of herself.

With Dani gone, Kingsley sits down to ponder his circumstance. Has he just made a deal with a second devil? If anything goes wrong with Dani’s treatments, she will be sure to expose him. Well, he hasn’t much choice. This longevity business seems filled with nothing but blackmailers and goons. Kingsley gets busy planning out a treatment schedule for Dani.

As the months pass, Dani receives her treatments and enjoys the same transformation as did Buford. Her years melt away as she becomes a thirty-something version of herself. One evening, she gets a call from the detective she hired to trail Kingsley. The man has been watching the news about the longevity treatments and Buford’s transformation. He has put two and two together and figured out that the Kingsley guy is the same guy he trailed to that business unit. Kingsley has dropped out of sight, no one seems to know where he has gone but the detective thinks he does know. He says to Dani, “You know that Kingsley guy you had me trail a while back. It just occurred to me that he may be the same guy that they are looking for; the longevity scientist. I bet he is holed up in that commercial unit out in the suburbs. The authorities would love to know what I know.”

Dani rolls her eyes. It is time to take the bait. “So, what do you want to keep quiet?”

“I want in on this longevity thing.”

Dani is cursing to herself. She has completely forgotten about this loose end. Damn. This guy could blow the whole thing. “Okay. Don’t reveal the location of Kingsley and I will get the treatments.”

The detective smiles to himself. This was so easy.

Dani, on the other hand, is thinking of other ways to take care of this loose end. For all she knows, there are people with dirt on him that will want in on the treatments. This leak needs to be dealt with. She calls Kingsley. “We have a problem. I hired a detective to follow you. That is how I found out about your lab. That detective has put things together and wants his own longevity treatment.”

“Damn!” Kingsley spits into the phone. “This can’t keep happening. Once he receives the treatments, his wife or relatives will want in on it and we can’t trust him to not pull this shit again.”

Dani agrees. “We have to move your lab.”

Kingsley grunts dubiously, “Moving all of my equipment, taking it down, setting it back up, will set me back months. The equipment is obviously medical equipment we risk exposing ourselves to more people while moving it.”

“Well, we need to get this guy off our trail. Make him think that you have vacated that location.”

“That man only needs to tail you long enough to find me again, you still have to come in for treatments.”

Dani bites her lip. “If you stop the treatments, what happens?”

“You very quickly revert back to your natural age.”

“There is our leverage. Give him the treatments, make him younger, so he appreciates the value of the treatment and tell him that if he reveals anything about the lab, you won’t be able to continue the treatments. He will be caught in his own trap.”

“That may work. You deal with your detective friend. Make sure he understands the conditions of his treatments. I will prepare the treatments for him. You bring him in when you get your treatments. How old is this guy?”

“He’s a retired cop, in his early sixties.”

Suddenly Kingsley is treating three people. If Buford gets wind of this.... But things quiet down for Kingsley. He gets back to work on the Hayflick limit while taking brief breaks to treat Dani and her detective. The transformation of the two is just as stunning as with Buford. As with Buford, they marvel at the return of their own youthful vitality, amazed at how secretively it had ebbed away over the years – almost unnoticed. Both glow with youth. Although the detective is 20 years Dani’s senior, their new biologic ages are closer, early thirties. They start a relationship, partners in crime, partners in youth, possibly partners in life.

Dani is the one that asks Kingsley, “When will you take the treatments?”

His reply stuns her. “I am not really interested in physical immortality. I want to lead a full, productive life and leave a legacy.”

Dani screws up her youthful nose, “But you can’t age out. Who will provide us with our treatments if you are not around?”

“Oh, I am sure we can train someone to take over when the time comes.”

Dani looks worried, “And when is that time? It could be tomorrow. You could suffer a stroke or heart attack; hit by the proverbial bus. We need some insurance, a Plan B if something happens to you.”

“Perhaps, but it means letting one more person in on this little club of ours. Are we sure we want to do that?”

“What about Dr. Brown or Dr. Smith. They must have the knowledge, the expertise. Perhaps one of them has ambitions of living forever.”

“I’ll tell you what. You figure out how to bring in someone to be my assistant, keep it all on the low down and I’ll train him or her.”

This seems to satisfy Dani. She will approach a who’s who of longevity researchers to see if anyone bites. She can use her credentials as a journalist to carry out sham interviews which are really

interviews for the position.

Kingsley's work on the telomere limit progresses well. There are a number of chemical processes that have to be unlocked within a cell to reset its telomeres. All the machinery is within the cell; it just has to be activated. In order to do this, Kingsley takes advantage of the recent advancements in RNA vaccine technology. In these vaccines, most widely known for their use against the Covid19 virus, RNA is introduced into the host that tricks cells into manufacturing viral proteins – in the case of Covid, a spike protein. Kingsley introduces the RNA for the proteins needed to activate the telomere reset using, not a vaccine but an infusion of the RNA. The infusion or IV drip, ensures that the RNA is at levels high enough to activate the process in all types of cells throughout the body. He doesn't need to activate all cells, just a few in every tissue. These 'new born' cells will grow to replace the unaffected cells, giving the patient new, youthful tissues, able to operate for another 100 years. At some point in the future, the process will have to be repeated to reset the telomeres once again. It is reincarnation without death and rebirth, able to carry on exactly where you left off.

The work distracts Kingsley from the situation he finds himself in. He is a wanted man. The authorities want to talk to him, possibly punish him for his by-passing testing protocols. Every Tom, Dick and Mary wants him to bestow longevity on them. They don't care about testing protocols; they know that their clock is ticking. Kingsley is quadrupling his jeopardy by giving the treatments to Dani, the detective, and now his new research partner, Rosanna and her husband.

Dani had found a longevity scientist at a university who was tired of the red tape, the endless research proposals and inadequate grants that result. She had read all of McSwain's papers and jumped at the chance to join his team. Kingsley couldn't pay her a salary so her price was longevity treatments for herself and her spouse. She now works with Kingsley part time and lectures at a local community college for income. The arrangement works well. Kingsley doesn't need another person full time. Her role is to understand the methods in case Kingsley gets hit by a bus. Rosanna attends all of the

treatment sessions for Dani and the detective and even performs the treatments in the future. All this is going on behind Buford's back. Buford meanwhile has applied his new youthful energies to climbing the richest person ladder. He is now the third richest person on the planet. He can afford a cadre of lawyers to keep the government off his case, to run interference for him.

Buford has his eye on becoming the world's first trillionaire. He knows he has the means to do it in Kingsley's treatments. While receiving the treatment for the telomere limit Buford proposes to Kingsley, "I have been thinking Kingsley. What is this treatment worth? What is a hundred more years of life worth? What is a thousand years of life worth?" He points at the IV running into his arm, "Hell what is immortality worth?"

Kingsley replies, "What did you pay for it?"

Buford grunts, "Don't remind me. But it has been worth it."

Buford continues, "I was thinking that we could offer the treatment to some of my billionaire friends. Lord knows they keep hinting that they would love to take whatever it is that is making me more youthful. But what to charge them?"

Kingsley suggests, "First born or their souls?"

Buford gets annoyed, "Get serious, man! What is this worth?"

Kingsley offers, "Well, what can they accomplish with an extra hundred years of life. Perhaps triple their wealth? Maybe you should ask for a percentage of whatever they earn going forward. Look at you. Since you got your youthful energy back, you have been killing it in acquisitions and trading."

Buford slaps his thigh. "I like that. A percentage of new wealth. Say thirty percent."

Kingsley mutters, "Sure, thirty percent to the government and thirty percent to you. Will you be offering tax credits like the government?"

Buford grunts, "Yeah, thirty percent is a little high, let's say fifteen percent. Fifteen percent of a billion is still \$150 million. I get ten billionaires to sign up, no hell, a hundred." Buford is almost

twitching at the imagined flow of wealth.

It is Kingsley's turn to grunt. "Your republican friends will see it as a tax and you know how they feel about taxes. Besides, a hundred billionaires? Where am I going to find the time to treat so many?"

"We'll have to get you some help!"

"Your goons are going to be busy."

#

Within a short time, Kingsley is running a small clinic, giving longevity treatments to Buford's selected rich pals. It turns out that Buford's distaste for most billionaires keeps the numbers to a few dozens. The results of the treatments are quickly noticed by those billionaires left out and pressure mounts from these influential few for governments to put some controls on this technology, at least slow it down until their boys in the lab figure it out.

The papers of McSwain are directed toward the elimination of the diseases of old-age. Health policy experts recognize the benefits of such treatments. There is much discussion in those governments who provide healthcare to their citizens. There are enormous cost savings to be made if those ailments could be eliminated. But they also recognize the population bomb that would result from a sudden extension of the years lived by those remaining baby-boomers and their millennial children. Policies are developed in the European Union to help their member countries enact these treatments. Their citizens can be given the treatments up to the age of one hundred. At this point, treatments would be stopped and nature would take back control of their biological clocks. The end would come swiftly for these centenarians, hit with a hefty package of age-related disease all at once. Not a pleasant end but the price worth paying for a hundred good years.

In the US, the bastion of free markets, the longevity treatments are monetized. Individuals are on their own, they can get the treatments if they can afford them. They can continue to receive the treatments as long as they can afford them. This has some predictable and not-so pleasant impacts on

society. Many aging, middle class boomers want in on longevity but they haven't the funds. Get rich quick schemes are everywhere. Boomers are risking financial ruin with risky stock market plays, gambling, lottery schemes, and many a scam. Many sell their homes to pay for the treatments. It is no longer about the American Dream of becoming wealthy enough to buy more things, live a richer lifestyle. It is now all about selling enough of your former life to purchase longevity treatments for a new life.

#

Some years later, Kingsley is sitting in a high-end restaurant in Aspen. He is attending the annual World Economic Forum, a guest of one of his rich clients. A young man enters the restaurant. He scans the place, looking for someone or something. Spotting Kingsley, he moves toward his table. Kingsley doesn't notice the man approaching until he stops at his table. Looking up, Kingsley is startled to see Buford standing there. Buford looks like a college grad, slim, healthy looking with a full head of hair. Kingsley smiles and half stands to shake Buford's hand. "Please join me. I just started eating."

Buford looks at the plate in front of Kingsley. It is a kale salad. Buford grunts, "You think eating that will keep you young and healthy?"

Kingsley shrugs, "No, I just felt like something light."

Buford notices a piece of kale stuck in Kingsley's teeth. He motions to his own teeth as a way of communicating the location of the kale to Kingsley. Kingsley uses his tongue to locate the stuck piece and scratches it out with a forefinger. "Thanks. That could have been there all afternoon."

Buford looks around the restaurant. It is filled with people from the conference on their lunch break. Many are young, very young for such an auspicious conference. "I think that is old Peabody over there. It is getting hard to recognize people; their young facades hide well their true identity. I see you haven't taken your own treatments yet. What are you waiting for? A genius like you needs to stick around."



Kingsley shrugs, “I need a new purpose, something to energize me if I am going to hang around for so many more decades. I haven’t found it yet. Besides, there is something very romantic about the man who ended old age riding off into the geriatric sunset.”

Buford grunts, “You always were all about your legacy. But as I see it, you have an identity crisis. All your work on ending age-related disease, published under that pseudonym, will forever be associated with McSwain. Even though you admitted that you were McSwain, that little fact will not be remembered when scientist of the future reference your papers, written by McSwain. You have given immortality to a non-existent person. So, what then will be your legacy? Will it be as McSwain or Kingsley? Who will go down in history as the greatest hero; McSwain, the man who gave the world an end to old age or Kingsley, the man who gave a chosen few immortality?”

At that moment, Kingsley realizes his mistake.