ADDENDUM TO FINAL TECHNICAL REPORT

AWARD NUMBER:

W81XWH-10-1-0623

TITLE:

Operation Brain Trauma Therapy

PRINCIPAL INVESTIGATOR:

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CONTRACTING ORGANIZATION:

University of Pittsburgh

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TYPE OF REPORT: Addendum to Final Technical Report, Revised Section 6. "Products, Inventions, Patent Application and/or Licenses"

PREPARED FOR: U.S. Army Medical Research and Materiel Command
Fort Detrick, Maryland 21702-5012

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Operation Brain Trauma Therapy

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13. SUPPLEMENTARY NOTES

14. ABSTRACT

Operation brain trauma therapy (OBTT) is a groundbreaking, rigorous, multi-center pre-clinical drug biomarker screening consortium for traumatic brain injury (TBI). It is supported by 2 closely linked grants from DoD, i.e., WH81XWH-10-1-0623 and OBTT extended studies (WH81XWH-14). As requested, this final report is restricted to work on the parent OBTT grant WH81XWH-10-1-0623. OBTT features testing in rat TBI models at the University of Pittsburgh, the Univ. of Miami, and WRAIR, in micro pig model at Virginia Commonwealth Univ., and biomarker studies at Banyan Biomarkers, Univ. of Florida, and Messina Univ. This grant supported testing of 8drugs. Screening carried out in >1200 rats included standard outcomes and >5000 biomarker samples. Levetiracetam showed the most benefit (in 2 modles). Glibenclamide and amantadine showed medel dependent benefit in contusion and penetrating brain injury. The biomarker GFAP performed well. OBTT produced 86 deliverables, including a full issue of J Neorotrauma. The biomarker data were well-received by FDA. OBTT is recognized as a pioneer in the TBI field.

15. SUBJECT TERMS

Traumatic Brain Injury, treatment, therapy, biomarker, combat causality care, neuroprotection

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
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ADDENDUM TO FINAL TECHNICAL REPORT

Revised Section 6. PRODUCT

Inventions, patent applications, and/or licenses*

*Identify inventions, patent applications with date, and/or licenses that have resulted from the research. State whether an application is provisional or non-provisional and indicate the application number.**

(The above instruction is taken from the language in Section 6 of the reporting requirements.)

Among the many therapies and biomarkers screened in pre-clinical studies by Operation Brain Trauma Therapy (OBTT), one of the items that was pursued was to develop a strategy to be able to assess the impact of the success of therapies in our in pre-clinical drug screening—to help provide evidence of target engagement for successful therapies. To that end we tested novel monoclonal antibodies to detect phospho-NMDA receptor synaptonuclear signaling and neuronal migration factor (pNSMF) (hybridoma clones 5A10D6 and 8H12C9). This was very novel and logical given that the most positive agent tested to date by OBTT is the anti-excitotoxic agent levetiracetam—which has key effects at the synapse. Since this was a new approach we submitted an invention disclosure at the time we received the monoclonal antibodies in order to pre-emptively protect them, and subsequently began testing the antibodies in the laboratory. However, the antibodies were not successful. No patent or license was thus pursued.

*The paragraph in your award entitled "Patents and Inventions Reporting Requirements" requires you to submit a final DD Form 882, "Report of Inventions and Subcontracts " and file invention disclosures and patent applications using the Interagency Edison (iEdison) system through the National Institutes of Health. Do not include the form or copy of the iEdison report in this addendum. Submit as instructed in the paragraph.