

**REPORT DOCUMENTATION PAGE**

*Form Approved  
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1. REPORT DATE (DD-MM-YYYY)		2. REPORT TYPE		3. DATES COVERED (From - To)	
4. TITLE AND SUBTITLE				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			19b. TELEPHONE NUMBER (Include area code)

## INSTRUCTIONS FOR COMPLETING SF 298

**1. REPORT DATE.** Full publication date, including day, month, if available. Must cite at least the year and be Year 2000 compliant, e.g. 30-06-1998; xx-06-1998; xx-xx-1998.

**2. REPORT TYPE.** State the type of report, such as final, technical, interim, memorandum, master's thesis, progress, quarterly, research, special, group study, etc.

**3. DATES COVERED.** Indicate the time during which the work was performed and the report was written, e.g., Jun 1997 - Jun 1998; 1-10 Jun 1996; May - Nov 1998; Nov 1998.

**4. TITLE.** Enter title and subtitle with volume number and part number, if applicable. On classified documents, enter the title classification in parentheses.

**5a. CONTRACT NUMBER.** Enter all contract numbers as they appear in the report, e.g. F33615-86-C-5169.

**5b. GRANT NUMBER.** Enter all grant numbers as they appear in the report, e.g. AFOSR-82-1234.

**5c. PROGRAM ELEMENT NUMBER.** Enter all program element numbers as they appear in the report, e.g. 61101A.

**5d. PROJECT NUMBER.** Enter all project numbers as they appear in the report, e.g. 1F665702D1257; ILIR.

**5e. TASK NUMBER.** Enter all task numbers as they appear in the report, e.g. 05; RFO330201; T4112.

**5f. WORK UNIT NUMBER.** Enter all work unit numbers as they appear in the report, e.g. 001; AFAPL30480105.

**6. AUTHOR(S).** Enter name(s) of person(s) responsible for writing the report, performing the research, or credited with the content of the report. The form of entry is the last name, first name, middle initial, and additional qualifiers separated by commas, e.g. Smith, Richard, J, Jr.

**7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES).** Self-explanatory.

**8. PERFORMING ORGANIZATION REPORT NUMBER.** Enter all unique alphanumeric report numbers assigned by the performing organization, e.g. BRL-1234; AFWL-TR-85-4017-Vol-21-PT-2.

**9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES).** Enter the name and address of the organization(s) financially responsible for and monitoring the work.

**10. SPONSOR/MONITOR'S ACRONYM(S).** Enter, if available, e.g. BRL, ARDEC, NADC.

**11. SPONSOR/MONITOR'S REPORT NUMBER(S).** Enter report number as assigned by the sponsoring/monitoring agency, if available, e.g. BRL-TR-829; -215.

**12. DISTRIBUTION/AVAILABILITY STATEMENT.** Use agency-mandated availability statements to indicate the public availability or distribution limitations of the report. If additional limitations/ restrictions or special markings are indicated, follow agency authorization procedures, e.g. RD/FRD, PROPIN, ITAR, etc. Include copyright information.

**13. SUPPLEMENTARY NOTES.** Enter information not included elsewhere such as: prepared in cooperation with; translation of; report supersedes; old edition number, etc.

**14. ABSTRACT.** A brief (approximately 200 words) factual summary of the most significant information.

**15. SUBJECT TERMS.** Key words or phrases identifying major concepts in the report.

**16. SECURITY CLASSIFICATION.** Enter security classification in accordance with security classification regulations, e.g. U, C, S, etc. If this form contains classified information, stamp classification level on the top and bottom of this page.

**17. LIMITATION OF ABSTRACT.** This block must be completed to assign a distribution limitation to the abstract. Enter UU (Unclassified Unlimited) or SAR (Same as Report). An entry in this block is necessary if the abstract is to be limited.



**59th Medical Wing**  
**Institutional Animal Care and Use Committee (IACUC)**  
Office of Clinical Research & Support/STCS  
1100 Wilford Hall Loop, Bldg 4430  
Lackland AFB, TX 78236-5300

**NOTICE OF ACTION REGARDING IACUC REVIEW**

**Date:** 30 Nov 18

**TO:** Capt Kole Spaulding/779 MDG

Your **Final Report** was reviewed by the WHASC IACUC during the **13 Nov 18** meeting. The Committee's decision is provided below:

**FWH20150086A** "Hydroxocobalamin with cardiopulmonary resuscitation compared to cardiopulmonary resuscitation alone in protection of neuronal cell death produced by global cerebral ischemia induced by cardiac arrest in swine (Sus Scrofa)", **PI: Capt Kole Spaulding/779 MDG**

The committee voted that this item **be approved as written. FOLLOW-UP: CLOSED**

**Name of Official**

MARIA E. DOMINGUEZ

**Title/Office Symbol/Phone**

Office of Research Protocol Support /SGVUS/292-6095

**Signature**

Info Copy To

**1. Protocol Number: FWH20150086A**

**2. Type of Research:** Animal

**3. Title:** Hydroxocobalamin with cardiopulmonary resuscitation compared to cardiopulmonary resuscitation alone in protection of neuronal cell death produced by global cerebral ischemia induced by cardiac arrest in swine (Sus scrofa)

**4. Principal Investigator (PI):**

Name	Rank	Date of IACUC Training	Branch of Service / Corps	Staff Resident Fellow Civilian	Department / Office Symbol	Email (if other than WHASC Outlook)	Phone
Kole Spaulding	O-3	Aug 2017	USAF	Resident	59 <sup>th</sup> EMDS/959 <sup>th</sup> CSPS	<a href="mailto:spaukole@email.arizona.edu">spaukole@email.arizona.edu</a>	208-599-1804

**5. Purpose:** The purpose of this study is to evaluate the effects of hydroxocobalamin in post cardiac arrest GCI in swine measured via 24 – 72 hour post injury global and microscopic neurohistopathology. Other dependent variables that will be measured as indicators of the quality of life post cardiac arrest will include 24-72 hour observation. Mean arterial blood pressure at 60 minutes, lactate and base excess will also be measured as secondary outcomes.

**6. Results:** This study is not complete, it has reached its triennial review date. A new protocol will be written and submitted.

Our primary goal was to complete protocol FWH20150042A first, which we did in December 2017. We completed 9 protocol development animals (amendments were submitted for additional animals). Our last protocol development animal was in January 2018, where we evaluated an 8 minute cardiac arrest model. The animal survived the 72 hours observation period. There was “rare neuronal necrosis in the CA1 area of the hippocampus” per Dr. Christensen. After further discussions between the study team and with our collaborator, Dr. Bebart, our primary focus moving forward will be the neurological function of the treated animal versus the control animals in an 8 minute cardiac arrest model.

**7. How may your findings benefit the Air Force?** Cardiac arrest and traumatic cardiac arrest are treated at FOBs, CACHEs, military and civilian hospitals. Cardiopulmonary resuscitation and emergency cardiovascular care is a relatively new field of investigation; however, the evidence that exists suggests that high quality chest compressions improve outcomes. Virtually all patients, military or civilian, young or old, that experience cardiac arrest will exhibit GCI. Mitigating the secondary effects of cardiac arrest would benefit all.

**8. Number of Animals**

Projected Enrollment of Animals at the Beginning of Study: 15

Actual Number of Animals Enrolled: 9

**9. Status of Animals Entered Into the Protocol:**

All animals that entered the study were in general good health. All animals were euthanized per protocol.

**10. Number of Animals Entered into the Study:**

	Number enrolled since last report	Total enrollment to date
Number of animals entered into the Study	4	9

**11. Status of Funds:** All funds were allocated. We have no budget deviations.

**12. Reason for Closure:** The study has reached its triennial renewal period.

**13. Specific Problems:**

- 1 - Delay in Senior Scientist returning to contract.
- 2 – Identifying a survivable model that produces brain ischemia.
- 3 – Delay in receiving items needed for TUNEL assay and immunohistochemistry

**14. Publications and Presentations:** None

**Presentations:**

These Presentations and Publications have/have not been cleared by 59 CRD and Public Affairs

**Publications:**

These Presentations and Publications have/have not been cleared by 59 CRD and Public Affairs.

**15. Exceptional Achievements:** None

**16. Signature of Principal Investigator:**

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San Antonio Military Medical Center  
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