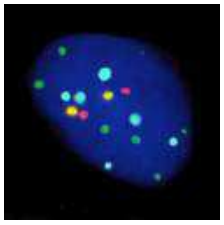

The Passion of Peter Duesberg

The sun is hot on my head as I cross the campus of UC Berkeley, looking for Donner Lab, the oldest building on campus, where molecular biologist Peter Duesberg has recently been relocated. I stop two students and ask for directions. They pull out a campus map; They've never heard of it. Finally they just give me their map and wish me luck. Eventually I find it. To say that it is on the periphery of the campus is an understatement: It is practically in the woods.

The Berkeley campus is looking very grand these days, its important halls adorned with impressively shaped, oblong hedges clipped to perfection. It's very quiet. Hard to imagine this having once been a bastion of radical protest. Thanks to large donations from two pharmaceutical companies, Berkeley Science is undergoing an extensive renovation. There are bulldozers here and there, and near Donner Lab is a huge gaping hole where a building has just been demolished. In the distance, I spot Peter Duesberg, Berkeley's most troublesome scientist, weaving past the bulldozers on his way into the lab. In the heat of the sun, it seems to me that their jaws might just reach down and snap him up, putting a quick, merciful end to the nearly two decade long battle between the Establishment and Dr. Duesberg.

In the 17 years since Duesberg, by invitation, wrote a paper in the prominent journal *Cancer Research* detailing, primarily, his critique of the then half-formed theory that retroviruses caused leukemia, and adding almost as an afterthought that the retrovirus

HIV could by no means cause a disease such as AIDS, he's been facing bulldozers almost wherever he goes. Reviled by the AIDS establishment, de-funded by the NIH, ostracized and all but exiled within the university where he is a tenured professor, Duesberg was invited back to his native Germany eight years ago to resume work on cancer. During this time, commuting bi-annually between Mannheim and Berkeley, Duesberg formulated and tested a theory that has brought a new glitter to his complicated name. Some cancer-theorists say it's nothing short of the genetic answer to cancer. Others say it is at least part of the answer. It's lucky for Peter Duesberg that AIDS and Cancer are distinct fields. In what is shaping up to be a denouement of Shakespearean proportions, his enemies in the AIDS field have made clear that they want him sunk to the bottom of the deepest sea, even if the answer to cancer goes with him.

Their feelings aside, it looks as though America's most controversial biologist may be poised for resurrection. When *Scientific American* recently published a lengthy article on where we stand in our understanding of cancer causation, Duesberg's picture was on the timeline in 1999, the year he formalized and published his new theory. He recently broke the record for undergrad students applying to study with him at UC Berkeley. Breaking a 17 year embargo against inviting Duesberg anywhere, to address anything, the NCI has invited him to their headquarters to speak on cancer. And in August, a comprehensive scientific biography of Duesberg will be published, (*Oncogenes, Aneuploidy, and AIDS: A Scientific Life and Times of Peter Duesberg,* by Harvey Bialy, Published by The Institute of Biotechnology of The Autonomous National University of Mexico) documenting his rise, fall and possible comeback along strictly scientific standards—placing each cell he ever argued about in its rightful place, and citing only the scientific literature.

Still, at Berkeley, where the administration remains overtly, almost flamboyantly hostile, Duesberg has had to hire a lawyer to fight for a simple raise, a so-called merit pay increase which usually comes automatically to professors of his stature, but which UC Berkeley has denied him for ten years, claiming his work is "not of high significance."

It's like The Berlin Wall in the days and hours before communism officially collapsed, but before the border guards were given their orders not to shoot.

[line]

If Duesberg's name sounds familiar, it's because he has been branded in mainstream media as the virologist who is wrong about HIV. His name entered the popular culture in the late 1980s pre-stamped with wrongness. You knew he was wrong before you knew what he had said in the first place. It wasn't just that he was wrong, he was wrong to have even posed the question about which he was declared spectacularly wrong. He was wrong to have created an air-pocket for the public in which to even *think* about whether the HIV-AIDS hypothesis was right or wrong, because prior to him no such space existed, certainly no language. And this was his real crime. The HIV-AIDS Hypothesis was an epoch defining sociological harness and scare-cloud, more than it was ever a well-grounded biological thesis. When you speak to scientists who oppose what Duesberg "did," without exception they point to the sociological effect of his critique and say he "endangered" the public.

Peter Duesberg created a template for a question that was not supposed to be thinkable, and which, to the AIDS industry is not only preposterous, it is virtually obscene: Does HIV really *cause* AIDS?

He did so in the form of a lengthy, highly technical paper published in 1987, in the journal *Cancer Research*. It was a paper that, in the words of Bialy, had "disastrous professional consequences," for Duesberg, and "sealed his scientific fate for almost two decades."

Duesberg, who discovered the first so-called onco-gene and mapped the genetic structure of retroviruses, has argued since 1987 that HIV is not pathogenic, ie not capable of killing cells, ie not the cause of AIDS, either in the industrialized world or the Third World. His case is amply documented, and by now familiar. This is not a "debate"—it is a divided earth between two sets of conclusions reached by looking at the same data. Each side thinks the other side is dead- wrong, not to mention "nuts,"-- and there has been no synthesis or compromise reached in 17 years.

The cadre of scientists who signed a petition in 1991 stating they agreed with Duesberg and wanted the case re-opened included three Nobel Laureates, and up to 600 PhDs. Still, the standard paragraph in any article you'll ever read about Duesberg will say that nobody agrees with Duesberg and that he as been "totally refuted."

Duesberg was at the very top of his field and was openly and unceremoniously stripped of everything: Government funding, grad students, a proper lab, invitations to conferences. He was all but banished from the scientific press, and perhaps worst of all, his name became degraded to the point where it became a means of career advancement to debase him. He became the Emmanuel Goldstein of AIDS.

Elias Canetti, in *Crowds and Power*, writes about different kinds of crowd formations, and cites as one of the most frightening, the "baiting crowd."

"This concentration on killing is of a special kind and of an unsurpassed intensity. Everyone want to participate," Canetti wrote. "If he cannot hit himself he wants to see others hit him….Every arm is thrust out as if they all belonged to one and the same creature…There is no risk because the crowd have immense superiority on their side."

In a recent documentary, *The Other Side of AIDS,* there is a remarkable scene in which Canadian MD Mark Wainberg, President of the International AIDS Society, (the world's largest organization of AIDS researchers and clinicians,) angrily calls for Duesberg and others who "attempt to dispel the notion that HIV is the cause of AIDS," to be "brought up on trial," calling such people, "perpetrators of death." He goes on to say that he would hope the US Constitution could be re-written to accommodate such arrests.

In the film, Wainberg's large face grows pale with fury as he realizes that the interviewer himself is one of the so-called dissidents. He unleashes a lengthy tirade, accusing all HIV skeptics of wanting "millions of people in Africa and elsewhere" to get HIV and die and finally, his eyes crazed with fury, shouts:

" *I suggest to you that Peter Duesberg is the closest thing we have on this planet to a scientific psychopath.*"

Then he declares the interview over, rips the microphone from his lapel and storms off.

It was what happened next that was interesting, and maybe a sign of changing tides.

The audience erupted in laughter, which turned to boos as the screen flashed a piece of text: It was a list of all of Wainbergs patents and other financial ties to the HIV industry.

[line]

"Are we clear that what you are going to do is present things as they are?" said Bialy, Duesberg's biographer, in a deep, stern voice over the phone.

"I'm not going to tell you *why* these things are, only that they are."

"Yes," I said, and felt like somebody had just strapped me into a safe harness before a flight.

I wrote on my notepad: *Things as they are.*

His voice intensified.

"You *think* you know who this man is and what he said but you don't. That's the starting point for your reader."

His book's academic title belies its hysteria-inducing subject: *Oncogenes, Aneuploidy and AIDS: A Scientific Life & Times of Peter H. Duesberg* (The Institute of Biotechnology of the Autonomous National University of Mexico.)

Bialy, a contemporary of Duesberg's, and longstanding HIV critic in his own right, is the founding scientific editor of *Nature BioTechnology*, a sister journal to *Nature*. The book is an extremely fine-boned history of the published papers, review articles and letters that Duesberg published between 1983 and 2003, and the responses they generated. Bialy writes as though inside a space capsule, in airless, acute prose untouched by any of the usual attitudes, convictions and emotions that have colored virtually ever word written or uttered about Duesberg since the fateful year of 1987.

Perhaps the most unusual quality of the book is the fact that in it, he writes of Duesberg as though he *exists,* as a scientist. Not as a disgraced, fallen scientist, but a scientist, period. It does not disparage him, nor does it elevate him, it merely records his scientific arc, through the three fields of study on which he has now had an almost immeasurable impact: Oncogenes, Aneuploidy, and AIDS. Let's shorten that to: Cancer and AIDS.

Bialy is hot-tempered and acerbic; He doesn't particularly wish to be interviewed and is indignant about all the non-science that has clouded Duesberg's biological ouevre since the mid 1980s, which he refers to as the "cult of personality."

I asked him why he wrote this book—a project that took him four years.

"It was when I read Peter's third paper that I understood what had happened and realized I had to write this book," he said. "I am persuaded that aneuploidy is the

initiating event in carcinogenesis. Peter has found the genetic basis for cancer. The most immediate application of it will be early diagnosis."

"When anuepolody, or genetic instability, or whatever linguistic term you want to use, gets reincarnated as the dominant theoretical explanation for the genesis of cancer, Peter Duesberg will be recognized as a major contributor to that. I wanted to make sure that his contributions were not swept aside or ignored. I knew they would try to blow Peter away. The AIDS establishment is, as you know, quite a bit more organized, ferocious and vicious than the cancer establishment. But that is immaterial."

"Scientifically," he says, "cancer is still an interesting question. AIDS has not been an interesting question for 15 years."

"Why do you say that?"

"Because it's been a closed book for 15 years. It has been clear for 15 years that this is a non-infectuous condition that has its cause in a whole variety of chemicals."

His voice rises. "Doesn't the book demonstrate very clearly that scientifically, nothing happened between 1994 and 2003? Zero. Absolutely nothing except one wrong epidemiological prediction after another, one failed poisonous drug after another. 0.000.000 cured. No vaccine, or even a fake vaccine. It's a total failure. We've turned virlogy inside out and upside down to accommodate this bullshit hypothesis for 17 years now. It's enough. It's over."

As he says that, I imagine Wainberg's livid face, and imagine how it would look if he heard this conversation, or saw a copy of Bialy's book.

"AIDS is a political thing, and Peter's stuck in it. There's nothing to discuss anymore on that."

I was stuck on the question of how people can talk about Peter Duesberg the way they do, and recited a few examples to Bialy, who made what I later realized was a critical point. Science is amoral and should be. There is no right and wrong, only correct and incorrect, which is its own, self-regulating "right and wrong."

"There is not a word in my book that calls Peter a *good* scientist, a *bad* scientist, a *mediocre* scientist, a *great* scientist or a *brilliant* scientist. What I have said is that he is a *classical* scientist. A classical molecular biologist. All he is interested in is rigorously

testing dueling hypothesis. The twin pillars, AIDS and Oncogenes, both are crumbling because of the questions Peter Duesberg put into motion..”

“He did what he did,” Bialy said. “If he did it for childlike or satanic or saintly reasons is not important.”

[line]

Peter Duesberg is bent over a metal tray with 12 petri dishes filled with pink gel, squirting each carefully with the tip of a long thin nozzle. He hears me come in and without looking up he starts to talk. “These are breast cancer cells that have been treated with chemotherapy.” He leans in closer and his cadence slows. “Fortunately… this time, it is in the petri dish and not…in somebody’s… body. “

I haven’t been in here one minute and already he’s saying something faintly unorthodox.

He finishes, pushes his goggles up on his forehead, and darts over to the microwave at the other side of the lab where he is heating two cups of green tea. “You want some?” he says. “It’s good stuff.” He moves very fast and he talks almost constantly, punctuating serious scientific arguments with a kind of absurdist black humor, all in a fairly pronounced German accent. Many people may be anguishing about what was done to him but he himself doesn’t seem too upset. He jokes about it. Remarking on his current ironic position, in what he calls “the semi-outhouse” of Donner lab, he tells me about his private funders, who keep him in business. “It’s small compared to NIH grants but..for what I’m doing, it’s perfect terrorist science. You can do it almost undercover. All you need is a belt and a little dynamite and a microscope.” He laughs, and hands me a mug swirling with tea leaves and puts a long, thin glass ‘Pasteur Pipette’ in it for me to stir with. “Those are disposable,” he says. “Don’t worry, there’s no radioactivity on them.”

He sits on a stool, stirs his tea and says, distractedly, “I really think we may have found it.”

His lab assistant, Ruhong Li, looks up for a moment.

What he means by “it” is the one thing all cancer cells he has ever come across have in common. For the past three decades, genetic cancer theory has assumed that cancer

results from one or several gene mutations, or so-called onco-genes. Every human being has about 35,00 genes strung along the 46 chromosomes. For most of the last century, cancer researchers have been focusing on the genes. Now the focus is shifting to chromosomes.

Duesberg has revived, honed, and formalized a new theory of cancer causation that was first articulated in 1914, by a fellow German. It is called the Aneuploidy Theory of cancer, and it posits that the cellular catastrophe that is cancer is caused not by a series of genetic mutations, as old dogma holds, but by a misfiring earlier on the timeline, in the critical moment that chromosomes divide, ie the moment of speciation.

Duesberg picked up on the discovery first made by German biologist Theodor Boveri in 1914—that all cancers have chromosomal abnormalities. The numbers of chromosomes in the cell are way off, first of all, and the chromosomes are broken, enlarged, and fused together as though mashed by faulty machinery.

Duesberg has provided a series of experiments, functional evidence, to back up his new hypothesis, placing aneuploidy at the center of the drama, and seeking to discard the role of mutant genes, for which he says there exists no functional proof of causation. Many cancer researchers are willing to follow him up to the point where here discards the mutant gene theory, arguing that both are an important part of the picture. But Duesberg, despite being the discoverer of the first so-called onco-gene in 1970, has been arguing since the early 1980s that mutant genes don't cause cancer, and nor do retroviruses. The 2003 article in *Scientific American* titled "The Roots Of Cancer" put German biologist Theodor Boveri and Peter Duesberg as bookends on their timeline of a near-century long search for the genetic roots of cancer.

Boveri's critical experiment was to take sea urchin eggs and soak them in sperm, managing to doubly fertilize them, creating double the normal number of chromosomes. "Instead of sea urchins he got monsters," Duesberg quips.

They were tumors. Boveri concluded that cancer was a result of excess or disturbed chromosomes.

"The basis of speciation is changing the content and the number of chromosomes," says Duesberg. "Cancer is essentially a failed speciation. It's not mutation. Cancer is a *species*. A really bad breast, lung, or prostate cancer has 70, 80, or more chromosomes.

Those are the real bad guys—they're way outside our species. But it's a rare kind of species that as a parasite is more successful in its host than the normal host cell is."

Duesberg maintains that 100% of solid tumors are aneuploid. "We're not the first to see this. Boveri was. But we're a close second, with a hiatus of 80 years," says Duesberg. "Boveri had a great theory, but even then they started attacking him because they were all for mutation. Genes were the sexy thing. That's the smallest unit in biology, the atom of biology. So they wanted it to be genes and they still do. Chromosomes, as [Nobel laureate Michael] Bishop once said in a speech, was "something little old ladies could see peering through a microscope." They're so obvious."

"All mammals," he continues, " have the same kit of 35,000 genes. So how do you go from a bat in the air to a whale cruising underwater for days at a time? Well, by regrouping these same old genes in different sets of chromosomes."

"If you are outside of 46, you can have any dates you want. You can have a date with a gorilla. It may be traumatic but it's harmless, because it's incompatible. This is the species barrier."

In January of 2004, Duesberg hosted the first ever "Aneuploidy Conference," inviting 50 cancer researchers from all corners of the world, who also have been working on the connections between aneuploidy and cancer. Seventy showed up. They included such luminaries as NCI's head of genetic oncology, Thomas Ried, Gert Auer from the Karolinska Institute in Stockholm, and Walter Giaretti who heads the equivalent of the NCI in Italy.

"It was an even bigger success than we hoped for," says Dr. David Rasnick, Duesberg's collaborator on the Aneuploidy theory, who provided the theoretical (mathematical model) for it, while Duesberg completed the experiments in Germany. "You see, the cancer establishment is a lot older than the AIDS establishment, for one thing. Virtually everybody in the cancer establishment realizes that the mutant gene theory is a dead end. There's just no functional evidence for it. Everybody is very open to this right now and we had a wonderful conference. Very civilized."

Rasnick makes the following analogy to explain why, mathematically and logically, a few mutant genes can't cause cancer: Let's say the whole genome is a biological

dictionary, divided into volumes called chromosomes, then the life of a cell is a Shakespearean drama. “If one were to misspell a word here and there, in Hamlet for example, it wouldn’t affect it much. But you could reduce it to gibberish if you deleted entire portions of text, copied others and shuffled them around at random. That’s what aneuploidy does to the cell.”

So what about carcinogens?

“This is hard to bite,” says Duesberg, “I think we all agree on that. It’s kind of hopeless. Diet. Cigarettes. I mean…early last century they put tar on bunnies, all the Western guys, didn’t see cancer in the next week and gave up. Well, the Japanese who are, you know, really known for their patience, they did it for two years, and *then* they saw cancers. There is no *really* good carcinogen. If there was we would not be alive.”

But, he added, every carcinogen they tested did cause aneuploidy. “Every one we tested, asbestos, hormones, hyrdro-carbons, what they do is they screw up the spindle apparatus, these proteins that balance the chromosomes.”

So, carcinogens cause aneuploidy and aneuploidy causes cancer, but carcinogens my or may not be necessary for aneuploidy to occur.

All life begins with a single cell, and in that cell the blueprint for the species lies in wait. When the cell divides, it doubles its chromosome number, briefly, and all the chromosomes line up in the middle of the two future cells. “The pairs of chromosomes are lined up in the middle,” Duesberg explains, “like soccer teams before they blow the whistle and start the game.”

At each end are two tiny cables, one attached to each pair of chromosomes. When life begins, each one pulls from its side and rip the chromosome pars apart. “Mechanically, it’s an unbelievable achievement,” says Duesberg. “It almost always happens perfectly, and everybody gets one half.”

But sometimes it fails. The only chromosomal failure nature lets slip in humans is one extra chromosome, number 21, which produces Down’s Syndrome. People with Down’s Syndrome are mildly aneuploid in their whole cellular system, and they are 30 times more likely to develop cancer during their lifetime than other people.

Several cancer researchers I spoke to, both here and in other countries, acknowledged that anuepoloidy is “important.” What they differ on is how important. Is it sufficient by

itself to explain cancer, a, and b, do you find it in all cancers? Duesberg, Rasnick, and Li are insistent that to date, nobody has produced a diploid (chromosomally normal) cancer cell.

MIT cancer researcher Robert Weinberg published a paper in *Cancer Research* in 2003 claiming Duesberg was wrong and that his lab had diploid (chromosomally normal) cell lines. Duesberg asked Weinberg to send the cell lines so he could study them. "To his credit, he sent them," Duesberg says. Things got a little ugly. Duesberg and Ruhong analyzed the cells using their state of the art technology, and found that ever single one was aneuploid. They published this finding in *Cancer Research,* to which Weinberg's team replied in a letter to the journal, that Duesberg's lab must have somehow contaminated the cells after receiving them.

"That's the only time I've ever seen Ruhong get angry," recalls Dave Rasnick. "Ruhong was furious."

It's dizzying standing in the middle of these kinds of disputes when you are not a scientist. You can't judge the actual scientific data but you can try to decipher differences in scientific manner and style. Duesberg is unique, or at least highly unusual, in one regard: He is as ruthless with his own discoveries and data as with others. This is how he generated a reputation for being stubborn and dogged, but those words are not used as compliments by most of his colleagues. Sitting there in his office that day, he reflected on this. If you gloss your data even slightly, he says, "science becomes arbitrary."

"This is something I don't understand," he says, with a look of genuine confusion over his face. "I mean, you put in 34 years in these rooms. OK, you have *some* fun but most of the time you grind and grind and grind and then it gets contaminated and…this is your biggest fear. That is why I would prefer to be honest even against my own interests."

[line]

The *Scientific American* article broke the current state of cancer-think into four essential camps: Standard dogma, Modified Dogma, Early Instability, and All-Aneuploidy. Those who have followed the 66 year old Duesberg's scientific arc, from the heights to the depths, and now back up again, were not at all surprised to see Duesberg take the most uncompromising position, all aneuploidy.

Many experts in the field disagree with him, of course, but they all disagree from some place on the aneupolidy *spectrum,* which ranges from—it's important but not causative, to it's very important but not causative, to the Duesberg position, ie, it is the very *cause* of cancer.

Dr. Thomas Ried, director of Genetic Oncology, attended Duesberg's conference, and has been focusing on aneuploidy himself for most of his career. I visited him in his lab at the NCI, and he said that aneuploidy has been well known and incorporated into American cancer research for many years. He shrugged. "Duesberg is right. But it's not like a big paradigm shift. If anyone had looked at chromosome aberrations in cancer and not realized that it's important, he or she would have been stupid. The director of the NCI called me up not long ago and said, "I would like to discuss aneuploidy.'

" We've invited Duesberg here to give a talk on aneuploidy."

That's odd, considering that the NCI still refuses to fund Duesberg. He has submitted 32 grant proposals to study aneuploidy, and one of the most influential cancer researchers in the country, Bert Vogelstein, Clayton Professor of Oncology, has written a letter to them urging them to reconsider. "I agree with him that aneuploidy is an essential part of cancer," he wrote. "Dr. Duesberg continues to have a major impact on this burgeoning area of research, through his careful experimental observations as well as through his thoughtful reviews and critiques of the subject. There is no question that he is a world leader in this field of investigation.

Ried deflected the question of why or whether NCI might fund Duesberg, saying only that he hadn't personally reviewed any of his grant proposals, and assuring me that if he wrote a good one he would be considered for funding in the future.

I asked Ried if he had hesitated before accepting Duesberg's invitation to speak at his conference. "No," he said simply. Then he got up and pulled a copy of a book by Theodor Boveri from a shelf. He tossed it on the table. He smiled. "Duesberg won't get jailed for talking about aneuploidy. Actually I was curious to meet with him and discuss this with him. I don't understand why he has to polarize the issue so much though. He says gene mutations don't play a role. I disagree with that. It doesn't serve a scientific purpose to say that."

"Peter Duesberg is one of the top aneuploidy researchers in the country," said Dr. William Brinkley, Vice President and Dean, Graduate School of BioMedical Sciences, Baylor College of Medicine. "I don't agree with him that gene mutations don't play any role, but he's a stellar scientist. I cite him all the time, and I was pleased to attend his conference on aneuploidy."

"A lot of people have said to me, 'Don't cite that guy. Don't go there.' Because of the associations with his name."

"I think he's a very creative scientist, but he has blinders on," says Dr. John Murnane, a cancer researcher at UCSF, who also attended Duesberg's conference. "I don't have anything against Peter, but I do think he made a mistake in not being more careful about the HIV issue. It had so many social implication and I think it would have been more responsible if he's said he thinks people should avoid HIV."

I asked him if he considered not attending the conference because of Duesberg's name. "Honestly? Yes. I thought about, what if somebody sees my name on this list. But then I decided to go anyway."

"His ideas are very brilliant," says Walter Giaretti, director of Italy's National Cancer Institute, who also came to the conference. "I still think gene mutations are important. I'm a partisan of both theories together, but we confronted each other in a passionate, beautiful way."

"This is the most important question in oncology. It's difficult. 99.99% of the research is on gene mutations and so we have to cope with this. Not just give up. Anyway, it was a very stimulating conference."

Dr. George Miklos, director of Secure Genetics in Sydney Australia, departs strongly from the centrist view on Aneuploidy. " I read Duesberg 1999 PNAS [Proceeding of the National Academy of Sciences] paper on aneuploidy. I read it, I put it down and I said 'This guy has got it right.' It was a revelation and it was instantaneous. I was a prepared mind though. I'd been reading up on cancer for like 25 years and it was a shambles. Nothing was making sense. It was all over the place. They're talking tumor suppressors and oncogenes every time you read another paper was slightly different and contradictory. If you've been in science long enough you know that that is a very bad

sign. They were changing their spots like a leopard. Whenever something is right in science is very clean it's very simple and very clean."

Miklos reviewed Bialy's book in *BioTechnology,* and gave it extremely high praise. "I actually saw Bialy's book on Duesberg as not really being about cancer or AIDS at all. I saw it as being a book about maintaining standards. It's following in the tradition, the German tradition actually, of people like Gunther Stent and Max Delbrooke, who really started standards in American science. That's what Duesberg comes from and that's why I get so passionate about him. He's put a stake in the sand and said, 'Look, you cross that line and you're lost. You've lost everything. Not just how you do your science but how you maintain your standards everywhere.' That's why it's so important. Once you make that first little step on your downward slope there is no way you can come back."

We discuss the changing image of Peter Duesberg, and the strange polarity between the way he was depicted in AIDS and the way he's talked about now. We talk about the American formula for success, and what success in science really means.

"Just because your culture identifies you as a loser doesn't mean you are one. I can tell you something..when all the dust settles from the mess of this era, only the Titans will stick up. And they will be very very few. The present generation will see Duesberg as a loser because of what happened to him, but when you look back in 100 years over the history of genetics, he'll be a winner."

[line]

We walk around the corner to Duesberg's office and he kneels down and pulls out the 1987 *Cancer Research* paper, the one that started it all. It turns out the very first reference listed is Theodor Boveri. "I was really a free thinker at that time more than I knew," he says, and shows me that the paper contains early contours of the aneupolidy theory, which Duesberg got to by way of first eliminating all the un-proven but fashionable cancer theories of his generation, which he unwittingly helped launch in 1970.

Together with virologist Peter Vogt, Duesberg discovered the first so-called onco-gene, a gene inside a retrovirus which *appeared* to cause cancer.

But Duesberg himself had doubts about the in-vivo relevance of these so-called onco-genes, and they would grow, as doubts do in the terrain of Duesberg's mind, to the point of critical urgency. Peter Vogt hasn't spoken to him in 20 years.

"I was a hero. They loved it. Great idea! Every M.D. around the globe took his favorite cancer and looked for onco-genes. They awarded several Nobel prizes for this stuff, without ever proving it really happened, that genes caused cancer. Bishop and Varmus became the kings of cancer and all the rest of it. The trouble was none of these guys bothered to clone them and put them in diploid cells and see if they're transforming, which was what I was trained to do with viruses."

Duesberg was a golden goose prior to 1987, but soon it became clear that there was something in his personality that caused him to crush his own eggs, and that's when the trouble began. The son of two prominent doctors, he'd been hand-picked right out of Germany's Max Planck Institute for Virus research by Wendell Stanley in 1964 to come to UC Berkeley's virology department to study viruses. By 1970, at 33, he'd discovered the first viral onco-gene, which he shrugged off as a clinically irrelevant lab fluke, but which gave rise to the next big idea boom in cancer research: The mutant gene theory.

Functional onco-genes have never been found, but the field still insists that they "are real," which isn't synonymous with that they have been found to *cause* cancer. They are genes with mutations which researchers have struggled to find meaning in—such as cancers that all share the same pattern of mutations.

"At first they said it's one onco-gene, then they said it's four to seven, then it was eight or nine. They were making deals all along," says Duesberg. "As long as they can stick with their religion that they grew up with."

Before the bio-tech boom of the mid 1980s, Duesberg's fastidiousness and insistence on functional evidence was better tolerated. By the time AIDS rolled around, this quality of Duesberg's would be seen as insanity. On the very day that the US Government announced it had found in HIV the "probable cause of AIDS," it also patented the HIV antibody test, about which there would later be a big feud with the Pasteur Institute in Paris, who had actually isolated (actually, this too is disputed) the virus a full year before Gallo*, and sent it to him.*

The viral-cancer field, now powered by the emerging biotech industry, was in no mood for doubts, and Duesberg was all about doubts. Better to say: He was all about clean functional proof, at a time when biology was becoming increasingly post-modern and opaque. “If the gene would do what it is said to do it would be very simple,” he says. “You would take the gene out of the cancer cell, put it in a normal cell, and get a cancer cell. But that has never worked. Despite Nobel prizes and twenty years of gene cancer work.”

“There is no functional proof for a cancer gene. When you put it in mice nothing happens. In fact I was the one who did that systematically, all these mix and match experiments, with viral and cellular exchanges. As the discoverer of onco-genes, I was in a privileged position because I had solid controls. ”

By the late 1980s, Duesberg concluded that he and his colleagues had gotten tangled up in a whole lot of complex ideas about retroviruses and onco-genes that were leading nowhere.

“So I hit the library,” he says. “and aneuploidy was everywhere. In my mind I was already conditioned to think about aneuploidy because there you have thousands of genes changing species. I was thinking, as soon as I finish this AIDS thing I have to go look at that.”

But this “AIDS thing” instead crashed down on him and shattered his scientific career. When, in 1987, he wrote the paper in Cancer Research, he unleashed the fury of the NIH Gods, that had already been brewing for some time. It would become one of the most sensational, vicious, and personalized battles in the history of science.

In 1986, waters were still calm. Duesberg received a special NIH cancer fellowship, as well as the highly coveted Outstanding Investigator Grant, which is reserved for the top scientists in the country and designed to let them push the very boundaries of scientific thought. He was also inducted into the elite National Academy of Sciences, the Hall of Fame for scientists, at the unusually young age of 50, making him one of the youngest members ever voted in.

Then came the 1987 paper, and all hell broke loose. It’s title was hardly incendiary: *Retroviruses as Carcinogens and Pathogens: Expectations and Reality.*

It was essentially a call for sobriety in the nascent and booming field of retrovirology that was spinning out of control, pinning its agents on every disease in sight, with no functional proof and no real interest in proof. In this one paper alone, Duesberg argues against the idea that retroviruses cause leukemia, cancers in general, and finally AIDS (the cellular opposite of leukemia.) Retroviruses, Duesberg reminded his colleagues in this paper, are not 'cytocidal,' meaning not cell-killers. AIDS is a disease of cell death, while leukemia is a disease of cell proliferation. However you may feel about the veracity of the HIV hypothesis, it is certainly true to say that to accept it, one has to accept a sudden and total reversal of what was held to be true about retroviruses until April of 1984.

The *Cancer Research* paper is, for the purposes of the layperson, essentially a sweeping reality check against overblown claims for retroviruses, written by the man who at that point in time was said to know them better than anbody. Duesberg was never really a rebel, he was a reformer. But given the hysteria of the time, the sense of emergency that AIDS had generated, he was seen as a dangerous extremist.

Shortly after Duesberg's *Cancer Research* paper came out, a memo was sent out from the office of the secretary of Health and Human Services, (HHS) with the words "MEDIA ALERT" that castigated the NIH for allowing the paper to have been published in the first place. "The article apparently went through the normal pre-publication processs and should have been flagged at NIH," it read. "This obviously has the potential to raise a lot of controversy….I have already asked NIH public affairs to start digging into this." The memo listed the few media outlets that had covered Duesberg's paper—primarily the *New York Native*, a gay weekly that has since gone out of business-- and cited a few journalists by name it promised to check up on.

The notion that the NIH expects to vet every scientific paper in every cancer journal is surprising to people who think of science in the old fashioned, soft-fuzzy way. But to anybody who knows the system it is no surprise at all. The NIH exerts a militaristic control over the ideas that emanate from US government science, and the control extends to the media, who are rewarded and punished in accordance with their suspension of curiosity.

The NIH and all its branches are not only part of the "government," they are in a sense part of the US military. Public Health has its roots in the military; The NIH began during WW1 as an organization that soley focused on the health of soldiers. This remained its core mandate through WW2, after which it expanded to a more sweeping public health institution. Still, top NIH scientists hold military rank—the only openly stated one being the Surgeon General.

The NIH, UC Berkeley, the respectable science press, and needless to say the world's many thousands of AIDS organizations choked on Duesberg like a bone lodged sideways in its throat. Ironically though, his achievements and reputation had lodged him deep in the system and it would take a while for them to expel him.

The Outstanding Investigator Grant Duesberg had received was designed for a handful of elite scientists to be able to focus on their work with a seven year grant cushion, the idea being that they shouldn't take precious time away for grant-seeking. So they were unable, legally, to close the spigot of funds from the NIH until the seven years had passed, in 1993. When Duesberg's grant came up for renewal he had the proverbial snowball's chance in hell, if that: The review committee included one AIDS researcher who had financial ties to the company that made AZT, a drug Duesberg continually criticized for its extreme toxicity, and one who had mothered a child by the very scientist who spawned the HIV-AIDS hypothesis, Robert Gallo. Three reviewers never even read the proposal. It wouldn't have mattered if Moses was on the review committee. Duesberg was doomed. The US government unceremoniously pulled the plug and would never again give Duesberg a single research dollar. So he went from being the most highly funded scientist in the country to being totally unfunded—but that was only the half of it. A kind of anti-Duesbergism swept the field and grew to near-frenzied levels. Gallo gave an entire interview in 1988 that was laced with furious and even profane cursing at Duesberg. "HIV kills like a truck!" he hollered. "HIV would kill Clark Kent!" Duesberg's quip, at the time, was that he wouldn't mind being injected with HIV—so long as the sample didn't come from Gallo's lab. Then for a while, a silence fell. The official position became that to address Duesberg's arguments was itself wrong, because it deflected valuable time away from the business of "saving lives," as well as lent credence to dangerous nonsense. AIDS organizations posted warnings about Duesberg

and the “denialists” on their websites. Project Inform’s Martin Delaney personally campaigned to get every journalist who interviewed Duesberg fired. He didn’t have to write many letters because very few journalists wanted to interview Duesberg. Those who did were quickly set straight. Anthony Fauci personally made sure Duesberg never appeared on national Television, by intimidating the producers who in many cases had already booked Duesberg and flown him to New York. A few times he was cancelled within an hour of air-time, only to turn on the TV and see Anthony Fauci himself on the show.

As for Berkeley, they were against him from the beginning, and wished they could get rid of him but they couldn’t, because he had tenure. They refused to endorse Duesberg’s appeal to the NIH and without it he could not proceed, legally.

He was disinvited from all scientific conferences, and colleagues even declared that they themselves would refuse to attend any conference that included Duesberg. The university dissuaded all grad students from working with him, telling them that it would destroy their careers—so he lost his grad students. He was banished also from publishing in the scientific press, most theatrically by [Nature editor] John Maddox himself, who wrote a bizarre editorial stating that Duesberg should not be entitled to the standard scientific publishing practice “Right of Reply” in the wake of attacks on him that were frequently published in Nature. This written record is rendered in vivid, often hilarious detail in Bialy’s book. Even the PNAS’s [Proceeding of the National Academy of Sciences] journal, where members are virtually always invited to publish, crushed a Duesberg paper on HIV after he spent over a year revising and re-submitting it to meet their various editing requests.

Those who tried to help Duesberg were themselves attacked, and in any case, it did no good. The virologist Harry Rubin (himself a member of the academy) intervened on Duesberg’s behalf to try to get his PNAS paper published, but it was to no avail. (I know this section is loose) Duesberg’s paper in 1992 became the second one in the PNAS’s 128 year history to be blocked from publication. (The other was written by Linus Pauling.)

In 1994, a high ranking NIH geneticist, Dr. Stephen O’Brien, called Duesberg and said he urgently needed to see him about a professional matter. He flew in from Bethesda the next day and the two met at the opera in San Francisco. After some small talk about

the good old days, O'Brien pulled a manuscript from the inside pocket of his tuxedo. Headlined, "HIV Causes AIDS: Koch's Postulates Fulfilled," it had three very incongruous names at the bottom: Stephen O'Brien, Robert Gallo, and Peter Duesberg.

It had been commissioned by Nature editor John Maddox. If Duesberg would only sign, O'Brien implored, he could have everything back, be back at the top again, back in the establishment. O'Brien told Duesberg that if he signed it, the paper would be in press by the following Tuesday—that he would fly to London immediately and deliver it to Maddox.

Unfailingly polite, Duesberg drove his old friend to the airport, and said he would give the matter careful consideration. He already knew what he was going to do. He sent the manuscript back to London the next day, but this time it was two papers. One, the original, with his own name removed, and a second paper which consisted of his rebuttal. Neither was published, and Duesberg hasn't been published in *Nature* in the decade since.

"So when he was given a chance to recant," Bialy laughs, "we got the Marx brothers."

As recently as last year, when Duesberg's merit pay increase was denied, one of the deans at Berkeley wrote in a letter to the adminsitrator who was brought in to examine charges of extreme bias, that Duesberg has "the blood of African AIDS babies dripping from his fingers."

In 2000, when the International AIDS Conference was being held in Durban South Africa, (where the President, Thabo Mbeki, has appointed a panel of dissident and mainsteam scientists to try to resolve the cause, or causes, of immune suppression in South Africa) 5,000 AIDS professionals signed a petition stating that HIV is the cause of AIDS. It was published in *Nature.*

Prior to 1987, Peter Duesberg never had a single grant proposal rejected by the NIH. Since 1987 he has written a total of 30 research proposals; Every single one has been rejected. He has submitted several proposals on aneuploidy, as recently as last year—they too have been rejected.

"They just took him out," says Richard Strohman, a retired UC Berkeley biologist. "Took him right out."

"The system works," says Dave Rasnick. "It's as good as a bullet to the head."

[line]

Not quite.

Over the years, a number of private cash infusions have kept Duesberg afloat, from foundations and private individuals, who simply give him what he needs because they believe in what he is doing. His most important, hands-on benefactor is a San Fransciso venture capitalist named Bob Leppo, who bought Duesberg and Li the $80,000 state-of-the-art "Zeiss Electron microscope" on which no aneuploid cell would ever be taken for a diploid cell. He also pays Ruhong's part time salary, and he sponsored the 2004 Aneuploidy conference in Oakland.

I met up with Leppo, a self-described Libertarian, in San Francisco, at a restaurant on Geary street. He said he estimates he has given Peter Duesberg more than half a million dollars since 1995.

"My main motivation was anger at the way I saw him being treated," says Leppo, a tall man of about sixty, who looks more like a professor than a venture capitalist. "And it's been very gratifying to watch this all play out."

We talked about whether it actually is critical for a scientist to be funded by the government.

"I'm here to tell you that there are two types of science. There's the science that needs government funding, and there's everybody else. You'll pardon the expression but the government is the sow, with all these nipples, and all the dependent scientists attached to them. Even the pharmaceutical companies depend on them. They are just as afraid of the government as the scientists are because the government has the power to decide which drugs people can buy and which they can't"

"Historically, a great many scientific discoveries were accomplished by either a single person or a tiny group with negligable funding, and what little funding they had didn't come from government. The basis of Peter Duesberg's genius is that he thinks about things differently. And that's the most important thing in science—not to see new things necessarily. A thousand scientists are seeing the same thing. Peter Duesberg is thinking differently about the things that he sees."

"Duesberg's problem was that everybody was driven by fear. The core of the condemnation of him by fellow scientists was the fear that if they didn't condemn him publicly, they would lose their government funding. They were taking out insurance against that. But that fear is not there in cancer. Peter Duesberg's notoriety has everything to do with AIDS and nothing to do with cancer. When we were planning the conference, he listed the crème de la crème in the field. The majority of cancer scientists that he wanted to come to his aneuploidy conference came."

Leppo laughs, and I turn my tape recorder off.

[line]

Donner Lab, May 2004

I asked her if we could talk about Peter Duesberg and she nodded, and walked me down the corridor into her office. She asked that I not identify her, and that I say only that she has known him for "a considerable time," and that she is a UC Berkeley scientist.

"I am not fond of this topic," she said, as I sat down in the chair opposite her, and explained what I was there to examine: Peter Duesberg's potential rehabilitation. The scientist knew Duesberg well, as did her husband, who apparently was "furious" at him when he, in her words, "disgraced" himself with the HIV debate. .

"I don't think Peter is necessarily wrong," she said. "But he had a fatal flaw. He went public. I think he hurt himself. He didn't understand the real world."

She kept talking, as though she'd been thinking about this for years, and was waiting for somebody to walk in there with a notepad. I got the same feeling from others who'd known Duesberg from the early days. Almost a sense of guilt, but threaded around an argument that places the blame at Duesberg's feet. For not playing ball.

"Peter doesn't have a bad bone in his body but he's childish. I think he sees the world in bright colors."

"Bright colors?" I said.

"Yes. He did it to himself, you know. Everything that's happened. You see, he wouldn't give up an idea. He went at it with a hammer. He may well be 3000% right but he upset an awful lot of people through his doggedness, which only made him more dogged."

"So that's not a value then, in science…being dogged?" I asked.

"He's been unpopular his entire career. You can't help but love him. He's here because nobody will have him."

"I realize that," I said.

"Nobody believed in him because what he was doing was overturning generally held views. They felt betrayed."

"*They* felt betrayed?"

"Yes, they felt attacked."

She paused. "Let me explain something. Political savvy is intrinsic to a scientific career. You don't just stand up and say that everybody is wrong."

"What should he have done though, given that he did think they were wrong?"

She shook her head and smiled.

"There's no such thing as totally right or totally wrong."

I leaned forward in my seat. "In *science*? There's no such thing as totally right or totally wrong?"

She waved her hand, as though we were talking about something faintly banal.

"Listen, it's passé now. He would have been ok if he had just done things as convention dictates."

I tried to write down every word she said because it felt like I had at long last gotten to The Answer, and I could scarcely believe my ears. The case she was making was a case for bourgeois science-- rosebushes and garden parties and playing along.

"I wouldn't want his life," she said.

We sat silently for a moment.

"In the department, they'd laugh and talk about him. He was very irritating to the department. He carried his ideas too far."

At no point did the conversation circle around to the question of the scientific arguments themselves. It was all about the culture of science, the codes and unspoken rules.

"If he had just *apologized,* he would have been resurrected long ago," she said.
"But how could he apologize unless he felt he had done something wrong?" I begged.
"And how could he feel that unless he thought he was incorrect. *He doesn't think* he is incorrect."
She sighed. And what she said next weighed no heavier on her than anything else she had said.
"Peter may be right about HIV. But there's an industry now."
It was *entirely* implicit that the scientist should adapt to the industry, shape his views to please it. If he wants to succeed.
"I don't think Peter understands what's going on," she said again. "He thinks everybody should be friendly. Maybe that's it. He's like a child, he really is."
Before I left she wanted to stress one more time that Peter Duesberg had brought all his miseries and punishments onto himself, that there was so "conspiracy," which I heard repeated by several others on the anti-Duesberg side of the fence.
"You're saying there was never any conspiracy to ruin him, as a scientist," I said.
"That's right," she said, "It's just…."
I waited.
"Just what?"
And then she smiled and shrugged.
"The cookie crumbles."
Before I left I asked her if I could feel free to quote her and she adamantly said she did not want to be identified in this story. We negotiated about what I could say about her, and wound up with only the most elliptical identification. She feared "they" would figure out who she was. As I was leaving she said something slightly odd. "I don't want to go on record saying anything for *or* against Peter."
It was as if, at this point, she could no longer be sure *which way* the cookie was crumbling around the name Peter Duesberg.

[line]

"Oh my God," whispers Nobel Laureate Kary Mullis when I read him the Mark Wainberg quote about putting HIV dissenters in prison.
"No real scientist would ever talk like that, ever," he said.

I caught up with Mullis by phone at his home in La Jolla, to discuss Duesberg, who he has defended in the past, being himself a fierce critic, in fact ridiculer, of the HIV hypothesis. In 1991, he told me that he had long been searching in vain for the reference or references that lies at the root of the idea that HIV causes AIDS. He wanted to be able to attach a reference to it because, as he sarcastically put it, "I didn't want it to be *my* idea."

Mullis won the 1994 Nobel Prize in chemistry for his invention of Polymerase Chain Reaction, the DNA amplification technique that has revolutionized forensics and DNA testing. The formula for the invention appeared in Mullis mind, complete and finished, while he was driving down a winding Pacific Coast road in the mid 1980s. He pulled over the scribbled it down. Whatever it was that appeared in his head, it was correct, and out of it came PCR, for which Mullis awarded the Nobel Prize in 1994. He has been a vocal and often bitingly sardonic critic of the HIV-AIDS hypothesis since the early 1990s, when the AIDS establishment tried to use PCR to prove Duesberg wrong in stating that only an insignificant number of cells were infected. Mullis said at the time: "PCR made it easier to see that certain people are infected with HIV, and some of those people came down with symptoms of AIDS, but that doesn't *begin*, even, to answer the question: Does HIV cause it? Human beings are *full* of retroviruses."

It came to light during the late 1990s decoding of the Human Genome that we all have tens of thousands of retroviruses in our germline.

I asked Bialy about this and he said: "It would have been the major single explanation that the hypothesis would have had to provide in order to be taken seriously. How do you account for the pathogenicity of this sleepy virus that has not a single pathogenic relative and in fact has 98,000 relatives quietly residing in the human germline. *Fuck.* 98,000 in the germline! Not in your body cells! In your *ovaries*! *Getting passed on from generation to generation for as long as human beings have been on this goddamn planet. Every*

single one of them is clearly not only not pathogenic but totally harmless. This is the most powerful proof that what Peter has been saying for 20 years now is absolutely correct."

Scientists like Bialy and Mullis remember where they were when they first heard the news that NCI's Bob Gallo had found the cause of AIDS and that it was a retrovirus. "A colleague told me," says Bialy. "I was on my way to New York. It was January 1984. I remember laughing. A cytopathic retrovirus? This is just more Gallo bullshit, I said. I said it will never fly."

"Look there's no sociological mystery here," says Mullis." It's just people's income and position being threatened by the things Peter Duesberg is saying. Their personal income and positions are being threatened and that's why they're so nasty. In the 1980s a lot of people started being dependent on Tony Fauci and his friends for their livelihood. All these people really wanted success in the sense of lots of people working for them and lots of power. In the AIDS field there is still a widespread neurosis among scientists, but the frenzy with which people approach the HIV debate has slacked off, because there's just so much slowly accumulating evidence going against them. Its' really hard for them to deal with it. They really did make a big mistake and they're not going to ever fix it. They're still poisoning people."

Mullis has reviewed Duesberg's aneuploidy grant proposals and written letters on his behalf.

"They're saying he's extreme and unreasonable to say this is all aneuploidy, but it's also an extreme and unreasonable position to say that it's onco-genes. There's no real strong evidence for that and they sure haven't made any great strides curing cancer with that idea. I think his ideas are much more intellectually interesting and in line with the facts. It makes more sense. But you know Peter does have a part of his personality that invites these attcks. He has a biting wit. But those AIDS guys, they deserved it. Peter doesn't really write his papers in a way that tries very hard to make a point to somebody who's not smart. He doesn't try to appeal to the lowest common denominator."

Before we sign off Mullis tells me he has just emailed his son in Australia to suggest he name his soon to be born son after a molecule.

[line]

Peter Duesberg is alone, at his favorite outdoor table of the UC Berkeley coffee house La Strada, typing on his laptop. At 66, he is a slender man, average height, with white, wavy hair that doesn't do anything crazy. Professorial hair. Blue eyes that have been described as having a twinkle and a German face that you could call boyish. He's wearing a white shirt and a navy knit vest, and he's typing, with an empty cappucino cup next to him and a plate with crumbs.

The café is noisy, students, adorned with the body-décor of would-be rebellion — piercings, tattooes, torn clothes-- stream past and take no notice of him.

Every day he has to write letters of appeal to the tribunal of deans and department heads at Berkeley, about his merit pay case. One of them is sitting around the corner, laughing loudly. If only it were possible to put all the whole story, thread by thread, into the frame. The laughing dean may or may not be the one who wrote a letter accusing Duesberg of having the very blood of African AIDS babies dripping from his hands. He's got his point of view. But if he walked around the corner and peered down onto Duesberg's screen, he'd see a letter in the form of an email, of the sort Duesberg gets almost every day, from a person he doesn't know, who is thanking him for saving his life. You have to look at everything.

A man comes over, a student of about 45, just as I have sat down, and greets Duesberg warmly. The man, an African American Chomsky-leftist who thinks Duesberg is correct about HIV and AIDS, says: "I have friends here on campus who think 9/11 was an inside job. But your stuff…" He shakes his head and laughs. "It's too radical for them. They refuse to even talk about it."

He walks away, and I scribble down what he said. One more thread in my vast collection. I'm trying to figure out how people build their "airy citadels" as Keats put it, of what they know, don't know, think they know, and don't want to know.

I contacted the Berkeley deans who oppose Duesberg and asked if they would speak to me. None of them agreed to an interview; Some didn't reply and others said they were leaving on vacations. One of them, Professor Michael Botchan, replied via email with this:

"Conspiracies in the academy don't exist as they did in Galileo's time—really. Now, Peter Duesberg has a theory that aneuploidy is necessary *and* sufficient for all cancers. If he is having trouble getting funded over an extensive period of time, it means that his peers really don't think much of his notions. Any other slant would in my opinion be way off the mark."

David Steele, Duesberg's attorney, who is also litigating against GlaxoSmithCline charging that they harmed and even killed people who too the anti-AIDS drug AZT without being informed that it is a chemotherapeutic agent, hands me a large black folder of correspondences between Duesberg and the Berkeley administration. "Read it for yourself," he says. "They are egregiously biased and take shots at him at every turn. The ethic among these guys is if you have a chance to take a whack at Duesberg, you never miss that chance. It's a whole culture. They reward each other for it."

At least twice, his request for merit pay increase has had to go to a new reviewer, as mediators have found them to be biased in their assessment of Duesberg's work, but it is difficult if not impossible to find an impartial reviewer in the virology department at Berkeley. At one point, they tried to find somebody in the math department.
Reviewing the dossier, one exchange in particular caught my attention. It was a simple thing: Duesberg had written to one of the adminsitrators asking about the teaching schedule for the upcoming semester. The administrator, Stuart Linn replied:

"Surely, Peter, as a member of the NAS [National Academy of Sciences], you can look up the lab days and divide them by 3. In the event that you cannot, there are 44 days of class and an exam at the end of each (unless you want to have the exam at the beginning, or don't want to have one), leaving 41 days of lab. "
He lists the exams, then goes on to say: "If this doesn't work for you, you are free to give lectures on AIDS, not give an exam, etc., but don't ask Sharon Lindley to worry about it as it is not her responsibility."

This was one rare instance where Duesberg showed emotion.
" "Surely" Stuart Linn," he replied, "I would like you to answer the following four questions."

The first one is: "Why would you have to address me as a member of the NAS in criticizing me for not knowing when exactly my section of MCB 11OL starts next

February? I can not help it that I was elected into the NAS—but, I also can not help it that you were not."

He goes on the dissect the Linn memo down to the last word, including "etc."

[line]

"I can't even go to the campus. The hostility just pours out from every corner," says Siggi Sachs Duesberg, Peter Duesberg's wife, an attractive, athletic German woman in her mid 40s, with whom Duesberg has an 8 year old son, Max. He also has three grown daughters from a previous marriage. She puts down a plate of cheese on the table and says, insistently: "Science is such a rotten thing. A bunch of completely mediocre people who don't want to risk anything. *They're egomaniacs.* "

She spoke of the social ostracization the family suffers. "We are never invited anywhere. Never. It even extends to Max, how they treat him in school. It's very hard and I'm so tired of it. The AIDS thing that they will never give up, they will fight it to the end."

Max climbs into his father's lap and Duesberg whispers something to him and they laugh. I ask Max if he wants to be a scientist when he grows up. "I want to be that last," he says. "In the last part of my life."

We get to talking about the 1989 earthquake, the big one. "Were you here?" I ask Duesberg.

"I was here, yes," he says distractedly.

"Peter was in the *lab*," Siggi says, with a combination of annoyance and affection. "Harry Rubin came running in and said, 'Peter we have to get out of here, it's an earthquake!' "

She laughs. "And you know Peter, you know how he is. *He wouldn't leave.*

He said, "I'm finishing my experiment.' "

---Celia Farber

(submitted to Harper's July 2005)