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ONE HUNDRED ELEVENTH CONGRESS

Congress of the United States

House of Representatives

COMMITTEE ON THE JUDICIARY

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Committee on the Judiciary

Witness List

<u>TIME</u>	<u>DATE</u>	<u>PLACE</u>
1:00 p.m.	Monday, January 4, 2010	Wayne State Univ. School of Medicine Room 1460 Gordon H. Scott Hall 540 E. Canfield St., Detroit, MI

Subject: Hearing on Legal Issues Relating to Football Head Injuries, Part II

Panel One

Mr. DeMaurice Smith
Executive Director, NFL Players Assoc.

Dr. Joseph Maroon
Vice Chair, Department of Neurosurgery
University of Pittsburgh

Dr. David Klossner
Director of Health and Safety, NCAA

Mr. Bob Colgate
Assistant Director, National Federation of
State High School Associations

Mr. Scott Hallenbeck
Executive Director, USA Football

Rev. Al Sharpton
Founder, National Action Network

Mr. Lem Barney
Detroit Lions Hall of Fame Player

Mr. Tommy Hearn
Retired Professional Boxer

Dr. Bennet Omalu
Co-Director, Brain Injury Research Institute,
West Virginia University

Dr. Ira Casson
Former Co-Chairman
NFL Mild Traumatic Brain Injury Committee

Mr. Vincent R. Ferrara
Founder and CEO, Xenith, LLC

Mr. David Halstead, Technical Director
Southern Impact Research Center

Panel Two

Dr. Randall Benson
Assistant Professor of Neurology
Wayne State University

Mr. Christopher Nowinski
President and CEO, Sports Legacy Institute

Mr. Ted Johnson
Retired NFL Player

Mr. George Martin
Executive Director, NFL Alumni
Association

Mr. Bernie Parrish
Retired NFL Player

Dr. Jeffrey Kutcher
Director, Michigan Neurosport

Mr. Kyle Turley
Retired NFL Player

Mr. Robert Schmidt
Chairman, Vincent T. Lombardi Foundation

Mr. Luther "Big Lu" Campbell
Trainer of Professional Athletes

TESTIMONY OF LEMUEL BARNEY
BEFORE THE COMMITTEE ON THE JUDICIARY
UNITED STATES HOUSE OF REPRESENTATIVES

JANUARY 4, 2010

Good Afternoon Chairman Conyers and other members of the House Judiciary Committee, I am Lem Barney. Prior to becoming a minister, I played professional football for the Detroit Lions for 11 seasons and was inducted into the Professional Football Hall of Fame in 1992. I began playing football in 1959 Sturgis Junior High in San Bernardino, California. After playing high school football in Gulf Port, Mississippi, I attended Jackson State University, where I was a three time all-SWAC player. I thank you for inviting me to testify at this hearing. I also want to thank the Committee for bringing awareness to the important issue of brain injuries in professional football. When I played in the 60's and 70's, we did not have the same level of awareness that we do now, and we should not repeat the mistakes of the past.

I played football for a total of 20 years and concussions have always been part of the game. I have had several concussions. The first concussion that I remember was the result of a knee from Rufus Mays to the ear hole in my helmet on a play in a game. I was out on the field for twenty-one minutes before moving to the side line and later returning to play. The next concussion that I recall was a result of me becoming privy to the high knee action that made Gayle Sayers the running back that we all know today. And the final concussion that I recollect was from Robert Newhouse, known for his powerful running style.

In each incident I returned to play immediately. Sure, there was an examination done by the trainer or team doctor on the side line. There were general questions asked of players that experienced concussions. Questions like "how many fingers am I holding up?" and "what day of the week is it?" but in reality, the ultimate decision to return to the game rested on the desire of the player, and sometimes the coach.

Hindsight tells us that we should not have returned to play based on those factors alone. New research into the effects of these injuries tells us that returning to play may not have been in our best interest and more than likely made us more susceptible to further injury. But back then, as I am sure the case for some players now, guys just wanted to play. I have witnessed guys return to the game and seen firsthand how they reacted to their injuries. Players would exhibit signs of wooziness and imbalance but still in some instances be allowed to retake the field. As I said before, hindsight tells us that those players would have probably been better off not returning, thankfully that decision is moving closer to the hands of an independent third party.

The Committee and the NFLPA should be applauded for raising the public's awareness of this issue. I particularly want to note the NFLPA's new Player Concussion Committee, which will ensure that future

generations of players are provided with the knowledge to make the best possible decisions. I am delighted and encouraged to see players taking the initiative and exerting control over their personal welfare. I would also like to commend the NFL on the League's new policies to restrict the return of players who have experienced concussions and other brain injuries.

Football is a great sport and one of my favorite passions, but no sport should endanger the lives of its participants. This holds true for all levels of football, from Pee-Wees to professionals. I have never coached the game of football but I have played the game on every level including several pro bowl appearances on the way to becoming a member of the NFL Hall of Fame. Since my playing days I have noticed continual improvements in the equipment used by players on the field. Helmets used in my time were little more than a thin plastic layer with a small donut shaped piece of foam rubber in the top. (I have brought an example here for you to see for yourself.) Today's helmet is much better at protecting the player during the game and in competition.

I recognize that in today's game the athletes are bigger and stronger and faster. As a result the hits are harder and the impact from each hit is much greater. With more research into ways to protect the players, we can continue to enjoy this game for years to come. Thank you again for your hard work on this issue and inviting me to this hearing. I look forward to answering any questions that you may have.

TESTIMONY OF DEMAURICE SMITH
EXECUTIVE DIRECTOR, NATIONAL FOOTBALL LEAGUE PLAYERS ASSOCIATION
BEFORE THE COMMITTEE ON THE JUDICIARY
UNITED STATES HOUSE OF REPRESENTATIVES
JANUARY 4, 2010

Good Afternoon Chairman Conyers and Members of the Committee on the Judiciary. By way of reintroduction, as Executive Director of the National Football League Players Association, I represent the players, both current and former, of the National Football League.

Please accept our deepest gratitude for shining a national spotlight on this issue of concussions and brain trauma in the sport of football. You have forced a change in the tide of the rules governing player safety and the recognition of the science that support these decisions. I offer my thanks on behalf of every player that has, is and will ever play this great game.

There has been much progress in the area of concussion prevention – the NFL, in conjunction with the its concussion committee, made strides by setting return-to-play guidelines governing players that have sustained head injuries during a game or practice. The NFL is also currently running a public service announcement that encourages players to report head injuries suffered by a player or his teammates. The awareness has been heightened significantly due to these efforts by the League; however, it is unfortunate that it took Congressional pressure to force action for such a critical issue. There is simply no justification for the NFL to have previously ignored or discredited Dr. Omalu and others with relevant, valid research. For far too long, our former players were left adrift; as I emphasized at the last hearing, we were complicit in the lack of leadership and accountability but that ends now. I am here again to make it clear that our commitment is unwavering.

My goal today is to proudly provide the Committee with an update on the players' progress in this realm. As you know, we formed the NFL Players Association Players Concussion Committee (PCC) in May of this year to address the diagnosis, treatment and prevention of concussions and traumatic brain injury (TBI) in active players and the long term, cumulative effects of isolated or repetitive TBI in NFL players as patients and how these effects can be reduced or eliminated.

During the October 28, 2009 hearing, we agreed to the following and have also provided an update as to our progress:

1. **To objectively and honestly embrace all studies related to this issue to create a roadmap that leads to preventative measures** – The PCC is actively considering proposals from various companies that manufacture proprietary technologies and products that reduce traumatic brain injuries and improve the diagnosis and

treatment of such injuries, as well as considering partnerships with various institutions with substantive knowledge on this issue.

2. **To verify the scientific relevancy of the NFL ongoing study concerning former players and concussions** – In an attempt to verify the scientific relevancy of current and previous studies, we encourage the NFL to release to us, any and all communications regarding studies surrounding head injuries in football so that both organizations can build upon the same relevant and valuable research.
3. **To renew the request to the NFL to provide the injury data and analyses for 2006, 2007 and 2008** – The League provided some injury data without providing the analyses as requested. We are currently reviewing the data and will renew our request to the NFL for the missing data and analyses that we have yet to receive.
4. **To commission new research and evaluate, follow and disseminate existing research in the area of traumatic head injury** – We have begun this task in the area of helmet safety; we are supporting an increase in helmet safety standards and measurements and access to helmet safety literature. We are also planning to encourage NOCSAE to implement new standards, as well as hosting a roundtable of major helmet companies to identify gaps in the current research pertaining to traumatic brain injuries. To assist in this effort, we ask that the NFL release their prior communications with the helmet companies to further our effort to take precautionary and preventive measures as it relates to helmet design and safety.
5. **To review the procedures for the diagnoses of players and the decision about when a player who suffers a head trauma should return to play** – We are encouraging player compliance with the new NFL rule governing return-to-play after sustaining a head injury and continuing to review any and all injury data and concussion reports.
6. **To improve the coverage provided by the 88 Plan** – We have discussed potential improvements, such as raising the maximum benefit amount and abolishing the distinction between in-home and institutional care. Such improvements are a part of ongoing collective bargaining agreement negotiations.
7. **To reach out to former players suffering from mental and psychologically conditions to assist them in any way possible** – The NFLPA Retired Players department will continue to provide support for retired players who suffer from severe medical conditions and/or are in dire need, through the award of PAT (Player Assistance Trust) grants.
8. **To take steps to become the leading voices to college, high school, and youth leagues about the TBI and concussions and the steps that can be taken to minimize the risks of concussion** – USA Football has taken significant steps to educate the youth on concussions and preventive measures. We currently work closely with USA Football and plan to share with them, our independent analyses gathered by the PCC.

As Executive Director of the NFLPA, my primary goal is to represent, support and serve the players of the National Football League; the credit for forming the Players Concussion Committee, precipitating real change in the brain injury arena and forcing accountability by the League to change

the rules to promote safety in football should go to the players first and foremost. Without their guidance, input and articulation of the issues, we would not be able to report on the progress made in the last few months. Those efforts include the endeavors of the Mrs. Sylvia Mackey, who successfully requested that the NFL to accept new Plan 88 applicants during the uncapped season, the NFLPA Retired Players Chapter Presidents and Steering Committee, Bob Grant and Dave Pear, all of whom presented the head injury issue to the army of former players to raise awareness and apply pressure to the appropriate parties to act.

As I have reiterated over and over again, the mantra of the Players Association is:

WE ARE COMMITTED TO GETTING THE RIGHT ANSWERS, TO WORK WITH EVERYONE WHO HAS THE GOAL OF PROTECTING OUR PLAYERS AND TO SERVE AS A MODEL FOR FOOTBALL AT EVERY LEVEL. WE WILL NOT FAIL.

Much more needs to be done, as the commitment needs be lasting and the parties need to be dedicated to the solution. The NFL should release all of the data that was promised to the Judiciary Committee and all internal analyses and communication pertaining to research conducted on this issue. We need to continue to encourage NOCSAE to update helmet standard testing, continue to communicate with the helmet manufacturers, continue to negotiate the collective bargaining agreement with an eye towards Plan 88 coverage improvements and finally, create a multi-year plan to educate the youth on playing football safely. Protecting the players is the most important aspect of the game and in order to preserve the fans' confidence and the continued participation of the youth, we need to act consistently and transparently to ensure that the integrity of the game perseveres.

Chairman Conyers, thank you again for your stewardship on this issue, as it has ushered in a new era of awareness and accountability. I ask the Committee to continue its leadership in this field, which will help ensure that future generations of athletes are equipped with the best knowledge, technology, and treatment. I look forward to answering your questions.

Ira R. Casson MD - Written Statement - January 4, 2010

I want to thank the chairman and the other members of the committee for inviting me to participate in this hearing. I will directly address the issue in question, namely, whether or not a career in professional football causes long term chronic brain damage. The media has consistently misrepresented my position by reporting that I deny the possibility that professional football may be the cause of long term brain damage. That is not my position. My position is that there is not enough valid, reliable or objective scientific evidence at present to determine whether or not repeat head impacts in professional football result in long term brain damage. I believe that there is tau pathology in the brains of some retired professional football players and that a number of retired NFL players have legitimate neurological and behavioral/psychological symptoms. As a physician I am very concerned about the possible long term implications of these findings regarding the health and safety of NFL players. I sympathize with the players and the families who are affected.

As physicians and scientists, it behooves us to critically evaluate the evidence before reaching definitive conclusions. My education, training and clinical experience have provided me with the tools necessary to accomplish this task. In the process of researching and writing my honor's thesis at Cornell, I learned how to critically analyze scientific manuscripts and how to view science in its historical and social contexts. I studied how political pressures can subvert the scientific process. During my medical school years at NYU, I learned how to transfer information gleaned from scientific research to the clinical evaluation and treatment of patients. As resident and chief resident in neurology at NYU-Bellevue, I was fortunate to have had the unique experience for a neurologist of having primary clinical responsibility for the diagnosis and treatment of many hundreds of patients with head injuries of all severities. After completing my residency, I pursued my clinical interest in head injuries by studying boxers. Over the next few years, I exhaustively studied the neurological literature regarding brain injuries in boxers and performed numerous neurological examinations of boxers. With the assistance of many colleagues, I performed clinical neurological

research studies on active and retired boxers. Our study on retired boxers that was published in JAMA was the first to report the results of clinical neurological examinations, neuropsychological testing, EEGs and CAT scans of the brain in retired boxers. The evidence collected in that study demonstrated that modern era retired boxers had signs of chronic brain damage. Many in the boxing community expressed their displeasure with the findings and criticized the paper. This did not deter me from publication. Then, as now, my allegiance was to scientific truth and I followed the scientific evidence.

Since 1982, I have been in solo private practice of general neurology in Forest Hills, New York. In addition to treating a wide variety of general neurology patients in the office and hospital settings, I have treated numerous head injured patients, including athletes of all ages and skill levels as well as non athletes.

In 1994 I was invited by then NFL Commissioner Tagliabue to become an original member of a newly formed scientific NFL committee on mild traumatic brain injury. The goals of that committee were congruent with my goals: to advance the medical/scientific knowledge of concussions and thereby improve the health and safety of NFL players. I joined the committee in an advisory/consultant capacity. I never was an employee of the NFL and I have always maintained my fulltime private practice of neurology. During my fifteen years as a committee member, including three years as co-chairman, we did research on the biomechanics of NFL concussion, the clinical and epidemiologic features of NFL concussion, neuropsychological testing in NFL players and scientific testing of protective headgear. In collaboration with Dr. Albert King of Wayne State University, we studied finite element modeling of NFL concussions. In collaboration with researchers in Sweden, we developed an animal model of NFL concussion.

All of the committee's research and scientific endeavors were conducted in a completely open and transparent fashion. We published our studies in the peer-reviewed medical literature. We participated in vigorous scientific debates. We invited outside experts from various scientific/medical disciplines, from academia as well as private industry, to attend and speak at our meetings. We have encouraged scientists to study and present their results to the scientific community. The committee has sponsored

Ira. R. Casson, M.D. - Written Statement

educational symposia for NFL medical and training personnel to update them on the latest scientific/ medical advances regarding concussion. We invited outside experts to speak at these events. We have shared our findings with Department of Defense medical experts. Although there is always more scientific work to be done, the work of our committee definitely advanced the scientific/medical knowledge of concussions and thereby improved the health and safety of NFL players.

I have been concerned about the possibility of long term effects on the brain related to football for close to thirty years. My studies and investigations on the chronic effects of boxing on the brain have provoked questions and concern regarding the possibility of similar effects related to other contact sports including football. One of the reasons that I was asked to be on the NFL MTBI committee was because of my knowledge of and experience treating boxers with chronic traumatic encephalopathy (CTE).

In 2003, members of our committee began to formulate a plan to scientifically investigate the possibility that there were long term effects on the brain due to a career in professional football. We planned a clinical research study modeled after the study that I had directed on retired boxers in the 1980s. We wanted to undertake a study that would be more exhaustive and include a control group. In order to assure the highest possible scientific quality, we consulted with leading experts from various medical/scientific fields at leading research academic centers around the country. We consulted with neuroradiologic MRI experts at USC, the University of Wisconsin, Mt. Sinai Hospital Medical Center in New York and Dr. Mark Haacke of Wayne State University. We consulted with neuropsychology experts including the president of the National Academy of Neuropsychology and experts at Columbia University in New York and the University of Texas-Southwestern. We consulted experts on APOE genotyping at Duke University. Committee member Dr. Joel Morgenlander, professor of neurology at Duke University, and I formulated a detailed plan for performing comprehensive clinical neurological evaluations. The result of these efforts was a comprehensive research study employing clinical neurological examinations, comprehensive neuropsychological testing, state of the art MRI imaging of the brain and APOE genotyping to evaluate a large group of retired NFL players and control subjects. The control group

consists of age similar men who played college football and then attended NFL training camp but played less than one full regular season in the NFL. The MRI brain protocols and analyses for the study are under the direct supervision of Dr. Mark Haacke of Wayne State University. The statistical analyses used in the development of this study were performed at Wayne State University. The NFL is funding this study.

Despite what inaccurate and distorted media reports have suggested, I have never prejudged the results of this or any other scientific study. I have no bias regarding the outcome of this study. All the examinations and testing for the study (including the neurological examinations) are performed in a completely blinded fashion (the status of the subject as a retired player or as a control is not known to the examiner). All data analyses are performed in a blinded fashion by experts who played no role in the data collection. Since all of the testing is standardized, the data from the retired players can be compared to both the control group and the general population.

The MTBI committee and I have closely followed the medical literature and the reports of studies suggesting a link between professional football and long term brain damage. Based upon three survey type studies in retired NFL players and a small number of case reports of neuropathological abnormalities in the brains of retired NFL players, some have suggested that chronic brain damage in football players is an epidemic that constitutes a national health crisis. It is my opinion that there is as yet not enough scientific evidence to support such statements. Clearly there is abnormal tau pathology in the brains of a small number of deceased former NFL players. Some living retired NFL players have experienced neurological/behavioral/psychological problems that may be related to this type of pathology or perhaps to other factors. This is a matter of great concern to me. However, as scientists and physicians it behooves us to carefully analyze the evidence before reaching definitive conclusions.

Three survey studies have been cited as proof that a career in the National Football League increases the risk of dementia and/or depression later in life. All were mail-in surveys or telephone surveys. There are a number of methodological limitations inherent to these types of

studies. The data collected is highly dependent on the subjects' motivation and memory. The researchers can never be sure that the percentage of subjects who respond are truly representative of the entire study population. These types of self report questionnaires are limited by response bias (the subjects respond to all the questions in a pattern manner) and social desirability response set bias (subjects' responses are based on what they think they should answer rather than what they may actually think).

These and other problems are readily apparent upon scientific analysis of the two papers from the University of North Carolina regarding the risks of depression and late life cognitive impairments in retired NFL players. It must be pointed out that both of these papers are based upon the same collection of data from the same self report questionnaires mailed to the same subjects and their spouses. In other words, the two papers are the result of one study, not two separate independent studies. The first questionnaire was mailed to 3,683 subjects, of whom 1131 (30.7%) did not respond. A follow up memory questionnaire was then sent to 1,754 retirees over age 50 who had responded to the initial questionnaire; 996 (66.8%) did not respond. There is no way to know if the large numbers of subjects who did not respond would have answered the questions posed in the same way as though who did respond. If many of the non-responding subjects did not answer because they were healthy and had no medical/neurologic or psychiatric complaints, this clearly would have biased the study results toward reporting a higher incidence of cognitive or depression symptoms than was truly present in the entire study population. These studies relied solely upon the memories of the subjects to collect data on concussion history 20 to 50 years in the past. Yet, the authors then reported that many of these same subjects had cognitive/memory problems. This raises serious doubts about the reliability of the data. The absence of a valid control group makes any comparisons to the general population difficult to interpret. The authors attempted to make a comparison to the United States population incidence of dementia but this comparison is invalid because the general population data were not collected from self report and spouse report questionnaires as was done in this study.

In the paper regarding depression, the authors reported that 11.1% of the entire group had been diagnosed with

clinical depression, which they then state is "generally consistent with" the incidence in the general U.S. population. This suggests that retired NFL players do not have an increased risk of depression. The authors then stratified the data and reported that subjects with a history of no concussions had a 6.5% incidence of depression, those with a history of one or two concussions had a 9.74% incidence of depression and those with 3 or more concussions had a 20.17% incidence of depression. Does this mean that professional football players who sustained two or fewer concussions during their careers are somehow protected from (partially immune) to developing depression later in life compared to other American men who never played professional football? Or are these results evidence of a phenomenon known to clinicians and social researchers as "selective memory"? This occurs when subjects who suffer from an illness (in this case depression) unconsciously seek out a cause for that illness and are thus more likely to "remember" prior concussions. These studies also suffer from the absence of any objective verification of the subjects reports. There are no reports of any physical examination findings or diagnostic study findings on any of the subjects.

The third self report "study" recently cited as indicating that retired NFL players have an increased incidence of cognitive/ memory impairments was done at the University of Michigan by Dr. David Weir and funded by an arm of the National Football League. This study has the same limitations and problems as the other two studies, as Dr. Weir himself has clearly noted. One need only review Dr. Weir's testimony to this congressional committee in October 2009 and read his written statement to the NFL MTBI committee in November 2009 to realize that this study did not find evidence that retired NFL players have an increased incidence of cognitive/memory problems. Dr. Weir testified to Congress: "The study was not designed to diagnose or assess dementia. The study did not conclude that football causes dementia." Dr. Weir wrote to the NFL MTBI committee: "The 19:1 ratio reported in The New York Times is just unsupportable given the evidence that the source for the "one" is much too low where we can compare with true rates. I told that to (New York Times reporter) Schwarz but he chose to ignore it. Again, nothing in this study says there is not a connection between football on any level and subsequent cognitive problems and nothing

says there is. The study is mute on this issue but unfortunately the press is not".

I have also analyzed the neuropathology reports from doctors Omalu and Mckee regarding abnormal tau deposition in the brains of retired NFL players. When Dr. Omalu published his first case, I along with other NFL MTBI committee members reviewed the report carefully and found a number of scientific issues with it. We engaged Dr. Omalu and his co-authors in an appropriate scientific debate by writing a letter to the editor of the journal in which the report had been published. Our objections were based on two major areas: 1. Dr. Omalu had claimed that the neuropathological findings in his case were consistent with those reported in CTE of boxers by Dr. Corsellis in a classic 1972 paper. Based upon my familiarity and knowledge of Dr. Corsellis' paper and the other scientific literature of CTE in boxers, we pointed out the multiple reasons why the Omalu reported findings were not consistent with the Corsellis report, and (2) we pointed out the numerous limitations in the minimal clinical information reported on the retired player in question and that there were no reports of any objective physician evaluations or diagnostic studies regarding the subject. In our letter we indicated there were major weaknesses inherent in reporting only posthumously obtained historical information from the deceased's family. When Dr. Omalu subsequently published a case report on the neuropathology of a second retired player, we again carefully evaluated the report and expressed our scientific opinions regarding the weaknesses of the paper in a letter to the editor of the journal. We pointed out that the reported neuropathology in the second case was different in many ways from that in the first case. We again noted the dearth of contemporaneously obtained objective clinical information about the subject and the sole reliance on posthumously obtained information from the deceased's family. We also pointed out a number of inconsistencies between the limited clinical information that was presented and the summary and conclusions reached by Dr. Omalu.

In June, 2007, at our invitation, Dr. Julian Bailes presented some of Dr. Omalu findings at an NFL conference on head injuries for all NFL team medical personnel. At the conference Dr. Bailes indicated that he and Dr. Omalu believed that these neuropathological findings of abnormal tau protein deposition in the brain had caused depression