

Next Study Guide

Next by Michael Crichton

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Plot Summary

Next is a novel by writer Michael Crichton. This novel questions the impact of bio-research on the world's population. Crichton presents several scenarios, including the question of ownership of one man's cells, the use of new therapies in humans without proper animal testing, and the idea of crossing human DNA with that of animals. The characters in the novel struggle with these issues, issues that seem outrageous at first but quickly begin to hit home with the readers. Like many of his other works of fiction, Next leaves Crichton's readers more frightened than they might have been if they had curled up with a good horror novel.

Frank Burnet sues his doctor, UCLA, and BioGen Research for stealing cells from his body and selling them to make cancer fighting drugs. Frank comes off in the press as ungrateful to his doctor for saving his life and unwilling to help in a process that will save millions of lives. The judge appears to agree with this bad press because he rules against Frank, in essence saying that BioGen owns the very cells that still circulate in Frank's body. Frank vows to continue fighting. During a meeting with his lawyers and the lawyers from BioGen, Frank is approached by a man who claims that he can find a way for Frank to profit from the cells that still circulate in his body. All Frank has to do is take a vacation.

Henry Kendall hears on the news that some tourist saw an orangutan in Sumatra that could speak. This causes Henry to remember an experiment he began and failed to complete at the NIH labs four years before. When, a few weeks later, Henry is sent a vial of blood from a friend who works at the NIH, Henry's worst fears are confirmed. The chimpanzee embryo he transferred his own DNA to somehow survived and is now a four-year-old chimpanzee who can speak and reason like a human child. Henry visits the animal only to learn that the lab intends to destroy him. Henry sneaks the animal out of the lab and takes him home where his wife insists they raise him as one of their own.

Josh Winkler works at BioGen where he is running experiments on a maturity gene. Josh is in the middle of administering the gene to his mice when his mother calls and asks him to pick his brother up at the courthouse. Josh's brother, a drug addict, has been arrested again. Josh does as he is asked, taking the canister containing the gene with him so he can complete the administration upon returning. However, when Josh stops for gas, his brother inhales the contents of the canister, thinking it might be something that will make him high. Within days, Josh's brother is off the drugs and holding down a full time job for the first time in several years. However, a side effect of the maturity gene is rapid aging. Josh's brother and another drug addict Josh gave the spray to will be dead in a matter of weeks.

Rick Diel is in the middle of a bitter divorce and struggling to keep BioGen out of the hands of his investor, Jack Walton. When Rick's car is stolen from the BioGen parking lot under the watchful eyes of his head of security, Rick decides to hire a security firm recommended by Jack Walton. Within days, Rick's head of security is arrested for having sex with a minor. Things begin to look up for Rick until his wife disappears,



leaving him with their small children, and the Burnet cell line, which is the backbone of his company, is contaminated. Rick goes to his lawyers in order to find a way to rectify at least the ruined cell line. The lawyers tell Rick that because he owns the cell line, he can take it from any source necessary. Since Burnet has disappeared, the lawyers advise Rick to hire a bounty hunter and take the cells by force from Burnet's daughter or grandson.

Alex Burnet rushes to her son's school when the teacher calls telling her that someone has attempted to pick him up. Alex barely escapes a kidnapping attempt when she arrives at the school. Alex takes her son, borrows her assistant's car, and leaves town. Alex arrives at the Kendall home moments ahead of her pursuers. The bounty hunter mistakes Kendall's son for Alex's and steals him off the street, right in front of Dave, the chimpanzee-human hybrid Henry Kendall created. Dave wants to protect his new brother, so he climbs onto the kidnappers' car and attacks the driver, causing an accident. The kidnappers escape and manage to steal the right child moments later.

Alex, Henry, and Dave follow the kidnappers and steal Alex's son back at gunpoint. At the same time, a judge is considering whether or not BioGen has the right to take cells from Alex and her son without their consent. The next day the judge rules that BioGen does not have this right and that they do not have the right to take them from Frank Burnet, either. The judge rules that no one can own another person's cells but that person. This ruling effectively ruins BioGen, who is already struggling under a lawsuit brought by a cousin of Josh Winkler's mother. Josh sent this cousin a canister that was supposed to contain the maturity gene, but actually contained saline. The cousin's family is accusing Josh's canister of causing their mother's Alzheimer's disease.



Prologue

Prologue Summary

Next is a novel by writer Michael Crichton. This novel questions the impact of bio-research on the world's population. Crichton presents several scenarios, including the question of ownership of one man's cells, the use of new therapies in humans without proper animal testing, and the idea of crossing human DNA with that of animals. The characters in the novel struggle with these issues, issues that seem outrageous at first but quickly begin to hit home with the readers. Like many of his other works of fiction, Next leaves Crichton's readers more frightened than they might have been if they had curled up with a good horror novel.

Vasco Borden, a fugitive-recovery specialist who specializes in high tech recoveries, is in Las Vegas following a fugitive. They are in the middle of a bio research conference. This man works for a bio research company and has run off with twelve embryos belonging to his company. Vasco is following him, hoping the fugitive will lead him to his contact. Vasco follows the fugitive into a ballroom where Jack Watson, a high tech investor, is giving a speech. Watson is cheerleading the bio research industry and denouncing a lawsuit that is being brought against his latest project, BioGen Research.

The fugitive leaves the ballroom. Vasco and his partner, Dolly, follow the fugitive back to his room, where he meets with a Russian woman whom they suspect to be a prostitute. Some time later, the two return to the hotel lobby and make their way to a restaurant. Vasco watches them approach a man who might be the fugitive's contact, but the fugitive suddenly runs. Vasco follows him, catching up to the fugitive just as he locks himself into an elevator. After a time, Vasco realizes the man is going to kill himself by opening the canister that he transported the embryos in and allowing the Nitrogen to enter the enclosed space. When Vasco is finally able to get the man out the elevator, he discovers the embryos are gone. The exchange was made and Vasco has no way of knowing when, where, or to whom.

Prologue Analysis

Vasco Borden is chasing a fugitive who has stolen embryos from his place of work. These embryos are clearly important, although the writer never tells the reader exactly why. As Vasco chases his fugitive, he sits through a speech by high tech investor Jack Watson, who has recently invested in a company called BioGen. This speech is important because it tells the reader who Watson is, suggesting he will be important later in the plot. The speech also introduces the bio research company, BioGen, which will also be important later, and the fact that BioGen is being sued. Watson clearly believes this lawsuit is frivolous and should not even be going to court. That fact, however, is reserved to the reader's judgment in the next few chapters as this court case will be a major plot element in those chapters.



Vasco eventually follows his fugitive into a restaurant. The fugitive is carrying a container that Vasco believes to contain the missing embryos. However, the fugitive appears to realize he is under surveillance and makes a run for it. The fugitive locks himself in an elevator and opens the container, exposing himself to the Nitrogen and eventually suffocating. The man would clearly rather die than be apprehended during the execution of this crime. When Vasco opens the elevator, he discovers the embryos are gone and he has no idea where or when. Vasco has failed at his assignment. The entire incident shows the reader how easily items can be stolen from bio research firms and how important it is to stop this type of theft.



Chapters 1-2

Chapters 1-2 Summary

Frank Burnet is about to take the stand in his civil case against the Regents of the University of California. Frank's daughter is watching from her seat at the plaintiffs table as her colleague prepares to question him. Alex Burnet is worried because of the bad press her father has gotten in the months leading up to the trial. Alex sees how healthy her father is now and wishes the jury could have seen him a few years ago when he was undergoing treatment for cancer.

Alex's colleague begins the testimony with easy questions, starting with his life before the cancer. Then he gently guides Frank through the diagnosis of cancer, the statement that he had less than a year to live, and the months of chemotherapy. Frank relates how his cancer went into submission, surprising even his oncologist. A year later, Frank returned to his doctor for follow up tests. A few days later the doctor calls him back and does more tests. Then every few months Frank is required to return for even more tests. This continues for four years, yet no one ever tells Frank what all these tests are for. When Frank asks, he is told not to worry, but Frank is worried. Frank believes his cancer has returned.

Every time Frank goes in for testing, the doctor has him sign consent forms. These forms grow larger and more confusing with each visit. Finally Frank refuses to sign the forms. This is when Frank learns that the doctor has been harvesting his cells and selling them to a drug company called BioGen. Frank is outraged by this, especially when he learns that his cells are worth billions of dollars. After this bomb is dropped on the jury, the defense attorney stands up and begins his cross examination. The lawyer asks Frank pointed questions, each one aimed to show that the doctor did not just steal Frank's cells, but also saved his life. Frank cannot deny this simple truth.

Chapters 1-2 Analysis

This chapter begins to illustrate all three major themes of the novel, but most specifically that of ownership of one's cells. Frank Burnet is suing the Regents of the University of California because his doctor stole his cells. Frank had cancer and his doctor told him he was going to die. However, Frank surprised everyone and survived. During routine testing after Frank's miraculous remission, the doctor clearly discovers something. The doctor requires Frank to come back for more testing every six months for four years without ever telling Frank why. Frank believes he still has cancer and continues to show for the tests, believing they are saving his life. However, when Frank finally refuses to sign release forms, the doctor informs him that he has been taking his cells and selling them to BioGen in order to manufacture a cancer fighting drug. Frank feels used and violated, leaving him full of anger toward the medical establishment. Frank feels that



these are his cells, he should have been told what they were being used for and he should have received compensation for that use.

Frank is outraged. Frank is doing the only thing he can do, he is suing. However, BioGen has tried the case in the press and made Frank out to be ungrateful and an impediment to medical research. This is what the lawyers for the defense also try to do at trial. The lawyer point blank asks Frank if his doctor did not in fact cure his cancer. Clearly Frank cannot say he did not. Frank looks ungrateful in the court as well. BioGen is trying to discredit Frank and make themselves come out as the heroes in this situation. It is BioGen who is creating a drug that will cure cancer after all.



Chapters 3-6

Chapters 3-6 Summary

Rick Diehl is in his lawyer's office. Rick recently caught his wife cheating on him and has decided to get a divorce. Rick explains to his lawyer that he wants to have genetic testing on his wife so that they can use the results to prove she is an unfit mother. Rick's lawyer listens to this and thinks it may be the new wave in custody fights.

In Sumatra, a guide is leading a group of tourists into an orangutan sanctuary. The guide advises the tourists to be quiet if they want any animals to show up. Before the words are all the way out of his mouth, an orangutan shows up. This orangutan is special, the guide knows, and he begins to show his uniqueness almost immediately. The orangutan begins to yell profanity at the tourists. Within hours, the news of this orangutan is in newspapers and on televisions around the world.

Charlie Huggins is at home having breakfast with his wife when he sees a news report about a talking orangutan. Charlie finds it amusing. Moments later, Charlie's lab partner calls. Henry Kendall wants to know if Charlie thinks the story about the orangutan is possible. Charlie laughs it off, but Henry cannot shake the story, specially in light of the phone call he received a few weeks ago from the office of Robert Bellarmino, confirming the time period four years ago in which Henry conducted experiments at the NIH labs in Bethesda.

At BioGen, Josh Winkler and his assistant, Tom Weller, are administering a retrovirus to their lab mice that contains a mature gene. When they are half finished, Josh gets a phone call. Josh's mother needs him to pick his brother up at the courthouse. Adam is a drug addict who has been arrested again for buying drugs from an undercover cop. Josh takes the retrovirus canister with him since he has to finish administering the retrovirus to the mice before five o'clock. However, as Josh is driving his brother to his mother's house, he runs out of gas. While pumping the gas, Adam inhales the retrovirus, thinking it might make him high. Josh is upset because he could get in trouble at work, but he is not worried about Adam. Josh does not think there is enough of the retrovirus in the container to affect his brother.

Chapters 3-6 Analysis

Rick Diehl, the owner of BioGen Research, is beginning divorce proceedings against his wife, who he caught cheating on him. In order to prove his wife's unfit state for parenting their children, he tells his lawyer to force her to submit to genetic testing. Rick believes that his wife has a genetic disorder that will someday cause her to be too ill to care for their children. Rick knows his wife is afraid to learn if she has this disease, so his motivation is as much punishing her as it is protecting his children. The lawyer is excited by this prospect, thinking it might be the future of custody litigation. At the same time, a



group of tourists hear an orangutan speak. When this hits the news, researcher Henry Kendall is reminded of a strange phone call he received just a few weeks ago checking the time line on some research he conducted at the NIH labs in Bethesda. Kendall is concerned, but the reader is not quite sure why at this point. The reader is left wondering what is going on with Kendall and how it will affect the rest of the novel, foreshadowing future chapters.

At BioGen, young researcher Josh Winkler is administering a retrovirus to his mice that contains a gene for maturity. Josh gets a phone call from his mother, telling him to pick his drug addicted brother up from the courthouse. Josh goes reluctantly, taking the canister with him because he intends to finish administering it to the mice when he returns to the lab. However, Josh's brother inhales the retrovirus himself, hoping it will make him high. Josh does not think the retrovirus will harm his brother because it contains only enough retrovirus to affect the mice and should not be enough to affect a human. However, the reader is curious if perhaps Josh is wrong and what the affect might be on Adam. This touches on the theme of DNA experimentation. It is important to test these viruses on animals before humans since no one knows what the results will be. Josh has jumped the gun here, although it is not entirely his fault. The question is, how will this affect Adam and what will Josh do next.



Chapters 7-10

Chapters 7-10 Summary

Alex Burnet returns home to tell her father that the judge ruled against them. The judge ruled that Frank Burnet has no right to his tissues once they leave his body and therefore the university could do anything with his cells that they want. However, Alex promises that she intends to begin the appeal process. A few days later, Frank, Alex, and her partners meet with the lawyers from the university. The meeting is unproductive. When all the lawyers leave, Frank has a conversation with a young man who brought sandwiches to the meeting. The young man tells Frank that BioGen in effect owns his cells and he cannot legally sell them to anyone. However, the young man tells Frank there are ways around this and offers him one hundred million dollars to sell the cells to the people he represents. Frank agrees to think about it.

Tom Weller gets a call telling him his father has died in a car accident. Tom's sister, who has been estranged from the family for several years, has not yet heard the news, so Tom agrees to stop by her apartment and tell her. When Tom arrives, he discovers his sister does know about the accident. However, his sister is not upset. Tom's sister does not believe that the dead man is her father. Tom's sister has decided to have a DNA test done to prove her suspicions. Tom's sister gets DNA from the hospital where her father died and learns that her suspicions are correct; he is not her father.

Emily Weller is outraged that the hospital allowed her daughter to get samples of her husband's DNA. The administrator at Long Beach Memorial is also angered by the situation because the Weller family is suing. The administrator calls Marty Roberts, the medical examiner, to his office. The family wants any blood or tissues the medical examiner has in order to run their own DNA tests. Roberts claims all the blood and tissue is gone. Roberts then returns to his office and finds his assistant, Raza, cleaning up. Roberts tells Raza to get rid of all blood and tissue left from the Weller case.

Charlie Huggins and Henry Kendall have been researching a novelty gene, the gene that causes people to seek out thrills. They submitted a grant application to the NSF to take blood samples of people who repeatedly ride roller coasters. Their grant is denied, but they learn later that Robert Bellarmino, a well-known researcher who happens to be on the NSF board, is researching the same gene using the same methods Charlie and Henry had intended to use.

Chapters 7-10 Analysis

Alex Burnet tells her father that they have lost their case. Alex intends to appeal, but in the meantime, she and her father meet with the university lawyers. Not only is the meeting unproductive, but based on the judge's ruling, the lawyers believe that BioGen owns all of Frank Burnet's cells, including the ones that still circulate in his body, once



again showcasing the theme of ownership of one's cells. After the meeting, Frank speaks with an unnamed young man and is told that even though BioGen owns his cells, there are legal ways of obtaining the cells. Then the young man suggests that something might happen to ruin the cells BioGen already has. This young man represents someone who wants to buy Frank's cells directly from him, and offer him millions of dollars to do it. Frank does not turn the man down right away, which suggests that he might consider selling the cells. The reader again is left wondering who this young man is, who he works for, and how he intends to buy the cells if it has been declared that BioGen owns them. The reader hopes the next few chapters will illuminate these questions.

Tom Weller's father dies. Tom's sister does not believe their father is her biological father, so she gets DNA samples from the hospital to run a test, hoping to learn the truth. When the family learns about this, they sue the hospital for releasing the samples to a non-family member. The family now wants samples of their own to run the tests again. To protect themselves, the hospital quickly loses the remaining samples, which will force the family to obtain samples some other way in a future chapter.

Charlie and Henry have applied for a grant from NSF in order to fund testing at amusement parks on people who like to ride roller coasters over and over. Their grant is denied, but one of the scientists on the panel, Dr. Robert Bellarmino, starts running tests of his own, in the same style and at the same amusement parks Charlie and Henry intended to use. This makes Henry upset, because he and Bellarmino have been rivals for many years, with Bellarmino always seeming to come out on top. This also shows some depth to Bellarmino before the reader ever gets to meet him.



Chapter 11-17

Chapter 11-17 Summary

Rick Diehl's lawyer tells his soon-to-be-ex-wife that they want to do genetic testing and she becomes hysterical, insisting her genetic makeup has nothing to do with her ability to be a mother. At the same time, Josh gets a call from his mother. Adam has suddenly become a new person. Adam is off the drugs and holding down a full-time job. Adam told his mother about the retrovirus. Now Josh's mother wants to know if he can do the same thing with the drug addicted son of a friend. Josh is reluctant, but agrees.

Emily Weller has the body of her husband exhumed. Emily is at the cemetery and is unhappy with the whole situation, hoping that the tissues can be taken at the cemetery in order to end the experience as quick as possible. Tom poses this question to Roberts, but is told that it is against the law to take tissues at the cemetery. However, when the coffin is opened, Roberts suddenly changes his mind. The tissues are taken and the family quickly leaves. Roberts returns to his office and confronts Raza. The long bones of Weller's arms and legs are gone.

When Rick Diehl walks into the parking lot of BioGen, he discovers that his new car has been stolen. Rick goes to the security office and demands to see the security tapes from the parking lot cameras. Brad Gordon, the head of security and nephew of Rick's investor, Jack Watson, tells him that the cameras in the parking lot have been broken for months. However, they do have tapes of the roof and these show a couple of men taking the car minutes after Rick arrived that morning. Rick assumes the men were hired by his wife and calls his lawyer to complain. The lawyer doubts it was his wife, however.

In Sumatra, despite the reports that the talking orangutan was a hoax, a large group of reporters is attempting to get footage of the animal. This group is making too much noise, however, and the guide is concerned the animal will not appear. When the guide tries to quiet the group, a fight breaks out. At the same time, Rick Diehl is golfing with Jack Watson. Rick tells Watson about the theft of his car and Watson recommends he hire a high tech security firm. Rick meets with the security firm's representative a few days later. The gorgeous woman recommends Rick replace Brad Gordon. Rick admits he cannot do that due to Brad's relationship to Watson. The woman assures Rick her company will take care of that situation. The woman then tells Rick they found his car and they are sure his wife did not take it.

Chapter 11-17 Analysis

Rick's wife does not want to have genetic testing because she does not see what it has to do with her ability to raise her children. The reader is wondering the same thing. At the same time, Josh learns that his maturity gene has caused his brother to shake his



drug addiction and turn his life around. Josh is just as surprised as his mother. When Josh's mother asks him to use the retrovirus on the drug-addicted son of a friend, he agrees reluctantly. Perhaps Josh is hoping to rule out coincidence and prove that the maturity gene can cure drug addiction.

When Emily Weller has her husband's body exhumed to retrieve DNA, she seems to be concerned about the body being examined in the hospital a second time. Roberts also does not want the body examined, but for his own reasons. Roberts has been taking the long bones of bodies due to be cremated and selling them. The bones of Weller's body have been taken, something Roberts does not want known because it could be traced back to him and cause him to lose his medical license. What Roberts has been doing is illegal. Not only could he lose his license, he could go to jail, motivating him to keep the body away from anyone official.

Rick Diehl's car is stolen from the parking lot of his company, BioGen. Rick is convinced that his wife had something to do with it. However, Rick's head of security is inept and has allowed the parking lot cameras to remain broken for months. Rick would like to fire Brad, but Brad's uncle is Jack Watson, Rick's biggest investor. Rick cannot find a new investor, so he needs to keep Watson happy. When Rick tells Watson about the theft of his car, Watson suggests a high tech security firm. Rick meets with the security firm's representative, who agrees that Brad must go. The woman tells Rick not to worry about it, her firm will take care of it. What this means, the reader is not clear about at this point. Then the woman tells Rick that his wife did not steal his car and that it has been located in Houston. The question of who stole the car is never answered. At the same time, the orangutan that spoke in front of tourists is now the subject of reporters. The same guide leads these reporters into the sanctuary, but warns them they are being too quiet. Within minutes a fight breaks out between the reporters. The orangutan never shows up. Clearly, it is not a hoax, however, as previous chapters have implied. The reader is left wondering what this orangutan has to do with the overall plot, however.



Chapters 18-22

Chapters 18-22 Summary

Brad Gordon has a habit of going to the girls' soccer practices at the local middle school in order to relax. Brad pretends to be a father or uncle, keeping people from talking to him by fiddling with his cell phone or PDA. One day a girl, claiming to be eighteen, sits next to him in the stands and starts a conversation. Before he knows it, Brad finds himself leaving with the girl. Across town, the director of Long Beach Memorial's genetics lab calls Roberts and complains that the morgue's original tox tests were negative, but that her tests on the tissues taken at the cemetery show Mr. Weller was intoxicated at the time of his death and had high levels of ethacrynic acid, a diuretic. This combination could have contributed to Mr. Weller's death and should have been reported to the police. Roberts promises to look into the matter. Back at the lab, Roberts remembers Emily Weller's behavior at the cemetery and begins to think perhaps she might have been giving the diuretic to her husband without his knowledge. Roberts calls her and suggests she have the body exhumed and cremated, something that would be beneficial to Roberts and Emily Weller.

In New York, Ellis Levine finds his mother shopping for expensive clothes despite the fact that he and his brothers had warned her to be more careful about her spending habits. Mrs. Levine seems confused when Ellis reminds her and then she begins to cry until Ellis promises to take her out for an expensive lunch. In Washington, Robert Bellarmino is speaking at the Congressional Biotechnology Prayer Breakfast. Bellarmino, a Christian as well as a scientist, speaks about the morality of bio research, suggesting that God would not have given man the intelligence and instruments to manipulate DNA if He did not intend for them to use it. It is a speech Bellarmino has given in various versions for years. Bellarmino also gives testimony at a hearing regarding patents on genes, assuring the committee that gene patenting is a good system.

A few days later, Roberts gets a call from Emily Weller letting him know she cannot have her husband cremated because the funeral parlor found metal pipes in his arms and legs. Emily Weller implies that she might sue the hospital over this new development. Roberts confronts Raza, who tells him he did not do it, that it must have happened at the funeral home. Roberts calls Emily Weller back and tells her that he has a copy of a prescription for the diuretic found in her husband's body and that she should just quietly rebury her husband. Roberts begins to think he should fire Raza, but before he can, Raza quits.

Chapters 18-22 Analysis

Brad Gordon goes to a girls' soccer game to watch the young girls run around in shorts and t-shirts. When a young girl, who claims to be eighteen, approaches him and asks



him to buy her alcohol, Brad readily agrees, suggesting he might be setting himself up for trouble. At the same time, Marty Roberts finds himself in trouble. The tox screen Roberts was supposed to run on Mr. Weller came back negative, but tests on the genetic material shows that Mr. Weller was drunk and had a diuretic in his blood stream. These things could have caused the accident and should have been reported to the police. Once again, Roberts has been caught cutting corners, leaving him vulnerable to sanction, motivating him to keep this from happening. The reader sees this and is curious what he will do next.

Roberts goes to his office and begins to think that perhaps Mrs. Weller was giving the diuretic to her husband and that was why she acted strangely at the exhumation. Roberts calls her and suggests she have the body of her husband cremated, something that would benefit them both. However, it is discovered that the missing long bones have been replaced with metal pipes. Roberts is angry because he always insists that wood be used to make exhumation possible. Worried again that this will come back on his head, Roberts calls Mrs. Weller back and tells her to rebury the body. Roberts has proof that she bought the diuretic, motivating her to keep Roberts quiet. Roberts believes all this is Raza's fault, so he begins to formulate a way to fire Raza, his assistant. Raza beats him to it when he announces he has already found a new job.

At the same time, Ellis Levine is having trouble convincing his confused mother not to spend money. Mrs. Levine seems to be having trouble understanding the depth of her and her husband's financial woes. Mrs. Levine is confused, implying to the reader that there may be more going on with her than what might be apparent on the surface. Dr. Robert Bellarmino makes an appearance in this chapter as well. Bellarmino is a Christian who peppers his beliefs with his research, sharing his views with anyone who will listen, including Congress. Bellarmino clearly has great influence with the American government, despite the lack of ethics that allowed him to steal Henry and Charlie's research ideas.



Chapters 23-29

Chapters 23-29 Summary

Josh's mother calls him and asks that he send a canister of the retrovirus to New York in order to help her cousin, Mrs. Levine. Josh does not want to do this, but promises his mother he will. While Josh is still on the phone with his mother, Brad Gordon is arrested for aggravated assault and rape of a minor. Brad sits in a cell for several hours waiting for his lawyer to show up. Brad knows his uncle will send an expensive lawyer and is not disappointed. The lawyer tells Brad that the girl whom he left the soccer game with claims he brutally raped her and has medical evidence to back her up. Brad swears he never touched the girl, that they only made out and she chickened out. The lawyer does not believe him, but the young man with him claims that his computer software shows that Brad believes he is telling the truth.

Henry Kendall goes to his old friend, Marty Roberts, and asks him to run a test on some blood he was sent in the mail. Henry will not tell Roberts where the blood comes from, but asks him to find out if the blood is human. Roberts agrees. At the same time, Josh Winkler goes to a lawyer to find out if there is any way he can get a patent on a component of the maturity gene so he will not be left out in the cold when Rick Diehl learns that it cures people of drug addiction. The lawyer assures him there is. Across town, Rick learns that his wife left town when served with the court order for the genetic testing. Rick now has physical custody of his children.

The day Brad gets out of jail on bail a young man approaches him. This young man tells Brad that he believes he was set up. The kid says that someone accessed Brad's phone records and learned his habits. The girl, the kid tells him, took forty-five minutes to make the ten-minute drive to the hospital. The kid says there is little that can be done, but that he will try to discredit the girl in order to keep the case from going to trial. A few days later, Josh is in Rick's office discussing the maturity gene. Rick wants to go public with it, despite the fact that they have not even begun their application to the FDA for human testing. Rick has spoken to Josh's mother and knows about the effects of the retrovirus on Adam. This takes away any chance Josh might have of gaining control of the gene and cashing in on its marketing.

Chapters 23-29 Analysis

Josh's mother wants him to send the retrovirus to her cousin in New York. This is the Levine's that the reader met in a previous chapter. Josh's mother hopes the retrovirus will help her cousin face her financial problems with more maturity. Josh agrees. At the same time, thanks to the success he has seen in both his brother and the son of his mother's friend, Josh decides to try to get a patent on one of the components of the maturity gene in order to cash in on a drug that might be developed. Josh is motivated by the financial rewards such a drug might reap. However, before he can do this, Josh's



mother calls Rick and tells him about the success with Adam. Rick now knows what is going on and can prevent Josh from taking any action that would be to his benefit. Rick is interested in keeping all the money for himself and his company, which means cutting Josh off before he can make any claim to the future drug.

Brad Gordon is arrested for aggravated assault and rape of a minor. Brad knows his uncle will get him out of trouble, he always has in the past. However, even the lawyer does not believe Brad can win at trial because the case against him is strong. Later, when Brad is released from jail, a young man approaches him and tells him that there is evidence that he has been set up. This appears to be the same young man who approached Frank Burnet about buying his cells. This young man promises Brad he will try to discredit the young woman. Brad continues to have confidence that his uncle will protect him, believing it is his uncle who has sent the young man to help him.

Rick Diehl now has physical custody of his children, due to the fact that his wife has deserted them. However, Rick has not spoken to his kids in three days, clearly preferring his solitary life to that of family man. Rick is struggling, showing that his true motivation was never to have custody of the children but to hurt his wife. At the same time, Henry Kendall takes some blood to Marty Roberts to have tested. Kendall wants to know if the blood is genetically human, but will not tell Roberts why he needs to know. The reader does not know, either, but is anxious to find out.



Chapters 30-35

Chapters 30-35 Summary

A focus group is listening to a pitch on a gene that promotes conventional wisdom. The group kicks around names for this new gene and eventually settles on sociability gene. At Bethesda, the Bioethics Review Panel is reviewing the case of a doctor who used a gene therapy on a young girl dying of a terminal disease and is now being sued by the patient's parents who say he did not warn them of the dangers of the treatment. The panel listens to the doctor's testimony and seems intent on sanctioning him, until Dr. Bellarmino convinces them that the doctor was in the right. From this meeting, Bellarmino meets with a young researcher working in his lab. The researcher has written a paper on some promising work he has recently completed. Bellarmino convinces the young man into placing his name first on the paper, promising to allow him to take all the credit the next time.

Gail Bond learns that someone has been helping her young son with his homework. When Gail sees the paper, she knows who the helper is. Gail is a researcher who has worked on transferring human genes into those of animals. One of these transgenic animals is a grey parrot named Gerard. Gerard lives with Gail's family. Gail goes home and tries to get Gerard on tape answering math problems. However, Gerard would rather have a bath. When Gail puts the bird off, he repeats a conversation he overheard between her husband and his lover. Gail confronts her husband, they argue, and she spends the night with her own lover, her lab partner.

Brad Gordon is home alone when a beautiful woman comes to visit him. The woman tells Brad that his uncle, who has been very generous to him over the years, needs his help. Brad is to go to BioGen, place a liquid on his fingers, and contaminate the Burnet cell line. At the same time, Henry Kendall gets a call from Roberts, telling him the blood in the vial is human and matches his DNA. Henry is clearly upset by this information and immediately arranges a trip to Bethesda. In Bethesda, Henry goes to the NIH labs he has not visited since his sabbatical four years before. During that sabbatical, Henry was researching the genetic link to autism. Henry infused his DNA with that of a chimpanzee embryo. Henry did not expect the pregnancy to last past the ninth week, at which time he intended to autopsy the embryo. However, an encephalitis outbreak in the lab caused the animals to be sent to labs throughout the country. Henry lost track of his mother chimpanzee and assumed the pregnancy had ended naturally.

Last week, a friend at the labs sent him blood from the living offspring. Now Henry walks into the labs and finds a chimpanzee with clear differences from other chimpanzees, such as pale coloring. Henry also learns that the chimpanzee has recently begun to speak. Henry talks to the chimpanzee, named Dave. When he finds out Dave is to be destroyed, he decides to steal him out of the lab. Henry does not know what he will do once he gets him home, but he knows he cannot allow Dave, essentially his own child, to be destroyed.



Chapters 30-35 Analysis

Dr. Bellarmino shows his conflicting colors once again. Bellarmino stands up for a doctor who is being sued for not warning a girl's parents that gene therapy could potentially lead to her death. Moments later, Bellarmino effectively steals the work of a promising researcher in his lab. It seems Bellarmino cares only about himself and his own fame.

Gail Bond learns that the grey parrot she created in her lab by transferring human DNA into its DNA has been helping her son with his homework. This is a huge breakthrough in the experiment, since it is the first time the parrot has done anything that proves individual thinking rather than repetitive action. While trying to get the parrot on tape solving math problems, the bird tells her that he husband has been having an affair in her apartment. Gail is angered and confronts her husband. This argument causes Gail to leave the apartment and spend the night with her lab partner. The impact of leaving the bird alone with her husband is not apparent at this time. However, the reader should be anxious for the bird, being aware that the husband does not like the bird.

Brad Gordon is visited by a beautiful woman who reminds him how helpful his uncle has always been to him. To pay him back, the woman instructs Brad to contaminate the Burnet cell line at BioGen. Brad agrees. This goes back to the meeting between Frank and the mystery young man who told Frank Burnet that mistakes tend to happen in labs all the time. At the same time, Henry Kendall learns that the blood he took to Roberts is human and that the DNA matches his own. Henry goes to the NIH lab in Bethesda where he was working on a transgenic chimpanzee four years ago when an encephalitis outbreak interrupted. Henry always assumed the embryo he created with his own DNA had died before the pregnancy ended, but now knows it did not. The embryo grew into a chimpanzee capable of speech. Henry spends time with the chimpanzee before learning it is to be destroyed. Henry decides to steal the chimpanzee from the lab and take it home, though he is not sure what he will do with him then.



Chapters 36-43

Chapters 36-43 Summary

Lynn Kendall, Henry's wife, is shocked when he brings Dave home. Lynn wants to know what Henry intends to tell people. Henry does not know. Lynn watches Dave play with their son, Jamie, and decides she has to do something. Lynn decides to create a fake genetic disease, a rare disease, that causes excessive hair. Lynn tells everyone that Dave is a human child who suffers this disease. At the same time, a press conference is going on in Shanghai to put to rest rumors of there is no such thing as a chimpanzee-human hybrid.

Mark Sanger has never gotten over the sight of a jaguar eating a leatherback turtle. Sanger has sworn to do something to stop it, perhaps to use some sort of wet art to the benefit of these animals. At BioGen, Josh learns that a large group of rats he has been administering the maturity gene to have died of age-related causes. Josh immediately calls his brother and invites him to lunch. At lunch it is obvious that Adam too is maturing rapidly. Josh sends Adam to their family physician to have some tests. In Washington, a Minnesota professor is telling Congress that there is no proof that a single gene can influence a person's behavior. In fact, it seems that many genes interacting with each other cause specific behaviors, not a single gene.

Dave fits in well with the Kendall family, but it does not take long before he realizes that he is different from everyone else. Lynn tries to make him feel better, but has difficulty knowing how to treat him. In New York, Ellis Levine forces his mother to inhale the fluid in the canister Josh Winkler sent. In Santa Barbara, Rick Diehl is struggling with his children when he learns that Brad Gordon broke into BioGen the night before and contaminated the Burnet cell line. Rick also learns that the off-site cells have disappeared, taken by someone who used Rick's authorization codes.

Chapters 36-43 Analysis

Lynn Kendall is shocked when Henry brings Dave home. Lynn does not know what to tell people, but she knows they must keep Dave. Lynn creates a fake genetic disorder that is very rare but will explain Dave's appearance to anyone who asks. Lynn intends to pass Dave off as a human. However, even this determination on her part does not help Lynn know how to deal with Dave. Dave is intelligent and knows he is different. Lynn does not know how to help him deal with his truth, the fact that he is a unique creation, touching on the theme of DNA experimentation. Dave clearly is an extreme example of what it means to tamper with something people do not yet completely understand. At the same time, a press conference in Shanghai denies the existence of animals like Dave.



A man named Mark Sanger wants to do something to prevent the attacks of jaguars on leatherback turtles, due to his personal outrage at having witnessed one of these attacks, but does not know how. Sanger considers using wet art to bring attention to the situation. Wet art is the modifying of nature for the purpose of education and art. The reader expects to see Sanger again in a later chapter. At the same time, Josh Winkler learns that his rats are beginning to die from premature aging. Josh goes to lunch with his brother and discovers the same thing is happening to him. Clearly, the maturity does not just affect behavior, but physical growth as well. In New York, Ellis Levine forces his mother to inhale the contents of the canister Josh sent them. The reader sees this on top of learning the shocking side effects of the retrovirus and wonders how this rapid aging will affect Mrs. Levine and her family.

Rick Diehl has learned that the entire Burnet cell line is gone. Rick's entire business is dependent on the Burnet cell line, which is why he had stores of the cell line in different parts of the world. However, these cells were stolen as well. Rick is furious and frightened about the impact on his business. Rick now needs to get ahold of Burnet and replace these cells, which he has the right to do since Rick's company owns the cells. However, Burnet is nowhere to be found. Rick wants to find another way to get the cells, suggesting a future chapter dealing with this specific issue. The entire situation revisits the theme of ownership of one's cells and again questions who really owns the lifesaving cells circulating in Burnet's body.



Chapters 44-51

Chapters 44-51 Summary

In Paris, Gail Bond got into the habit of staying at her lab partner's apartment and then slipping back into her own apartment in time to take her son to school. One morning, Gail returns home to find Gerard has vanished. Gail suspects her husband did something to Gerard on purpose, but cannot prove it. Gerard knows the tones for her cell phone, so she hopes she might hear from him again some day. In Malibu, Alex Burnet is in the middle of the biggest case of her career, so she does not ask many questions when her dad announces he is going out of town for a few weeks.

In London, an advertising exec gives a presentation of a new form of advertising. This campaign uses a type of wet art that will use nature to advertise. The campaign will use fish with company logos on their scales and clouds that are like huge billboards. The presentation is a failure, as the executive is told that this type of advertising has already been done. The conservation chief in Tortuguero goes to the beach to see a turtle that is displaying some unusual markings. This turtle is glowing from within its plates on its shells. The conservation chief thinks the lights form a shape of a company's logo, but cannot figure out which company it is.

Josh's mother calls him and tells him the son of her friend on whom he used the maturity gene has died. The boy had a heart attack just weeks after getting off the drugs and getting a full time job. The boy was only in his early twenties. Josh's mother also mentions how old Adam is beginning to look. She is worried about him and about her cousins in New York. She need not worry about the cousins, however, because Josh sent them a canister that only contained saline.

In Paris, Gail Bond's husband is having lunch with an important client. The client needs a unique gift for his wife. Knowing his wife likes birds, Gail's husband gives the client Gerard. In Maryland, Robert Bellarmino is at a middle school talking with a group of kids for a television show Bellarmino is to appear on. The questions are supposed to be simple and easy to answer, but turn out to be complicated questions about human cloning. Bellarmino answers the questions as benignly as he can before changing the subject. In Sumatra, a photojournalist, Gorevitch, uses a tranquilizer gun to capture the talking orangutan.

Chapters 44-51 Analysis

In Paris, Gail Bond stops spending the night at her own apartment, giving her husband the opportunity to make Gerard, their transgenic bird, disappear. Gail knows her husband is behind the disappearance due to his hatred of the bird, but cannot prove it. The reader learns the husband is in fact to blame when Gail's husband promises the bird to a client who needs it to please his wife. At the same time, Alex Burnet gets a



phone call from her father, telling her he is leaving town for a while. The reader latches on to this and imagines he has agreed to sell his cells to the young man who contacted him before, especially in light of the fact that the Burnet cell line has either been contaminated or gone missing from BioGen.

In London, an advertising executive suggests using wet art to put advertising on animals and in clouds. However, the man is told this has already been done. As though to prove it, a turtle in Tortuguero seems to be glowing some sort of advertisement on the same beach Sanger was so concerned about, suggesting this incident might be tied back to Sanger in a later chapter. At the same time, Josh Winkler learns that the second person he gave the retrovirus for the maturity gene to has died of a heart attack despite his young age. Josh is worried about his brother, but is not concerned about the cousin in New York because the canister he sent them only contained saline. The reader is relieved to hear this, assuming the woman will have no side effects from the saline.

Bellarmino takes questions from a bunch of children in front of television cameras, thinking it will be simple. However, the children ask complicated questions about human cloning, putting Bellarmino on the spot. Bellarmino carefully answers some of the questions before changing the subject, concerned how the entire event will make him look to his public. In Sumatra, a photojournalist uses a tranquilizer gun to capture the talking orangutan. The reader does not know why the photojournalist wants the orangutan, except for the obvious effort to record it speaking.



Chapters 52-56

Chapters 52-56 Summary

Rick Diehl's lawyers tell him that he owns the Burnet cell line, therefore he has a right to take it from any source. Since Frank Burnet's children and grandchildren have the same cells, they technically are in possession of stolen property and Rick can retrieve this property any way necessary. The lawyer advises Rick to hire a bounty hunter to have the cells forcibly taken from either Alex Burnet or her son, Jamie. Vasco Borden is the bounty hunter Rick hires. Vasco arranges for his assistant, Dolly, to go to Jamie's school and tell the teacher that Alex has sent them to take Jamie to the doctor. Once they have the kid, Vasco has a doctor who will do the procedures in the back of an ambulance.

Brad Gordon is advised by his new lawyer to leave town and participate in as much thrill seeking behavior as possible. The attorney plans to use a bad gene defense when Brad's case goes to court. Brad immediately packs his bags, including his gun for safety. In La Jolla, Lynn Kendall is called to Jamie's school. Jamie took Dave to school that morning and Dave bit another child. Dave insists that the other kid was being mean to Jamie and Lynn believes him. Lynn leaves Dave at school.

Alex Burnet is called to her son's school by the teacher when she becomes suspicious about a woman attempting to pick Jamie up. Alex talks to the woman and is told that she is actually from the doctor's office. The woman starts talking to the doctor on the phone and leads Alex outside. Once outside, the woman and a man waiting outside try to grab Alex. Alex fights them off and they leave. Alex speaks briefly to the police and then takes her son home. However, instead of going into her apartment, Alex waits in the park across the street. There Alex can see the man from the school loitering around her apartment. Alex calls her assistant and arranges to trade cars with her for the day. While riding back to the office with her assistant, Alex opens a package her father sent her a few days before. Inside is a prepaid cell phone, some cash, and a warning not to use her credit cards if she runs into trouble.

Chapters 52-56 Analysis

Rick Diehl speaks to his lawyers and learns that he has the right to take Frank Burnet's cells from any source, again exploring the theme of ownership of one's cells. Rick decides to take his lawyer's advise and hire Vasco Borden to abduct either Alex Burnet or her son Jamie and take the cells from them. Vasco arranges for his assistant Dolly to pretend to be from Alex's office and pick the boy up at school. The plan is to extract the tissue necessary in the back of an ambulance and return the child to school. However, the teacher catches on and calls Alex. Once there, Alex is nearly kidnapped herself. Alex escapes and manages to keep from running into Vasco and Dolly at her apartment. Alex arranges to trade cars with her assistant. On the way to the office, Alex opens a package from her dad that contains money, a cell phone, and a warning not to use her



credit cards. The reader suspects Alex's dad knew this was going to happen and wanted to warn her.

Brad Gordon is advised by his lawyer to go on a cross country trip and to seek thrills anyway he can. The lawyer wants to use the novelty gene, a thrill seeking gene that Bellarmino is investigating, as his defense. Brad is happy with the idea, happy to get out of town and away from the stigma of his arrest. When he packs, Brad takes his gun, along suggesting to the reader a time when he might use it. At the same time, Lynn gets a call from her son's school telling her that Dave has bitten another child. Lynn believes the other boy is at fault and insists that Dave stay at school. The reader might suspect that this is not a good idea, however.



Chapters 57-64

Chapters 57-64 Summary

Georgia Bellarmino sees a bruise on her daughter's stomach and wants to know how it got there. Her daughter, who is sixteen, refuses to answer. Georgia calls her husband, but he is on his way to the airport and does not have time to talk. Robert tells her to search the girl's room. In Paris, Barton Williams boards his private jet with Gerard in tow, a gift for his wife. However, Gerard talks so much, repeating the words of everyone on board, that Williams gives him to one of the stewardesses rather than take it home and listen to it talk all the time. The stewardess takes it to a pet shop in Shaker Heights and gives it to the guy behind the counter, Stan Milgram.

In Medan, Gorevitch is waiting impatiently for a replacement camera. Gorevitch wants to film the orangutan speaking, but the animal has caught his cold and will not talk. Gorevitch is worried the orangutan will stop speaking all together before the camera arrives. In Bethesda, Georgia Bellarmino searches her daughter's room and finds fertility drugs hidden in her bathroom. Georgia Bellarmino takes her daughter to the police station to force her to tell why she is using the fertility drugs, but the police say they cannot force her to release medical information, even to her mother. In Chicago, Dr. Martin Bennett gets a visit from a woman who claims to be his daughter. Since the woman was conceived two years into his marriage, a marriage to which he has been faithful, he knows she cannot be his. However, the woman has a DNA test. It turns out the woman was conceived through artificial insemination with sperm Dr. Bennett donated as a medical student. Now the woman wants compensation because she has learned that Dr. Bennett passed down the addiction gene to her. When Dr. Bennett contacts his lawyer, he learns that the woman has a good case against him.

In New York, Ellis Levine once again finds his mother shopping. Mrs. Levine seems to have no memory of their conversations about money and her spending habits. That night Ellis meets with his brothers and shares his concern that their mother might be suffering from Alzheimer's. Ellis' brother, Aaron, a lawyer, hypothesizes that the spray Josh Winkler sent them might have caused their mother's disease. Ellis does not think so, but Aaron pushes the idea, suggesting a lawsuit against BioGen would help pay for nursing home for their mother.

Chapters 57-64 Analysis

Georgia Bellarmino, Robert Bellarmino's wife, notices strange bruises on her daughter's stomach. Georgia searches her daughter's room and finds fertility drugs in her daughter's bathroom. Upset, Georgia takes her daughter to the police and insists they make her daughter tell her what the drugs are for. The police say they cannot force the girl to tell because of laws against forcing a teenage girl to divulge medical information regarding fertility and reproduction. There is nothing Georgia can do to force her



daughter to tell. In light of the entire Frank Burnet situation in which his cells are stolen without his consent, this episode seems ironic to the reader who might think the two situations should be reversed. Burnet should have the right to keep his cells while the minor child should have to share her medical situation with her mother.

The rich client Gail Bond's husband gave Gerard, the transgenic parrot, to does not like the way Gerard mimics the people around him, so he gives the bird to the stewardess. The stewardess, unable to deal with the bird either, gives the bird to a clerk in a pet shop who has an aunt that might like him. Now Gerard is in America and does not seem too happy about it, as he keeps telling everyone he has been kidnapped. At the same time, the photojournalist who captured the speaking orangutan is frustrated because he does not have a camera to record the orangutan talking. The orangutan has a cold and is not speaking as much and the photojournalist is afraid he will stop speaking all together before the camera arrives. Ironically, the bird is suffering the same cold the photojournalist has, making the photojournalist responsible for his own situation. In Chicago, a Dr. Bennett has just discovered that the sperm he donated more than thirty years ago has created a young woman who blames him for her drug addiction due to a gene he passed on to her. The young woman wants to be compensated and the doctor's lawyer believes it is possible she could win in court. As outrageous as this situation is, the reader wonders how it relates to the rest of the novel.

Ellis Levine finds his mother in the same store, shopping for the same non-existent vacation as the last time he went looking for her. Ellis talks to his mother and finds her confused. Ellis suspects she might have Alzheimer's. When Ellis tells this to his brother Aaron, Aaron begins thinking about a lawsuit against Josh Winkler and BioGen because of the spray Josh sent him, unaware that it was only saline. It seems there might be more trouble for BioGen, despite the fact that it looked as though Josh were in the clear with the Levines. There is irony in the fact that the one person Josh did not harm is the only person who wants to make him pay for what he has done.



Chapters 65-71

Chapters 65-71 Summary

Billy Cleever, the sixth grader Dave bit earlier in the day, is on his way home from school with his friends when they see Dave and Jamie up ahead. Billy's friends goad him into getting Dave back for the earlier incident. Billy jumps Jamie in the park, knocking him down, then goes after Dave. Dave climbs a fence out of Billy's reach. When Billy cannot get to Dave, he turns back to Jamie and begins beating him. Dave pulls down his pants and throws feces at the boys. The boys run home, but not before Billy promises to go get his dad's gun and get rid of Dave once and for all. Lynn cleans up Jamie's injuries and asks what happened. Both Dave and Jamie tell her an honest account of the fight. That night, while the boys are playing outside, Lynn tells Henry what happened. Outside, there is gunfire.

Stan Milgram begins the long drive from Shaker Heights to California. Gerard is very talkative and at first it is annoying, but after a time it becomes agonizing. The bird will not stop talking and singing, no matter how many times Stan yells at him. When Stan arrives in California a few days later, he is exhausted. Gerard has begun screaming and the first night got Stan kicked out of his motel room. Stan decided after that to keep driving, but the bird continues to scream. Stan keeps telling the bird to shut up, but he will not. Soon Stan knows he will have to get rid of the bird or go insane.

Alex calls her old friend, Lynn Kendall, but Lynn seems preoccupied and she hangs up on her. It is late, so Alex pulls off at a motel and rents a room, using her credit card. Alex and Jamie go get some dinner, then to a discount store to get supplies. Alex tries to buy a shotgun, but there is a waiting period. When they return to the car, a security guard is writing down her license number. Alex talks him into forgetting about it, but now she knows the bounty hunter has already caught up with her. Alex goes back to the motel, but instead of going inside, she parks across the street and calls the front desk, convincing the clerk to get up and go to the other side of the motel. Alex runs into the office and takes the clerk's gun before driving off again.

The gunfire continues as Lynn runs outside. Lynn sees Jamie on the ground, not moving. Lynn quickly crawls to her son, vaguely aware that Dave has climbed over the fence toward the shooting. Lynn checks Jamie and is relieved to see he is okay. At the same time, Dave chases Billy down the street. Billy climbs into a neighbor's car and hides there until the police force him to get out. The entire incident has frightened Henry, who now regrets bringing Dave home. Lynn insists it is a one time thing and that Dave is staying with them, no matter what.



Chapters 65-71 Analysis

Jamie and Dave get into a fight with Billy Cleever, a local bully, through no fault of their own. Dave reverts to chimpanzee behavior and throws feces at the boys in order to protect Jamie. This seems normal to Dave since he is a chimpanzee, but it infuriates Billy and causes him to get his dad's gun to kill Dave. When the shooting begins, Lynn is trying to defend Dave to Henry, but the shooting makes this defense inadequate. Lynn panics as she runs outside, convinced her son is dead, but finds him safe. Dave chases Billy and traps him in a car until the police arrive. Dave has protected Jamie again, but now Henry is sorry he brought Dave home because he seems to only be raining trouble down on their heads and putting Jamie in danger. Henry wants to destroy Dave after all, but Lynn will not hear anything bad about Dave because she has bonded with him.

Stan is trying to drive cross country with Gerard, but Gerard is not making the trip easy. Gerard wants to go back to Paris and is confused about what has happened to him. Gerard has become a nuisance to Stan and Stan is threatening to put him out on the side of the road if he does not stop. The reader is curious, however, why Stan does not question the intelligence of this bird and understand his worth. Stan clearly believes the bird is simply repeating things he has heard, as parrots do, despite the purpose in Gerard's speech.

Alex has put some distance between herself and the bounty hunters. At least she thinks she has. When Alex uses a credit card to pay for a motel room, however, the bounty hunter is back on her trail. Alex talks her way out of a security guard giving her license plate number to the bounty hunter, gets a gun from the motel clerk, and hits the road again, determined to protect her son from whatever it is the bounty hunter wants. Alex is still unclear about what they want from her, though she is slowly beginning to put the pieces together. Alex has changed dramatically in these chapters, becoming less timid and more forceful in her actions, motivated by a need to protect her child.



Chapters 72-81

Chapters 72-81 Summary

Ellis tells Aaron that Josh Winkler claims to have only sent saline in the canister Ellis gave to his mother, but Aaron says it does not matter. He intends to sue anyway. In Jackson Hole, Wyoming, Brad Gordon is in the hospital. As per his orders from the lawyer, Brad got into a bar fight. The only thing was, the guys he fought were into martial arts. Brad tries to call his lawyer, but no one knows where he is. Brad calls his uncle, but Jack Watson hangs up on him. In Berkley, Mark Sanger is arrested for tampering with the leatherback turtles in Costa Rica. Sanger does not even know how to do what he is accused of.

Still lost, Stan Milgram loses his patience with Gerard. Stan dumps Gerard off on the side of the road. Gerard yells at Stan as he drives off. As soon as Stan is gone, Gerard hears a pack of wild dogs coming toward him. As the dogs approach, Gerard speaks to them, hoping to scare them off. This only works for a few minutes. When it seems the animals are determined to get him, Gerard tests his wings. To his surprise, he is able to fly away.

Dolly and Vasco arrive via helicopter in Pebble Beach where Alex Burnet checked into a motel. They arrive too late. Vasco tells Dolly to check Alex's phone records as far back as possible. Vasco thinks Alex is headed somewhere specific and wants to know where that is. The next morning, Dolly informs Vasco that Alex has a friend in the area called Kendall. Vasco decides to head directly to the Kendall house and wait for Alex to show up.

Alex wakes in her car to find herself surrounded by six men. The men are after a rattlesnake near her car. Alex thanks them. One of the men tells her that there was a man looking for her and that if she heads out right away she will probably miss him on his way back through. Once on the road again, Alex calls the head of her law firm and asks him to represent her in a case in Oxnard that morning. BioGen, she learned, has sworn out an arrest warrant for her, claiming she has possession of their property. Bob Koch agrees to go.

Chapters 72-81 Analysis

Brad Gordon is doing all he was told to do and is getting himself into trouble as he does. Brad got into a fight with a couple of guys who knew martial arts and ended up in the hospital. When he tries to call his lawyer, Brad realizes he is not from the best law firm in town. Brad is worried, but decides to stay on the road. Brad needs to protect himself from the allegations against him, even though it appears that his uncle is no longer involved in the situation. At the same time, Aaron Levine decides to go ahead with the lawsuit against BioGen even though Josh Winkler claims to have sent his mother saline.



Stan Milgram is lost and Gerard is irritating him with his constant talking and singing. Stan finally has enough and leaves Gerard on the side of the road. Stan believes Gerard will be eaten by local wildlife and does not seem concerned by this, only desiring to have some peace and quiet. This is almost true, until Gerard discovers he has regained the ability to fly. Gerard flies away. However, the reader is concerned about this bird because he is not a wild bird and most likely cannot survive on his own. The reader looks anxiously to the next chapters to see the fate of this bird.

Vasco and Dolly are tight on Alex's tail. Dolly learns that Alex has called the Kendalls a great deal in the past, and Vasco decides that this is where she is heading. As Vasco and Dolly go to stake out the Kendall home, Alex is talking to Bob Koch, a partner in her law firm. Alex needs someone to go to court and fight Rick Diehl's opinion that he can steal cells from her or her son's body because a court of law decided her father's cells were no longer his own. Koch agrees, giving both Alex and the reader hope that there might be a light at the end of this tunnel.



Chapters 82-89

Chapters 82-89 Summary

Henry Kendall is not happy to see Alex and Jamie Burnet when they arrive at his home. Henry is consumed with finding a way to protect his children. Henry has brought home some tracking equipment that he uses in the lab to keep track of animals. It takes Henry a while to decide where to place the devices. Finally, Henry decides to put them in the children's shoes. Unknown to him, the bounty hunter looking for Alex and Jamie is parked outside his house just waiting for them to come out. At the same time, somewhere over California, Gerard is tired and hungry. Gerard stops at a house where he smells food. A boy is feeding his chickens. Gerard does not like the chicken feed, but eats some of it anyway, but is forced to leave when the kid comes after him with a net. Gerard flies over the coast and finds a place where there are oranges. The only trouble is the oranges belong to another bird. Gerard tries to be polite and speak to the other bird, but the bird will not talk back. Finally Gerard just takes what he wants.

Jamie and Dave leave for school. Vasco sees them and they follow in the ambulance. Dolly gets out and asks Jamie his name. When he says Jamie, she mistakes him for Jamie Burnet and grabs him. Dave watches in confusion, not sure what to do until Jamie screams. Then Dave jumps on the back of the ambulance. Just as Vasco realizes he has the wrong kid, Dave climbs in the driver's side window and attacks him. Dave bites off Vasco's ear, causing him to crash the ambulance. Dave and Jamie go back to Jamie's house, where all the adults are out on the lawn. Suddenly Vasco drives his Hummer onto the lawn and grabs the right Jamie. Henry remembers the tracking devices he put in the kid's shoes. Even though Jamie is not wearing his, one of the devices is lit up on his computer. It seems Dave caused Vasco to swallow one when he was fighting with him in the ambulance. Alex, Dave, and Henry chase after Vasco. They follow him to a spa several miles away. Vasco knows a doctor at the spa who has agreed to do the necessary procedures. Vasco and Dolly walk Jamie into the spa, passing a talking bird who seems to take a liking to Jamie. When Alex and Henry follow, the bird lets them know that Jamie is there. Alex spots Vasco, pulls her gun on him, and demands he hand her son over. Alex then warns him to never come near her again.

In a courtroom in Oxnard, Bob Koch makes a good argument against BioGen's claim to the cells in Alex and Jamie's bodies. At the same time, the lawyers for BioGen make an argument for their right to the cells. Both sides argue in depth until the judge decides he has heard enough. The judge adjourns the case and promises to have a ruling the next day. When the ruling comes, Alex is present to hear it. The judge rules that just like a stillborn baby is not medical waste, neither are Frank Burnet's cells. No one can own someone else's body parts, and therefore BioGen cannot own Frank Burnet's cells, nor the cells in his daughter or grandson's bodies.



Chapters 82-89 Analysis

Henry Kendall is worried about the safety of his children now that Dave has come to live with them. Henry decides to put tracking devices in the children's shoes, suggesting these tracking devices might come in handy as the reader watches Vasco arrive at the Kendall home. Jamie and Dave leave for school soon afterward. Vasco mistakes Jamie Kendall for Jamie Burnet and kidnaps him. Dave witnesses this and climbs onto the ambulance they are using. Dave attacks Vasco through the window, biting off his ear. At the same time, Dave puts his foot in Vasco's mouth, causing him to swallow the tracking device in his shoe. Later, when Vasco kidnaps the right Jamie, Henry is able to use this device to track him.

Alex and Henry follow Vasco to a spa where Gerard just happens to have landed. Gerard speaks to Jamie when he walks past and is able to inform Alex that he has come by. Alex catches up to Vasco with Dave's help and pulls her shotgun on him. Once again, Dave has protected another child, proving his intelligence and kind heart. Alex makes Vasco promise he will not come after her or her son again. The next day, the judge in Oxnard makes a ruling that benefits Alex and her son, a ruling that essentially overturns the ruling in the previous case regarding her father's cells. This ends the theme of ownership of one's cells, turning the case around in such a way that the reader can feel relief that their own cells will not someday be declared the property of someone else.



Chapters 90-95

Chapters 90-95 Summary

Rick Diehl's company is essentially destroyed with the court decision in Oxnard and the lawsuit pending against them in the Levine case. Not only this, but Rick's divorce attorney has been denounced for attempting to use genetic testing in a child custody case. Rick's wife now has custody of the children. Frank Burnet meets with Jack Watson, who has just successfully sold Burnet's cells to Duke University in a deal that will benefit both men. A few weeks later, Jack Watson is having difficulty walking. After many tests, a doctor tells him he has Vogelmann's paresis, a fatal condition. With all the money and all the power Watson has, there is nothing that can be done to save his life.

Brad Gordon is at an amusement park admiring some young teenagers when a man asks him to step out of line for the roller coaster. The man wants to take some blood for a research project, but Brad thinks he is about to be arrested for child molestation. Brad pulls out his gun and fires, killing Dr. Robert Bellarmino. At the same time, Gorevitch makes a documentary of the autopsy of the orangutan he stole from the Sumatran sanctuary. The autopsy shows that the animal's ability to speak was a normal mutation of the vocal cords and had nothing to do with gene therapy.

Henry Kendall and his family have adopted Gerard. Gerard began making cell phone tones shortly after he came to live with the Kendalls. One night a guest recognizes the tones and helps them dial the number. Gail Bond is thrilled to hear from them and comes to visit Gerard, though she decides Gerard is better off remaining with the Kendalls. News of Dave's true nature has gotten out and now the world knows what Henry Kendall has done. Kendall is celebrated and Dave is a celebrity. However, Henry finds himself repulsed when a farmer remarks on the usefulness of such a creature.

Chapters 90-95 Analysis

Frank and Jack Watson prove to have been behind the destruction of Rick Diehl's BioGen and the contamination of the Burnet cell line. They have done all of this to sell the cell line to a higher bidder. It seems Rick's discomfort at Jack Watson's involvement in his business was justified. Rick has now lost everything due to the greed of another, which seems only just to the reader, since Rick was willing to build his business by stealing the cells of an innocent man. Later, Watson learns he is dying of a fatal genetic disease, and all his money and all his power can do nothing to save him. Just like Watson, Bellarmino also meets a fitting end when Brad Gordon goes berserk at an amusement park and guns him down. The writer seems to be building a theme based on the idea that everyone suffers and dies in the end no matter what they do in life to prevent the inevitable.



Henry Kendall and his family adopt Gerard. They manage to call Gail and let her know that Gerard is alive and well, something she is grateful to know. At the same time, Dave's secret is also out, making him and Henry both celebrities. However, the tide is already turning in the public mind, as a farmer comments on how nice it would be to have such a creature working on his farm. This comment gives the reader a chill, making them think that DNA experimentation of this sort, a theme of the novel, is going to continue despite lessons learned.



Characters

Rick Diehl

Rick Diehl is a young man who had a desire to begin a bio research company after he graduated from college. Rick's main motivation was to prove to his family of physicians that he could be as successful as them without become a doctor himself. Rick uses his wife's small fortune to fund his company during the start up years before the company begins to turn a profit. After purchasing the Burnet cell line, the company begins to do well, but Rick would still like for it to do better. Rick decides to take on a silent partner and accepts a deal from Jack Watson. Soon after, Rick, his company, and UCLA are sued over the ownership of the Burnet cell line.

Rick wins the lawsuit, but his personal life falls apart. Rick's wife leaves him for another man. Rick decides to ask that his wife have genetic testing as part of the divorce in hopes that the results will show she is an unfit mother. Rick's lawyer jumps on this, seeing it as the new wave in divorce litigation. Upon being served with a court order for the testing, Rick's wife leaves town, leaving him alone with their three young children. At the same time, things begin to unravel at BioGen. Rick's head of security is arrested for raping a minor child and his prized car is stolen. Soon after this, the entire Burnet cell line is contaminated. Rick needs to get new cells. Rick's lawyer tells him he can take the cells from Burnet any time he likes thanks to the court ruling. However, Burnet is nowhere to find. Rick's lawyer tells him he can go after Burnet's next of kin, so Burnet hires a bounty hunter to kidnap either Burnet's daughter or his eight-year-old grandson.

Burnet's daughter foils the first attempt to kidnap her son, but is unable to stop a second attempt. Burnet's daughter rescues her son at gunpoint the day before a judge makes a ruling that essentially overturns the previous ruling. At the same time, Rick's demand that his wife have genetic testing is overturned in court and his lawyer is run out of town for attempting the charade in the first place. Finally, Rick's business collapses under the strain of the loss of the Burnet cell line and a lawsuit brought against it by a family claiming an untested gene therapy caused a woman to develop Alzheimer's.

Frank Burnet

Frank Burnet is a construction worker who developed cancer in middle age. Burnet sought treatment and survived his cancer despite being told he would not. A time after Burnet has been told his cancer is in remission, he goes to the doctor for routine follow up tests. Shortly after these tests, Burnet's doctor calls him and asks to run more tests. The doctor does not tell Burnet what these tests are for. However, Burnet is routinely called in for more of these tests. Burnet comes to believe that his cancer has returned. At each visit, the doctor has consent forms for Burnet to sign, each more complicated than the ones before. Eventually Burnet becomes suspicious, and refuses to sign to



consent forms. Soon after, Burnet learns that the doctor has discovered that his cells contain a cancer fighting element that he has been harvesting and selling to BioGen.

Burnet sues UCLA, his doctor, and BioGen for compensation for the sale of his cells. However, the court rules that Burnet agreed to the use of his cells in research and that once the cells were removed from his body they were considered medical waste. It is ruled that Burnet's cells do not belong to him, but in fact belong to BioGen. Burnet is outraged at the ruling and continues to fight, taking his case to the appellate court. Before it gets that far, however, Burnet is approached by an unknown man who offers to pay him millions of dollars in exchange for his cells. Burnet agrees, especially after he learns that the cells currently belonging to BioGen will be destroyed. However, while Burnet is gone having his cells harvested, BioGen arranges to kidnap his grandson in order to harvest the cells from him, reasoning that BioGen owns Burnet's cells no matter whose body they are in. Eventually, a lower court will make the ruling that Burnet's cells remain his property whether they are in his body or not.

Alex Burnet

Alex Burnet is a lawyer and is also the daughter of Frank Burnet. Alex is part of the legal team that attempts to force BioGen and UCLA to give up their ownership of her father's cells and to compensate him for using the cells without his knowledge. The first case goes against Alex and her legal team, but they intend to appeal. While waiting for the appeal, Alex's father suddenly disappears. Frank tells Alex he is going on vacation. While he is gone, Alex gets a call from her son's teacher telling her some woman from her office is trying to pick her son up. Alex quickly goes to her son's school and stops the woman, but finds herself nearly kidnapped. Alex gets away and takes her son, but instead of going home she switches cars with her assistant and goes to a friend's house.

Within hours of arriving at her friend's house, another attempt is made to kidnap her son. During the chaos that follows, Alex's son is taken. Alex follows the kidnappers to an exclusive resort, where they intend to harvest cells from her son's tissues. Alex takes her son back at gunpoint. Later, in a courtroom, the original court ruling is essentially overturned when another judge makes the ruling that no company can own a person's cells. This ruling ends the ordeal for Alex and her son and presents grounds for her father to receive compensation against BioGen.

Henry Kendall

Henry Kendall is a scientist. Four years ago, Henry Kendall was working in the labs at the NIH. Henry was investigating the genetic basis of autism. Henry took a chimpanzee embryo and inserted his own DNA in to the animal's DNA. Henry had intended to harvest the embryo after the ninth week of pregnancy, assuming the fetus would not survive past this point, and autopsy it. However, an encephalitis outbreak caused the



animals at the lab to be quarantined in labs across the United States and Henry lost track of the mother.

Henry then gets a phone call from the NIH labs asking about his blood type. Henry becomes suspicious, especially after a friend at the NIH sends him a vial of blood to test. Henry realizes that the fetus did not die and that it is alive and well at the NIH. Henry goes to the labs to see his creation. When Henry is told the animal, who can speak and shows alarming levels of intelligence, is to be destroyed, he decides to take it home. When Henry tells his wife the whole story, she creates a fake rare genetic disease and tries to pass the chimpanzee as a human child. Dave becomes a part of the family until circumstances force the Kendalls to tell the world the truth.

Dave Kendall

Dave Kendall was created in a lab. Dave is the product of a DNA experiment Henry Kendall performed in order to study the genetic basis of autism. Dave was supposed to die in utero, but a quarantine causes Henry to lose track of the animal. Henry wrongly assumes Dave to have died and forgets about him. However, years later, Henry is introduced to Dave, a chimpanzee who is so human-like that Henry cannot allow him to be destroyed. Henry sneaks Dave out of the lab and takes him home to raise him as one of his own children.

Dave, however, still has the same instincts as any chimpanzee his own age. When Dave feels his brother is being threatened, he reacts by attacking the enemy. First Dave bites another child at school who pushed Jamie down. Then Dave throws feces at a group of boys beating Jamie up in the school yard. Later Dave causes an ambulance to crash when Jamie is kidnapped by the bounty hunter looking for Alex Burnet's son. All of these incidents make it impossible for the Kendalls to keep the truth behind Dave's birth secret. Eventually the truth comes out and Dave is accepted into his community despite his uniqueness.

Josh Winkler

Josh Winkler works at BioGen. Josh works on a project that is testing a maturity gene on mice. One afternoon, while giving the mice the retrovirus that transmits the gene, Josh gets a call to pick his brother up at the courthouse. Josh's brother is a drug addict whose life is quickly going downhill. Josh takes the canister of mouse retrovirus with him when he leaves, because he does not have time to put it away properly. While Josh is getting gas, his brother administers the retrovirus to himself, hoping it will have something in it that will make him high. Within a few days, Josh's brother is off the drugs and is holding a full-time job.

So happy with her son's miraculous cure, Josh's mother talks him into using the spray on the son of one of her friends, who is also a drug addict. Josh's mother also asks him to send the spray to a cousin in New Jersey, but this time Josh only sends saline. A few weeks later, Josh learns that the second drug addict he used the spray on has died of a



heart attack, despite being a young man. Josh goes to see his brother and finds that he has also aged quickly. Within a few weeks, Josh's brother dies of ailments normally only seen in the very old. Josh's actions are illegal and have left BioGen open to litigation. Not only this, but the cousin in New Jersey has developed Alzheimer's and her family is suing Josh and BioGen for causing the disease.

Dr. Robert Bellarmino

Robert Bellarmino is a Christian who happens to be a scientist. Bellarmino uses his Christian views to promote science while at the same time making excuses for the types of experiments that go on every day throughout the world. In private, however, Bellarmino is an unpleasant man who often steals credit for other's work and takes ideas from the grant applications he often reviews in his position at NIH. Bellarmino is a hypocrite with as many enemies as he has friends. Bellarmino is at an amusement park one afternoon working on an experiment that tests for a specific gene in people who like to ride roller coasters when he is shot by a man who is confused by his intentions.

Marty Roberts

Marty Roberts is the medical examiner at Long Beach Memorial. When Tom Weller's father dies, his body comes to the morgue that Marty Roberts runs. Roberts assistant makes the mistake of allowing Tom Weller's sister take blood from her father in order to run a paternity test. When the Weller family threatens to sue, Roberts is the one who appears at the exhumation to oversee the retrieval of tissue for further DNA testing. During the exhumation, Roberts discovers that his assistant has taken the long bones of Weller's arms and legs and replaced them with metal pipes. Roberts is upset because he is afraid this mistake will cause his scam to be exposed. Roberts decides to fire his assistant, but the man quits first. A short time later Roberts is arrested after his assistant goes to the police with stories of Roberts's bone stealing scam.

Brad Gordon

Brad Gordon is the nephew of Jack Watson. Brad has the job as head of security at BioGen because of his connection to Jack Watson. Rick wants Brad gone, but cannot afford to anger Watson. Rick talks with a woman he believes to be the head of a special security firm and is told that Brad will be taken care of. A few days later, Brad is arrested for having sex with a minor. Despite Brad's protestations of innocence, it looks like he is going to jail. Brad's uncle hires him a lawyer who appears to have a good record in cases like this one. The lawyer tells Brad to get out of town and to do as many thrill seeking activities as possible. Brad gets into bar fights and goes to amusement parks. However, Brad becomes paranoid and begins to think people are out to trap him. When Brad is approached while in line for a roller coaster, he goes berserk and pulls out a gun. Brad kills Dr. Bellarmino.

Jack Watson

Jack Watson is a business man who invests in bio research companies. Watson invests in BioGen, apparently with the focus on getting rich off the Burnet cell line. However, it seems Watson's goal is a far different one. Watson has his employees set Rick Diehl up by destroying the Burnet cell line and buying the cells directly from Burnet. Soon after ruining BioGen, Watson learns he has a rare genetic disorder that can be cured with cell therapy. However, the research on the therapy has not advanced far enough and Watson dies before any treatment can be utilized.



Objects/Places

Frank Burnet's Cells

Doctors discover that cells in Frank Burnet's body make cytokines, cancer fighting cells. The doctors took these cells and sold them to a company who uses them to make cancer drugs. In a court of law, it was ruled that Frank Burnet was no longer the owner of these cells. This decision is later overturned by another court.

Gas Canister

Josh Winkler uses gas canisters to administer a retrovirus containing a mature gene to mice. When Josh's brother uses the canister on himself and suddenly loses his addiction to drugs, Josh uses it on another drug addict. However, Josh later discovers that the mature gene not only causes emotional maturity, but also causes the body to mature at an accelerated rate.

Saline

Josh Winkler sends a canister filled with saline to a cousin of his mother when she pressures him to give the woman and her husband the maturity gene. Later, when the woman's family realizes she is displaying symptoms of Alzheimer's, the family sues Josh Winkler and the company he works for, claiming his spray caused the Alzheimer's.

Dart Gun

A photographer uses a dart gun to sedate a talking monkey in Sumatra in order to film the orangutan. However, the photographer overdoses the orangutan and causes it to stop breathing. While giving the animal mouth to mouth, the photographer gives the orangutan a cold. The orangutan dies from its illness. Upon autopsy, it is discovered that the orangutan's ability to speak is a natural phenomenon and not the result of gene tampering.

Pistol

A young boy who goes to school with Jaime Kendall uses a gun to frighten Dave, a chimpanzee-human hybrid created by Jaime's father.



Embryos

Vasco chases a man through a Las Vegas hotel, The man has stolen frozen embryos from a lab where he worked. The man locks himself onto an elevator and opens the container holding the embryos, aware that this will cause him to die of carbon monoxide poisoning.

Metal Pipes

When the body of Tom Weller's father is exhumed to extract tissues for DNA testing, it is discovered that the long bones of his arms and legs have been replaced with metal pipes. The bones were sold on the black market for medical use.

Long Beach Memorial

Long Beach Memorial is the hospital in which the body of Tom Weller's father was autopsied and the long bones of the arms and legs removed.

NIH

National Institutes of Health, NIH, is a federally-funded organization that overseas and conducts medical experiments in order to better treat ill Americans. Robert Bellarmino is a leading researcher at the NIH. It is also in an NIH lab where Henry Kendall creates Dave, his chimpanzee-human hybrid.

Radical Genomics

Radical Genomics is the lab where Henry Kendall works with his partner, Charlie Huggins.

UCLA

The University of California at Los Angeles, UCLA, is the where Frank Burnet's oncologist sold his cancer fighting cells. UCLA in turn sold the cells to BioGen in order for them to mass produce them for cancer patients.

BioGen Research

BioGen Research is the name of Rick Diehl's company. BioGen owns the cancer fighting cells that Frank Burnet's body produces.



Themes

DNA Experimentation

One of the major themes of this novel is the highly unregulated use of human DNA in research throughout the world. There are several examples of this type of research in the novel, beginning with the cells stolen from the body of Frank Burnet and ending with the chimpanzee-human hybrid Henry Kendall created in an NIH lab. These events play out throughout the novel, moving from a simple story of pure fiction into something that causes the reader to think about the advances being made every day in labs throughout the world.

Frank Burnet's body makes cells that fight cancer. When his doctor learns this, the man takes these cells and his university, UCLA, sells them to a bio research company who uses them to create medications for people with cancer. While it is noble to make these medications, as it saves hundreds of lives every year, the doctor has taken the cells without Frank's permission. Not only this, but a court of law rules that the cells that live inside Frank's body are not his own and the bio research company could potentially force him to donate more cells should it become necessary.

At the same time, scientists are doing research with DNA that involves replacing the natural DNA of animals with other DNA, including human DNA. While researching the genetic causes of autism, Henry Kendall splices human DNA, his own, with that of a chimpanzee embryo. Kendall did not expect this pregnancy to go to term and hoped only that the pregnancy would last long enough for him to extract the embryo and autopsy it. Unfortunately, an encephalitis outbreak causes the animals at the lab to be quarantined, and Kendall loses track of the chimpanzee mother. Several years later Kendall learns that the pregnancy survived and created an infant that could speak and had the intelligence of a human child.

The author of the book uses these stories, this theme, as a warning to his readers of how out of control research of this type can become. The reader is encouraged to develop their own opinions on what should be considered appropriate research and what is crossing the line. It is this thought provoking aspect of DNA experimentation that makes it a theme of the novel.

Ownership of One's DNA

The story of Frank Burnet is presented by the author to make the reader question the ownership of their own DNA. Frank Burnet is a simple man, a construction worker, who is diagnosed with cancer. Frank Burnet's doctors all tell him he is going to die. Frank suffers through his illness and the treatments that will eventually save his life. Frank beats the odds. However, some time after his doctor tells him his cancer was in remission, the doctor calls Frank back to his office and insists on doing some tests.



These tests continue over a long period of time without the doctor ever informing Frank what they are for or whether he is sick again.

Frank believes himself to still be in the throes of the disease. It is not until Frank begins to protest the lengthy consent forms his doctor requires that he learns the truth. Frank's doctor discovered that his body makes cells that have unique cancer fighting properties. The doctor has been extracting these cells from Frank's body and selling them to a bio research company. When Frank stops this process and attempts to sue his doctor, the university where his doctor works, and the bio research company, the judge rules that the cells belong to the bio research company.

Frank is outraged at the outcome of the trial and urges his lawyers to appeal. However, Frank is contacted by an unnamed individual who assists him in ruining the bio research company and selling his cells for a great deal of money. While Frank is involved in the extraction of his cells, the bio research company discovers that their cells have been compromised and decide to extract more. When Frank cannot be found, the company targets Frank's daughter and grandson. Frank's grandson is kidnapped. The child is eventually saved and the first ruling overturned, but not before some damage is done. It is the outrageousness of Frank's story that makes ownership of one's DNA an important theme of the novel.

Bio Theft

Another theme of the novel is bio theft. Not only can the reader interpret Frank's struggle over his body's cells as bio theft, but the author also throws in a few other interesting thefts. When Tom Weller's father dies, his body is autopsied at Long Beach Memorial, the long bones of his arms and legs are stolen and replaced with metal pipes. When the body has to be exhumed in order to recover tissue samples for DNA testing, the medical examiner discovers this theft. The medical examiner is so upset by the discovery that he decides to break the law and take the samples there at the cemetery. The reader believes this is outrage at the theft. However, it turns out to be outrage at the use of metal pipes. The assistant who performed the theft was supposed to use wooden dowels.

Another theft takes place in the BioGen labs. One of the researchers takes a canister of a mouse vaccine out of the lab and his brother breaths it, hoping it is something that will help him get a high. Instead, it turns out to be a maturity gene that cures him of his addiction. Unfortunately, the gene also causes him to age before his time and he dies a few weeks later.

BioGen also suffers the theft of cells. Someone breaks into BioGen and contaminates all the Burnet cells. BioGen will go out of business if they cannot replace these cells, but Frank Burnet is no where to be found. The BioGen lawyers decide that, because a judge has ruled that the cells are the property of BioGen, they can take them at any time. If Frank Burnet is not available, then BioGen can take the cells from a living relative, since they should share the same cells. BioGen takes this advice and sends a

bounty hunter after Burnet's daughter and grandson. The bounty hunter actually kidnaps Burnet's eight-year-old grandson with the intention of stealing his cells, using an invasive medical procedure, without his mother's permission.



Style

Point of View

The point of view of this novel is third person omniscient. The author does not use one person as his narrator, but rather moves from character to character, rarely using one character more than half a dozen times. The third person omniscient allows the author to show the thoughts and feelings of these characters, while at the same time relating their stories to the reader. Since the point of view is omniscient, the reader is allowed some degree of intimacy with the characters, creating a quick connection that helps the reader connect enough with the various characters to care what might happen to them.

The point of view of this novel is the only one that could work with the style in which the writer has chosen to write. The novel includes so many different stories and so many different characters that it would be nearly impossible for the reader to keep up with the stories if a different point of view was used. If the first person point of view had been used, for example, the reader might have grown confused over which character is speaking due to the frequent change of narrator. Also, if the writer had chosen not to use an omniscient point of view, the reader would not develop a connection to the characters and would not care what happened to them. Caring about the characters is crucial to the story's impact on the reader.

Setting

The novel is set in California, mostly around the Los Angeles-Santa Barbara area. The setting is gorgeous, with warmth and sunshine all the time. The setting sets up a bright setting, a place that makes the reader want to be happy all the time. This setting is a stark contrast for the stories that are being related in the plot. The setting is misleading, making the reader feel as though good things are happening, only to learn later that these good things are actually horror stories in disguise.

The writer possibly chose this setting in order to create a metaphor to the story he is trying to tell. The research industry is a multi-billion dollar industry that on the surface appears to be doing great things for humanity. These researchers are finding new and amazing drugs that provide health and happiness to millions of people who as little as a few years before would have suffered or possibly died. This is a great thing. However, some of this research uses unethical procedures and creates side effects that could change the very basics of human nature. Just like California seems like a warm and happy setting despite its high potential for natural disasters, bio research, if looked at close enough, proves to have a dark side.



Language and Meaning

The language of the novel is simple English, easy to understand. However, included in the novel are medical terms that might be difficult for some readers to understand. Most of these words are explained within the text, either through direct exposition or in dialogue. The novel also includes some slang that might also be unfamiliar to the uninitiated.

The language of this novel is simple, but at times can prove difficult when certain medical terms are used. This can prove difficult for some readers, but is appropriate to the text. The novel is, after all, a novel about medical research and all its repercussions. If the author had chosen to leave out the difficult language, the novel would have lost some of its impact and meaning, leaving the reader lost as to the overall themes of the novel. Therefore, the use of difficult language in this novel works to enhance the plot of the novel.

Structure

The book begins with a prologue and contains ninety-five chapters. Each chapter is relatively short, most having fewer than ten pages. The narrator normally changes between chapters, with each subsequent chapter telling a different story from the one before. However, many of the stories come together toward the end, tying each chapter together in the final dozen or so chapters. The novel also contains many newspaper and Internet stories that link with the story being discussed in the previous chapters. At the end of the novel, all of these ideas are brought together in a discussion the author shares with his readers, discussing the real world aspects of the novel and what should be done to prevent some of the outrageous incidents described in the novel.

The book contains many story lines. There is not one overall story, though all the stories contain elements of the main themes of the novel and each story is tied to the others in some fashion by the end of the novel. The stories include the plight of Frank Burnet whose cells have been sold, without his permission, to a bio research company; the story of Henry Kendall who discovers his chimpanzee-human hybrid survived pregnancy to become one of the first talking chimpanzees in the world; and, Josh Winkler's decision to give BioGen's mature gene to humans without first getting the permission of the FDA. All these stories include elements of the main themes of the book and come together to make one cohesive plot.



Quotes

"Frank Burnet was a barrel-chested man who looked younger than his fifty-one years. He appeared healthy and confident as he was sworn in. Alex knew that her father's vigorous appearance could undermine his case. And, of course, the pretrial publicity had been savagely negative. Rick Diehl's PR team had worked hard to portray her dad as an ungrateful, greedy, unscrupulous man. A man who interfered with medical research. A man who wouldn't keep his word, who just wanted money." Chap. 1, p. 18

"It was true that Henry Kendall had a tendency to be high-strung; his hands sometimes shook when he spoke, especially when he was excited. And he was a bit of a klutz, always stumbling, banging into things at the lab. He had a nervous stomach. He was a worrier." Chap. 5, p. 41

"You can't legally sell your cells at this point, because the court has ruled you no longer own them—BioGen does. But your cells could be obtained from other places. Over the course of your life, you've given blood many times in many places. You went to Vietnam forty years ago. The army took your blood. You had knee surgery twenty years ago in San Diego. The hospital took your blood, and kept your cartilage. You've consulted various doctors over the years. They ran blood tests. The labs kept the blood. So your blood can be found, no problem." Chap. 7, p. 57

"The coffin rose into sunlight. It looked the same as it had when buried a week earlier, except for the clumps of dirt that dropped from the underside." Chap. 13, p. 82

"An American anthropologist has concluded that Neanderthals died from a genetic predisposition to resist change." Chap. 28, p. 149

"During his first year of life, Gerard showed little effect from the human transgenes that had been injected into him as a chick by Yoshi Tomizu and Gail Bond in the laboratory of Maurice Grollier at the Institut National in Paris. This was not surprising. The successful injection of transgenes was a tricky business, and required dozens, even hundreds, of attempts before it worked properly. That was because multiple conditions had to be fulfilled for the gene to work in a new environment." Chap. 32, p. 168

"Lynn had been married to Henry for fifteen years. They had two children together. She knew better than anyone that Henry was prone to nervous tics and flights of fancy. The same imaginative leaps that made him such a good researcher also made him a bit of a hysteric." Chap. 34, p. 181

"When the human genome was decoded, he explained, scientists discovered that the genome of a chimpanzee was nearly identical to that of a man. 'All that separates our two species,' he said, 'is five hundred genes.'" Chap. 36, p. 192



"More and more, the biggest difference seemed to be hair. Dave was hairy; those around him weren't. According to her reading, the loss of hair had occurred after human beings separated from chimps. The usual explanation was the human beings had become for a time swamp creatures, or water creatures." Chap. 41, p. 217

"In recent weeks, the talking orangutan had faded from the media. The story had gone the way of other animal reports that didn't prove out: that Arkansas woodpecker nobody could find again, and the six-foot Congo ape that nobody could locate despite persistent stories by natives, and the giant bat with the twelve-foot wingspan that was supposedly seen in the jungles of New Guinea." Chap. 51, p. 247

"Henry Kendall was in shock. There had been a kidnapping right on his front lawn; he hadn't rushed forward to stop it; his own son was sobbing and clutching his mother; and Dave had dropped some guy's ear on the lawn; the other kid's mother was getting to her feet, screaming for the cops, but the Hummer was gone, down the street and around the corner, and gone." Chap. 87, p. 378

"And one autumn day, while Dave was walking with Henry at the county fair, holding Henry's hand, a farmer in overalls came up and said, 'I'd like to get me one of them to work on my farm.'

That gave Henry a chill." Chap. 95, p. 415

Topics for Discussion

Who is Jack Watson? What role does he play in the destruction of BioGen? What is Watson's motivation in ruining this company? How does the destruction of the company affect him personally? Is Watson's campaign against BioGen personal or does it have more to do with the public good?

Discuss irony. How many instances of irony can you find in the plot? How is Watson's illness at the end of the novel ironic? Could Watson have been saved if he had acted differently toward BioGen? How does his illness underscore some of the major themes of the novel?

Discuss the talking orangutan in Sumatra. What is significant about the orangutan's speech abilities? Why do people not believe the press reports about the orangutan? Why does the photographer drug the orangutan and take it away from the preserve? How does the orangutan die? What is ironic about his death? What does the autopsy prove about the orangutan's ability to speak? How does this relate to Dave or Gerard?

Discuss Dave and Gerard. How are these animals made to speak? What are the advantages of making animals that can speak? What are the disadvantages? Does speech make these animals more intelligent, or were they always this intelligent? Should man mess with animal DNA in order to give animals human characteristics? What are some of the dangers of continuing this type of research?

Discuss Frank Burnet. Do you think it is morally correct for a judge to rule Frank's cells are medical waste and therefore no longer his possession? Can another person own someone else's cells? Do you think it is possible for the Burnet story to happen to someone in the real world? Why or why not? What would the repercussions of such a situation be?

Discuss Josh Winkler. Did Josh have the right to use his mouse vaccine on people without FDA approval? If so, why is the FDA in place? What would have happened had Josh's maturity gene not caused premature aging? Would success have made what Josh did okay? What about the family who decided to sue Josh for causing their mother's Alzheimer's? Do they have the right to do that? Could Josh have caused the disease?

Why do the Kendalls try to pass Dave off as a child with a rare disease? Why do they hide Dave's true heredity? What do you think would happen if a creature like Dave was really created and set loose in the world? Do you think there would be cause for concern? Should scientists create creatures like Dave? Would such creatures be considered human or monkey? Defend your answer.