

EXHIBIT A

BENNET OMALU PATHOLOGY

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Public Health Management
Anatomic Pathology
Clinical Pathology & Toxicology
Forensic Pathology
Neuropathology
Epidemiology
Medico-legal Consultations

February 8, 2017

Charles S. Zimmerman, Esq.
Chairman, Zimmerman Reed, LLP
1100 IDS Center, 80 South 8th Street
Minneapolis, MN 55402

Dear Mr. Zimmerman,

RE: National Hockey League Players' Concussion Injury Litigation

I completed medical school in 1990 at the University of Nigeria, Enugu, Nigeria. Upon graduating from medical school, I completed a one-year clinical housemanship at the University of Nigeria Teaching Hospital in the fields of pediatrics, internal medicine, general surgery, obstetrics and gynecology. After housemanship, I became an emergency room physician at a university hospital in Nigeria and remained an emergency room physician for approximately three years. I sat for, and passed my United States Medical Licensing Examinations [USMLE] and I came to the United States in 1994. I completed residency and fellowship training in four subspecialties of medicine namely anatomic pathology, clinical pathology, forensic pathology and neuropathology. I hold four board-certifications in these four subspecialties of medicine. I also hold a Masters in Public Health [MPH] degree in Epidemiology and a Masters in Business Administration [MBA] degree from the Tepper School of Business, Carnegie Mellon University, one of the leading business schools in the world. I am a Certified Physician Executive and an honorary fellow of the American Association of Physician Leadership [AAPL]. I also hold a fifth board-certification in medical management from the AAPL. I am licensed to practice medicine and surgery in four states in the United States namely Hawaii, California, Indiana and Pennsylvania.

I am currently the Chief Medical Examiner of San Joaquin County, California; the President of Bennet Omalu Pathology, a California medico-legal consulting firm, and a Clinical Professor at the Department of Medical Pathology and Laboratory Medicine, University of California, Davis. I am a practicing forensic pathologist and neuropathologist and there are less than a few dozen practicing forensic pathologists-neuropathologists in the United States who are board-certified in both forensic pathology and neuropathology.

For over eighteen years, I have been involved in over seven thousand death and injury investigations in my career as a forensic pathologist and neuropathologist, which began in 1999. I have personally conducted and performed over six thousand autopsies and death investigations, and examined over five thousand brain tissue specimens. I also perform trauma pattern analysis in both living patients and deceased patients to determine causes and mechanisms of sustenance of injuries and death. I am also involved in the evaluation of living victims of all types of injuries and trauma, including but not limited to victims of assault, traumatic falls, industrial and accidental injuries, medical complications and misadventures, rape, child abuse and sports-related injuries. I have been consulted and retained as an expert witness in over one thousand cases involving all types of medico-legal cases across all jurisdictions in the United States including federal, state, county and municipal courts and arbitration panels; in both civil and criminal cases, for the plaintiff, defense, district attorneys and public defenders. I have been involved as an expert witness in complex class action and industrial law suits involving thousands of individuals and major corporations.

My major areas of interest and focus are brain injuries and brain trauma, in both living and deceased patients. I identified Chronic Traumatic Encephalopathy [CTE] in a retired football player, when I performed an autopsy and examined the brain of Mike Webster. Subsequently, I identified CTE in other high-impact, high-contact sports athletes and in military veterans suffering from Post-Traumatic Stress Disorder [PTSD]. Since 2002 CTE has finally received begrudging attention from the sports industry, sports medicine and neuroscience. My work has been featured extensively in all media platforms across the world. My work and life were featured in a major Hollywood film, "Concussion" released in December 2015 by Sony Motion Pictures, in which the renowned actor, Will Smith, played me as Dr. Omalu. Several New York Times best-selling books have also been published on my life and work including "The League of Denial" and "Concussion". I have published several books and my latest book "Truth Doesn't Have a Side" will be published in August 2017. I have published extensively in the medical and scientific literature authoring many scientific papers and book chapters, with a major focus on brain injury and brain trauma.

I have received two honorary PhD degrees from two universities in the United States in recognition of my work and expertise in brain injury and trauma. I will be receiving my third honorary PhD by the summer of 2017 from a very highly respected physician organization in Europe, again for my work and expertise in brain injury and trauma. I have also received numerous awards from across the world in recognition for my work and expertise in brain injury and trauma in both living and deceased patients. I have received the "Distinguished Service Award" from the American Medical Association [AMA], which is the highest award a physician can receive from the AMA. I have been honored by the United States Congress for my work on brain injury and trauma and I have appeared on multiple occasions before committees of the United States Congress and committees of State Legislatures across the United States advising them on matters relating to brain injury and trauma.

Since 1999 I have testified as an expert witness in matters relating to all types of injuries and death in over 450 court proceedings across the United States. I have attached a copy of my curriculum vitae, which enumerates my body of work and experience in greater detail.

Pursuant to your request, I have reviewed the declaration of Rudy Castellani, MD, in the matter of the National Hockey League Players' Concussion Injury Litigation. Please find below my response to Dr. Castellani's declaration.

Introduction:

In 2002, after the Mike Webster autopsy, I carried out extensive research into the very well-established sequelae of traumatic brain injury. That research confirmed that it has long been, and remains a generally accepted principle of medicine and common knowledge of science, that when the human being suffers blunt force trauma of the head and acceleration-deceleration injuries of the brain, a forensically significant risk of suffering permanent brain damage results, which can manifest with a broad spectrum of diseases that include neuro-behavioral, cognitive and motor disorders (1). Across the years these diseases have been known by a broad variety of names. However, with the tremendous advances in science, we now have a better understanding of the pathology of these diseases. Today, the concept of traumatic encephalopathy syndromes encompasses all these diseases, including Sub-Concussion, Concussion, Post-Concussion Syndrome, Chronic Traumatic Encephalopathy [CTE], Post-Traumatic Encephalopathy, Post-Traumatic Epilepsy, Post-Traumatic Cerebral Vasculopathy, Dementias [Alzheimer's Disease, Fronto-Temporal Dementia, Lewy Body Disease], Amyotrophic Lateral Sclerosis [ALS], Chronic Traumatic Myelo-Encephalopathy [CTE-ALS], Parkinson's Disease, Chronic Traumatic Encephalopathy-Parkinson's Disease, Post Traumatic Stress Disorder, Dementia Pugilistica etc.

Historical antecedents:

In spite of this long history of very well-established science and common knowledge, sports organizations and leagues that govern high-impact, high-contact sports in the United States like boxing, American football and ice hockey have historically misappropriated, denied, undermined and dismissed this science in order to protect and expand their brand equity, financial health and market share. In other words, they deny the truth and humanity of science in order to protect their revenue streams. Based on historical precedence, which will be presented below, these sports organizations may actually go even farther to influence science and steer the direction of outcomes of scientific research to their benefit. They identify some doctors with certain unique characteristics, supply them with status and lots of money and have them propose scientific concepts, do bogus research, turn out scientific papers that will perpetuate their sports, brands and revenues.

Through Dr. Castellani's declaration, the National Hockey League [NHL], by denying the science of CTE and other traumatic encephalopathy syndromes, is doing exactly what the New York State Boxing Commission and the National Football League [NFL] did, beginning in the

1950's across the 1980's up until 2010 [This will be discussed in greater detail below, but has been discussed at length in my book (1)]. The current positioning of the NHL is a mirror image of the positioning of the New York State Boxing Commission and the NFL decades ago. It is pertinent to note that both the boxing commission and the NFL failed in their attempts to discredit the science and truth of CTE and traumatic encephalopathy syndromes in their respective sports. Today, the boxing commission and the NFL recognize that playing high-impact, high-contact sports can damage the human brain. As human beings, we are not like other animals like woodpecker birds that have anatomic configurations that protect their brains from the risk of damage from blunt force trauma and acceleration-deceleration forces.

The historical positioning of these organizations is to retain doctors like Dr. Rudy Castellani who use the privileges of their licensure and certification to make calculated attempts to deny the generally accepted principles of science and medicine, denying that common humanity we all share together through science. These doctors are usually doctors of meagre repute with very marginal and outlying opinions and interpretations of science that are grossly outside the widely and generally accepted principles and standards of science and medicine. They propose "alternative facts" that cannot pass the "Daubert Standard" and use the prominent platforms of these extremely rich and famous sports leagues to propagate their "alternative facts" and falsehoods. Historically they eventually fail, but after inflicting irreparable harm because the health and safety of the public is undermined.

Standards of practice and generally accepted principles of science and medicine:

Based on his declaration, as an expert of the NHL, Dr. Castellani is using the platform of the NHL to place himself above and outside the global scientific community and colleges of physicians around the world. He has placed himself above and outside the standards of practice of science and medicine, and the generally accepted principles of science and medicine.

The generally accepted standards of scientific publications stipulate that when a group of researchers and physicians have done good scientific work and applied known scientific methodologies, they generate data and outcomes which are analyzed to derive conclusions. This group of researchers will then submit a write-up of their research, in the form of a manuscript to a scientific or medical journal. The manuscript will state the objectives of the research, the methodologies of the research, the results of the research and a discussion of the results and conclusions. The strengths and weaknesses of their methodologies are also discussed. The editor and sub-editors of the journal will then assign the submitted manuscript to a panel of scientists, experts and physicians to independently review the manuscript and evaluate the scientific merit, validity, authenticity and originality of the objectives, methodologies, results, conclusions and discussion, and judge if the manuscript falls within the generally accepted principles and standards of science and medicine. The reviewers are isolated from any external, biasing influences. If the panel of scientists, experts and physicians, as well as the editor and sub-editor, independently agree that the manuscript fulfills all these criteria, many times after revisions and amendments suggested by the panel are made, the

manuscript is accepted for publication and published. This is the peer-review process, which is the standard of practice of science and medicine.

After a paper is published in a scientific or medical journal, some scientists or physicians may not agree with the contents of a paper for whatever reason, including personal opinion. The personal opinion of one or several physicians does not supersede generally accepted principles of science and medicine, or the standards of practice of science and medicine. For example, there are physicians today who believe that vaccines are harmful for children and cause all types of harm. The opinions of these marginal physicians cannot and does not change the generally accepted principles of science and medicine that vaccines are the most potent and successful modality for the prevention of dangerous and lethal infectious diseases in children and adults. Dr. Castellani has every right to disagree with traumatic encephalopathy syndromes; that is his personal opinion. However, his personal opinion, cannot, should not, and does not change the generally accepted principles of science and medicine that every human activity that exposes the human head and brain to blunt force trauma and acceleration-deceleration forces with or without a helmet, inside or outside sports, can cause brain damage, which can be permanent. Dr. Castellani has every right to disagree with the standards of practice of science and medicine, and with the standards of practice of the peer-review process for scientific publications. Again, that is his personal opinion, which cannot and does not change the generally accepted principles of science and medicine.

Once a scientific or medical paper is published, the methodologies of the paper have been tested, evaluated and validated by the peer-review process by a panel of scientists, experts and physicians who are members of the editorial board of a scientific journal. Once a published paper has passed through the comprehensive test of peer-review and been published, that paper is a validated paper, which applied generally accepted principles and standards of science and medicine. The members of these boards who peer-review papers for publication are typically the very best and most accomplished leaders of thought in their respective fields and specialties. Dr. Castellani, the last time I checked, is not a leader of thought in any field of science or medicine.

If any scientist has any problem or issues with the paper, he or she should follow the standards of practice, which is to contact the editor of the journal and express in writing his or her issues with the paper. The editor would again assign the complaint to a non-partisan panel of scientists, experts and physicians who would review and evaluate the complaint and judge the merit of the complaint. If the complaint has no merit, it would simply be dismissed. If it has merit, the issues in question will be adequately addressed by the editorial board and the authors of the paper in question. This is the academic peer-review process, which is transparent. Most times the complaint letter, the response from the editorial board and the response from the authors of the paper are published for public consumption in the respective scientific journal. Dr. Castellani's declaration and opinions go way outside the generally accepted principles of science and medicine, common knowledge and standards of practice of science and medicine.

The Mike Webster paper:

My first paper, the Mike Webster paper (2), which Dr. Castellani has dismissed and ridiculed, went through this rigorous scientific process in 2006, over ten years ago. In 2005 after the Mike Webster paper was published (2), doctors who belong to the same creed as Dr. Castellani, who were paid experts of another sports league, the NFL, disagreed with me and made exactly the same accusations and bogus “alternative fact” statements that Dr. Castellani is making on behalf of yet another league, the NHL, almost eleven years later. These experts of the NFL were Dr. Elliot Pellman, Dr. Ira Casson and Dr. David Viano (3, 4). While Dr. Castellani belongs to the same creed as these NFL doctors, these NFL doctors did not do what Dr. Castellani is doing. They did not place themselves above and outside the generally accepted principles of science and medicine and the standards of practice of science and medicine like Dr. Castellani is doing.

These NFL doctors respected the generally accepted principles and standards of practice of science and medicine, and sent a letter to the editor of the Neurosurgery journal, which is one of the most respected and most reputable neurosurgery journals in the world. The Neurosurgery journal peer-reviewed and published the Mike Webster paper and the second CTE paper, the Terry Long paper (5). The editorial board of the Neurosurgery paper received their letter, reviewed it and asked me to write a response according to the generally accepted principles and standards of practice of science and medicine. It is rather unsurprising that the same issues Dr. Castellani is raising in his declaration were raised by these NFL doctors because they have something in common. They are experts hired by professional sports leagues to protect their financial and brand turfs rather than protect the truth and humanity of science and medicine. The editorial board of the Neurosurgery journal reviewed the letter the NFL doctors sent, evaluated the issues they raised, reviewed my response to the issues they raised (3, 4), and issued a lengthy and scathing judgement against the NFL and their doctors in the form of a statement written by Dr. Donald Marion, who was a sub-editor of the journal (3). Dr. Marion concluded his judgement and statement with the following paragraph:

“As members of the Mild Traumatic Brain Injury Committee of the NFL, and clinician-scientists that are clearly devoted to the investigation of sports-related concussion, Drs. Casson, Pellman, and Viano should welcome the contribution from Omalu et al. and consider the findings of that report highly relevant to their own research, rather than recommending retraction of the article. The need to obtain more details regarding premorbid neuropsychological deficits and specific episodes of concussion is clearly recognized and stated by Omalu et al. in their paper, but the histopathological findings are clearly described and consistent with a previous history of brain injury. Together with subsequent reports of autopsy results from NFL players, which hopefully will include the important premorbid clinical details, we will begin to establish a reliable definition

of chronic traumatic encephalopathy typical for professional football players.” (3)

After this judgment was rendered within the generally accepted principles and standards of practice of science and medicine, thousands of scientific papers have been published in scientific journals across the world on CTE. My findings in the Mike Webster paper were followed up very quickly by a second paper, the Terry Long paper (5), and by third and fourth papers, which reported the Andre Waters and Chris Benoit cases (6, 7). As a certified epidemiologist, I applied very well-established epidemiological methods on how to introduce concepts into the scientific literature within the generally accepted principles and standards of practice of science and medicine. I adhered to these principles and standards and reported a first case as my sentinel case, and followed up with more case reports and then a case series report. My work has since been independently reproduced and validated by researchers across the world including Boston University. The principle that when a human being is exposed to blunt force trauma of the head and/or acceleration-deceleration injuries of the brain, there is a significant risk of suffering brain damage, is not a novel principle. It is a generally accepted principle of science and medicine that has been very well-established and generally accepted for many years. The scientific basis of Dr. Castellani's declaration are critically flawed and are extremely and excessively outside the generally accepted principles and standards of practice of science and medicine.

Boston University:

Boston University has done excellent scientific work on CTE and has published excellent papers in a variety of highly reputable and respected scientific journals across the world. Their scientific work and publications were presented in the form of manuscripts, within the standards of practice of science and medicine. Their objectives, methodologies, results and conclusions were reviewed and validated by hundreds of leading scientists, experts and physicians across the world, and were published. It is troubling and professionally negligent that a single physician, Dr. Rudy Castellani, an expert of the NHL, an interested party in the scientific outcomes of CTE, would single-handedly challenge the communities and colleges of scientists and physicians across the world, challenge the standards and generally accepted principles of science and medicine, and refute the widely validated and published work of a group of researchers, scientists and physicians in a major university in the United States of America. He is positing that as an expert of the NHL, only he knows it best, and he knows it better than the hundreds to thousands of scientists, experts, physicians, editors and sub-editors across the world who have reviewed, validated and published the methodologies of Boston University and other universities across the world. This is a very dangerous approach that undermines the primal foundations of science and medicine.

A sports league, no matter how rich and famous, should not be meddling in science and setting standards of practice in science and medicine. Fortunately, similar antecedent attempts in this regard by other sports leagues failed. This new attempt by the NHL and Dr. Castellani will not

be the first time something like this is happening in science. As a licensed physician and scientist, I will oppose, in the strongest terms possible, Dr. Castellani's attempt, on behalf of the NHL, to compromise the integrity of the independent standards of practice of science and the scientific process. These standards should in no way be steered by interested parties and industries like a powerful sports league. The laudable works and respected research of Boston University and other universities have been published in the scientific literature after very rigorous and independent peer-reviews according to the standards of practice of science and medicine. Their objectives, methodologies, results and conclusions have been peer-reviewed, validated and published. This is where the process ends. The scientific peer-review process which was done independently by scientists and physicians across the world has validated and confirmed the scientific precision, proficiency and sufficiency of the methodologies of Boston University and other universities. This is where this objective process ends. Dr. Rudy Castellani's opinion and request, on behalf of a sports league, the NHL, undermines the integrity, purity and independence of this long-established process and standards of practice, which have been polished and fine-tuned across the centuries by the colleges of scientists and physicians across the world who came before us.

History, in its own generous way, takes care of the opinions and practices of doctors like Dr. Rudy Castellani of the NHL, Dr Elliot Pellman, Dr. Ira Casson and Dr. David Viano of the NFL, and Dr. Harry Kaplan, Dr. Jefferson Browder and Dr. Ira McCown of the New York State Boxing Commission. Boston University is not the only university in the world that has done work and research, and published on CTE and traumatic encephalopathy syndromes. There are thousands of papers already published over the years on these subjects. I do not know why Dr. Castellani is choosing and singling out Boston University in his declaration. In so doing, and according to his declaration, the methodologies and work of every university (8, 9) who has published work on CTE and traumatic encephalopathy syndromes should be reviewed again, and validated by him.

The NHL is doing exactly what the boxing commission and the NFL did:

In October 1969 the House of Lords of the United Kingdom and the Royal Colleges of Physicians of London confirmed and published that the prevailing scientific evidence and the body of scientific work and literature across the centuries supported that there was a significant risk of chronic brain damage in athletes who engage in high-impact and high-contact sports like boxing (10, 11). In spite of this established principle, boxing associations and the doctors they hired denied this prevailing evidence and claimed that even if boxing caused brain damage, it was an extremely rare event in boxers (1).

Beginning in the 1700's doctors and scientists began to recognize increasingly emerging evidence that high-impact, high-contact sports like boxing can cause brain damage in human beings. With advancing technologies, pathologists in the United States began to demonstrate the pathological evidence of this suspected brain damage in the late 1800's and early 1900's and numerous scientific papers were published on this subject (1). It became a generally accepted principle of science and medicine.

In spite of this prevailing body of work and published scientific evidence, the New York State Boxing Commission, in 1954 hired and retained two physicians, to act as their experts, just like Dr. Rudy Castellani has been retained by the NHL. These two doctors were Dr. Harry Kaplan and Dr. Jefferson Browder. The two doctors were offered research money and research collaboration with the boxing commission to study the effects of blows to the head sustained by professional boxers. As expected, the New York State Boxing Commission, Dr. Kaplan and Dr. Browder published the results of their study (12) claiming that their study of the brains of boxers confirmed that boxing did not cause brain damage in boxers. In their study, they examined the brains of 1,043 professional boxers in all divisions of boxing using electroencephalography, which was mostly performed within 10 minutes of the cessation of a bout, either at the offices of the New York State Boxing Commission or at the Eastern Parkway Boxing Arena in New York City. They opined that there was no evidence that blows to the head and/or concussions caused permanent brain damage in boxers (12).

Dr. Ira McCown, another expert of the boxing commission, who was the medical director of the New York State Athletic Commission proudly reiterated the opinions of Dr. Kaplan and Dr. Browder in two additional papers he published in 1959 (13, 14) defending the sport of boxing. Dr. McCown stated that permanent brain damage in boxers “had never been proven to be a neurological syndrome peculiar to boxers and produced by boxing. It has, unfortunately, become a slick medical cliché with which to label any boxer whose performance and behavior in or out of the ring is unsatisfactory or abnormal”. In his summary, Dr. McCown concluded that “No clinical or laboratory evidence was found which would substantiate the so-called punch-drunken syndrome that has so often been erroneously identified with boxers” (14). Dr. McCown inferred that since the statistics of the New York State Athletic Commission confirmed only seven fatalities over a fourteen-year period [1946 – 1951: seven deaths; 1952 – 1958: zero death], boxing was a relatively safe sport as compared to American football and baseball, which showed higher fatalities (13-15). Paradoxically, Dr. McCown still recognized that “boxing has often been considered the most dangerous of all the competitive sports” (13).

This historical narrative illustrates that the current position of Dr. Rudy Castellani and the NHL will not be the first time a sports league or association is using a doctor and their expert to misappropriate scientific evidence. Unfortunately, medicine is not an absolute science like Mathematics and Physics which deal with absolutes. The science of medicine can become a dangerous tool in the hands of a conniving mind with an agenda other than good science. The different perspectives of an issue in medicine, which may not be absolute, can be thwarted, packaged and presented to support even the most ridiculously outlying propositions, and an “alternative fact” can be made to look almost exactly the same as the true fact. This is why the concepts of “standards of practice” and the “generally accepted principles of medicine” are paramount and must be adhered to in all aspects of medicine, including legal medicine and medical pathology.

This tradition of the sports leagues and organizations did not end with the New York Boxing Commission. Unfortunately, in the same New York City, about 30 years later, the NFL and their retained doctors re-enacted the same ploy, as unbelievable as it may seem (1).

Beginning in the 1980's into the 1990's there was an increasing recognition by the public of the burdens of repeated blows to the head on NFL players who were retiring prematurely because of brain damage (16). Top American football players like Al Toon [New York Jets] and Merrill Hoge [Pittsburgh Steelers] retired in 1992 and 1993, respectively (17). In response, the NFL retained a team of experts, just like Dr. Rudy Castellani, and created a committee they called the Committee on Mild Traumatic Brain Injury [CMTBI]. The membership pre-requisites and qualifications of this committee were unclarified (17). The majority of the members already had business and professional relationships with the NFL. For example, the chairman of the committee was Dr. Elliot Pellman, who was a rheumatologist, a personal physician to the NFL commissioner, and an associate team physician for the New York Jets. Dr. Pellman admitted in a guest editorial in 2003 (17) that he and other NFL team physicians did not know much about concussions and they dedicated the first several months of meetings, after their commission in 1994, to the definition of concussions. They "quickly decided" to rename concussions, mitigate the seriousness of concussions, and give it "the more academically appropriate term, mild traumatic brain injury, which is more commonly referred to as MTBI" (17). There was no basis provided for this redefinition or for why members of the committee, who admittedly did not know much about concussions, would think that concussions were mild types of traumatic brain injury without permanent sequelae.

Dr. Pellman stated the following: "Although published information existed, most of what I – like other team physicians – knew about concussions was from on-field anecdotes passed on from other team physicians and athletic trainers who had been treating professional football players for many years. During my years of medical school, internal medicine training [including an extra year as chief medical resident], and fellowship, from 1975 to 1986, I had never received a single lecture on concussions. As I learned later, this was typical of physician training for what was then an often underdiagnosed and little understood clinical condition." (17).

In his editorial in October 2003 titled "Tackling concussions in sports." (18), the NFL commissioner, Paul Taglibue, touted the NFL's advancing understanding of concussions predicated upon the research and recommendations of the CMTBI and saluted the CMTBI for their leadership. With the unlimited financial wherewithal, power and influence of the NFL, the members of this committee embarked on a chain of research programs and studies to show that American football did not cause brain damage. Their major focus was on the helmet as the technological tool for the control and management of the epidemic of concussions in football (17, 19). The NFL published numerous scientific papers to support their propositions that football did not cause brain damage (16, 19-34). It is pertinent to note, that right from the onset, the NFL chose to publish their research findings, analyses and conclusions only in one journal, and pre-selected a single journal to publish all their papers (17). As expected the NFL

failed to identify or recognize CTE and even denied and dismissed the existence of CTE when it was identified by an unexpected source, Dr. Omalu (2-5, 35).

The NFL and their retained physicians stated that “Another often-expressed concern underlying the development of mild TBI guidelines is the occurrence of chronic brain damage as a result of multiple head injuries. A recent letter to the editor in Neurosurgery addressed the case of an NFL player who was alleged to have died of complications of chronic traumatic encephalopathy, underscoring this concern (3). Chronic traumatic encephalopathy in boxers is a well-accepted and documented clinical and pathological syndrome. The clinical features include a combination of cerebellar, extrapyramidal, and pyramidal dysfunction, along with cognitive and personality changes. In the NFL study, none of these features was identified in any player, including those with repeated injury. There were no signs of chronic traumatic encephalopathy in this group of active, contemporary football players” (16, 36, 37). The NFL and their physicians, through their publications, posited that players of American football, as a high-impact, high-contact sport, did not suffer any type of brain damage from playing football.

The NFL and their physicians claimed that their research showed that it was safe and actually safer and better to return a concussed player to the same game in which he was concussed (25, 38). They concluded that “Players who are concussed and return to the same game have fewer initial signs and symptoms than those removed from play. Return to play does not involve a significant risk of a second injury either in the same game or during the season.” They further stated: “The results of this article indicate that many NFL players can be safely allowed to return to play on the day of injury after sustaining an MTBI.” (25) and actually suggested that their analysis and conclusion in professional football players may have relevance and may be applied to college and high school football players (25). In yet another review paper for neurologists, the NFL and their physicians concluded and recommended, based on their research, data and analyses, that there was no clinical outcome difference between a single concussion and repeated concussions in a professional football player, and actually reaffirmed that returning a concussed player to the same game reduces the total number of clinical signs and symptoms (36, 37).

Similar to the NFL, Governor Dewey of New York State appointed the very first medical advisory board for the New York State Athletic Commission in 1948 (13, 14). The board consisted of nine members comprising a chairman and other outstanding specialists and authorities in sports medicine, including a neurologist, psychiatrist, orthopedic surgeon, ophthalmologist, internist, general surgeon, dentist, and a specialist in industrial medicine. These specialists were regarded as experts in fields of medicine that pertained to the medical aspects of boxing. The committee was charged with formulation of plans and standards for the medical examination of boxers and wrestlers, and recommendation of safety measures to protect these athletes. Prior to this time, the local clubs and boxers’ managers assumed the financial responsibility for the medical welfare of their boxers. However and unfortunately, the stance of Dr. McCown, the medical director of the New York State Athletic Commission, during this time, was that boxing was a relatively safe sport that rarely, if at all, caused brain damage in boxers (13, 14). Just like the NFL CMTBI, the medical advisory board of the New York State

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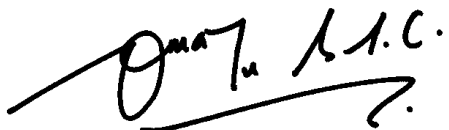
Athletic Commission undertook scientific research, which purportedly showed no evidence of permanent brain damage in boxers (12). According to Dr. McCown, the medical advisory board was successful because the fatality rate of boxing in New York State dropped from seven deaths in 1946 to 1951, to zero death in 1952 to 1958 (13, 14) based upon the medical measures and recommendations advocated and adopted by the medical advisory board and the New York State Athletic Commission for the safety and welfare of boxers. He opined that professional boxing will survive and prosper under the measures and programs they had implemented (13).

In conclusion, therefore, the trend here is vividly obvious. The NHL and their expert, Dr. Rudy Castellani, are using the same failed and scientifically unfounded ploy the New York State Boxing Commission, the NFL and their experts employed many years ago, denying that there is a danger or risk of brain damage in high-impact, high-contact sports. Dr. Rudy Castellani's declaration and opinion about traumatic encephalopathy syndromes in high-impact, high-contact sports, like ice hockey, are excessively and extremely outside the generally accepted principles of science and medicine, and the standards of practice of science and medicine. His declaration and opinion do not serve that common humanity we all share together in science and medicine. The NHL and Dr. Rudy Castellani are presenting the same old perspective that has long ago been debunked and dismissed as false.

I have provided my opinions with a reasonable degree of medical certainty.

Thank you.

Very truly yours,



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