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October 21, 2002

James Braden
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44 Montgomery Street, Suite 1210
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Re: Mr. Douglas Copp

Dear Mr. Braden:

Mr. Douglas Copp is a patient under my care who was permanently disabled as a result of multiple injuries sustained while functioning as a rescue worker at the World Trade Center collapse on September 11, 2001.

As founder and executive director of American Rescue Team International, Doug Copp has worked at every world major disaster in past 15 years. With experience in hundreds of building collapses (the WTC were buildings numbers 893 and 894) Mr. Copp is arguably the most experienced rescue worker in the world.

Mr. Copp was flown by private jet to Ground Zero on September 12, 2001, where he spent a week several floors below Ground Zero, directing his team, locating trapped individuals, and saving lives. During this time he was exposed to a toxic array of chemicals of unprecedented proportions.

Robust and athletic prior to 9/11/01, Mr. Copp had always been healthy. He was under treatment for no medical condition, and took no medications.

On September 15, 2001, having spent four days rescuing people

under ground zero, Mr. Copp first noticed, during a television interview, that his voice had changed, and that he had begun to cough. Over the next ten days he continued to experience increasingly severe respiratory symptoms, primarily cough and shortness of breath. These were accompanied by pain and tightness in the chest.

The severity of the cough, shortness of breath, and chest tightness continued to increase, and on September 27, 2001, while in Santa Fe, New Mexico, Mr. Copp experienced a severe acute attack in which he felt unable to breathe. He went to the local Emergency Room where he was treated with steroids and bronchodilators.

Since that time, Mr. Copp has continued to experience severe ongoing respiratory distress, with ongoing dyspnea, cough, and chest pain. Unable to walk even short distances without exceeding his lung's ability to supply his tissues with sufficient oxygen, he has been rendered totally incapacitated.

Although the respiratory system was most damaged and is--at least in the early stages of illness--of most acute concern, several other body systems are involved here as well. These include the immune system, adrenal glands, liver, and upper digestive tract. A further component of Mr. Copp's health problems is general body contamination caused by inhaled and dermatologically absorbed components of dust and smoke borne toxins.

History of Present Illness

Mr. Copp has received care from a number of physicians and medical institutions, including St. Joseph's Hospital in Albuquerque, and Dr. Henry Garcia, a family practitioner who has seen him on a more or less monthly basis. Mr. Copp's respiratory disorder has been treated as if it were asthma and bronchitis, using conventional medications such as Advair discus and Allbuterol. He has been given inhalers, prednisone,

and antibiotics, but with only marginal success in controlling the symptoms. Prednisone has been effective at suppressing the abnormal immune responses, but the price to be paid in weight and water gain, bone mass and muscle loss, mental symptoms, immune system suppression, and adrenal atrophy has been detrimental to his overall health and decreases the probability of complete recovery, so he has aggressively attempted to wean off of steroids.

Mr. Copp takes the blood pressure medication Tiazac 120 mg. daily for hypertension of unknown (but presumably WTCS) origin. He had no hypertension prior to 9/11/02. He receives 0.25 mg Synthroid daily for hypothyroidism. He was seen by Dr. Richard Radecki, physical medicine, and a Dr. Hinds (no specialty indicated), but was not fully worked up because an MRI could not be performed due to metal in his lungs.

Current Symptoms, Signs, and Complaints

- High Blood Pressure, only partially controlled by medication
- Low thyroid
- Blurred vision
- Heartburn
- Sinus blockage
- Dry eyes
- No libido
- Water retention and bloating
- Stomach extended
- Disorientation
- Difficulty concentrating
- Constant pain in chest
- Inability to walk farther than 30 to 40 ft without resting
- Difficulty speaking with out prolonged breaks for breath
- Weight increase
- Frequent urination

- Difficulty sleeping
- Constant sense of chest spasm
- Hyperventilation
- Extreme reactions to heat and stillness of air
- Extreme reactions to cigarette smoke, air pollution, ambient volatile chemicals
- Frequent chest, upper left arm pain which feels like a heart attack
- Earaches
- Reduced hearing
- Irritability
- Feels lousy...and "just plain sick"

Current Medications

- Prednisone
- Xopenex 1.25 mg with nebulizer as needed for acute bronchoconstrictive attacks.
- Allbuterol Inhaler
- Intal Inhaler
- Advair discus
- Synthroid

General Toxicity

The complex and unique mixture of toxins presented by the WTC collapse is unprecedented in human history. The environment to which Mr. Copp was exposed was a mixture of vapor, smoke, and very fine particles that originally made up the materials of the WTC, its contents, and the aircraft that struck it. A complete listing would include tens of thousands of chemicals: cement, glass, asbestos, superheated volatilized polyvinylidene chloride (PVC), polyethylene, acrylonitrile-butadiene-styrene (ABS), reinforced thermosetting resin pipes (RTRP), vinyl coated wiring, carpet, office furniture, hydraulic oil, fuel oil, diesel fuel, jet fuel, cement and drywall dust,

organic particulates from burning plastic such as polyvinyl chloride, polychlorinated biphenyls (PCBs), dioxins and other polynuclear aromatic hydrocarbons, thousands of combustion product chemicals, airplane components, burning human bodies, and vaporized toxic metals such as lead, copper, cadmium, tin, iron, steel, mercury.

The combined effect of these toxins is impossible to assess, but it is safe to say that all organs and tissues would be adversely affected. The respiratory system, immune system, upper digestive system, and central nervous system are hardest hit. There are both short and long term effects. Mr. Copp evidences symptomatology of the adverse effects of this toxic mixture on his respiratory system, upper gastrointestinal system, CNS, adrenal glands, and liver.

Respiratory System

Of the several injuries sustained by Mr. Copp, the most most severe and disabling is the damage to his respiratory system. He is experiencing ongoing toxicity due to thousands of xenobiotic molecular forms, many more than in any previous disaster. The damage caused by these chemicals to the immune cells that line his respiratory epithelium has resulted in chronic hyperreactivity to low level allergens and lowered resistance to microbial exposures.

The most acute effect of toxic exposures from the WTC is felt at the respiratory level. As noted above, Mr. Copp experiences ongoing severe respiratory distress with cough, chest pain, shortness of breath, zero exercise tolerance, and severe dyspnea on minimal exertion, and acute bronchospasms triggered by allergic reactivity.

Since the initial episodes (described above), Mr. Copp has had continuous shortness of breath, punctuated by frequent episodes of severe reactive airway disease with bronchospasm.

He has been continuously unable to breathe normally and has frequently required emergency medical attention and the administration of systemic steroids.

This patient's severely compromised baseline respiratory function is exacerbated by any activity. He can walk no further than 30 feet without having to rest to catch his breath.

Mr. Copp has also experienced continuous chest pain, and a deep and at times paroxysmal cough that will not subside. Any physical activity exacerbates this chest pain. He always feels on the verge of another acute attack, and must keep his attention focussed on his breathing in order to avoid precipitating another attack. His inflamed respiratory system has become exquisitely sensitive to small concentrations of allergens and irritants that would formerly have caused no problem. For example, a small amount of cigarette smoke once triggered an attack that sent him to the ER.

Immune System

It has been well established that exposure to xenobiotic (foreign to living systems) toxins causes immune dysfunction. In Mr. Copp's case, these foreign chemicals caused tissue damage, immune dysfunction, and probable endocrine effects. This aspect of his disease has not been adequately addressed.

In the respiratory epithelium and elsewhere, xenobiotic exposure has altered protein molecules in his respiratory tree, causing subsequent autoimmune reactions in which the altered proteins are mistaken by his immune cells as foreign and then attacked by antibodies, natural killer cells, and macrophages. The resulting inflammatory reaction manifests in Mr. Copp as chronically inflamed respiratory tissue, shortness of breath, and chronic cough.

Exposure to xenobiotics (including the initial exposure, ongoing

low level exposure, and exposure from xenobiotics released from fatty tissue stores) also causes immunostimulation, which results in spurious immune attacks on normal body proteins. This further inflames the respiratory cells, lowering the threshold for bronchospasm and cough. The autoimmune reactive symptoms and damage to normal protein activate complement cascades which cause more local tissue injury and further lower the threshold for bronchospasm and cough.

Exposure to xenobiotics also causes a kind of immunodepression that leads to loss of the immune system's normal surveillance function, leading to increased risk of infection and neoplasia.

I have ordered a Comprehensive Immunotoxicology Panel which will elucidate which toxic chemicals or chemical groups have evoked an immunotoxic response. These tests will also tell us the specific amounts of chemical antibodies in Mr. Copp's system, whether the immunotoxic symptoms he is suffering are being primarily expressed as immunosuppression or immunoactivation, and the degree of toxicity or immuno-injury he has sustained. After evaluation of these results, we may make further recommendations to further clarify the full extent of this patient's immunotoxic condition.

Exposure to xenobiotic chemicals can also alter immune function by damaging the hypothalamus, altering the endocrine system's ability to properly regulate the immune system. We are performing tests that will determine the extent to which this is occurring in Mr. Copp.

In a scenario where the body's detoxification and excretory capacities are exceeded (as in the WTC exposure), xenobiotic matter that could not be excreted is moved in fatty tissue storage areas from which they are gradually released over time. This gradual release continues the immune challenges described above, and, coupled with ongoing daily low level environmental exposures to antigenic and allergenic airborne

materials, continues to aggravate the immune dysfunction.

Adrenal Glands

The adrenal glands are assigned the task of handling all kinds of stress. The broad based chemical stress caused by ongoing internal exposure to the toxins listed above has had a profound effect on Mr. Copp's adrenal functioning. The inflammatory reactions caused by these chemicals have overwhelmed his adrenals' capacity to respond. Additionally, the oral corticosteroid medications necessary to control his bronchospasm attacks have placed an additional burden on normal adrenal functioning. Adrenal testing is in progress to establish the degree of compromised adrenal functioning.

Fractured lumbar vertebrae; low back pain

While negotiating the subfloors of the World Trade Center, attempting to locate trapped people, Mr. Copp slipped on a thin layer of dust that covered the surface of a tilted piece of polished marble. Unable to grab hold of anything for fear of creating a further collapse, he fell several feet, damaging at least two vertebrae in his lumbar spine. Since this fall, he has experienced ongoing neuropathic symptomatology, including lower back pain, numbness and tingling in the buttocks, perineum, left foot, and posterior left leg. An MRI has been impossible because of the magnetic metals in his lungs from inhaled dust and smoke. He will need surgery, and has been referred to Dr. Serena Hu of the orthopedic surgical unit at the University of California San Francisco Medical Center. Compromised respiratory function may render him a poor surgical risk. Currently, he has moderate to severe back pain on an ongoing basis, and can only walk short distances without an exacerbation of this pain.

Liver and Detoxification

The toxins to which Mr. Copp was exposed were initially absorbed through the skin and lungs, and sent to the liver for processing. Since this was certainly a liver overload situation, some toxins were partially processed by the liver while others were stored for future processing primarily in the liver and fatty tissues. These are being slowly released back out into his bloodstream and present an ongoing immunological problem.

We are currently attempting to assess tissue levels and degree of damage done by the various contaminants. A deluge of foreign chemicals such as experienced by Mr. Copp would be expected to place great stress on hepatic Phase I and Phase II detoxification enzyme systems, possibly damaging these systems or (in the case of a Phase II deficit) creating systemic overload of partially processed toxic Phase I metabolites. These fail to be immediately processed by Phase II enzymes and so go back out into the general circulation, causing cellular damage, immune system damage (see above), interference with enzyme systems, while lowering the threshold for respiratory allergic reactivity. Additionally, the toxic burden from WTC exposure placed great burden on Mr. Copp's hepatic cellular detoxification and free radical scavenging enzyme systems, primarily glutathione peroxidase, superoxide dismutase, and coenzyme Q-10.

Chemicals such as mercury, chlorinated biphenyls, or benzene ring derivatives (to name just a few) may destroy or paralyze different natural detoxification enzyme systems triggering hypersensitivity to minute amounts of chemical exposures. It has been well established that a broad spectrum of toxins has the potential to damage detoxification enzymes, impairing the body's ability to expel xenobiotics.

A Comprehensive Hepatic Detoxification Profile (currently in process) will provide information regarding damage caused by

toxins due to free radicals and oxidative stress, and adequacy of hepatic detoxification enzyme systems.

Diagnoses:

1. World Trade Center cough and syndrome (WTCS)
2. Reactive airways dysfunction syndrome (RADS)
3. Hypersensitivity pneumonitis
4. Immunotoxicity secondary to xenobiotic exposures
5. Allergic respiratory hypersensitivity triggered by WTC smoke and dust, causing local immune cell damage with subsequent hypersensitivity to smoke, dusts, molds, volatile compounds and other ambient allergens ~~previously not allergenic to this individual~~
6. Upper respiratory allergies, primarily allergic sinusitis
7. ~~Asbestosis~~
8. Fractured lumbar vertebrae
9. Lower extremity pain, numbness and paresthesias
10. Lowered adrenal reserve
11. Steroid induced adrenal atrophy
12. Post-traumatic stress disorder
13. Hypothyroidism
14. Hypertension

Plan:

Considering the severity and extent of injuries, Mr. Copp has had fairly minimal care. The medical attention he has received has been administered on a fairly symptomatic basis, with little attention to complete diagnosis and coordination of therapeutic efforts. His debilitating respiratory disease has not been seriously addressed by a pulmonologist. Though his respiratory and systemic problems are closely related to immune functioning, he has not been seen by a specialist in immunology. Mr. Copp's low thyroid and high blood pressure have never apparently been fully tested, nor evaluated by an

endocrinologist. His back pain and neurological symptoms have not been fully diagnosed, and there is no treatment program in place, despite more than a year having passed since his injury. He is very much in need of CT imaging, and a complete workup by an orthopedist and neurologist.

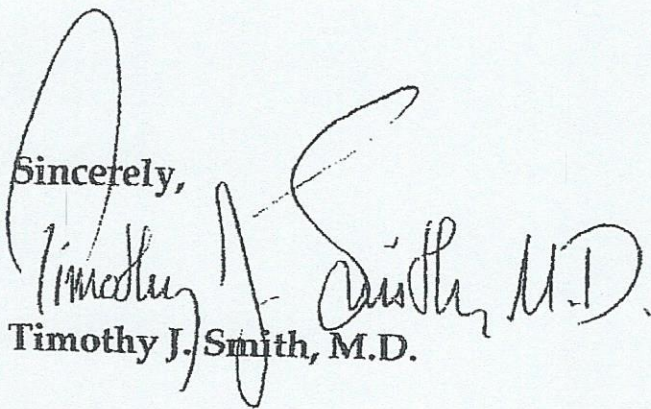
If Mr. Copp were improving, the level of care received thus far might be acceptable, but his condition is deteriorating, and he is in great need of a coordinated, aggressive, and thorough program of diagnosis and treatment.

Specifically, I recommend the following:

- Complete workup by a pulmonologist, preferably one with extensive experience in WTCS disease
- A CTScan of the lumbar spine
- Orthopedic surgical consultation by Serena Hu, M.D. at the University of California Medical Center, San Francisco
- Coordinated neurological and neurosurgical consultations
- Spinal rehabilitative care including physical medicine, osteopathic medicine, acupuncture, and surgical intervention if indicated
- Complete immunological and immunotoxicological testing
- A full thyroid and endocrinological workup
- Closer management of thyroid, blood pressure, and pain medications
- Testing to assess liver detoxification enzyme systems and free radical load
- A program of systemic detoxification including phytomedicines that support hepatic detoxification
- A broad spectrum nutritional medicine program designed to restore health to his immune system, respiratory system, liver, detoxification system, and back.

This gentleman deserves optimum medical care for the injuries he sustained by placing his own life at risk while selflessly attempting to save the lives of others.

Sincerely,

A large, stylized handwritten signature in black ink, appearing to read "Timothy J. Smith, M.D.". The signature is written over the printed name below it.

Timothy J. Smith, M.D.

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August 10, 2003

Re: Mr. Douglas Copp

Dear Mr. Purcell:

Mr. Douglas Copp is 51 year old patient under my care who was permanently disabled as a result of multiple injuries sustained while functioning as a rescue worker at the World Trade Center collapse on September 11, 2001.

As founder and executive director of American Rescue Team International, Doug Copp has worked at every major world disaster in the past 15 years. With experience in hundreds of building collapses (the WTC were buildings numbers 893 and 894) Mr. Copp is the most experienced rescue worker in the world.

Mr. Copp was flown by private jet to Ground Zero on September 12, 2001, where he began searching for trapped victims in the six floors below Ground Zero. Because fires were raging above, and the entire subterranean area was considered extremely unstable, other less experienced teams were not allowed there. These areas were even more toxic than the areas above because of the lack of ventilation, molds, and toxic chemicals being flushed by water from the fire hoses into this space.

For a week Mr. Copp spent 20 hours a day working in this extremely toxic area, directing his team and searching for trapped individuals. During this time he was exposed to an toxic array of poisonous

chemicals of unprecedented proportions--even by the new standards being set six floors above him.

Despite the dangerous nature of his work, Mr. Copp had always been healthy, robust, and athletic prior to 9/11/01. He was under treatment for no medical condition, and took no medications. Although he had risked his life countless times, crawling into partially collapsed buildings, he had never sustained an injury.

About Doug Copp

Prior to 9/11, Mr. Copp enjoyed worldwide fame as the world's most experienced rescue worker. In 1985, having saved the life of a 9 day old baby from a maternity ward in a collapsed hospital in Mexico City, he decided to devote his life to rescue. He points with pride to the over 125,000 lives he has saved throughout an illustrious career. He has been awarded dozens of medals and keys to cities by grateful diplomats around the world. He has made over 800 TV appearances, usually as the most experienced rescue worker on over one hundred major disaster scenes. He has been featured in 8 documentaries, and has appeared on BBC several times. Also an inventor, Mr. Copp has developed several advanced technological devices designed to make saving lives easier for rescue workers, and has 32 inventions to his credit. His organization, American Rescue Team International, has members in 59 countries. Mr. Copp has been instrumental in training over ten thousand rescue workers through lectures and training seminars he gives at every disaster and training videos published in North America and Australia.

Mr. Copp has generated great admiration, respect and appreciation from many world leaders who--having been trapped in the throes of a disaster without preparedness or a workable plan--found themselves dependent upon, and extremely grateful for, Doug's expertise. Among these are President Fujimori of Peru and President Duarte of El Salvador.

Mr. Copp has been an invited lecturer at dozens of institutions of higher education, and has given hundreds of lectures. Three of these were recently televised live throughout all of South America.

The chancellor of the National University of Peru recently presented a medal to Mr. Copp honoring him as the year's most noteworthy individual. The ceremony was carried on Peruvian national television.

Medical Review

I first saw Doug Copp in my office on September 23, 2002. At that time, because of dyspnea, he was barely able to climb the steps to my second floor office. He was extremely short of breath even while sitting. He related to me, with frequent pauses to get air, the story of his involvement in the World Trade Center rescue operation. He related his fourteen day experience, probing his way in the darkness through a toxic brew of chemicals, mold, and water in an attempt to locate and rescue survivors who might still be trapped.

Immediately following the World Trade Center collapse, Mr. Copp's most debilitating symptoms related to his back and respiratory system. He had slipped and injured his lumbar spine while four stories below the WTC, causing low back pain, groin pain, and numbness in the left leg.

On the third day of rescue, he began noticing changes in his voice and respiration, caused by the ongoing exposure to toxic fumes and molds. This had persisted and worsened in the year that had passed since the end of the rescue effort. He complained that "I get out of breath doing just about anything, even eating." He experienced a constant pain in his chest, and an ongoing feeling that with the next breath his lungs would go into spasm. He was taking Xopenex and Albuterol. Indeed he had already been hospitalized twice for acute reactive airway disease with life threatening bronchospasm, and had been put on oral prednisone to reduce the respiratory allergic hyperreactivity.

In addition to shortness of breath and frequent asthmatic attacks, he had a variety of other complaints, all of which began during or shortly after September 11, 2001. Since 9/11 Mr. Copp had become edematous and had gained 50 pounds, presumably due to side effects of the prednisone. He had developed hypertension, and was taking Tiazac 120

General

- Inability to walk farther than 30 to 40 ft without resting
- Low thyroid
- Heartburn and Gastro-Esophageal Reflux Disease
- Absence of sex drive
- Frequent urination
- Water retention and bloating
- Distended abdomen
- Weight increase
- Feels lousy...and "just plain sick"

Neurological and Neuropsychiatric

- Disorientation
- Memory problems
- Difficulty concentrating
- Difficulty sleeping
- Cerebral edema, causing
 - Dementia
 - Glaucoma
 - Blurred vision
 - Optic nerve cupping
 - Constant headache
 - Earaches
 - Reduced hearing

• **Respiratory**

- Constant pain in chest
- Difficulty speaking without prolonged breaks for breath
- Hyperventilation
- Constant sense of chest spasm
- Frequent chest and upper left arm pain

Immunological

- Extreme reactions to cigarette smoke, air pollution, ambient volatile chemicals
- Extreme reactions to heat and stillness of air
- Irritability
- Sinus blockage
- Dry eyes

Overview of Injuries

mg. daily . Whereas prior to 9/11 he could "eat anything," he now had developed a sensitive stomach, and experienced heartburn and indigestion on a regular basis. He had developed a chronic allergic nasosinusitis.

In terms of neurological symptomatology, he complained that ever since 9/11 he was having episodes of disorientation, memory problems, difficulty concentrating, poor sleep, and blurred vision. A constant headache, fluctuating in intensity, made it "very difficult to do anything."

He told me that he had become very reactive to everyday odors that previously had never been a problem. Now gasoline fumes, solvents, glue, perfumes, smoke, dust, mold, and other common airborne chemicals elicit powerful respiratory attacks. "Now I look at someone with a cigarette as if they are aiming a gun at me."

In subsequent months he developed cerebral allergic reactions in which exposure to any of these allergens triggered an exacerbation of his cerebral edema (swollen brain) with consequent heightened headache and dementia. These have become his most chronic and debilitating problems, and will be discussed below.

Symptoms and Health Problems Secondary to WTC exposure

Please note that prior to his World Trade Center exposure, Mr. Copp was perfectly healthy.

Primary health problems

- Toxic encephalopathy with dementia
- Cerebral allergic hypersensitivity reaction
- Cerebral edema with optic nerve cupping
- World Trade Center cough and syndrome (WTCS)
- Reactive airway disease with chronic immune activation, bronchial edema, and bronchospasm
- Hypertension

Other Symptoms, Signs, and Complaints

The complex and unique mixture of toxins presented by the WTC collapse is unprecedented in human history. The environment to which Mr. Copp was exposed was a mixture of vapor, smoke, and very fine particles that originally made up the materials of the WTC, its contents, and the aircraft that struck it. A complete listing would include tens of thousands of chemicals: cement, glass, asbestos, superheated volatilized polyvinylidene chloride (PVC), polyethylene, acrylonitrile-butadiene-styrene (ABS), reinforced thermosetting resin pipes (RTRP), vinyl coated wiring, carpet, office furniture, hydraulic oil, fuel oil, diesel fuel, jet fuel, cement and drywall dust, organic particulates from burning plastic such as polyvinyl chloride, polychlorinated biphenyls (PCBs), dioxins and other polynuclear aromatic hydrocarbons, thousands of combustion product chemicals, airplane components, burning human bodies, and vaporized toxic metals such as lead, copper, cadmium, tin, iron, steel, mercury.

Mr. Copp's WTC-induced health problems were caused by inhaled and dermatologically absorbed components of these dust and smoke borne toxins. The combined effect of these toxins is impossible to assess, but it is safe to say that all organs and tissues would be adversely affected. In this patient, the immune system, respiratory system, and central nervous system were most profoundly affected. Although the CNS symptoms are most disabling, the most profound symptoms and problems disabling Mr. Copp actually stem from immune dysfunction with multisystem repercussions, so I will address that first.

Immune System Sensitization, Activation, and Hyperreactivity

For six days, Mr. Copp waded in a toxic soup, breathed toxic air, and had toxins smeared on his body surface. It is unlikely that anyone has ever in human history been exposed to as concentrated or complex a mixture of dangerous chemicals. This mixture placed an overwhelming burden on his immune system, which generated, in response, many hundreds or perhaps thousands of types of antibody molecules (at least one for each toxic chemical). Mr. Copp now, following this overwhelming exposure, experiences ongoing allergic hypersensitivity reactions caused by reexposure to similar molecules in the environment.

Sensitized mast cells in Mr. Copp's brain, lungs, and elsewhere cause ongoing allergic reactions. Because his immune cells were "sensitized" by the WTC overload of toxins and fungal allergens, they are now on "hair trigger." His entire immune system now overreacts to even very small exposures to similar chemicals. Immunological testing has revealed elevated antibodies to an array of fungal microorganisms, including *Alternaria Tenuis*, *Aspergillus fumigatum*, *Candida species*, *Cladosporium herbarium*, *Epicoccum nigrum*, *Geotrichum candidum*, *Pullularia pullulans*, and *Rhodotorula glutinis*.

In effect, this patient's immune memory cells are hypervigilant and overreact. The ambient pollution to which we are all exposed has become a great danger to Mr. Copp because his damaged immune system now massively overreacts. The sustained immune reactivity in his brain and bronchioles causes ongoing symptoms. Lung symptoms are limited to recurrent asthmatic (reactive airway disease) type reactions. The consequences in the brain, however are far more severe and disabling: cerebral edema, dementia, and chronic headache. Allergic hypersensitivity reactions like these in brain and lung are also accompanied by ongoing local tissue damage, which perpetuates the process.

Although the prognosis is different from one person to the next, once an individual's immune system has been damaged this way, there is little likelihood that it will return to normal. These patients live out their lives with environmental illness, always on the verge of another acute exacerbation of their extreme allergic hypersensitivity. Before the WTC exposure, when Mr. Copp was exposed to smoke, it did not bother him. Now, because of immune sensitization, even a small amount of secondhand cigarette smoke causes a violent immune overreaction, and he experiences a classic severe asthmatic reaction. This has occurred many times and has sent him to the hospital on more than one occasion.

This patient's history and symptom picture are diagnostic of environmental illness with multiple acquired chemical sensitivities. As a result of cerebral allergic reactions, he experiences an underlying chronic cerebral edema, an inflammatory swelling of the brain caused by allergic

hypersensitization, which causes constant low grade headaches, speech disorder, and dementia. He manifests grossly impaired memory and concentration. Acute exposures trigger an immediate exacerbation above his baseline symptomatology. An example of a cerebral reaction is that when Mr. Copp is exposed to the occasional transient fumes while refilling at a gas station, or a whiff of glue, or even ambient pollution, he now suffers an immediate and severe exacerbation of the chronic low grade headaches, confusion, and disorientation caused by this ongoing immune hyper-reactive state.

Ophthalmological examination of Mr. Copp by Dr. DeMonaco revealed optic nerve cupping, a retinal manifestation of the increased pressure (AKA cerebral edema) in his intracranial space.

Central Nervous System

As a result of the multiple chemical exposures at the World Trade Center, Mr. Copp suffers from a toxic encephalopathy and environmental illness. He experiences cerebral hypersensitivity reactions causing cerebral inflammation and edema. This results in compromised cognitive functioning. Neuropsychological testing performed by Tony J. Kreuch, Psy.D., ABPN, on April 23, 2003 revealed significant cerebral impairment, including memory deficit, impaired concentration, decreased powers of reasoning, and significant impairment of problem solving ability. Dr. Kreuch finds that Mr. Copp suffers from "neuropsychological dysfunction, most likely related to a toxic exposure within a previously high functioning individual. Affected areas include attention, concentration, processing speed, working memory, and acquisition, storage, and retrieval, in addition to executive conceptualization and flexibility of cognition." Dr. Kreuch went on to recommend pharmacological management, and individual counseling with referrals to a psychiatrist, psychotherapist, and speech-language pathologist.

Mr. Copp now evidences organic brain syndrome with dementia, induced by exposure to organic solvents, heavy metals, and other chemicals. He has cerebral edema, with constant headaches, as a consequence of inflammatory changes in the brain caused by exposure

to an array of toxic chemicals.

He has lost the ability to focus his thoughts, and is often unable to remember what he was doing. "I am constantly losing things, locking my keys in the car. Can't remember things. It is a lot like Alzheimer's, I think. I have to stop and think, "What am I doing? And a lot of the time I can't remember what I was doing."

Toxins, autoantibodies, and/or toxin-mediated allergic sensitization of brain tissue are all present and responsible for the brain swelling or cerebral edema. Diamox (500 mg. three times a day) has afforded significant relief from the constant headaches, earaches, eye pain, and feelings that his head was swollen. This response confirms the hypothesis that these symptoms were caused by allergy-induced cerebral edema. The dementia remains unchanged, however. He has compromised concentration, memory, and reasoning capabilities.

According to Mr. Copp: "I've been at more than one major disaster where the president is thinking of quitting, the generals are running around tearing their hair out, needing to do something, but not knowing what to do--and this is when I'm at my best. I am extremely calm under stress. Stress actually relaxes me, and this is because I never felt so alive as when I was solving problems. This is what I was meant to do. Now, I am unable to think clearly. I have great difficulty solving problems, and thinking is actually painful. Now I have lost so much of my thinking and concentration and memory that there is no way I could manage a disaster scene like I used to--it would be impossible."

Respiratory System

On September 15, 2001, having spent three days searching for people under Ground Zero, Mr. Copp first noticed, during a television interview, that his voice had changed, and that he had begun to cough. Over the next ten days he continued to experience increasingly severe respiratory symptoms, primarily cough and shortness of breath. These were accompanied by pain and tightness in the chest.

The severity of the cough, shortness of breath, and chest tightness

continued to increase, and on September 27, 2001, while in Santa Fe, New Mexico, Mr. Copp experienced a severe acute attack in which he felt unable to breathe. He went to the local Emergency Room where he was treated with steroids and bronchodilators.

Since that time, Mr. Copp has continued to experience severe ongoing respiratory distress, with ongoing dyspnea, cough, and chest pain. Unable to walk even short distances without exceeding his lung's ability to supply his tissues with sufficient oxygen, he has been rendered totally incapacitated.

Prior to seeing me, Mr. Copp's respiratory disorder had been treated as if it were asthma and bronchitis, using conventional medications such as Advair discus and Albuterol. He had been given inhalers, prednisone, and antibiotics, but with only marginal success in controlling the symptoms. Prednisone had been effective at suppressing the abnormal immune responses, but the price in terms of weight and water gain, bone mass and muscle loss, mental symptoms, immune system suppression, and adrenal atrophy had been detrimental to his overall health and decreased the probability of complete recovery, so he successfully weaned off of steroids several months ago.

It has been well established that exposure to xenobiotic (foreign to living systems) toxins causes immune dysfunction. In Mr. Copp's case, these foreign chemicals caused tissue damage, and immune dysfunction, as described above.

In the respiratory epithelium and elsewhere, xenobiotic exposure has altered protein molecules in his respiratory tree, causing subsequent autoimmune reactions in which the altered proteins are mistaken by his immune cells as foreign and then attacked by antibodies, natural killer cells, and macrophages. The resulting inflammatory reaction manifests in Mr. Copp as chronically inflamed respiratory tissue, shortness of breath, and chronic cough.

Exposure to xenobiotics (including the initial exposure, ongoing low level exposure, and exposure from xenobiotics later released from fatty tissue stores) also causes immunostimulation, which results in spurious immune attacks on normal body proteins. This further inflames the

respiratory cells, lowering the threshold for bronchospasm and cough. The autoimmune reactive symptoms and damage to normal protein activate complement cascades which cause more local tissue injury and further lower the threshold for bronchospasm and cough. The result is chronic asthma. This problem has been addressed by implementing a combination of symptom suppressive medications in conjunction with a broad based nutritional supplementation program designed to support and heal the respiratory and immune systems.

Hypertension Mr. Copp takes the blood pressure medication Tiazac 120 mg. daily for hypertension of unknown--but presumably WTC--origin. Toxin mediated neurological damage to the sympathetic nervous system can cause hypertension. Mr. Copp had no hypertension prior to 9/11/01.

Hypothyroidism He is in good control at 0.25 mg Synthroid daily.

Low back pain Mr. Copp was seen by Serena Hu, an orthopedist at the University of California, San Francisco who referred him to Neurosurgeon Philip R. Weinstein, M.D. also at UCSF medical Center, who referred Mr. Copp to a neurologist. He was also seen by Dr. Richard Radecki, physical medicine, but could not be fully worked up because an MRI could not be performed due to metal in his lungs.

Diagnoses:

1. World Trade Center cough and syndrome (WTCS)
2. Allergic respiratory hypersensitivity triggered by WTC smoke and dust, causing local immune cell damage with subsequent hypersensitivity to smoke, dusts, molds, heavy metals, volatile compounds and other ambient allergens previously not allergenic to this individual
3. Organic Brain Syndrome with dementia secondary to immune sensitization caused by 2
4. Cerebral edema secondary to 2
5. Chronic headaches secondary to 4
6. Optic nerve supping secondary to 4
7. Glaucoma secondary to 4
8. Environmental illness with multiple acquired chemical sensitivities
9. Reactive airways dysfunction syndrome (RADS) causing bronchial

inflammation, swelling, and obstruction and resulting in asthma

10. Hypersensitivity pneumonitis
11. Chronic nasosinusitis
12. Immunotoxicity secondary to xenobiotic exposures
13. Upper respiratory allergies, primarily allergic rhinosinusitis
14. Asbestosis
15. Low back pain
16. Left lower extremity pain, numbness and paresthesias
17. Hypertension
18. Hypothyroidism

Current medications and treatments

- Provigil 75 mg. per day, an alertness medication which partially reverses the dementia-induced lethargy and memory disorder
- Diamox, a medication that removes excess or accumulated fluid, used to reduce cerebral edema
- Tiazac 240 mg. a day for hypertension
- Celluvisc eye drops as needed for chemical conjunctivitis
- Xopenex 1.25 mg with nebulizer as needed for acute bronchoconstrictive attacks.
- Albuterol inhaler for reactive airway disease
- Intal inhaler for reactive airway disease
- Advair discus as needed for reactive airway disease
- Synthroid 25 mcg daily for hypothyroidism
- Sporanox 100 mg. daily for multiple chronic systemic fungal infections
- A comprehensive nutritional supplement program designed to support and enhance healing of the immune, respiratory, and central nervous systems
- Ongoing psychiatric therapy for neuropsychiatric sequelae of WTC injuries
- Chelation Therapy, previously performed by Robert Friedman, M.D., currently per Dr. Kumar Biswas

Required Treatments with Estimated Cost

- Comprehensive workup and ongoing treatment by William Rea, M.D., director of the Environmental Health Center, Dallas, the

world's leading expert on toxic exposure and environmental medicine. Treatment program including detoxification, skin testing, intravenous therapy, antigen therapy, oxygen therapy, living at environmentally controlled units, home treatment program; 6-8 weeks of treatment. Total for initial evaluation and followup therapy three times yearly, including cost of maintaining home treatment plan between visits = 30,000/year X 25 years = \$750,000

- Estimated cost of travel to Dallas including hotels three times a year \$750 for 25 years = \$18,750
- Bottled water \$1200/year x 25 years = \$30,000
- Additional cost for organic food \$3000/year x 25 years = \$75,000
- Home renovation for environmental illness (includes allergy free carpeting and hardwood floors, formaldehyde-free cabinetry, home air system to remove mold contamination, air filters and conditioning, one-time cost: \$85,000
- Chelation therapy and intravenous nutritional medicine per Robert Friedman, M.D. and Dr. Kumar Biswas: currently owed \$11,000 for past treatment and estimates \$50,000 to complete all of the intravenous chelation and IV nutrient therapy injections
- Quarterly consultations by Timothy J. Smith, M.D. at \$300 x 25 years = \$30,000
- Drug Medications
 - Provigil 75 mg. daily; \$2263/yr
 - Thyroid 25 mcg daily; \$276/yr
 - Tiazac 240 mg. daily; \$564/yr
 - Sporanox 200 mg. daily; \$3179/yr
 - Diamox 1 500 TR q12h; \$1764/yr
 - Xopenex \$3096/yr
 - Albuterol Inhaler \$504/yr
 - Intal Inhaler \$948/yr =
 - Celluvisc Eye Drops \$1200/yr =
 - Total cost per year = \$14,994
 - Total cost for 25 years = \$374,850
- Non-prescription medications for detoxification, immune support, environmental illness: \$11,000 per year x 25 years = \$275,000
- Medical and immunological testing to determine medical status,

- effectiveness of therapy and degree of immune dysfunction: \$2000
 annually for immunological testing X 25 years = \$50,000
- SPECT Scan 3000 x 3 = \$9000
 - Quarterly medical office visits at \$300 per visit to internist: \$1200 X 25 years = \$30,000
 - Quarterly medical office visits at \$300 per visit to pulmonologist: \$1200 X 25 years = \$30,000
 - Quarterly medical office visits to immunologist: \$1200 X 25 years = \$30,000
 - Neuropsychiatric therapy: \$300 per visit x average of 12 visits per year = \$3600/year X 25 years = \$90,000
 - Ophthalmology for Glaucoma, optic nerve cupping, cerebral edema - Quarterly medical office visits: \$1600 X 25 years = \$40,000

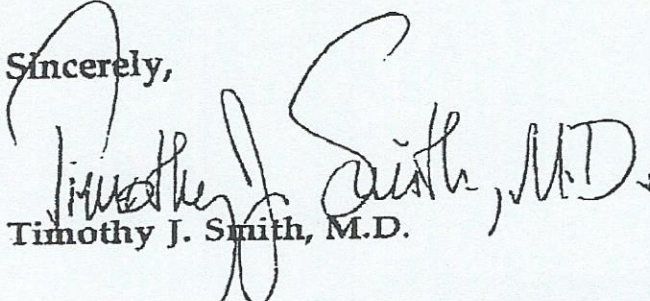
Grand Total for all Medical costs: \$1,967,600

Summary, Prognosis, and Conclusion

In the week of September 12 to September 18, 2001, Mr. Copp experienced an overwhelming exposure to chemicals and fungi at the site of the World Trade Center terrorist attacks. Previously healthy, Mr. Copp has now been rendered totally disabled. Because of the nature of the damage to his immune, respiratory, and central nervous systems, there is little likelihood that his condition will improve to the point where he would be able to resume work. He is permanently disabled.

This gentleman deserves optimum medical care for the injuries he sustained by placing his own life at risk while selflessly attempting to save the lives of others.

Sincerely,


 Timothy J. Smith, M.D.

TIMOTHY J. SMITH, M.D.
2635 REGENT STREET
BERKELEY, CALIFORNIA 94704
TELEPHONE (510) 548-8022

March 7, 2006

Sheldon Karasik
Karasik and Associates
28 West 36th Street
New York, New York 10018

Re: Doug Copp Medical History Review

Dear Mr. Karasik:

As per your request, this communication provides a summary of Mr. Doug Copp's medical histories pre-September 11, 2001 ("Part I") and post-September 11, 2001 (Part II). I have faxed you complete copies of all of the medical records I review in this communication.

I would welcome the opportunity to discuss Mr. Copp's case in general and/or these findings in particular with other medical professionals. Mr. Copp has agreed to this as well.

Part I: Review of pre-September 11, 2001 medical records

This record consists of 13 pages in all. It includes Mr. Copp's complete medical history in the two-year period prior to September 11, 2001. (I am forwarding a copy of this document with this letter).

The following is a summary of every medical visit for which Mr. Copp was examined and treated from September of 1999 to September 2001:

Undated Kaiser intake form

Lists intake "Medical Diagnoses" as ingrown toenails and eczema. This means that Mr. Copp had no history of preexisting significant illness prior to his initial intake at Kaiser.

April 15, 1999

Hayward Kaiser lab tests show a normal sedimentation rate (a measure of inflammation in the body), and a normal complete blood count. Handwritten at bottom of page is "Looks good! Best Wishes, Rick Levine, M.D."

January 7, 2000

Mr. Copp was seen in Urgent Care Clinic at Kaiser Hospital by a Dr. Cumming for treatment of an infected ingrown toenail. Dr. Cumming noted "will travel to South America soon."

April 11, 2000

Seen by Dr. Michael Tran who performed a history and thorough physical exam. Dr. Tran notes that "Patient is a 48 year old male without significant past medical history." He states that Mr. Copp "travels throughout the world."

History and physical exam by Kaiser physician Michael Tran, M.D. In the chart notes, Dr. Tran wrote "states wife doesn't want to have intercourse with him often enough." Interested in (behavioral medicine) referral." and "Desires counseling for both patient and wife regarding above."

Dr. Tran's examination of the head and CNS revealed no cognitive deficit. Neurological exam was negative.

Dr. Tran listened (auscultation) to Mr. Copp's chest and percussed it and found no abnormalities ("CT A & P" means clear to auscultation and percussion.)

The abdominal exam was normal.

No abnormalities were found on the physical exam on this date.

Lab tests were ordered (see below) and these all came back normal.

At no stage of this visit was there a suggestion by patient or physician of any immune system, respiratory system, or central nervous system problem.

April 13, 2000

Kaiser laboratory test results indicate modestly elevated cholesterol at 240, normal kidney functioning, normal glucose level, normal thyroid, normal HDL, and normal complete blood count. Dr. Michael Tran writes "Excellent results" at bottom of page.

May 15, 2005

Message for (and signed by) Michael Tran, M.D. from the Union City Kaiser Call Center states that Mr. Copp's "wife states that patient is arriving home from Puerto Rico this evening and needs an appointment for fever and diarrhea for four days. Patient's wife states to leave message on home phone with appointment time for tomorrow with Dr. Tran."

May 24, 2000

Message for (and signed by) Michael Tran, M.D. from the Union City Kaiser Call Center states that Mr. Copp "is the chief of an international rescue team, just came back from a mission to South America, developed amoebic dysentery per Venezuela medical clinic and placed on Lomotil. Continues to have diarrhea for 10

days now, although less today. Yesterday had total of 7 diarrheas...." Dr. Tran states "wife will come by to pick up lab slip." (for stool testing)

May 26, 2000

Lab report finds *Campylobacter* infection on stool culture, which confirms that Mr. Copp caught dysentery in South America. All other lab tests done at that time were negative, including a complete blood count, thyroid testing, glucose, kidney, liver, hepatitis A, and stool for occult blood. Mr. Copp's cholesterol was elevated at 240.

December 29, 2000

Mr. Copp was seen in Medicine clinic at Kaiser by Extended role RN, Schexnayder "complaining of right ear pressure and two months of sinus congestion. States feels like jaw is swollen. Denies sore throat." Exam reveals normal ears, nose moderately swollen, no TMJ problem, throat red at sides, no exudate, non tender neck without lymph nodes, no swelling of face. Diagnosed as rhinitis with post nasal mucus. Appropriate treatment was prescribed.

Conclusions

The above summary of Mr. Copp's pre-9/11/2001 medical history depicts a clear picture of a man who is especially fit, busily working at his chosen profession, traveling around the world, and unhampered by any disease process.

There is no suggestion, from my examination of him and his complete pre-9/11/01 medical records, that Mr. Copp was suffering from any chronic illness. There was no suggestion of lower respiratory disease, no neurological impairment, no immune system dysfunction.

The only significant illnesses in the record prior to 9/11/01 relate to gastrointestinal infections (dysentery) he contracted while working on rescue missions in foreign countries.

In 1999, 2000, and 2001 prior to 9/11/01, Mr. Copp was active and healthy, working at the job he loved to do, saving lives in rescue missions around the globe. During that time period he traveled to Taiwan (earthquake), Turkey (earthquake), El Salvador (landslide and earthquake), Peru (el Nino), Venezuela, and several other countries. It would be highly unlikely that a gentleman with severely compromised immune, respiratory and neurological functioning could have traveled, as did Mr. Copp, to 16 countries in 1999, 6 countries in 2000, and several more in 2001.

At present, Mr. Copp can't walk a city block or climb a flight of stairs without having to stop to catch his breath. Is it possible that he would have been capable of directing and coordinating the efforts of large teams of rescue workers as, for

example, on January 13, 2001 when Mr. Copp traveled to assist the rescue efforts in the massive earthquake in El Salvador?

Of note here is Mr. Copp's pre-9/11/01 request for medical help because his sex drive was greater than his wife's. One would not expect this from a sick man. After 9/11/01 Mr. Copp's libido and sexual activity level plummeted as a consequence of his diseases, and have been nonexistent since he was injured at the WTC.

In his medical visits to Kaiser Hospital during the three year period of these medical records, Mr. Copp never once complained of shortness of breath, wheezing, brain fog, fatigue, pain, difficulty with concentration and memory, symptoms of hypothyroidism, hypertension, or any of the other symptoms on the long list since his WTC injuries. The illnesses he was seen and treated for included only ingrown toenail, dysentery and rhinitis.

Although he was once treated for acute rhinitis, physical examinations of Mr. Copp revealed no lower respiratory disease, and the patient never had lower respiratory complaints.

Likewise, all blood testing revealed a healthy sound biochemically normal individual without any sign of pathologic processes. Specifically, there were no test results suggesting respiratory disease, neurological disease, toxicity, or immune dysfunction. Testing for toxicity, immune system dysfunction, respiratory disease, and neuropsychological functioning were not done prior to 9/11/01 because there was no reason to do such testing. Testing done after 9/11/01 revealed massive heavy metal toxicity, extensive damage to the immune system, neurological damage with organic brain syndrome, and episodic respiratory failure.

Part II: Post-September 11, 2001 Medical History

Mr. Copp's history included heavy toxic exposure and multiple signs of immune system failure. I therefore ordered a battery of immunological tests which were done on October 23, 2002. The following is a summary of those results, with interpretive comments. A copy of this report is appended to this document.

% T Helper Cell (T4) elevated at 59.0 (25-55). this indicates a severely compromised immune system that has been damaged, sensitized, upregulated, and is now on "high alert."

T-Helper/T-Suppressor Ratio elevated at 2.7 (1-2.5) likewise indicative of a severely compromised immune system that is on "high alert." An elevation of the helper/suppressor ratio indicates immune activation and autoimmunity. Mr. Copp has many symptoms indicating he suffers from autoimmune disease.

% Immunocompetent -NKHT3+ at 1.0 (1.5-5.0) also indicates depletion of immunocompetent natural killer cells. This indicates loss of killer cell function and compromised immune system functioning. The immune system is in a weakened state and unable to mount a normal attack on invaders. An overwhelming toxic and antigenic load has damaged it.

p 2

Natural Killer Cell Activity very low at 10.50 (normal 20-50). Natural killer cells are a type of immune system cell that attack invaders. Stress and chemical exposure can cause damage to natural killer cells and/or interfere with optimum natural killer cell production. This depletion of natural killer cells indicates immunosuppression, in this case secondary to a massive toxic exposure.

% Immunocompetent -NKHT3+ at 1.0 (1.5-5.0) also indicates depletion of immunocompetent natural killer cells. This indicates loss of killer cell function and compromised immune system functioning. The immune system is in a weakened state and unable to mount a normal attack on invaders.

% T3 Positive Cells elevated at 81 (53-79) again indicating severe immune stress, toxic and/or antigenic overload, and immune dysfunction.

p 3

Autoimmune Panel When an immune system is damaged (e.g., by toxic exposure or antigenic overload) it may begin to malfunction. Since the immune system is actually a cooperative system involving many cell types with multiple tasks, a damaged immune system may malfunction in numerous ways. One of these ways is to lose its ability to discriminate between "self" and "other." When this occurs, the injured immune system begins to make antibodies that target its own body's cell, a tragic immune error known as autoimmunity. In Mr. Copp we see this process at work in a severely elevated anti-nuclear antibody (these are antibodies that are

programmed to destroy the nucleus of his own cells) level at 1:320 (normal is <1:20). This is evidence of immune activation and autoimmune disease.

We see this process again in an elevated anti-smooth muscle antibody level and rheumatoid factor (antibodies that attack smooth muscle and joint tissue respectively). Anti-smooth muscle antibodies can cause hypertension; rheumatoid antibodies can cause joint pain. Mr. Copp has both high blood pressure and arthritic joint pains.

Total immune complex is elevated at 52.0. Immune complexes are antibodies attached to their target molecule to form a complex, and are evidence that the antibodies are finding their target tissues. Elevated levels, in the context of other abnormal immune markers, indicate autoimmune activation and autoimmune disease.

Complement is a group of proteins that help destroy molecular and cellular entities that have already been targeted by antibodies. Elevation of C-3 Complement 167 (75-148) and C-4 Complement 36 (10-34) indicates that the complement system has been activated, further proof of autoimmune activation and disease.

p 4

Immune Complex Assay is a measurement of three different classes of antibody that have found and locked onto their antigen, forming their respective immune complexes. IgG, IgA, and IgM are elevated. Immune complexes are antibodies attached to their target molecule to form a complex, and are evidence that the antibodies are finding their target tissues. Elevated levels, in the context of other abnormal immune markers, indicate that the immune system has been damaged, is activated, and is struggling. Elevated levels of immune complexes are typical of autoimmune disease.

p 5

Fungal Panel with elevations of Alternaria tenuis, Asper fumigatus, Candida species, Cladosporium herbarum, Epicoccum nigrum, Geotrichum candidum, Penicillium notatum, Phoma herbarium, Pullularia pullulans, and Rhodotorula glutinis indicates elevations of IgG and/or IgE antibodies to an assortment of common fungal species. When Mr. Copp worked six floors beneath the World Trade Center, the toxic soup he encountered there contained large quantities of spores of several fungal forms that thrive in this dark, damp environment. These molds are both immunosensitizing and immunosuppressive. In other words they damage the immune system while stimulating the production of large numbers of

antibodies. Although they all are immunosuppressive, one of them, *Candida* species, is arguably the most immunosuppressive species known to medicine. The massive exposure to spores of these species sensitized his immune system such that even over a year after the exposure, antibody levels remained significantly elevated. Clinically, this group of antibody elevations indicates why Mr. Copp experiences severe respiratory attacks and cerebral allergic reactions. (A cerebral allergic reaction occurs when antibodies attacking brain structures causing inflammation that leads to confusion, cognitive deficit, inability to concentrate, and memory problems.) Because his immune system has been sensitized to these antigens, it overreacts when exposed to mold levels that would not be noticed individuals with normal immune functioning.

p 6

Gamma Glutamyl Transferase is elevated at 65.2 (0-43). This is a test for liver function, and elevated level indicates hepatotoxicity (liver damage), presumably due to extreme toxic exposure at World Trade Center site, six floors below "Ground Zero."

p 7

Secretory IgA low at 11.0. Secretory IgA is a type of antibody secreted by mucus-secreting tissue, such as that which lines the bronchioles and is involved in asthmatic breathing. A deficiency of secretory IgA is evidence of damage to immune cells, and low levels are found in immunocompromised patients like Mr. Copp with asthma, neuropathies, endocrine (hypothyroidism), and gastrointestinal (*Helicobacter pylori* infection) disorders.

p 8

A Hair Analysis for toxic and essential mineral elements performed on October 21, 2002 showed toxic elevations of several metals, including antimony, barium, cadmium, lead, mercury, nickel, copper, zinc, manganese, and strontium. Although we do not have a pre-WTC analysis for comparison, this is an unusually high profile.

p 9

A later urine toxic mineral analysis done on December 31, 2002 revealed very much higher levels of lead (20 times the upper limit of normal), bismuth, cadmium, and arsenic. These levels are higher because Mr. Copp had received intravenous chelation treatments, which moved some of the toxic elements from storage depots in fat tissue into his bloodstream.

p 10

Comprehensive Detoxification Profile is a functional test which measures the liver's capacity to remove toxins. A liver that has been overloaded with toxins loses its ability to excrete toxic material. A specific toxic load is administered, and then key biochemical markers are observed. The liver removes toxic substances in two "phases." Phase I (activation) is similar to wrapping garbage prior to tossing it in the can. Phase II (conjugation, sulfation, and glucuronidation) is the actual waste removal, analogous to transporting processed garbage out of the body. Mr. Copp's results indicate that both Phase I and II are compromised. Caffeine clearance, a marker for Phase I is severely compromised. As can be seen on page 10a, sulfation, glycation, and glucuronidation are likewise severely compromised. Finally, two free radical markers are very low: reduced glutathione and superoxide dismutase. This indicates that there is toxic overload on the liver, and its ability to provide endogenously generated antioxidants with which to neutralize toxic free radicals is likewise compromised.

Neuropsychological Evaluation by Tony J. Kreuch, Psy.D., ABPN

Neuropsych Evaluation from Tony J. Kreuch, Psy.D., ABPN. This report indicates significant cerebral impairment which again dates back to toxic exposures in the days following September 11, 2001. In my presentation to the Victim's Compensation Fund hearings, I wrote the following:

As a result of the multiple chemical exposures at the World Trade Center, Mr. Copp suffers from a toxic encephalopathy and environmental illness. He experiences cerebral hypersensitivity reactions causing cerebral inflammation and edema. This results in compromised cognitive functioning. Neuropsychological testing performed by Tony J. Kreuch, Psy.D., ABPN, on April 23, 2003 revealed significant cerebral impairment, including memory deficit, impaired concentration, decreased powers of reasoning, and significant impairment of problem solving ability. Dr. Kreuch found that Mr. Copp suffers from "neuropsychological dysfunction, most likely related to a toxic exposure within a previously high functioning individual. Affected areas include attention, concentration, processing speed, working memory, and acquisition, storage, and retrieval, in addition to executive conceptualization and

flexibility of cognition." Dr. Kreuch went on to recommend pharmacological management, and individual counseling with referrals to a psychiatrist, psychotherapist, and speech-language pathologist.

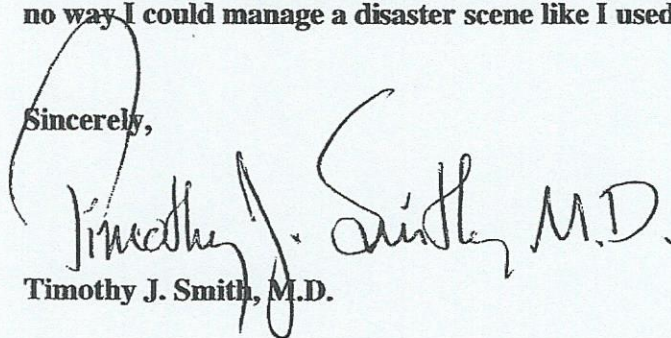
Mr. Copp now evidences symptoms of organic brain syndrome with mild dementia, induced by exposure to organic solvents, heavy metals, and other chemicals. He has cerebral edema, with constant headaches, as a consequence of inflammatory changes in the brain caused by exposure to an array of toxic chemicals.

He has lost the ability to focus his thoughts, and is often unable to remember what he was doing. "I am constantly losing things, locking my keys in the car. Can't remember things. It is a lot like Alzheimer's, I think. I have to stop and think, "What am I doing? And a lot of the time I can't remember what I was doing."

Toxins, autoantibodies, and/or toxin-mediated allergic sensitization of brain tissue are all present and responsible for the brain swelling or cerebral edema. Diamox (500 mg. three times a day) has afforded significant relief from the constant headaches, earaches, eye pain, and feelings that his head was swollen. This response confirms the hypothesis that these symptoms were caused by allergy-induced cerebral edema. The dementia remains unchanged, however. He has compromised concentration, memory, and reasoning capabilities.

Mr. Copp is acutely aware of the neuropsychological dysfunction and organic brain syndrome symptomatology diagnosed by me and Dr. Kreuch. He understands how dramatically his daily life has been affected by the loss of critical cognitive functions (memory, concentration, thinking, problem solving). He puts it this way: "I've been at more than one major disaster where the president is thinking of quitting, the generals are running around tearing their hair out, needing to do something, but not knowing what to do--and this is when I'm at my best. I am extremely calm under stress. Stress actually relaxes me, and this is because I never felt so alive as when I was solving problems. This is what I was meant to do. Now, I am unable to think clearly. I have great difficulty solving problems, and thinking is actually painful. Now I have lost so much of my thinking and concentration and memory that there is no way I could manage a disaster scene like I used to--it would be impossible."

Sincerely,

A handwritten signature in black ink that reads "Timothy J. Smith, M.D." The signature is written in a cursive style with a large, looping initial "T".

Timothy J. Smith, M.D.