

James Noble

Project Title: *Hip-Hop Heads Up: An intergenerational study to improve concussion literacy*

Requested Amount: \$64,500

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Vote Tabulations

	Yes	No
LOI	8	2
Full Application	3	0

Reviewer Comments:

- Overall, this seems like an interesting, well written proposal that has potential to be viral and effective, and would certainly seem appropriate for the ABF platform for crowdfunding in my opinion.
- Overall quality – it appears that the grant application is of solid quality, easy to understand, and well thought-out. Main idea is to improve literacy about concussions by targeting children and adolescents and providing broad education of concussion symptomatology and consequences by use of multimedia (largely music, comics) with the goal to have a broad outreach through education via schools and other public facing platforms. This project parallels success of programs that were done for stroke education.
- Feasibility – the proposed plan appears feasible; financial budgeting appears realistic, and more than 50% is financed through a different source already
- Innovation – this education intervention to teach young children about concussion is both novel in approach (using music, comics with a model built on validated models of behavior change and community engagement) as well as main target (children, adolescents, as opposed to adults)
- Evidence of institutional support – strong; the chief of staff of neurology is co-investigator in this project
- Initial data (if any) – strong: successful Hip Hop Stroke program improved multigenerational stroke literacy among children and their parents including appropriate 911 activation by children in response to real-life stroke events; pilot data from a related dementia program has been similarly effective; PI has strong track record for projects in similar areas

ABF Letter of Intent**Letter of Intent Form**

Prefix

Dr.

First Name

James

Last Name

Noble

Suffix

Title

Assistant Professor of Neurology at CUMC

Institution

Columbia University

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Project Details

Project Title

Hip-Hop Heads Up: An intergenerational study to improve concussion literacy

General focus

Brain & Spine Trauma

Other

Specific Disease Focus

sports-related concussion, neurological health literacy

Project Description

Objectives: The goals of this proposal are to evaluate the effectiveness of a novel concussion education intervention to a) teach young children to recognize concussion symptoms, particularly in developing appropriate

attitudes and demonstrate an appropriate action plan (which we have collectively termed concussion literacy) and b) have these concussion-literate children teach and improve the concussion literacy of their parents.

Background: Prospective recognition of concussion occurrence is challenging. This in turn makes it difficult to identify players at risk for recurrent sports-related concussion or prolonged recovery periods, and predictors of these outcomes are poorly understood. Public health programs have led to increased public awareness and knowledge of concussions, particularly among young and emerging adults. However, behavioral responses in concussion management among children and parents following these programs are uncertain despite the relatively simple messaging delivered through required training. Additionally, it is likely that the barriers to effective implementation of these educational programs relate to the manner of content delivery focusing on concussion knowledge (including the CDC Heads Up modules) and may be impacted further by adverse concussion attitudes. The subtle nature of some concussions and factors leading competitive persons to remain on the field remain unsolved public health problems in concussion. Also, there are no studies exploring the effectiveness of either long-term retention of concussion education programs among youth, nor are there youth-based assessments of concussion attitudes, measures of behavioral intent, or ability of parents to learn concussion knowledge from their children.

Methods: The Intervention, "Hip Hop Heads Up," will be built on validated models of behavior change and an community engaged approach established in other neurological disorders (stroke and dementia) by our center. The program will use a brief multimedia intervention designed to teach children key concussion signs and symptoms, improve concussion attitudes and motivations to report, and inform the youth about actions taken when concussion is recognized (early evaluation by a parent, physician or sideline staff). This novel intervention is a targeted intergenerational multimedia concussion awareness program using cartoon videos, hip hop songs containing concussion-related education and attitudes messaging, and role play to teach elementary school aged children concussion recognition and appropriate care-seeking action, and motivate these children to teach their peers, parents, and other family members. Three phases of study will comprise this work beginning with content delivery to children, refinement, and adoption of concussion literacy by parents of children taught by our model. This application to the ABF specifically seeks to provide development for essential program materials including develop and creation of a concussion themed hip-hop song (tentatively titled "A Concussion Ain't Nothin"), accompanying cartoon created by an Emmy-award winning Sesame Street animator, and a related comic book for distribution. Our group already has substantial existent infrastructure and personnel to enable the research once these materials are developed.

How will your project contribute to the treatment, prevention or cure of a neurological disease(s)?

Knowledge, attitudes, and behaviors towards sports-related concussions will be improved by the following methods:

1. A novel neurological health intervention: Social learning techniques are used to incorporate popular music and entertainment media into a behaviorally focused concussion literacy curriculum. Hip Hop Heads Up was designed to provide children with the skills, confidence, and motivation necessary to learn and act on concussion signs and symptoms and will be based on established CDC materials. The intervention is directed at the children and their parents, via built-in child-parent communication procedures.

2. Engagement of the children: Our pilot studies are highly effective in creating engaged, active students excited by the program. Hip Hop Heads Up is designed to excite children and make concussion recognition and the communication of this knowledge to parents a heroic endeavor while providing specific strategies for influencing parents' behavior.

3. A multigenerational, community-based concussion education model: The objectives of this proposal map directly to the 2013 Institute of Medicine Report Sports-Related Concussions in Youth: Improving the Science specifically regarding the lack of research regarding educational programs on enabling behavioral change regarding concussion reporting. The program has additional relevance in providing an opportunity to improve education and enable improved attitudes toward concussions within the family unit, through a strategy we have termed "intergenerational primordial risk reduction"--one educated generation can influence the future health of themselves and their subsequent children, inform other current members with mid-life risk, and improve the well-being of those already at risk of or affected by the disease.

Project Budget

Total expense budget

An estimated total is acceptable.

\$137,500

Value of existing funding or in-kind support

What portion of the above total expense has funding already received or promised?

\$75,000

Portion to be raised through crowdfunding

How much are you seeking from the crowdfunding platform?

\$62,500

Attachments and Verifications

Please download, fill out, and upload the [Financial Disclosures & Conflict of Interest form](#).

Financial Disclosures & Conflicts of Interest Form

Financial-Disclosure-Conflict-of-Interest-Form-JMN3.pdf

CV of Principal Investigator

Curriculum Vitae-JMNv2017Mar17-COAPrev.pdf

I understand that the American Brain Foundation will not post approved projects for crowdfunding until documentation of IRB approval or exemption is provided.

Yes

ABF Full Application**Applicant Information**

Prefix

Dr.

First Name

James

Last Name

Noble

Suffix

Title

Assistant Professor of Neurology at CUMC

Institution Name

Columbia University

E-mail

jn2054@cumc.columbia.edu

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2123424126

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Project Details

Project Title

Hip-Hop Heads Up: An intergenerational study to improve concussion literacy

Project Start Date

June 01, 2017

Project End Date

May 31, 2018

Disease focus

Brain & Spine Trauma

Other

Specific Disease Focus

sports-related concussion, neurological health literacy

Project Summary/Abstract

Objectives: This proposal will evaluate a novel concussion education intervention to a) teach young children to recognize concussion symptoms, develop appropriate attitudes and demonstrate an appropriate action plan ("concussion literacy") and b) have these concussion-literate children teach and improve the concussion literacy of their parents.

Background: Prospective recognition of concussion is challenging. This in turn makes it difficult to identify players at risk for recurrent sports-

related concussion or prolonged recovery periods, and predictors of these outcomes are poorly understood. Public health programs have increased public awareness of concussions among emerging adults but behavioral responses in children and their parents are uncertain--this is particularly important at a critical time period of first exposure to high risk sports. Barriers to effective implementation of these educational programs relate to manner of content delivery, focus on concussion knowledge and may be impacted by adverse concussion attitudes. Methods: The Intervention, "Hip Hop Heads Up," will be built on validated models of behavior change and community engagement established by our center in other neurological disorders (stroke and dementia). The program will use a brief multimedia intervention designed to teach elementary children key concussion signs and symptoms, improve concussion attitudes, and instruct actions taken (early evaluation by a parent, physician or sideline staff). Children are motivated to teach their peers, parents, and other family members. This application specifically seeks support for program materials including a concussion themed hip-hop song, accompanying cartoon created by an Emmy-award winning animator, and comic book for a pilot study.

Project Narrative

This project offers a unique opportunity effectively improve multigenerational community concussion knowledge at an age as young children begin to participate in sports at high risk for contact and collision. Our group's innovative model, pilot data, and recently completed and randomized controlled trial of a similar program in stroke support our approach and collective skill sets and experience providing an unparalleled opportunity to both meet project goals and establish several key steps to meaningfully impact concussion health literacy and potentially health outcomes including concussion attitudes and early care-seeking behavior. Development of program materials is a critical step which will enable a pilot study modeled on our prior programs. Our group already has substantial existent infrastructure and personnel to enable the research itself. The subsequent research program will include content delivery in several local elementary schools, planning to reach 200 local school children (4th and 5th graders, aged 9-11 years), and in turn their parents. Children concussion knowledge and attitudes will be assessed at baseline, 3 days after program delivery, and 3 months thereafter, with parental assessments performed on a similar timeline. As with our related programs, children are responsible for all in-home education, motivated through our program materials.

Facilities and Equipment

Columbia University Health Sciences has the largest federally funded neurological research portfolio in the US. Drs. Noble (PI) and Williams (Co-I) are members of the department of neurology at Columbia University Medical center and have individual academic office space in the Neurological Institute of New York. They each have access to HIPAA compliant computer network, as well as physical computing necessary to accomplish the procedures. Additionally, Dr. Noble is a faculty member

of the Taub Institute on Research on Alzheimer's Disease and the Aging Brain and the G. H. Sergievsky Center which focuses on neuroepidemiology. The principal investigator and co-investigators also have access to Taub Institute, GH Sergievsky, and CUMC core areas including computer, conference, library, pathologic, and administrative facilities, as well as statistical software necessary for the proposed analyses. The Taub Institute is a 100+ station local area network that is part of the Columbia University's wide-area network. The heterogeneous network combines Windows and Linux servers with Windows, Macintosh, Linux and Sun workstations to provide file and printer sharing, applications, e-mail, and other network services. Every workstation has full access to the Internet as well as to Columbia's libraries, with their extensive on-line research facilities. Software available at the center includes Word, WordPerfect, Lotus 123, Excel, PowerPoint, Cyrillic, Access, SPSS and SAS. Additional research staff will be physically located in the Neurological Institute in space already available.

Specific Aims

The goals of this proposal are to evaluate the effectiveness of a novel concussion education intervention to a) teach young children to recognize concussion symptoms, particularly in developing appropriate attitudes and demonstrate an appropriate action plan (which we have collectively termed concussion literacy) and b) have these concussion-literate children teach and improve the concussion literacy of their parents. The intervention is modeled on our successful Hip Hop Stroke program (HHS, R01NS067443), which improved multigenerational stroke literacy among children and their parents including appropriate 911 activation by children in response to real-life stroke events; 1-4 pilot data from a related dementia program has been similarly effective.⁵

SA1 To assess program effectiveness of educating children and parents relative to the intervention.

Hypothesis 1. Hip Hop Heads Up will lead to a significant improvement of concussion knowledge and attitudes in children and their parents at immediate and delayed post-testing relative to baseline performance.

SA2. To identify the effect of child-parent concussion communication on concussion knowledge in parents. Hypothesis 2. Concussion-literate children are effective conduits of concussion knowledge and attitudes to adult caregivers at home.

Research Strategy

Significance, Innovation, Approach, Timeline

Significance

Concussion knowledge and attitudes are significant barriers to diagnosis. Although a substantial and important focus has been placed on identifying improved multimodal biomarkers as a means to improve concussion diagnosis objectively, a fundamental element currently required of concussion diagnosis is the identification of the injury by the player or bystander. At present, despite the significant occurrence and possible public health burden of SRC 6-10, prospective recognition of

concussion occurrence is challenging. This in turn makes it difficult to identify players at risk for recurrent SRC or prolonged recovery periods, making predictors of these outcomes poorly understood.

Concussion attitudes and knowledge are potentially modifiable risk factors in concussion management. Given the subtle nature of some concussions, as well as myriad factors leading competitive persons to remain on the field or in arenas of combat, identifying reasons for poor adoption of concussion identification guidelines is an important unmet need in the field. Mechanistically upstream of conventionally considered modifiable concussion risk factors (e.g. recurrent SRC and other factors) and approaches to care are cultural beliefs and health literacy. Beliefs, knowledge, and attitudes about concussion are barriers to its acceptance and diagnosis. High school athletes are far less likely to report a concussion if one was previously experienced.¹¹ Beliefs and attitudes about concussions may differ for complex reasons,¹² as concussion symptoms may simply be considered to be part of the game, and recognition and report of concussion may be considered a sign of an ineffective or weaker player.

Current youth concussion education programs are either ineffective or incompletely studied. In the past few years, significant efforts to improve concussion awareness have been undertaken, primarily for coaching and athletic training staff,^{13,14} but with a lesser degree of outreach and effectiveness with players¹⁵ who may describe concussions in an inappropriately genteel manner with terms including "bell ringer" or "getting dinged" still commonly used to describe what is fundamentally brain injury.¹⁶ To date, the only study of a concussion education program including elementary school-aged students did not study concussion knowledge beyond an immediate post-test, and did not include measures of behavioral intent or concussion attitudes.¹⁷

Measuring concussion knowledge and attitudes among youth. Three important unmet needs exist in the field of concussion public health education: 1) a brief, reliable and validated youth concussion literacy measure suitable for large scale community interventions in schools or sports communities and 2) a test of the appropriate behavioral response by the lay public to concussion sign and symptom presentations, and 3) a tool measuring concussion attitudes at the youth level including elementary schools. Development of a tool containing these three domains is critical for the meaningful assessment of concussion literacy, particularly in populations at greatest risk of injury.

Innovation

Our preliminary work has demonstrated that children can serve as conduits of important neurological health information into their homes and improve the knowledge of adult caregivers in their homes. This paradigm shifting approach to health education has been termed "child mediated health communication" (CMHC) and our work suggests substantial opportunities for the rigorous application of our methods to the field of concussion health literacy.

Approach

Given the success of our pilot studies in stroke and dementia, we propose to test the effectiveness of our approach in sports-related concussion to: (1) teach 4th and 5th grade children (age 9-11 years) concussion literacy for and attitudes towards concussion; and (2) have the children transmit core messages of lessons they learn to parents via a procedure that we have termed "Child Mediated Health Communication; CMHC".⁴ This pilot program will be delivered in New York City elementary schools, totaling 200 total students, along with their parents and adult caregivers.

Timeline

The first 6 months of timelines are mapped below. Months 7-12 will involve a two school (student n=200) pilot program of content delivery from Months 1-6. Children concussion knowledge and attitudes will be assessed at baseline, 3 days after program delivery, and 3 months thereafter, with parental assessments performed on a similar timeline. As with our related programs, children are responsible for all in-home education, motivated through our program materials. Our group has a longstanding track record of successful health education programs in NYC schools, having educated more than 60,000 elementary school aged students over the past 12 years of programming. Our lengthy track record of successful community-based engagement optimizes chances of successful research.

List up to 5 milestones you will reach within the first 6 months of your study.

The first part of the project period focuses on adapting an item pool of knowledge components that address understanding of a concussion, appropriate and behavioral responses, and proactive attitudes. Later months will focus on developing our materials following the concussion item pool development. Items to measure self-efficacy and other constructs relevant to the study goals will be added and examined in relation to the outcome; these will comprise a novel "concussion action test" and a refined concussion attitudes index appropriate for children. Principally this tool will be developed from 3 sources as including the existent CAI (18) CDC Heads Up training tools and the Test of Concussion Knowledge. Regarding the Heads Up tools, we will specifically focus on tools which have been developed for 11-13 year olds, (closest established age group to that targeted in this proposal) and those included in the parental knowledge summary given the dual goals of this proposal of child and parent concussion literacy. Development of a 3- minute program cartoon, mapped to our song, comic, and character icons focusing on a mnemonic and primary behavioral outcomes. Our group has an extensive track record in similar program development, including more than 3 dozen health related songs, a dozen cartoons and live action films, and comic books.

- 1) Months 1-2. Concussion item pool development.
- 2) Months 2-3. Vetting using student advisory board system
- 3) Months 3-4. Storyboard development-Months 3-4
- 4) Months 4-5. Song creation

5) Months 4-6. Cartoon and comic book creation

Age of Population Group(s) that will potentially benefit from this research

(check boxes that apply)

All Ages

Pediatric

Scientific Literature References

Reference 1

19 references are included in our application. A separate references file will be sent to ABF.

Reference 2

Reference 3

Reference 4

Reference 5

Reference 6

Reference 7

Reference 8

Reference 9

Reference 10

Budget, Attachments and Acknowledgements

Budget

We recognize that changes may have occurred since the time you submitted your Letter of Intent. Please share the most recent accurate numbers below:

Total Project Budget

139,500

Total existing funding or in-kind support

75,00

Amount to be raised through crowdfunding campaign

64,500

Evidence of institutional support (letter)

Letter of recommendation_Hip Hop HEADS UP.pdf

Full budget

budget.docx

Documentation of IRB/IUCAC approval or exemption, if applicable.

Columbia University's RASCAL - Research Administration System.pdf

Completed conflict of interest & disclosure form

I understand that the ABF will not list approved projects for general public crowdfunding campaigns until documentation of IRB/IUCAC approval or exemption is provided.

Yes

I understand that approval of the project to be shared on the crowdfunding campaign site is dependent on providing and working with the ABF staff to create the requisite materials that present the project in an engaging, easy-to-understand website presentation. I am amenable to working with the ABF staff to create such materials.

Yes

I understand that approval once a project has been completed, I will be required to submit a summary of my findings to be posted online (one page), and will submit this in a reasonably timely fashion. I also agree to submit a financial report, and to co-sign a thank you letter with the ABF that will be sent to donors.

Yes

I understand and agree that the ABF may share the information that I provide (including but not limited to the project description and relevant biographical/background details) in conversations with other potential funders outside the website to bolster fundraising efforts.

Yes

American Brain Foundation Release Agreement

American Brain Foundation Release Agreement – Research

1. **Grant.** For good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I grant to the American Brain Foundation ("ABF") and to the ABF's affiliates (including the American Academy of Neurology), and their respective contractors, agents, assigns, licensees, and successors (collectively, the "ABF Group"), a worldwide, royalty-free, perpetual, irrevocable right to take and use my image, likeness, voice, verbal statements, written testimonials and name and all images, videos, sound recordings, and written and verbal materials that I provide to the ABF (collectively, the "Materials"), in all forms and media, including composite or modified representations, for the purpose of promoting and supporting the missions of the ABF. For the avoidance of doubt, the Materials include all research project proposal information, project reports and other research-related information submitted to the ABF. I understand and agree that the ABF may publish the Materials on any and all media, including printed matter, promotional materials, e-mail, websites and social media platforms.
2. **Acknowledgement of Use.** I understand that the ABF Group may use the Materials on any and all media, including printed matter,

promotional materials, e-mail, websites and social media platforms.

I understand that the ABF's use of the Materials may intentionally or unintentionally give rise to the impression that either I or a family member suffers from brain/neurologic disease, and I nevertheless consent to this use. The ABF is not obligated to utilize any of the rights granted in this agreement. I waive the right to inspect or approve any uses of the Materials in connection with this grant.

3. **Warranty.** I warrant that I have the full power to enter into this agreement and to grant the aforementioned rights.
4. **Release.** I release the ABF Group from all liability for any claims that may arise regarding the use of Materials, including any claims of defamation, invasion of privacy, or infringement of moral rights, rights of publicity, or copyright. The ABF is permitted, although not obligated, to include my name as a credit in connection with any use of the Materials. **I have read and understood this agreement, I understand that it contains a release of liability, and I am over the age of 18.** This agreement expresses the complete understanding of the parties and shall be binding on me and my heirs, legal representatives and assigns. I understand that I am entering into a legally binding agreement and that clicking "I Accept" below shall have the same legal effect as my signature on this Release Agreement.

I Accept

Song development (\$10,000 x 1): We have budgeted \$10,000 for the development and production of two concussion related educational songs, focused on concussion symptom recognition, attitudes, and action plan. Our group has previously developed more than 3 dozen health related songs, which are incorporated into our previously developed health programs.

Cartoon development (\$37,500 x 1): We have budgeted \$37,500 for the development and production of two concussion related educational cartoons, focused on concussion symptom recognition, attitudes, and action plan. These cartoons will be set to songs described above. We have collaborated successfully with several companies to develop now a dozen cartoons and live action films, both short and long form.

Comic development (\$15,000 x1) We have budgeted \$15,000 in Y1 for the development and production of one concussion related educational comic book. Images and themes developed in the comic and song will be directly mapped to the comic book, which will be distributed to each child participant. Our collaborative team includes working with several animators including Ian James and William Black who were recognized for their longstanding work on Sesame Street.

Participant Incentives (\$2,000): We have budgeted \$1,000/school for incentives for parent and student incentives (e.g., Pencils, water bottles, Songs for a Healthier America CDs, t-shirts, compact mirrors and magnets), for a total of \$2,000.

Payment in-kind (\$75,000)

Dr. Noble (PI) and his co-investigator Dr. Olajide Williams are fully supported in their related work at Columbia University. They both supervise approximately 10 research support staff at any time and this infrastructure enables the accomplishment of such work. Although the amount of effort available to the program is far higher, an estimate of \$75,000 of investment is offered based on estimates of time commitment required of Drs. Noble, Williams, a research assistant, and 2 lay-health educators to assure appropriate content delivery of the programs.

Other:

Dr. Noble has applied to support a related, more expansive Hip Hop Heads Up program through the CDC. Notification of this award will not be informed until later in 2017 (date TBD). Should that grant be funded, the ABF will be directly notified by Dr. Noble to determine appropriate steps if crowdfunding for this application has also been successful.



COLUMBIA UNIVERSITY
MEDICAL CENTER

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Chief of Staff of Neurology
Associate Professor of Neurology
Neurological Institute
710 W. 168th St., 6th floor
New York, NY 10032
212.305.1710 Tel
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ow11@cumc.columbia.edu

March 28, 2017

To whom it may concern,

RE: ABF Crowdfunding Application

“Hip-Hop Heads Up: An intergenerational study to improve concussion literacy”

First, thank you for starting up the ABF Crowdfunding program and offering inclusion of Dr. Noble in the pilot group. Innovative approaches to starting key funding programs are essential for this and related work.

I am pleased to support the application of my colleague Dr. Noble in his accompanying application. He and I have developed related programs utilizing hip hop as a vehicle to educate and inspire young children to teach their family unit about stroke and dementia. These programs have been eventually supported by large NIH grants but each began as small pilot studies in a manner identical to that being described. One of the hardest yet essential steps for funding involved identifying sources of funds to develop program materials including comics, songs, and cartoons. As you know from the application the funding is specifically being sought to develop these essential program materials through our network of award winning animators and songwriters.

In my role as chief of staff in our department, I can attest that Dr. Noble has our full support in development of this project and my group has the necessary infrastructure to accomplish the described scope of work.

Please do not hesitate to contact me with any questions.

Sincerely,

Olajide Williams MD MS

Abbreviated title	Hip Hop Heads Up Pilot Program	Protocol Number	AAAR3509
Originating Department	NEU Columbia Neurology (752530X)	Protocol Initiator	James Noble (jn2054)
Protocol Year	1 Modification 00	Date Created	03/24/2017 14:00:50
Principal Investigator	James Noble (jn2054)	You are	James Noble (jn2054)

Protocol History

Status: Submitted
 IRB Committee:
 Exempt: Yes
 Expeditable: No
 Meeting Date:
 IRB Approval Date:
 Expiration Date:

Status History

Status	Date	Person/Outcome	Compare
Submitted	03/29/2017 at 7:29	By James Noble (jn2054)	<input type="checkbox"/>

1 - 2 of 2 results 100 ▼

« < 1 > »


[Compare](#)

Department and Personnel Approval History

Approver	Approval Role	Date Approved
1 - 1 of 1 results 100 ▼		

« < 1 > »

Department and Personnel Approvers have been notified.

[Contact Us](#) | © Columbia University 

Please contact the Human Research Protection Office if you have questions about submitting to the IRB, or whether this study requires review.

CUMC Campus:
 (212) 305-5883 | irboffice@columbia.edu
 CU-MS and LDEO Campus:
 (212) 851-7040 | askirb@columbia.edu

Dear Applicant:

In the increasingly complex world of scientific publication, concerns about commercial influence and other possible conflicts make it important for authors to disclose all potential sources of bias. Our system of reviewing conflicts of interest aligns with the policies of the American Academy of Neurology and allows donors to judge whether conflicts exist. Please complete this form, referring to the definitions in the beginning regarding commercial entities, compensation, expert witness, and "immediate family member." At first glance, this task may seem onerous, but will likely take less than 10 minutes.

What to expect: You will be asked whether you have disclosures relating to each question (check yes or no) and will be provided a field in which to list the disclosures. Filling out the forms on the next few screens will be easiest if you have a list of the following items regarding your activity (either commercial or non-profit) and that of any immediate family members during the period of your project. Disclosures are required for any dollar amount, except for gifts valued under \$1000. Names of commercial and non-profit entities are required along with specific roles, grant numbers for grants, and specific years. No dollar amounts need to be included. Please indicate complete names of sponsors or companies.

DEFINITIONS

Personal compensation:

Serving on a scientific advisory board

Gifts worth more than \$1000

Travel funded by a commercial entity

Serving as a journal editor, associate editor, or on an editorial advisory board

Patents held or pending

Royalties from publishing

Honoraria for speaking engagements

Corporate appointments or consultancies

Speakers' bureaus

Clinical, neurophysiology, or imaging studies in your practice and % effort devoted if the result of this paper will benefit your practice, affiliated unit, or a sponsor

Research support:

Commercial research support

Government research support (including funding organization, grant number, and role)

Academic research support not attributed in the manuscript

Support from a non-profit foundation or society

Stock options for serving on a Board of Directors

License fee payments

Royalty payments from technology or inventions

Stocks, stock options, and royalties

Stock options in a company in which you are (were) an investigator

Stock options in medical industry

Legal proceedings

Expert testimony for a legal proceeding on behalf of industry

Affidavit for a legal proceeding on behalf of industry

Witness or consultant for a legal proceeding on behalf of industry

Optional non-financial

Non-financial disclosures you wish to share

Definitions of Terms in Disclosure Agreement

Commercial entity: A for-profit business that manufactures, distributes, markets, sells, or advertises pharmaceutical or scientific products or medical devices.

Compensation: Anything of monetary value including a salary, honorarium, stipend, gift, or payment of travel-related expenses.

Expert witness: A person who has provided expert medical testimony during a trial or administrative hearing, in a deposition or an affidavit, or in any other type of legal proceeding.

"Immediate family member": Any person who would benefit financially from the publication of the manuscript because of their relationship to the author. This includes a member of an applicant's immediate family or anyone else who has a significant relationship with the applicant.

Please provide all financial relationships (and those of your "immediate family members") from the past two years regardless of whether these relationships are related to the project described in your application.

FINANCIAL DISCLOSURE

Personal Compensation from Commercial and Non-Profit Entities that benefits you directly or indirectly. Within the past two years (and during the course of the study under consideration if the study exceeded two years), I or one of my "immediate family members" received personal compensation for the following:

All compensation received during the past two years regardless of the relationship to your project must be disclosed; for the period exceeding two years, only compensation relevant to the topic of the study needs to be disclosed.

1. Serving on a scientific advisory board or data safety monitoring board. List specific disclosures in the following format: (1) Commercial or non-profit entity (2) Commercial or non-profit entity... If none, please say "None":

None

2. Gifts (other than travel or compensation for consulting or for educational efforts) worth more than USD \$1000. List specific disclosures in the following format: (1) Commercial or non-profit entity, brief description of gift, (2) Commercial or non-profit entity, brief description of gift... If none, please say "None":

None

3. Funding for travel or speaker honoraria to the individual from a commercial or non-profit entity not included in the study funding [Exclude CME activities and Grand Rounds]. List specific disclosures in the following format: (1) Commercial or non-profit entity, type of payment, (2) Commercial or non-profit entity, type of payment... If none, please say "None":

None

4. Serving as a journal editor, an associate editor, or editorial advisory board member. This may include a journal published by your national medical/scientific organization. Please include regardless of whether you receive compensation. List specific disclosures in the following format: (1) Full journal name, role, year(s), (2) Full journal name... If none, please say "None":

None

5. Patents issued or pending. List specific disclosures in the following format: (1) Brief description of invention/technology, (2) Brief description of invention/technology... If none, please say "None":

US provisional patent applied for, TEAM helmet (transmitted electroencephalogram activity monitoring helmet); this does not relate to this application

6. Publishing Royalties (do not include honoraria for occasional writing). List specific disclosures in the following format: (1) Full title of work, full name of publisher, year(s) of publication (or receipt of royalties), (2) Full title of work... If none, please say "None":

None

7. Employment. If you are currently employed by a commercial entity, please disclose below. In addition, if your past employment at a commercial entity is directly related to this manuscript, please disclose below. List specific disclosures in the following format: (1) Commercial entity, position, years (2) Commercial entity, position, years... If none, please say "None":

None

8. Consultancies. List specific disclosures in the following format: (1) Commercial or non-profit entity, (2) Commercial or non-profit entity... If none, please say "None":

9. Speakers' bureau. List specific disclosures in the following format: (1) Commercial or non-profit entity, (2) Commercial or non-profit entity... If none, please say "None":

None

10. Other activities not covered in designations above (if in doubt, provide full disclosure). List specific disclosures in the following format: (1) Commercial or non-profit entity, brief description of activity, (2) Commercial or non-profit entity... If none, please say "None":

(1) Volunteer Board member, Hip Hop Public Health (501c3). This is a nonprofit entity working to promote the work of hip hop related education programs. It is indirectly affiliated with Columbia University through Olajide Williams (president and co-founder). There is no material support from HHPH related to this application. (2) President and Co-Founder, Arts & Minds (501c3); unrelated work to this application

11. Some studies have potential for financial gain for the project investigators or the sponsor. The following question seeks to provide transparency regarding any financial benefits to investigators or sponsors.

Do you perform clinical procedures or imaging studies in your practice or unit that overlap with the content of your proposed project, practice parameter, or clinical practice guideline and would your sponsor or this part of your practice or unit benefit if the conclusions were widely followed?

Note: This is the only item in this Agreement that applies to an interest that is related specifically to this particular study, practice parameter, or clinical practice guideline.

List specific disclosures in the following format: (1) Name of Practice or Research Unit, Clinical procedure/imaging study, % of effort (e.g. 35%), year(s), (2) Name of Practice or Research Unit, Clinical procedure/imaging study, % of effort (e.g., 35%)... If none, please say "None":

None

RESEARCH SUPPORT

Within the past two years and during the course of the study under consideration if the study exceeded two years, I or one of my "immediate family members" received financial or material research support or compensation from the following:

All support received during the past two years regardless of the relationship to the study must be disclosed; for the period exceeding two years, only support relevant to the topic of the study needs to be disclosed.

12. Commercial entities. List specific disclosures in the following format: (1) Commercial entity, (2) Commercial entity... If none, please say "None":

None

13. Government entities. List specific disclosures in the following format: (1) Sponsor/funding source, grant number(s), role, year(s), (2) Sponsor/funding source... If none, please say "None":

NIH, U54 NS081765, as Co-I 2015-present, no overlap. NIH, T35 AG044303, Co-PI, 2013-present, no overlap. NIH, R01 NS067443, as Co-I, 2011-present, provides salary support for Dr. Noble for Hip Hop Stroke program (predicate to this application), UF AG032438, as Co-PI, 2016-present, no overlap. P50 AG008702, as Co-I, 2008-present, no overlap.

14. Academic entities other than those attributed in the manuscript. List specific disclosures in the following format: (1) Academic entity, (2) Academic entity... If none, please say "None":

Columbia University, Coulter program (for TEAM Helmet, above); Columbia University, Taub Institute, for MRI imaging study of sports-related concussion. No overlap to this program.

15. Foundations or societies (include grant number if required by funding agency). List specific disclosures in the following format: (1) Full name of Foundation or Society, (2) Full name of Foundation or Society... If none, please say "None":

None

STOCK, STOCK OPTIONS & ROYALTIES

In the past two years and during the course of the study under consideration if the study exceeded two years, I or one of my "immediate family members":

All revenues during the past two years regardless of the relationship to the study must be disclosed; for the period exceeding two years, only revenues relevant to the topic of the study needs to be disclosed.

16. Stock or stock options or expense compensation for serving on a board of directors. List disclosures in the following format: (1) Commercial entity, (2) Commercial entity... If none, please say "None":

Bats Toi (wrestling headgear), value <\$100.

17. License fee payments. List specific disclosures in the following format: (1) Invention/technology, source of payment, (2) Invention/technology... If none, please say "None":

None

18. Royalty payments or have contractual rights for receipt of future royalty payments from technology or inventions (this does not include royalties from publishing). List specific disclosures in the following format: (1) Technology/invention, source of payment, year(s), (2) Technology/invention... If none, please say "None":

None

19. Stock or stock options in a commercial entity sponsoring research with which the author or "immediate family member" was involved as an investigator (Excludes investments in mutual funds held by the author or dependents). List specific disclosures in the following format: (1) Company, year(s), (2) Company, year... If none, please say "None":

None

20. Stock or stock options in a commercial entity whose medical equipment or other materials related to the practice of medicine. (Exclude investments in mutual funds held by the author or dependents). List specific disclosures in the following format: (1) Company, year(s), (2) Company, year... If none, please say "None":

None

LEGAL PROCEEDINGS

In the past two years and during the course of the study under consideration if the study exceeded two years, I or one of my "immediate family members" have (whether or not it pertains to the topic of the current study):

All compensation received during the past two years regardless of the relationship to the study must be disclosed; for the period exceeding two years, only compensation relevant to the topic of the study needs to be disclosed.

21. Given expert testimony, acted as a witness or consultant, or prepared an affidavit for any legal proceeding involving a commercial entity (do not include proceedings for individual patients). You may specify role, e.g., 'expert witness for plaintiff' if desired. (Include year only if activity is directly related to the present study.)

List specific disclosures in the following format: (1) Commercial entity, activity, year(s), (2) Commercial entity, activity, year(s)... If none, please say "None":

Expert witness for concussion litigation, unrelated

OPTIONAL: NONFINANCIAL DISCLOSURE

22. I have chosen to declare one or more non-financial competing interests (e.g., special interest groups you represent or others that may be affected if your paper is published or that could be perceived as biasing the study; the corresponding author should be aware of conflicts of interest that Co-investigators or Contributors may have). Non-financial disclosures will not be published.

List specific disclosures, if none, please say "None":

None

I have completed this Disclosure Statement fully and to the best of my ability. I understand that all Applicants must complete this Disclosure Statement and that the information disclosed may be published if their project is accepted for crowdfunding.

By my electronic signature, I verify the completeness and accuracy of the contents of this form.

Click in the box above to add your electronic signature

Date [MM/DD/YYYY]

03-24-2017

1. Williams O, Noble JM. 'Hip-hop' stroke: a stroke educational program for elementary school children living in a high-risk community. *Stroke*. Oct 2008;39(10):2809-2816.
2. Williams O, Leighton-Herrmann E, DeSorbo A, et al. Hip Hop Stroke: Study Protocol for a Randomized Controlled Trial to Address Stroke Literacy. *Journal of clinical trials*. Oct 2015;5(5).
3. Williams O, DeSorbo A, Noble J, Shaffer M, Gerin W. Long-term learning of stroke knowledge among children in a high-risk community. *Neurology*. Aug 21 2012;79(8):802-806.
4. Williams O, DeSorbo A, Noble J, Gerin W. Child-Mediated Stroke Communication: findings from Hip Hop Stroke. *Stroke*. Jan 2012;43(1):163-169.
5. Noble JM, Hedmann MG, Williams O. Improving dementia health literacy using the FLOW mnemonic: pilot findings from the Old SCHOOL hip-hop program. *Health education & behavior : the official publication of the Society for Public Health Education*. Feb 2015;42(1):73-83.
6. Thurman DJ, Branche CM, Snizek JE. The epidemiology of sports-related traumatic brain injuries in the United States: recent developments. *The Journal of head trauma rehabilitation*. Apr 1998;13(2):1-8.
7. Langlois JA, Rutland-Brown W, Wald MM. The epidemiology and impact of traumatic brain injury: a brief overview. *The Journal of head trauma rehabilitation*. Sep-Oct 2006;21(5):375-378.
8. Marar M, McIlvain NM, Fields SK, Comstock RD. Epidemiology of Concussions Among United States High School Athletes in 20 Sports. *Am J Sports Med*. Jan 27 2012.
9. McCrory P, Meeuwisse WH, Aubry M, et al. Consensus statement on concussion in sport: the 4th International Conference on Concussion in Sport held in Zurich, November 2012. *Br J Sports Med*. Apr 2013;47(5):250-258.
10. Institute of Medicine (IOM) and National Research Council (NRC). *Sports-related concussions in youth: Improving the science, changing the culture*. Washington DC: The National Academies Press; 2013.
11. Register-Mihalik JK, Valovich McLeod TC, Linnan LA, Guskiewicz KM, Marshall SW. Relationship Between Concussion History and Concussion Knowledge, Attitudes, and Disclosure Behavior in High School Athletes. *Clinical journal of sport medicine : official journal of the Canadian Academy of Sport Medicine*. Jul 19 2016.
12. Pearce AJ, Young JA, Parrington L, Aimers N. Do as I say: contradicting beliefs and attitudes towards sports concussion in Australia. *Journal of sports sciences*. Oct 18 2016:1-9.
13. Covassin T, Elbin RJ, Sarmiento K. Educating coaches about concussion in sports: evaluation of the CDC's "Heads Up: concussion in youth sports" initiative. *J Sch Health*. May 2012;82(5):233-238.
14. Shenouda C, Hendrickson P, Davenport K, Barber J, Bell KR. The effects of concussion legislation one year later--what have we learned: a descriptive pilot survey of youth soccer player associates. *PM & R : the journal of injury, function, and rehabilitation*. Jun 2012;4(6):427-435.
15. Kroshus E, Daneshvar DH, Baugh CM, Nowinski CJ, Cantu RC. NCAA concussion education in ice hockey: an ineffective mandate. *Br J Sports Med*. Aug 16 2013.
16. Valovich McLeod TC, Bay RC, Heil J, McVeigh SD. Identification of sport and recreational activity concussion history through the preparticipation screening and a symptom survey in young athletes. *Clinical journal of sport medicine : official journal of the Canadian Academy of Sport Medicine*. May 2008;18(3):235-240.
17. Bagley AF, Daneshvar DH, Schanker BD, et al. Effectiveness of the SLICE program for youth concussion education. *Clinical journal of sport medicine : official journal of the Canadian Academy of Sport Medicine*. Sep 2012;22(5):385-389.
18. Rosenbaum AM, Arnett PA. The development of a survey to examine knowledge about and attitudes toward concussion in high-school students. *Journal of clinical and experimental neuropsychology*. Jan 2010;32(1):44-55.

CURRICULUM VITAE

JAMES McCALLUM NOBLE, MD

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Date of Preparation: January 26, 2017

Name: James M. Noble, M.D., M.S., C.P.H.

Place of Birth: Atlanta, GA

Date of Birth: June 19, 1976

Citizenship: USA

Academic Appointments, Hospital Appointments, and Other Work Experience

07/2015 -present	Assistant Professor of Neurology at CUMC Department of Neurology Taub Institute for Research on Alzheimer's Disease and the Aging Brain GH Sergievsky Center Columbia University Medical Center	New York, NY
05/2011-present	President and Co-Founder (Volunteer position) Arts & Minds, Inc. (501c3)	New York, NY
01/2011-07/2015	Assistant Professor of Neurology at CUMC Columbia University Medical Center Department of Neurology Taub Institute for Research on Alzheimer's Disease and the Aging Brain	New York, NY
07/2009-12/2016	Neurology Clerkship Director Columbia University College of Physicians and Surgeons	New York, NY
07/2008-12/2010	Assistant Professor of Clinical Neurology Columbia University College of Physicians & Surgeons Department of Neurology Taub Institute for Research on Alzheimer's Disease and the Aging Brain	New York, NY

07/2007-06/2011 Assistant Attending Neurologist New York, NY
Harlem Hospital Center

Education

08/2006-05/2008 **Columbia University** New York, NY
Mailman School of Public Health
Master of Science, Epidemiology, May 2006

08/1998-05/2002 **Emory University School of Medicine** Atlanta, GA
MD, May 2002

08/1994-05/1998 **Vanderbilt University** Nashville, TN
Bachelor of Science, Math and Chemistry, May 1998
magna cum laude

Training

07/2006-06/2008 **Columbia University Medical Center** New York, NY
Department of Neurology & G. H. Sergievsky Center
Fellowship, Aging and Dementia & Neuroepidemiology

07/2005-06/2006 **Columbia University Medical Center** New York, NY
Department of Neurology
Neurology Co-Chief Resident

07/2003-06/2006 **Columbia University Medical Center** New York, NY
Department of Neurology
Neurology Residency

06/2002-06/2003 **Columbia-Presbyterian Medical Center** New York, NY
Department of Medicine
Internal Medicine Preliminary Internship

Gaps in work/training/education:

N/A

Licensure and Board Certification

- 10/2008-10/2018 **National Board of Public Health Examiners (NBPHE)**
Certification in Public Health (CPH)
#20070713279
- 08/2008-08/2018 **United Council for Neurologic Subspecialties (UCNS)**
Behavioral Neurology and Neuropsychiatry
#BNNP00326-08
- 05/2007-12/2017 **American Board of Psychiatry and Neurology (ABPN)**
Neurology
#54098
- 05/2004-Present **New York State Education Department, Office of Professions** New York
Medical License #232438

Honors & Awards

- 11/2012- Present **Columbia University, College of Physicians and Surgeons**
Virginia Apgar Teaching Academy
- 9/2012- 06/2013 **American Academy of Neurology**
Selection, Emerging Leaders Forum 2012-2013 (Inaugural year)
- 6/2011 **Department of Neurology, Columbia University Medical Center**
Stephen Q. Shafer Award for Humanism in Neurology
- 5/2008 **Columbia University, Mailman School of Public Health**
Anna C. Gelman Award for Excellence in Epidemiology

Academic Service

- 3/2017- present **American Academy of Neurology**
Leader, UES Scholarship/Award Review Workgroup
- 11/2016- present **College of Physicians & Surgeons**
Member, Liaison Committee on Medical Education (LCME), Committee on Education
- 10/2016- present **New York State Concussion Initiative Advisory Committee**
Invited Member (Director Mark Herceg PhD)
- 9/2016- **Columbia University College of Physicians and Surgeons**

present Neural Science Curriculum Task Force

12/2014-2/2016 **Institute of Medicine/National Academy of Medicine**
 Committee Member, *Gulf War & Health Volume 10: Update of Health Effects of Serving in the Gulf War*

10/2014-
 present **National Institutes of Health**
 NIA Special Emphasis Panel (T32/T35 Training Grants) ZAG1 ZIJ-1 (J1)
 Reviewer/Committee Member

9/2014-6/2017 **AAMC (Association of American Medical Colleges)**, Core Entrustable Professional Activities (EPAs) for Entering Residency Pilot Cohort Member, Columbia University's P&S 4-member working group

8/2014-11/2014 **American Academy of Neurology**
 Reviewer for 2015 Annual Meeting Research Methodology, Education, and History abstracts

08/2014-
 present **Big 10-Ivy League Conference**
 Chair, Funding Subcommittee

07/2014-
 01/2015 **Columbia University College of Physicians and Surgeons**
 Clinical Performance Evaluation task force meeting
Chair

9/2013-10/2013 **American Museum of Natural History, New York, NY**
 Co-Chair: "Sackler Brain Bench: Neuroscience of Sports: Your Brain in Action"

7/2013 **French National Research Agency (ANR)/ General Directorate for Healthcare Provision**
 Programme de Recherche Translationnelle en Santé (PRTS)
 Invited Grant reviewer

4/2013-present **American Academy of Neurology**
 Reviewer, Preclinical Summer Research Program

03/2013-
 present **American Academy of Neurology**
 Member, Undergraduate Education Subcommittee

01/2013-
 present **New York State Athletics Commission**
 Member, Medical Advisory Board

11/2012- 06/2013	New York-Presbyterian Hospital Primary Care Clinical Initiative <i>Working Group Member</i>
07/2012- present	Big 10-Ivy League Conference Committee on Institutional Cooperation (CIC) Member, Concussion Research Collaborative, working group member of education and data subcommittees
04-07/2012, 2016	Columbia University Medical Center, Department of Neurology Compensation Program Committee <i>Working Group Member</i>
09/2011	National Medical Research Council, Ministry of Health, Singapore Clinician Scientist Grant Review
07/2011- Present	Columbia University Medical Center, Department of Neurology Education Committee <i>Member</i>
06/2011- Present	Columbia University Medical Center, Department of Neurology Executive Committee <i>Member</i>
08/2011- Present	Columbia University Medical Center Columbia Concussion Center Development Team <i>Working Group Member</i>
02/2011- 05/2012	Columbia University College of Physicians and Surgeons Task Force on Honor Code <i>Member & Co-Author of New P&S Honor Code Implemented 8/2012</i>
01/2010- Present	Columbia University Medical Center & Harlem Hospital Center Hip Hop Public Health Center <i>Co-Chair of Research</i>
10/2009- Present	Columbia University College of Physicians and Surgeons Major Clinical Year Evaluation Subcommittee <i>Voting member</i>
07/2009- Present	Columbia University College of Physicians and Surgeons Major Clinical Year Committee Member

07/2009- Present	Columbia University College of Physicians and Surgeons Clinical Faculty Committee Voting Member
2/2009-12/2010	Harlem Hospital Center, Department of Neurology Neurology Clinics <i>Chief</i>
07/2008- 12/2010	Harlem Hospital Center, Department of Neurology Performance Improvement Committee <i>Chairman</i>
08/2007- 12/2007	Columbia University Mind Brain Behavior Building Clinical Programming Committee <i>Member</i>

Professional Organizations and Societies

Memberships and Positions

1/2001-present	American Academy of Neurology Member
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Consultative

8/2016-present	Prophase LLC
9/2015-present	Bats Toi-Mercado Wrestling Headgear
7/2011	The Cloisters Museum: Sights & Scents Program for Dementia Patients & Caregivers

Journal Reviewer

(1 st year encountered)	Journal Name
2017	Neuroscience Letters
2017	Developmental Neuropsychology
2016	American Journal of Cardiology
2016	British Journal of Sports Medicine
2016	Patient Education and Counseling
2015	JAMA Neurology
2015	Canadian Geriatrics Journal
2015	Pediatrics
2015	The Physician and Sportsmedicine

2015	BMC Neurology
2015	Journal of Athletic Enhancement
2015	BMC Research Notes
2014	Journal of Science and Medicine in Sport
2014	Journal of Neurotrauma
2014	American Journal of Epidemiology
2014	PLoS One
2014	Neurobiology of Aging
2013	The Medical Letter
2013	Health Education & Behavior
2012	Journal of Clinical Periodontitis
2012	Journal of the American Geriatrics Society
2011	Journal of the International Neuropsychological Society
2011	European Journal of Neurology
2011	Journal of Pediatric Neurology
2010	American Journal of Public Health
2010	Journal of Neurological Sciences
2009	Neurology
2009	Journal of Neurology, Neurosurgery, and Psychiatry
2009	Alzheimer's & Dementia: The Journal of the Alzheimer's Association
2009	European Journal of Clinical Nutrition

Editorial Board

2017	Associate Editor (Neurology), Netter's Integrated Review of Medicine (Elsevier, in preparation)
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Fellowship and Grant Support

Present Support

10/2015- 12/2017	Brain MRI in Contact Sports	PI	\$10,000	Taub
07/2015- 12/2016	Columbia Coulter Program TEAM Helmet (Transmitted Electroencephalogram Activity Monitoring)	Co-PI	\$53,000 direct	CU
09/2014- 08/2017	U54 NS081765 (PI: Ogedegbe, G) Center for Stroke Disparities Solutions	Co-I	\$252,847 (Direct, current FY)	NINDS
05/2013- 04/2017	T35 AG044303 The BRAIN (Brief Research in Aging and Interdisciplinary Neurosciences) Project	Co-PI/Co-Director	\$467,190 (Direct, total)	NIA

4/2016- 3/2021	R01 NS067443 06-10 PI O. Williams) Hip Hop Stroke Statewide Dissemination	Co-I	\$769,647 (Y1)	NINDS
2/2011- PRESENT	UF1 AG032438 Dominantly Inherited Alzheimer Network (PI Bateman)	Co-I/Site PI		NIA
7/2008- PRESENT	P50 AG008702 (PI Honig) Columbia University ADRC	Co-I (clinical core)		NIA

Past Support

12/2010- 11/2015	R01 NS067443 01-05 (PI O. Williams) Hip Hop Stroke RCT	Co-I	\$664,619 (Direct, current FY)	NINDS
10/2013- 08/2016	R56 DE022568 WHICAP-PERIoD: Periodontitis Exposure and Risk of Incident Dementia	Co-PI Administrative PI	\$999,999 (Direct, total)	NIDCR
01/2012- 03/2014	<i>Assessing efficiency of learning the neurologic exam with a visual tracking device</i>	PI	\$9090 (Direct)	AAN, CU
03/2010- 03/2011	<i>Serologic antibodies to periodontal pathogens in incident AD and matched controls</i>	PI	\$25000 (Direct)	Taub
05/2009- 12/2010	<i>A Renaissance of the Mind: Healing Memories with Art in Central Harlem</i>	PI	\$11000 (Direct)	Private
06/2008- 12/2010	New Investigator Research Grant <i>Arteriosclerosis and Alzheimer disease in a multiethnic cohort of autopsy brains.</i>	PI	\$86819 (Direct)	Alz. Assn
07/2006- 06/2008	T32 NS07153 Public Health Service training grant	Fellowship		NINDS
07/2006- 06/2008	Charles L. and Anne L. Saunders Brown Fellowship	Fellowship		Private

04/2006	58 th Annual Meeting Resident Scholarship To present <i>Stroke Associated with Cocaine Abuse: No Longer Just a Problem of the Young</i>	Co-I	AAN
09/2005	130 th Annual Meeting Travel Scholarship To Present <i>Recombinant Tissue Plasminogen Activator (rtPA) for Acute Ischemic Stroke among African Americans in Central Harlem</i>	Co-I	ANA
07/2005-06/2006	5 T32 NS007155-25 Public Health Service Grant (Residency Research Support)	Co-I	NINDS

Pending support

PASSED NIA COUNCIL	1R01AG054536-01 Old SCHOOL Hip Hop: A randomized controlled trial to improve dementia knowledge PENDING CONGRESSIONAL APPROVAL FY2017 BUDGET	PI	NIA
REVIEW COMPLETE, SCORE PENDING 2/17	R01, NS(number TBD) (O. Williams)Effect of an integrated nutrition-math curriculum to improve food-purchasing behavior of children.	Co-I	NINDS
PENDING REVIEW 5/2017	U01CE002868: Hip-Hop Heads-Up: An innovative intergenerational approach to improve knowledge, attitudes and behavior about sports-related concussions in youth and their parents	PI	CDC

Educational Contributions

Direct Teaching/Precepting/Supervising		Annual Enrollment:
Specific Courses (All at Columbia University)		
09/2015-present	BMEN 3910 Senior Design Class	35

	Biomedical Engineering Clinician Lecturer	
09/2014-10/2014	MEDIM6107 The Body in Health & Disease Problem-based learning Neuroscience cases	25
09/2012-11/2014	MEDIM6107 Team Based Learning, Neuroanatomy	25
5/2012-2015	Art Matters: An Evening for Medical Students at the Frick Lecturer	25
08/2011-2016	CPMDN04P0 Clinical Practice-IV	170
4/2011	The Cognitive Neuroscience of Aging (PSYCH G4222) Lecturer	20
07/2009-12/2016	NEURM 7201003 Neurology clerkship (as Director)	170
07/2009-3/2016	Neurology Subinternships Director (NU1P, NU01P)	12
03/2009-Present	P9493 Neuroepidemiology	15
07/2008-present	Columbia University Medical Center Neurology Resident Inpatient/Outpatient Supervision	30
08/2007-06/2011	Harlem Hospital Center Inpatient Service, Consult, Outpatient Attending	35
1995-1997	Vanderbilt University Vanderbilt Student Volunteers for Science	30

Advising and Mentorship

- 7/2016-
6/2017 **Minji Kim MD (as PGY4 Neurology Resident)**
Drawing upon Minji’s research background in fMRI, she will assist with implementation of the Taub Research Pilot MRI study of collegiate athletes.

- 4/2016-
3/2017 **David Baker (as 4th year P&S medical student)**
For his longitudinal scholarly project, I will mentor David in an exploration of the secular trends in concussion diagnosis in NY State and nationally.

- 3/2016-present **Cecilia Davis-Hayes (as 4th year P&S medical student)**
Cecilia will dedicate a year to several TBI research projects including MRI in active football players and the epidemiology of concussions including gender differences of Columbia athletes
- 12/2015-5/2016 **Colin Klenk (as 4th year P&S medical student)**
For his longitudinal scholarly project, Colin helped develop a curriculum for the planned Hip Hop Volunteer Project, which aims to implement a large-scale elementary health education program in NYC schools using undergraduate and graduate students from Columbia University with an interest in public health.
- 05/2015-present **Jeremy Mitnick (as college junior, University of Michigan)**
Jeremy worked as a summer research observer, assisting with developing a new cohort of former Columbia collegiate athletes having automated neuropsychological testing pre and post-concussion
- 05/2014-04/2015 **Elaine Su (as 4th year P&S medical student)**
For her longitudinal scholarly project, I mentored Elaine in a study exploring the use of retinal optical coherence tomography (OCT) as a tool to identify neurodegenerative illness in a multidisciplinary practice
- 02/2014-present **Daniel Arteaga (as 1st year P&S medical student)**
During summer 2014, I mentored Daniel in developing a standardized mortality ratio study entitled “Neurodegenerative Mortality Among a Cohort of Former College Football Players.” Analyses are ongoing.
- 02/2014-present **Cailey Simmons (as 1st year medical student at SUNY-Albany)**
During summer 2014, I mentored Cailey in studying the longitudinal Hip Hop Stroke experience from 2005-2014, exploring secular trends in knowledge as well as the influence of environment, neighborhood, and school quality. The work has led to presentations at the 2015 International Stroke Conference and a publication in the *Journal of Stroke and Cerebrovascular Diseases*.
- 02/2012-05/2013 **Wei-Jen Hsieh (as a 4th year P&S medical student)**
As part of her longitudinal scholarly project, I mentored Wei Jen in her development of an integrated math/health curriculum as part of our larger interdisciplinary health project “Hip Hop HEALS (Healthy Eating and Living in Schools)”
- 02/2013-present **Hannah Roberts (as 1st year P&S medical student)**
During summer 2013, I mentored Hannah to complete 2 projects relating art-centered experiences and Alzheimer care: 1) caregiver/patient participant

perspective and 2) medical students perceptions of dementia before and after the program. Both studies were presented at the 2014 AAN meeting. Study #1 was supported by T35 AG044303; study #2 was supported by the P&S Steven Miller Memorial Fellowship and was later published in *Neurology*.

- 06/2012-05/2013 **Luke White, MD (as PGY3-4 Psychiatry Resident)**
Studied medical student perceptions of Alzheimer disease and chronic illness as it affects the family unit
- 03/2012-06/2014 **Marco Gonzalez-Castellon, MD (as PGY4-6 Resident/Neurovascular Fellow)**
Co-investigator on Assessing efficiency of learning the neurologic exam with a visual tracking device (PI: Noble). Presented as platform at AAN March 2013. Project ongoing.
- 03/2012-06/2014 **Christina Blum, MD (as PGY3-4 Resident)**
Co-investigator on Assessing efficiency of learning the neurologic exam with a visual tracking device (PI: Noble)
- 01/2012-05/2013 **Tanzid Shams, MD (as PGY-6 Pediatric Neurology Fellow)**
Co-investigator on "Concussion in Columbia Undergraduate Football Players (2000 -2011)" (PI: Noble). Awarded best poster at Department of Neurology Resident Research Day 2012; paper was presented at ANA 2013. Manuscript is in development.
- 06/2011-05/2012 **Ben Tolchin, MD (as PGY3 neurology resident)**
Developed literature review regarding history of child-mediated health communication; manuscript in development.
- 07/2009-present Faculty Advisor for P&S Chapter of American Academy of Neurology's Student Interest Group in Neurology (SIGN). Coordinate with chapter's rotating presidents

Educational Administration and Leadership

		# of annual learners
02/2010-Present	Hip Hop Public Health, Department of Neurology Co-Director of Research	6,000
07/2009-present	Columbia University College of Physicians & Surgeons Neurology Clerkship Director	150-175

Instructional/Educational Materials used in Print or other Media

1/2015-
present **Scientific American Neurology**
Neurology Clerkship Co-Director
Published online 10/2015

Community Education

01/2012-
present Old SCHOOL (Seniors Can Have Optimal aging and Ongoing Longevity) Hip Hop
A novel child-mediated health communication program
Creator

01/2010-
Present Neurology clerkship: New curricula
Creator

2006-
present Hip Hop Stroke
A novel child-mediated health communication program
Co-Creator

Patents & Inventions:

US Provision Patent Application for TEAM (Transmitted Electroencephalogram Activity Monitoring) helmet, Co-inventor Barclay Morrison PhD, filed 6/8/2016

Publications

ORCID: 0000-0003-0648-6702

Google Scholar Statistics: Citations: 1375, h-index: 16, i10-index: 19.

Peer-Reviewed Research Publications in Print or other Media

**indicates first, senior, and/or corresponding author*

1. Baker DR, Kulick ER, Boehme AK, **Noble JM**. Effects of the New York State Lystedt Law on Concussion-Related Emergency Healthcare Utilization among Adolescents, 2005-2015 (under review, *British Journal of Sports Medicine*)
2. *Davis-Hayes C, Gossett JD, Levine WN, Shams T, Harada J, Mitnick J, **Noble JM**. Gender Specific Outcomes and Predictors of Concussion Recovery: A Single Site 15-year College Experience (in preparation for *Sports Medicine*)
3. Devanand DP, Pelton GH, D'Antonio K, Strickler JG, Kreisl WC, **Noble J**, Marder K, Skomorowsky A, Huey ED. Low-dose Lithium treatment for agitation and psychosis in Alzheimer's disease and Frontotemporal dementia: A case series. *Alzheimer Disease & Associated Disorders*. (in press)
4. *Simmons C, **Noble JM**, Leighton-Herrmann E, Hecht MF, Williams O. Community level measures of stroke knowledge among children: Findings from Hip Hop Stroke. *Journal of Stroke and Cerebrovascular Diseases*. 2017. 26 (1), 139-142
5. *Williams O, Leighton-Herrmann E, Hecht MF, DeSorbo A, Gerin W, Hedmann M, Shelton R, Tolchin B, and **Noble J**. Child-mediated health communication: A conceptual framework for increasing stroke literacy in hard to reach populations. *Journal of Health Disparities Research and Practice*. 2016. 9(4), 82-97.
6. Williams, O, Leighton-Herrmann E, DeSorbo A, Eimicke J, Abel-Bey A, Valdez L, **Noble J**, Gordillo G, Ravenell J, Ramirez M, Teresi JA, Jean-Louis G, Ogedegbe G. The effect of two 12-minute culturally targeted films on intent to call 911 for stroke. *Neurology*. 2016 May 24;86(21):1992-5
7. *Williams O., Leighton-Herrmann, E., DeSorbo, A., Hecht, M., Hedmann, M., Huq, S., Gerin, W., Chinchilli, V., Ogedegbe, G., and **Noble, J.** (2015). Hip Hop Stroke: Study protocol for a randomized controlled trial to address stroke literacy. *Journal of Clinical Trials*. 5(242), 2167-0870.
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10. Ravenell J, Leighton-Herrmann E, Abel-Bey A, DeSorbo A, Teresi J, Valdez L, Gordillo M, Gerin W, Hecht M, Ramirez M, **Noble J**, Cohn E, Jean-Louis G, Spruill T, Waddy S, Ogedegbe G, Williams O. Tailored approaches to stroke health education (TASHE): study protocol for a randomized controlled trial. *Trials*. 2015, 16:176.
11. Monserrate A, Ryman D, Ma S, Xiong C, **Noble JM** et al. Factors Associated With the Onset and Persistence of Post–Lumbar Puncture Headache. *JAMA Neurol*. 2015 Mar 1;72(3):325-32.
12. ***Noble JM**, Hedmann MG, Williams O. Improving dementia health literacy using the FLOW mnemonic: pilot findings from the Old S.C.H.O.O.L. Hip Hop Program. *Health Educ Behav*. 2015 Feb;42(1):73-83.
13. Seifan A, Marder KS, Mez J, **Noble JM**, Cortes EP, Vonsattel JP, Honig L. Hippocampal Lamina Distribution of Tau Relates to Alzheimer’s Disease and Age of Onset. *J Alzheimers Dis*. 2015;43(1):315-24.
14. ***Noble JM**, Scarmeas N, Celenti RS, Elkind MSV, Wright CB, Schupf N, Papapanou PN. Serum IgG antibody levels to periodontal microbiota are associated with incident Alzheimer Disease. *PLoS One*. 2014 Dec 18;9(12):e114959
15. *Williams O, Hecht MF, DeSorbo AL, Huq S, **Noble JM**. Effect of a novel video game on stroke knowledge of 9- to 10-year-old, low-income children. *Stroke*. 2014 Mar; 45(3):889-92.
16. DeSorbo A, **Noble J**, Shaffer M, Gerin W, Williams O. The Use of an Audience Response System in an Elementary School-Based Health Education Program. *Health Educ Behav*. 2013 Oct; 40(5):531-5.
17. Williams OA, DeSorbo AL, **Noble JM**, Shaffer M, Gerin W. Long-term learning of stroke knowledge among children in a high-risk community. *Neurology*. 2012 Aug 21;79(8):802-6.
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19. Williams O, DeSorbo A, **Noble JM**, Gerin W. Child-Mediated Stroke Communication: Findings from Hip Hop Stroke. *Stroke*. 2012 Jan;43(1):163-9.
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Reviews, Chapters, Monographs, Editorials

1. **Noble JM** Editorial: "The long drive ahead to better understanding chronic traumatic encephalopathy: First (case) and 10 (years later)." *JAMA Neurology* 2016 Mar 1;73(3):263-5.
2. **Noble JM** "The Neurological Examination" Merritt's Neurology, 13th ed. Eds: Elan D. Louis and Stephan Mayer, Wolters Kluwer, 2015.
3. ***Noble JM**, Crary J. "Concussion" Merritt's Neurology, 13th ed. Eds: Elan D. Louis and Stephan Mayer, Wolters Kluwer, 2015.
4. ***Noble JM**, Weimer LH. Neurologic complications of alcoholism. *Continuum*. 2014 Jun;20(3 Neurology of Systemic Disease):624-41
5. ***Noble J**, Hesdorffer D. Sport-Related Concussions: A Review of Epidemiology, Challenges in Diagnosis, and Potential Risk Factors. *Neuropsychol Rev* 2013 Dec;23(4):273-84.
6. ***Noble J**, Scarmeas N, Papapanou PN. Poor oral health as a chronic, potentially modifiable dementia risk factor: review of the literature. *Curr Neurol Neurosci Rep*. 2013 Oct;13(10):384.
7. Rippon G and **Noble JM**. "Parkinson Disease Dementia and Dementia with Lewy Bodies." *Current Diagnosis and Treatment in Neurology*, 2nd ed. Ed: John CM Brust, Lange 2012.
8. *Sevigny J, Frontera J, **Noble JM**. Viral Infections of the Nervous System, *Current Diagnosis and Treatment in Neurology*, 2nd ed. Ed: John CM Brust, Lange 2012.
9. ***Noble JM**, Scarmeas N. "Frontotemporal dementia" *Merritt's Neurology*, 12th ed. Eds: Lewis P. Rowland and Timothy A. Pedley. LWW 2010.
10. ***Noble JM**, Scarmeas N. Application of PET Imaging to Diagnosis of Alzheimer's Disease and Mild Cognitive Impairment. *Int Rev Neurobiol* 2009;84C:133-149

11. ***Noble JM**, Patterson MC. "Vitamin C Deficiency," invited review for *BMJ Point of Care* (BMJ Publishing Group), original publication 2008; updated 2009-14.
12. ***Noble JM**, Scarmeas N. "Cognitive impairment." *Improving Oral Health for the Elderly: An Interdisciplinary Approach*. Eds. Ira B. Lamster, DDS, MMSc, and Mary E. Northridge, PhD, MPH. Springer US Books 2008.
13. Luchsinger JA, **Noble JM**, Scarmeas N. Diet and Alzheimer's Disease. *Curr Neurol Neurosci Rep*. 2007 Sep;7(5):366-372.

Books/Textbooks for Medical or Scientific Community

1. Gulf War and Health: Volume 10: Update of Health Effects of Serving in the Gulf War, 2016 (2016), Deborah Cory-Slechta and Roberta Wedge, Editors. Committee member.
2. Merritt's Neurology 13th Edition (Lippincott Williams & Wilkins). Section Editor, "Diagnostic Tests" Wolters Kluwer, 2015.

Books/Textbooks for General Public

1. "Navigating Life with Dementia" (Oxford University Press/American Academy of Neurology), Author. Second draft in preparation, anticipated publication 2018.

Case Reports:

1. *Etienne M, **Noble JM**. Multiple parenchymal tuberculomas without tuberculous meningitis. *Arch Neurol*. 2007;64:1045-1047.
2. ***Noble JM**, Mandel A, Patterson MC. Scurvy and Rickets Masked by Chronic Neurologic Illness: Revisiting "Psychologic Malnutrition." *Pediatrics*. 2007 March;119(3):e783-90.
3. Sommerville RB, **Noble JM**, Vonsattel JP, DeLaPaz R, Wright CB. Eosinophilic Vasculitis in an Isolated CNS Distribution. *J Neurol Neurosurg Psychiatry*. 2007;78:85-88.
4. ***Noble JM**, Anderson CT, Etienne M, Williams O, Adams DJ. Sarcoid meningitis with fulminant delirium and markedly abnormal cerebrospinal fluid. *Arch Neurol* 2007 Jan;64(1):129-31
5. ***Noble JM**, Canoll P, Honig LS. Brain Tumor-Associated Dementia. *Sci. Aging Knowl. Environ*. 2005 Aug 24; 2005(34):dn2

Letters to the Editor

1. *Dhamoon M, **Noble JM**. [Correspondence to] Intranasal insulin improves cognition and modulates beta-amyloid in early AD. *Neurology*. 2009 Jan 20;72(3):292-294.
2. ***Noble JM**, Hauser WA. [Correspondence to] Effects of rivastigmine on cognitive function in patients with traumatic brain injury. *Neurology* 2007 May 15;68(20):1749

Thesis

1. "Possible association of periodontitis with cognitive impairment among older adults: analysis of the Third National Health and Nutrition Examination Survey (NHANES-III)." For Master's of Epidemiology, Mailman School of Public Health, graduated 5/2008.

Other Non-Peer Reviewed Publications in Print or Other Media

Published Abstracts

1. ***Noble JM**, Simmons C, Hecht MF, Williams O. Stroke Knowledge Among Children Is Associated With Measures Of Economic Need. *Stroke* 46 (Suppl 1), ATP391-ATP391
2. ***Noble JM**, Simmons C, Hecht MF, Williams O. Baseline Stroke Knowledge of 4th-6th Grade Children in New York City Public Schools Has No Appreciable Trend from 2005-2014. *Stroke* 46 (Suppl 1), ATP390-ATP390
3. Seifan A, **Noble J**, Mez J, Marder K, Honig L. "Hippocampal Laminar Distribution of Phospho-Tau Relates to Alzheimer's Disease and Age of Death" *Neurology* April 8, 2014 vol. 82 no. 10 Supplement P1.247
4. *Roberts HJ, **Noble JM**. "Changing Medical Student Perceptions of Dementia: An Arts-Centered Experience" *Neurology* April 8, 2014 vol. 82 no. 10 Supplement P1.318
5. *Roberts HJ, Halpin-Healy C, McGinniss R, **Noble JM**. "Museum-based creative arts programming is associated with less dementia patient apathy and better caregiver well-being" *Neurology* April 8, 2014 vol. 82 no. 10 Supplement P1.002
6. *Shams T, Brickman AM, Gossett J, Levine W, **Noble JM**. Subtle Post-Concussion Cognitive Impairment Is Under-Recognized, and yet Identifiable: Findings from the Concussion in Columbia University Sports Student (ConCUSS) Study [ABSTRACT] *Ann Neurol* Dec 2013: 74(S17); page S37.
7. Wright B, Lewis L, **Noble J**, Vonsattel JP, Khandji A, Sommerville R, Wright C. Case Series: Eosinophilic Vasculitis Isolated to the Central Nervous System (P02.053) *Neurology* February 14, 2013 80: P02.053
8. *Gonzalez-Castellon M, Phillips M, Blum C, Goldberg M, **Noble JM**. Assessing the Efficiency of Learning the Neurologic Exam with a Visual Tracking Device (S27.007). *Neurology* February 14, 2013 80:S27.007
9. ***Noble J**, Kang M-S, Honig L. Arteriosclerosis and Alzheimer's disease: A case-control pathologic study. *Alzheimer's & Dementia* 2012, 8(4), P298

10. Collins-Praino L, Scarmeas N, Manly J, Schupf N, **Noble J**, Provenzano F, Griffith E, DeCarli C, Mayeux R, Luchsinger J, Brickman A. White Matter Hyperintensities May Mediate the Relationship Between Inflammation and Cognition in an Elderly Cohort. *Alzheimer's & Dementia* 2012, 8(4), P523
11. *Williams O, DeSorbo A, **Noble J**. Hip Hop Stroke: Long-Term Retention of Stroke Knowledge Among Sixth Graders Living in a Low-Income Neighborhood. *Stroke* 2012 43: A2476
12. *Williams O, DeSorbo A, **Noble J**. Hip Hop Stroke: The Standalone Effect of Musical Cartoons on Stroke Knowledge of Fourth Grade Children Living in a Low-Income Neighborhood. *Stroke* 2012 43: A2476
13. ***Noble J**, Scarmeas N, Celentia R, Elkind M, Wright C, Schupf N, Papapanou N. Serum Antibodies to Periodontal Pathogens are associated with Incident Alzheimer Disease. *Alzheimer's & Dementia* 2012, 8(4), P498
14. *Williams OA, Gerin W, DeSorbo AL, **Noble JM**. "A Novel Interventional Strategy to Improve Stroke Awareness: The Hip Hop Stroke Project." *Psychosomatic Medicine* 2011; 73 (3) A100.
15. *Williams O, DeSorbo A, **Noble JM**. Lifetime Acquired Stroke Knowledge in a High Risk Community: Parents Versus Children. *Annals of Neurology*, 2010, 68 (S14), p S11
16. ***Noble J**, Schupf N, Luchsinger J. Relation of high sensitivity C-reactive protein with plasma amyloid beta. *Neurology* 2009; 72 Suppl 3: A53
17. ***Noble JM**, Manly JJ, Schupf N, Tang MX, Mayeux R, Luchsinger JA. "Relation of C-reactive protein to cognitive impairment." *Alzheimer's & Dementia: The Journal of the Alzheimer's Association* 2009; 5(4S): P297
18. Luchsinger JA, **Noble JM**, Tang MX, Mayeux R. "Hyperinsulinemia, defined as low adiponectin or type 2 diabetes in the elderly, is related with higher late-onset Alzheimer's disease risk" *Alzheimer's & Dementia: The Journal of the Alzheimer's Association* 2009; 5(4S): P386
19. ***Noble J**, Borrell LN, Papapanou PN, Elkind M, Scarmeas N, Wright C. Association of the Periodontitis Pathogen *Porphyromonas gingivalis* with Poor Memory: Analysis of the Third National Health and Nutrition Examination Survey (NHANES-III). *Neurology* 2008; 70 Suppl 1: A191.
20. Williams O, Wowo B, **Noble J**, Brust J. Insurance Coverage And Ambulance Use During Acute Stroke In A Low Income Inner City Population. *Stroke* 2008; 39:627.

21. ***Noble JM**, Scarmeas N, Honig L. Challenges in dementia diagnosis in a multiethnic population. *Neurology* 2007; 68 Suppl 1:A237
22. ***Noble JM**, Manly JJ, Schupf N, Mayeux R, Luchsinger JA. Possible disparate contribution of diabetes to cognitive impairment in elderly minorities. *Neuroepidemiology* 2007; 28:125.
23. *Williams O, **Noble JM**. "Hip-Hop" Stroke Education in Central Harlem Elementary Schools: Pilot Data from a Novel Intervention and Proposed Educational Model for Stroke Awareness Developed by the National Stroke Association. *Stroke* 2007.38:457-8.
24. Williams O, **Noble JM**, Brust JCM. Stroke Associated with Cocaine Abuse: No Longer Just a Problem of the Young. *Neurology*. March 2006; 66 (Suppl 2): A384.
25. Williams O, **Noble JM**, Brust JCM. Recombinant Tissue Plasminogen Activator (rtPA) for Acute Ischemic Stroke among African Americans in Central Harlem. *Annals of Neurology*, 2005, 58 (S9), p S45

Non-authored, Credited Publications

1. Amyloid- β 11C-PiB-PET imaging results from 2 randomized bapineuzumab phase 3 AD trials. Liu E, Schmidt ME, Margolin R, Sperling R, Koeppe R, Mason NS, Klunk WE, Mathis CA, Salloway S, Fox NC, Hill DL, Les AS, Collins P, Gregg KM, Di J, Lu Y, Tudor IC, Wyman BT, Booth K, Broome S, Yuen E, Grundman M, Brashear HR; Bapineuzumab 301 and 302 Clinical Trial Investigators. *Neurology*. 2015 Aug 25;85(8):692-700.
2. Merlin LR, Horak HA, Milligan TA, Kraakevik JA, Ali II. A competency-based longitudinal core curriculum in medical neuroscience. *Neurology*. 2014 Jul 29;83(5):456-62.
3. Salloway S, Sperling R, Fox NC, Blennow K, Klunk W, Raskind M, Sabbagh M, Honig LS, Porsteinsson AP, Ferris S, Reichert M, Ketter N, Nejadnik B, Guenzler V, Miloslavsky M, Wang D, Lu Y, Lull J, Tudor IC, Liu E, Grundman M, Yuen E, Black R, Brashear HR; Bapineuzumab 301 and 302 Clinical Trial Investigators. Two phase 3 trials of bapineuzumab in mild-to-moderate Alzheimer's disease. *N Engl J Med*. 2014 Jan 23;370(4):322-33.

Invited and/or Peer-Selected Presentations at Regional, National or International Levels:

International

1. 11/10/2016 **United Nations, NGO Committee on Mental Health**
Comprehensive Healthcare: Integration of Physical and Mental Healthcare for the Prevention and Control of NCDs Across the Lifespan
2. 3/13/2015 **International Association for Dental Research General Session,**
Boston, MA

Papapanou PN, Burkett S, Watson C, **Noble JM**. Oral Health Status among Elderly Participants in the WHICAP Study. (Presented by PNP)

3. 3/15/2013 **Alzheimer's Association International Conference**, Boston MA
"Public Health and Psychosocial: Education, Training and Technological Applications" Session
***Noble JM**, Hedmann MG, Williams O. Teaching Children about Dementia: Pilot Findings from the Hip Hop Old S.C.H.O.O.L. (Seniors Can Have Optimal aging and Ongoing Longevity) Program. (Presented by JMN)
4. 2/7/2007 **International Stroke Conference**, San Francisco, CA
"Prevention Strategies" Session
*Williams O, Noble JM. "Hip-Hop" Stroke Education in Central Harlem Elementary Schools: Pilot Data from a Novel Intervention and Proposed Educational Model for Stroke Awareness Developed by the National Stroke Association (presented by OW)

National

6/8-9/2016

The Art of Examination: Art Museum and Medical School Partnerships

Museum of Modern Art, NY

Presentation: "Research & Evaluation" and Panelist: "Counting What Counts: Research and Evaluation in Arts-based Medical Education"

2/10/2016

Gulf War and Health Volume 10 Related Briefings (Capitol Hill, Washington DC)

Veterans Affairs Administration

Senate Veterans Affairs Committee

House of Representatives Veterans Affairs Committee

10/16/2015

American Academy of Neurology, Fall Meeting, Las Vegas, NV
"Neurology Update: Dementia"

07/15-16/2015

Big 10/CIC Ivy League TBI Research Collaboration, 3rd annual meeting, Chicago
"Breakfast by Position: Athletics" and "Connecting the Dots: Report from the funding working group"

4/18/2015

American Academy of Neurology, Annual Meeting Washington DC

Clerkship Director & Program Director Session: Critical Thinking and Professionalism
“Thinking about Finches, Firetrucks, and Ways to Develop Clinical Reasoning Skills”

- 7/17/2014 **Big 10/CIC Ivy League TBI Research Collaboration**, 2nd annual meeting, Philadelphia “Active and Reconstructed Player Cohorts to Address Concussion Research Questions: Lessons from the Concussion in Columbia University Sports Students (ConCUSS) Studies”
- 3/2014 **AFTD’s 2014 Education Conference and Annual Meeting**—White Plains NY -small group session for caregivers
- 3/20/2013 **American Academy of Neurology Annual Meeting**, San Diego CA S27.007, part of S27: Neurologic Education.
*Gonzalez-Castellon M, Phillips M, Blum C, Goldberg M, Noble JM. Assessing the Efficiency of Learning the Neurologic Exam with a Visual Tracking Device Presented (by MGC)
- 5/4/2007 **World Federation of Neurology North American Regional Meeting Conference**, Boston, MA
*Noble JM, Manly JJ, Schupf N, Mayeux R, Luchsinger JA. Possible disparate contribution of diabetes to cognitive impairment in elderly minorities. (presented by JMN)
- 4/6/2006 American Academy of Neurology Annual Meeting, April 6, 2006 S54.005, part of S54: Uncommon Causes of Stroke
Williams O, Noble JM, Brust JCM. Stroke associated with cocaine abuse: no longer just a problem of the young. (Presented by JMN)

Regional

- 3/17/2016 **Department of Neurosurgery (CUMC)**
Grand Rounds: First (case) and 10 (years later):
The long path ahead to better understanding chronic traumatic encephalopathy
- 12/1/2015 **University of Florida, Department of Neurology Neurology Grand Rounds**
“10 years of Hip Hop Stroke: Improving knowledge, behavior, and ultimately access to acute stroke therapies”

- 11/18/2015 **17th Annual Stein Lecture**
New Jewish Home, Mamaroneck NY
 “Art-Centered Experiences And Cognitive Aging”
- 10/09/2015 **Alzheimer’s Association, NYC Chapter**
 Caregiver Training Conference
 “Overview of Alzheimer’s Disease”
- 10/7/2015 **HAS Harlem Advocates for Seniors: Discussion of Dementia**
 Panelist
- 4/1/2015 **Columbia University**
 2015 Mini-Symposium on the Internet of Things
 Human-Machine and Wearable Systems in Sports Related
 Concussion:
- 12/9/2014 **JCC Manhattan**
 “Concussion: Are Football + Sports Safe for Your Brain?”
- 10/20/2014 **Mailman School of Public Health**
 Robert Butler Aging Center Brown Bag Series
 “Museum-based, arts-centered experiences as a means to
 improve dementia caregiver burden”
- 10/10/2014 **Alzheimer’s Association, NYC Chapter**
 Caregiver Training Conference
 “Overview of Alzheimer’s Disease”
- 9/26/2014 **Woodrow Wilson School of Public and International Affairs,**
Princeton University
 Symposium: Concussions in youth sports as a public health
 concern
 “Epidemiological insights and unanswered questions in the
 continuum of concussion and chronic traumatic encephalopathy
 (CTE)”
- 9/10/2014 **Spence High School, New York City**
 Review of concussion diagnosis and management.
- 6/23/2014 **Alzheimer’s Association Brain Awareness Summit, Harlem State**
Office Bldg, NYC
 Review of AD.

- 6/7/2014 **St. Barnabas Medical Center**, Short Hills, NJ
Geriatric Care Symposium
“Update on Alzheimer’s Disease Diagnosis, Epidemiology, and Treatment”
- 4/24/2014 **Department of Orthopaedics, CUMC**
Grand Rounds: Review of Sports-Related Concussion
- 1/27/2014 **Collegiate High School, NYC**
Review of concussion care/diagnosis/management.
- 6/8/2011 **Department of Neurology, CUMC**
Grand Rounds: CPC Discussant
- 11/28/2010 **Greater New York Dental Meeting**
New York, NY
“Periodontitis: a potential risk for cognitive decline?”
- 5/6/2010 **Mountainside Hospital**
Montclair, NJ
Department of Medicine , Grand Rounds
“Periodontitis and cognitive impairment: implications of markers of systemic inflammation”
- 1/2010 **“Community based multidisciplinary interventions to prevent and treat Cognitive Impairment and its Co-morbidities”**
Columbia University Medical Center (CUMC),
*Noble JM. “Strategies to Decrease Cerebrovascular Risk in Harlem”
- 11/20/2009 **Harlem Hospital Center, New York, NY**
3rd Annual Treatment and Prevention of Stroke in Black and Hispanic Populations.
*Noble JM. The Relationship between Stroke and Dementia: Is this a Bigger Problem among Blacks and Hispanics?
- 6/3/2009 **Ageing Concerns Unite Us Conference**
New York State Association of Area Agencies on Aging
Albany, NY
*Noble JM and Williams O. Hip-Hop Stroke: Empowering an Inner City Community to Identify and Prevent Stroke in the Elderly.
- 10/24/2008 **36th Annual Meeting of the New York State Society of Aging**
Saratoga Springs NY

*Noble JM and Williams O. Hip-Hop Stroke: Stumbling Before Success.

Invited Media

- 2/28/2017 **AAN/PR Newswire Press release (online and in print)**
“Women May Be at Higher Risk for Sports-Related Concussion than Men”; republished in multiple news outlets in US, UK, Australia, and in Spanish
Related:
“Among College Athletes, Concussion Risk May Be Higher in Women”
(CUMC)
“Female Athletes More Prone to Recurrent Concussion”
(Med Page Today)
“Concussions More Likely in Female Athletes”
(Health Day)
- 1/29/2017 **Uni Mas (Univision NYC affiliate)**
“Contigo en la Comunidad” (discussing Alzheimer disease in Spanish)
- 3/15/2016 **Reuters (Life, online)**
“Gum disease may signal faster Alzheimer’s decline”
- 1/6/2016 **Discovery News (online)**
“What Can We Learn From Michael Keck’s Brain?”
- 1/4/2016 **Reuters Health (online)**
“Dead college football player leaves clues of concussions’ toll on brain”
- 1/4/2016 **STAT News (online)**
“After concussions, young football player’s plea: Donate my brain to science”
- 1/4/2016 **Health Day News (online)**
“College Football Player’s Autopsy May Offer Clues to Brain Trauma”
- 12/4/2015 **Columbia Magazine (print and online)**
“Picturing Alzheimer’s”

- 8/5/2015 **NPR (Health Shots Online Feature)**
 “Sharing Art Helps Medical Students Connect With Dementia Patients”
- 6/12/2015 **CBS This Morning (National TV)**
 Discussed concussion monitoring/protection in the context of Women’s World Cup Soccer
- 4/30/2014 **WNYC Brian Lehrer Show (Broadcast and online NPR Radio)**
 “Eyes on the Prize” (concussion in competitive cheerleading)
- 12/15/2013 **NBC Today Show (National TV)**
 Discussed chronic traumatic encephalopathy in context of American professional football
- 11/6/2013 **CBS New York (NYC area TV and online)**
 Discussed publication regarding childhood musical training and the effect on cognitive aging
- 10/24/2013 **NYU Arthur L. Carter Journalism Institute (online)**
 “Art Program in Harlem Strives to Improve Quality of Life for Those Affected by Alzheimer’s and Dementia”
- 10-11/2012 **Neurology Now (print)**
 “One Precious Gift”
 Discussion of brain donation as it relates to notable patient
- 8/23-24/2012 **CBS New York (NYC area TV and online)**
 “Dementia and Dental Health”
 Discussion of peer-reviewed publication #2
- 5/11/2012 **Uptown Radio (online radio)**
 “Fighting Effects of Alzheimer’s With Art And Interaction”
 Discussion of Arts & Minds and related works
- 1/31/2012 **Center for Advancing Health: Health Behavior News Service (online)**
 “Study Illuminates Ethnic Disparities in Diabetes and Cognitive Impairment”
 Discussion of peer-reviewed publication #5
- 5/24/ 2011 **World Journalism Institute Times Observer (online and print)**
 “Attacking Alzheimer’s Disease: New Non-profit Uses Art to Fight Dementia”

Discussion of Arts & Minds and related works

5/2010

Good Housekeeping (print)

Discussion of peer-reviewed publication #2

11/16/2009

BBC Radio 5 Live (terrestrial and online radio)

“Up All Night” with Dotun Adebayo

Discussion of peer-reviewed publication #2

11/13/2009

Reuters (online and print)

“Trouble thinking? Better see the dentist”

Discussion of peer-reviewed publication #2

10/15/2009

Neurology Today (online and print)

“Children in Minority Communities are Taught to Recognize Stroke Symptoms”

Discussion of peer-reviewed publication #1

12/ 2005

Neurology Today (online and print)

“Pilot Study Reports High Rates of Intracranial Hemorrhage in African-Americans Treated with tPA”

Discussion of Abstract #1