## **Biopsy Report (form C)**

Complete this form for each patient referred for MH susceptibility evaluation. The MH muscle biopsy center director must review the completed form before it is submitted to the NAMHR.

Thank you!

#### **INSTRUCTIONS:**

- 1. This survey is only to be used by the director or staff of an MH diagnostic center.
- 2. Use this survey for each patient referred to you for MH evaluation, if they undergo muscle biopsy.
- 3. If any adult relatives wish to be registered by name, separate consent forms for participation in the Registry must be signed by that relative. If you wish to register a minor under the age of 18, a consent form must be signed by one of the minor's parent or guardian.
- 4. The Center Director must review and sign below to verify accuracy before it is submitted to the Registry.
- 5. Please download the completed form at end of survey for your records.

#### MH DIAGNOSTIC MUSCLE BIOPSY

(Answer for caffeine halothane contracture test or European IVCT test only. These tests are only done at MH Biopsy centers, and are different from regular pathology biopsies.)

# You have completed ... (of Form C - Biopsy Report) 10%

C1.yr - Year of muscle biopsy	
	(for example, if Dec 25th, 2017, please type in 2017)
C1.m - Month of muscle biopsy	
	(for example, if Dec 25th, 2017, please type in 12)
C1.d - Day of muscle biopsy	
	(for example, if Dec 25th, 2017, please type in 25)

C1.0 - If you have the Biopsy Report, please scan and upload the complete report.



C1.2 - Center which performed MH Biopsy (Caffeine halothane Contracture Test)	<ul> <li>○ Children's Hospital of Oklahoma (CODE: 20)</li> <li>○ Cleveland Clinic (CODE: 23)</li> <li>○ Hahnemann University (CODE: 01)</li> <li>○ Thomas Jefferson University (formerly Hahnemann CODE: 01)</li> <li>○ Toronto General Hospital (CODE: 05)</li> <li>○ Wake Forest University (CODE: 06)</li> <li>○ University of California at Davis (CODE: 07)</li> <li>○ Ottawa Hospital- Civic Campus (CODE: 04)</li> <li>○ Presbyterian University Hospital (Pittsburgh) (CODE: 22)</li> <li>○ Loyola University (CODE: 02)</li> <li>○ Mayo Clinic (CODE: 03)</li> <li>○ UCLA (CODE: 08)</li> <li>○ University of Iowa (CODE: 10)</li> <li>○ University of Florida (CODE: 21)</li> <li>○ University of Florida (CODE: 19)</li> <li>○ University of Manitoba (CODE: 11)</li> <li>○ University of Massachusetts (CODE: 12)</li> <li>○ University of Nebraska (CODE: 13)</li> <li>○ University of Texas-Houston (CODE: 14)</li> <li>○ University of Texas Medical Branch (CODE: 18)</li> <li>○ University of Washington (CODE: 15)</li> <li>○ University of Wisconsin CODE: 24)</li> <li>○ University of Wisconsin CODE: 25)</li> <li>○ Bowman Gray (CODE: 06)</li> <li>○ SUNY at Buffalo (CODE: 27)</li> <li>○ Federal University of Rio de Janeiro</li> <li>○ other (specify)</li> <li>(select one)</li> </ul>
C1.2.1 - If other, please specify	
C1.3 - MH Diagnostic Muscle Biopsy Results	<ul> <li>positive - MH susceptible</li> <li>negative - not susceptible to MH</li> <li>equivocal - MH susceptibility indeterminate</li> <li>control biopsy</li> </ul>
C1.4 - To date, how many control patients has this lab evaluated with the 1989 Biopsy Standards protocol?	
C1.5 - What was the reason for the MH diagnostic muscle biopsy?	☐ fulminant MH ☐ possible MH (or possible MH event) ☐ family history of MH ☐ control ☐ negative genetic test ☐ other (specify) (check all applicable)
C1.5.1 - If negative genetic test, where is the location?	
C1.5.2y - If negative genetic test, which year was the test?	(for example, 2017)

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C1.5.2m - If negative genetic test, which month was the test?	(for example, 12)	
C1.5.2d - If negative genetic test, which day was the		
test?	(for example, 25)	
C1.5.3 - If negative genetic test, which exons examined?		
C1.5.4 - If other, please specify:		
C1.6y - What's the year of anesthetic induction for muscle biopsy?	(for example, 2017)	
	(for example, 2017)	
C1.6m - What's the month of anesthetic induction for muscle biopsy?		
Thusele blopsy:	(for example, 12)	
C1.6d - What's the day of anesthetic induction for		
muscle biopsy?	(for example, 25)	
C1.6t - What's the time of anesthetic induction for		
muscle biopsy?	(for example, 18:30)	
C1.7y - What's the year that muscle was excised?		
	(for example, 2017)	
C1.7m - What's the month that muscle was excised?		
	(for example, 12)	
C1.7d - What's the day that muscle was excised?		
	(for example, 25)	
C1.7t - What's the time that muscle was excised?		
	(for example, 18:30)	
C1.8 - Which muscle was biopsied?	<ul><li>vastus</li><li>rectus abdominus</li><li>gracilis</li><li>other (specify)</li></ul>	
C1.8.1 - If other, please specify:		
C1.9 - Has additional muscle tissue been stored?	○ Yes ○ No	



C1.9.1 - If additional muscle tissue has been stored, what is the location?		
C1.10 - Has additional blood specimen been stored?	○ Yes ○ No	
C1.10.1 - If additional blood specimen has been stored, wh	at is the sample ID#?	



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MEDICATIONS		
You have completed (of Form C - Biopsy Report)		
20%		
C2.1 - Were any medications being taken contains the following agents at the time of biopsy?	☐ calcium channel blocker ☐ neuroleptic agent ☐ adrenergic agent ☐ lipid lowering agent ☐ No medication taken ☐ other (please specify) (check all applicable)	
C2.1.1a - If containing calcium channel blocker, what is the name of drug?		-
C2.1.1b - Hrs. before biopsy:		
	(hrs)	-
C2.1.2a - If containing neuroleptic agent, what is the name of drug?		-
C2.1.2b - Hrs. before biopsy:		
	(hrs)	-
C2.1.3a - If containing adrenergic agent, what is the name of drug?		
C2.1.3b - Hrs. before biopsy:		
	(hrs)	•
C2.1.4a - If containing lipid lowering agent, what is the name of drug?		-
C2.1.4b - Hrs. before biopsy:		
	(hrs)	-
C2.1.5a - If other agent, what is the name of drug?		-
C2.1.5b - Hrs. before biopsy:		
	(hrs)	-



### **ANESTHETIC AGENTS**

You have completed ... (of Form C - Biopsy Report) 30%



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C3.1 - Pre-medication and anesthetic agents utilized (for biopsy): (check all applicable)		
<ul> <li>□ ACETAMINOPHEN - acetaminophen (Tylenol)</li> <li>□ ANALGESIC/ANTICONVULSANT - gabapentin (Neurontin)</li> <li>□ ANALGESIC/ANTICONVULSANT - pregabalin (Lyrica)</li> <li>□ ANTACID AGENT - cimetidine (Tagament)</li> <li>□ ANTACID AGENT - dolasetron (Anzemet)</li> <li>□ ANTACID AGENT - droperidol (Inapsine)</li> <li>□ ANTACID AGENT - lansoprazole (Prevacid)</li> <li>□ ANTACID AGENT - amorrazole (Prilagon)</li> </ul>		
<ul><li>☐ ANTACID AGENT - omeprazole (Prilosec)</li><li>☐ ANTACID AGENT - ranitidine (Zantac)</li></ul>		
ANTICMETIC metacle promide (Paglan)		
☐ ANTIEMETIC - metoclopramide (Reglan) ☐ ANTIEMETIC - ondansetron (Zofran)		
ANTIEMETIC - promethazine (Phenergan)		
<ul><li>☐ ANTIEMETIC - scopolamine (Hyoscine)</li><li>☐ ANTIHISTAMINE - diphenhydramine (Benadryl)</li></ul>		
ANTIHISTAMINE - hydroxyzine (Vistaril)		
☐ ANTIMUSCARINIC AGENT - atropine ☐ ANTIMUSCARINIC AGENT - glycopyrrolate (Robinul)		
□ NSAID - celecoxib		
<ul><li>□ NSAID - diclofenac</li><li>□ NSAID - ibuprofen</li></ul>		
□ NSAID - Ibdiptoteri		
NSAID - meloxicam		
<ul><li>☐ NSAID - naproxen</li><li>☐ SEDATIVE/HYPNOTIC - clonidine (Duraclon)</li></ul>		
SEDATIVE/HYPNOTIC - dexmedetomidine (Precedex)		
<ul><li>☐ SEDATIVE/HYPNOTIC - diazepam (Valium)</li><li>☐ SEDATIVE/HYPNOTIC- etomidate (Amidate)</li></ul>		
SEDATIVE/HYPNOTIC- ketamine (Ketalar)		
☐ SEDATIVE/HYPNOTIC- lorazepam (Ativan) ☐ SEDATIVE/HYPNOTIC- midazolam (Versed)		
SEDATIVE/HYPNOTIC- propofol (Diprivan)		
SEDATIVE/HYPNOTIC- thiopental		
☐ OPIOID/OPIOID ANTAGONIST - alfentanil (Alfenta) ☐ OPIOID/OPIOID ANTAGONIST - fentanyl (Sublimaze)		
OPIOID/OPIOID ANTAGONIST - hydromorphone (Dilaudid)		
☐ OPIOID/OPIOID ANTAGONIST - meperidine (Demerol) ☐ OPIOID/OPIOID ANTAGONIST - methadone		
OPIOID/OPIOID ANTAGONIST - morphine		
☐ OPIOID/OPIOID ANTAGONIST - nalbuphine ☐ OPIOID/OPIOID ANTAGONIST - naloxone		
OPIOID/OPIOID ANTAGONIST - remifentanyl (Ultiva)		
<ul><li>☐ OPIOID/OPIOID ANTAGONIST - sufentanil (Sufenta)</li><li>☐ POTENT VOLATILE ANESTHETIC AGENT - desflurane (Suprane)</li></ul>		
☐ POTENT VOLATILE ANESTHETIC AGENT - halothane		
<ul> <li>□ POTENT VOLATILE ANESTHETIC AGENT - isoflurane (Forane)</li> <li>□ POTENT VOLATILE ANESTHETIC AGENT - sevoflurane (Ultane)</li> </ul>		
☐ OTHER VOLATILE ANESTHETIC AGENT - sevolidratile (oldatile)		
NON-DEPOLARIZING NEUROMUSCULAR BLOCK AGENT - atracurium (Tracrium)		
<ul><li>NON-DEPOLARIZING NEUROMUSCULAR BLOCK AGENT - cisatracurium (Nimbex)</li><li>NON-DEPOLARIZING NEUROMUSCULAR BLOCK AGENT - pancuronium (Pavulon)</li></ul>		
NON-DEPOLARIZING NEUROMUSCULAR BLOCK AGENT - rocuronium (Zemuron)		
<ul><li>NON-DEPOLARIZING NEUROMUSCULAR BLOCK AGENT - vecuronium (Norcuron)</li><li>NON-DEPOLARIZING NEUROMUSCULAR BLOCK AGENT - other non-depolarizing n</li></ul>	euromuscular bloc	k (NDNB)
NON-DEPOLARIZING NEUROMUSCULAR BLOCK REVERSAL AGENT - sugammadex		()
☐ DEPOLARIZING NEUROMUSCULAR BLOCK AGENT - IM succinylcholine (Anectine) ☐ DEPOLARIZING NEUROMUSCULAR BLOCK AGENT - IV succinylcholine (Anectine)		
CHOLINESTERASE INHIBITOR - edrophonium (Tensilon)		
☐ CHOLINESTERASE INHIBITOR - neostigmine (Prostigmin) ☐ CHOLINESTERASE INHIBITOR - physostigmine (Antilirium)		
☐ CHOLINESTERASE INHIBITOR - pyridostigmine (Mestinon)		
LOCAL ANESTHETICS - bupivacaine (Marcaine)		
☐ LOCAL ANESTHETICS - chloroprocaine (Nesacaine) ☐ LOCAL ANESTHETICS - cocaine		
2715964-14NFSTHETICS - etidocaine (Duranest)	projectredcap.org	REDCa

LOCAL ANESTHETICS - levo-bupivacaine
LOCAL ANESTHETICS - lidocaine (Xylocaine)
LOCAL ANESTHETICS - mepivacaine (Carbocaine)
LOCAL ANESTHETICS - prilocaine (Citanest)
☐ LOCAL ANESTHETICS - procaine (Novocain)
☐ LOCAL ANESTHETICS - ropivacaine (Naropin)
☐ LOCAL ANESTHETICS - tetracaine (Pontocaine)
☐ LOCAL ANESTHETICS - curare
☐ VASOPRESSOR - ephedrine
☐ VASOPRESSOR - epinephrine (Adrenaline)
□ VASOPRESSOR - norepinephrine (Noradrenaline)
☐ VASOPRESSOR - phenylephrine (Neosynephrine)
☐ VASOPRESSOR - vasopressin
STEROID - dexamethasone
☐ STEROID - hydrocortisone
Other (specify)
Unknown
C3.1.1 - If other, please specify:

ANESTHETIC METHOD
You have completed (of Form C - Biopsy Report) 40%
C4.1 - Type of anesthetic used for biopsy: (check all applicable)
<ul> <li>monitored anesthesia care</li> <li>regional anesthesia</li> <li>spinal anesthesia</li> <li>epidural anesthesia</li> <li>general anesthesia without endotracheal intubation</li> <li>general anesthesia with endotracheal intubation</li> <li>general anesthesia with a face mask</li> <li>general anesthesia with a laryngeal mask airway</li> <li>tourniquet use</li> </ul>



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LABS	
(Laboratory Exam)	
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You have completed (of Form C - Biopsy Report	1)
50%	
C5.1 - What's the value of serum creatine kinase at	
the time of evaluation (U/L)?	((U/L))
C5.2 - Laboratory upper limit of normal for creatine	
kinase (U/L):	
	((U/L))



HISTOLOGY	
You have completed (of Form C - Biopsy Report) 60%	
C6.1 - Was muscle histology performed?	<ul><li>Yes</li><li>No</li></ul>
C6.2 - The muscle histology result was:	<ul><li>normal</li><li>abnormal</li><li>equivocal</li><li>(check one)</li></ul>
C6.3 - What were the abnormal histologic findings?	☐ diffusely distributed internal nuclei☐ other (specify) (for example, diffusely distributed internal nuclei)
6.3.1 - If other, please specify abnormality (write pending if results not available)	- <u></u>
C6.4 - Was muscle histochemistry performed?	○ Yes ○ No
C6.5 - The muscle histochemistry results was:	<ul><li>○ normal</li><li>○ abnormal</li><li>○ equivocal</li></ul>
C6.6 - Specify results of muscle histochemistry:	<ul><li>moth-eaten fibers</li><li>cores</li><li>other (specify)</li></ul>
C6.6.1 - If other, please specify abnormality (write pending if results not available)	



You have completed (of Form C - Biopsy Report) 70%	
C7.1 - In your lab, when muscle is exposed to 3% halothane, what is the minimum contracture indicating MH susceptibility?	(grams)



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Strip 1 (HALOTHANE AT 3%)		
C7S1.1 - Hours between excision to completion of test (hrs):		
	(hrs)	
C7S1.2 - Stimulation - duration (milliseconds):		
	(milliseconds)	
C7S1.3 - Stimulation - frequency (Hz):		
	(Hz)	
C7S1.4 - Stimulation - voltage (volts):		
	(volts)	
C7S1.5 - Stimulation - current (mA):		_
	(mA)	
C7S1.6 - Was a length/tension curve done?	○ Yes ○ No	_
C7S1.7 - Pre-drug twitch tension (g) (measure from baseline for twitch tension only)		
(measure from baseline for twitch tension only)	(gs)	
C7S1.8 - Pre-drug tension 3% hal(g):		
	(gs)	
C7S1.9 - Low point tension 3% hal(g)		
	(gs)	
C7S1.10 - Contracture tension developed to 3% hal(g):		
	(gs)	
C7S1.11 - Do you consider the tension developed to be abnormal?	○ Yes ○ No	
C7S1.12 - Length (cm):		_
	(cms)	
C7S1.13 - Wet weight (g):		
	(gs)	



Strip 2 (HALOTHANE AT 3%)		
C7S2.1 - Hours between excision to completion of test (hrs):		
	(hrs)	
C7S2.2 - Stimulation - duration (milliseconds):		
	(milliseconds)	_
C7S2.3 - Stimulation - frequency (Hz):		
	(Hz)	_
C7S2.4 - Stimulation - voltage (volts):		
	(volts)	_
C7S2.5 - Stimulation - current (mA):		
	(mA)	_
C7S2.6 - Was a length/tension curve done?	○ Yes ○ No	
C7S2.7 - Pre-drug twitch tension (g) (measure from baseline for twitch tension only)		
(measure non baseline for twitch tension only)	(gs)	_
C7S2.8 - Pre-drug tension 3% hal(g):		
	(gs)	_
C7S2.9 - Low point tension 3% hal(g)		
	(gs)	_
C7S2.10 - Contracture tension developed to 3% hal(g):		
	(gs)	<del>_</del>
C7S2.11 - Do you consider the tension developed to be abnormal?	○ Yes ○ No	
C7S2.12 - Length (cm):		
	(cms)	_
C7S2.13 - Wet weight (g):		
	(gs)	_



Strip 3 (HALOTHANE AT 3%)		
C7S3.1 - Hours between excision to completion of test (hrs):		
	(hrs)	_
C7S3.2 - Stimulation - duration (milliseconds):		
	(milliseconds)	_
C7S3.3 - Stimulation - frequency (Hz):		
	(Hz)	_
C7S3.4 - Stimulation - voltage (volts):		
	(volts)	_
C7S3.5 - Stimulation - current (mA):		
	(mA)	_
C7S3.6 - Was a length/tension curve done?	○ Yes ○ No	
C7S3.7 - Pre-drug twitch tension (g) (measure from baseline for twitch tension only)		
(measure from baseline for twitch tension only)	(gs)	_
C7S3.8 - Pre-drug tension 3% hal(g):		
	(gs)	_
C7S3.9 - Low point tension 3% hal(g)		
	(gs)	_
C7S3.10 - Contracture tension developed to 3% hal(g):		
	(gs)	_
C7S3.11 - Do you consider the tension developed to be abnormal?		
C7S3.12 - Length (cm):		
	(cms)	_
C7S3.13 - Wet weight (g):		
	(gs)	



Strip 4 (HALOTHANE AT 3%)		
C7S4.1 - Hours between excision to completion of test (hrs):		
	(hrs)	
C7S4.2 - Stimulation - duration (milliseconds):		
	(milliseconds)	
C7S4.3 - Stimulation - frequency (Hz):		
	(Hz)	
C7S4.4 - Stimulation - voltage (volts):		
	(volts)	
C7S4.5 - Stimulation - current (mA):		
	(mA)	
C7S4.6 - Was a length/tension curve done?	○ Yes ○ No	
C7S4.7 - Pre-drug twitch tension (g) (measure from baseline for twitch tension only)		
(measure non baseline for twitch tension only)	(gs)	
C7S4.8 - Pre-drug tension 3% hal(g):		
	(gs)	
C7S4.9 - Low point tension 3% hal(g)		
	(gs)	
C7S4.10 - Contracture tension developed to 3% hal(g):		
	(gs)	
C7S4.11 - Do you consider the tension developed to be abnormal?	○ Yes ○ No	
C7S4.12 - Length (cm):		
	(cms)	
C7S4.13 - Wet weight (g):		
	(gs)	



Strip 5 (HALOTHANE AT 3%)		
C7S5.1 - Hours between excision to completion of test (hrs):		
	(hrs)	
C7S5.2 - Stimulation - duration (milliseconds):		
	(milliseconds)	
C7S5.3 - Stimulation - frequency (Hz):		
	(Hz)	
C7S5.4 - Stimulation - voltage (volts):		
	(volts)	
C7S5.5 - Stimulation - current (mA):		
	(mA)	
C7S5.6 - Was a length/tension curve done?	○ Yes ○ No	
C7S5.7 - Pre-drug twitch tension (g) (measure from baseline for twitch tension only)		
(measure non baseline for twitch tension only)	(gs)	
C7S5.8 - Pre-drug tension 3% hal(g):		
	(gs)	
C7S5.9 - Low point tension 3% hal(g)		
	(gs)	
C7S5.10 - Contracture tension developed to 3% hal(g):		
	(gs)	
C7S5.11 - Do you consider the tension developed to be abnormal?		
C7S5.12 - Length (cm):		
	(cms)	
C7S5.13 - Wet weight (g):		
	(gs)	



Strip 6 (HALOTHANE AT 3%)		
C7S6.1 - Hours between excision to completion of test		
(hrs):	(hrs)	
C7S6.2 - Stimulation - duration (milliseconds):		
	(milliseconds)	
C7S6.3 - Stimulation - frequency (Hz):		
	(Hz)	
C7S6.4 - Stimulation - voltage (volts):		
	(volts)	
C7S6.5 - Stimulation - current (mA):		
	(mA)	
C7S6.6 - Was a length/tension curve done?	○ Yes ○ No	
C7S6.7 - Pre-drug twitch tension (g) (measure from baseline for twitch tension only)		
(,,	(gs)	
C7S6.8 - Pre-drug tension 3% hal(g):		
	(gs)	
C7S6.9 - Low point tension 3% hal(g)		
	(gs)	
C7S6.10 - Contracture tension developed to 3% hal(g):		
	(gs)	
C7S6.11 - Do you consider the tension developed to be abnormal?	○ Yes ○ No	
C7S6.12 - Length (cm):		
	(cms)	
C7S6.13 - Wet weight (g):		
	(gs)	<del></del>



Strip 1 (CAFFEINE ALONE)		
C8S1.1 - Hours between excision to completion of test (hrs):	(hrs)	-
C8S1.2 - Stimulation - duration (milliseconds):		
	(milliseconds)	-
C8S1.3 - Stimulation - frequency (Hz):		
	(Hz)	-
C8S1.4 - Stimulation - voltage (volts):		
	(volts)	-
C8S1.5 - Stimulation - current (mA):		
	(mA)	-
C8S1.6 - Was a length/tension curve done?		
C8S1.7 - Pre-drug twitch tension (g) (measure from baseline for twitch tension only)		
	(gs)	-
C8S1.8 - Predrug tension 0.5mM (g):		
	(gs)	-
C8S1.9 - Pleteau tension 0.5mM (g):		
	(gs)	-
C8S1.10 - Predrug tension 1.0mM (g):		
	(gs)	-
C8S1.11 - Pleteau tension 1.0mM (g):		
	(gs)	-
C8S1.12 - Predrug tension 2.0mM (g):		
	(gs)	-
C8S1.13 - Pleteau tension 2.0mM (g):		
	(gs)	-
C8S1.14 - Predrug tension 4.0mM (g):		
	(gs)	-



C8S1.15 - Pleteau tension 4.0mM (g):		
	(gs)	-
C8S1.16 - Predrug tension 8.0mM (g):		
	(gs)	-
C8S1.17 - Pleteau tension 8.0mM (g):		
	(gs)	-
C8S1.18 - Predrug tension 32.0mM (g):		
	(gs)	-
C8S1.19 - Pleteau tension 32.0mM (g):		
	(gs)	-
C8S1.20 - CSC (mM)		
		-
C8S1.21 - % response at 2mM		-
C8S1.22 - Do you consider the tension developed to be abnormal?	○ Yes ○ No	
C8S1.22.1 - If yes, at what concentration?		
COC1 22 2 15		-
C8S1.22.2 - If yes, at what CSC?		-
C8S1.22.3 - If yes, at what % response?		
		-
C8S1.23 - Length (cm)		
	(cms)	<b>-</b>
C8S1.24 - Wet weight (g)		
	(gs)	-



Strip 2 (CAFFEINE ALONE)		
C8S2.1 - Hours between excision to completion of test (hrs):	(hrs)	-
C8S2.2 - Stimulation - duration (milliseconds):		
	(milliseconds)	_
C8S2.3 - Stimulation - frequency (Hz):		
	(Hz)	_
C8S2.4 - Stimulation - voltage (volts):		
	(volts)	_
C8S2.5 - Stimulation - current (mA):		
	(mA)	_
C8S2.6 - Was a length/tension curve done?	○ Yes ○ No	
C8S2.7 - Pre-drug twitch tension (g) (measure from baseline for twitch tension only)		
<b>,</b>	(gs)	-
C8S2.8 - Predrug tension 0.5mM (g):		
	(gs)	_
C8S2.9 - Pleteau tension 0.5mM (g):		
	(gs)	_
C8S2.10 - Predrug tension 1.0mM (g):		
	(gs)	-
C8S2.11 - Pleteau tension 1.0mM (g):		
	(gs)	_
C8S2.12 - Predrug tension 2.0mM (g):		
	(gs)	_
C8S2.13 - Pleteau tension 2.0mM (g):		
	(gs)	-
C8S2.14 - Predrug tension 4.0mM (g):		
	(gs)	-



C8S2.15 - Pleteau tension 4.0mM (g):		
	(gs)	_
C8S2.16 - Predrug tension 8.0mM (g):		
	(gs)	_
C8S2.17 - Pleteau tension 8.0mM (g):		
	(gs)	
C8S2.18 - Predrug tension 32.0mM (g):		
	(gs)	_
C8S2.19 - Pleteau tension 32.0mM (g):		
	(gs)	
C8S2.20 - CSC (mM)		
C8S2.21 - % response at 2mM		<del>_</del>
Co32.21 - 70 response at 2000		_
C8S2.22 - Do you consider the tension developed to be abnormal?	○ Yes ○ No	
C8S2.22.1 - If yes, at what concentration?		_
C8S2.22.2 - If yes, at what CSC?		_
C8S2.22.3 - If yes, at what % response?		_
C8S2.23 - Length (cm)		
	(cms)	_
C8S2.24 - Wet weight (g)		
	(gs)	_



Strip 3 (CAFFEINE ALONE)		
C8S3.1 - Hours between excision to completion of test (hrs):	(hrs)	-
C8S3.2 - Stimulation - duration (milliseconds):		
	(milliseconds)	-
C8S3.3 - Stimulation - frequency (Hz):		
	(Hz)	_
C8S3.4 - Stimulation - voltage (volts):		
	(volts)	-
C8S3.5 - Stimulation - current (mA):		
	(mA)	_
C8S3.6 - Was a length/tension curve done?	○ Yes ○ No	
C8S3.7 - Pre-drug twitch tension (g) (measure from baseline for twitch tension only)		
	(gs)	_
C8S3.8 - Predrug tension 0.5mM (g):		
	(gs)	_
C8S3.9 - Pleteau tension 0.5mM (g):		
	(gs)	_
C8S3.10 - Predrug tension 1.0mM (g):		
	(gs)	-
C8S3.11 - Pleteau tension 1.0mM (g):		
	(gs)	_
C8S3.12 - Predrug tension 2.0mM (g):		
	(gs)	_
C8S3.13 - Pleteau tension 2.0mM (g):		
	(gs)	_
C8S3.14 - Predrug tension 4.0mM (g):		
	(gs)	-



C8S3.15 - Pleteau tension 4.0mM (g):		
	(gs)	-
C8S3.16 - Predrug tension 8.0mM (g):		
	(gs)	-
C8S3.17 - Pleteau tension 8.0mM (g):		
	(gs)	-
C8S3.18 - Predrug tension 32.0mM (g):		
	(gs)	-
C8S3.19 - Pleteau tension 32.0mM (g):		
	(gs)	-
C8S3.20 - CSC (mM)		
		-
C8S3.21 - % response at 2mM		-
C8S3.22 - Do you consider the tension developed to be abnormal?	○ Yes ○ No	
C8S3.22.1 - If yes, at what concentration?		
COCO 22 2 15		-
C8S3.22.2 - If yes, at what CSC?		-
C8S3.22.3 - If yes, at what % response?		
		-
C8S3.23 - Length (cm)		
	(cms)	
C8S3.24 - Wet weight (g)		
	(gs)	-



Strip 4 (CAFFEINE ALONE)		
C8S4.1 - Hours between excision to completion of test (hrs):	(hrs)	-
C8S4.2 - Stimulation - duration (milliseconds):		
	(milliseconds)	-
C8S4.3 - Stimulation - frequency (Hz):		
	(Hz)	-
C8S4.4 - Stimulation - voltage (volts):		
	(volts)	-
C8S4.5 - Stimulation - current (mA):		
	(mA)	-
C8S4.6 - Was a length/tension curve done?	○ Yes ○ No	
C8S4.7 - Pre-drug twitch tension (g) (measure from baseline for twitch tension only)		
<b>,</b>	(gs)	-
C8S4.8 - Predrug tension 0.5mM (g):		
	(gs)	-
C8S4.9 - Pleteau tension 0.5mM (g):		
	(gs)	-
C8S4.10 - Predrug tension 1.0mM (g):		
	(gs)	-
C8S4.11 - Pleteau tension 1.0mM (g):		
	(gs)	-
C8S4.12 - Predrug tension 2.0mM (g):		
	(gs)	-
C8S4.13 - Pleteau tension 2.0mM (g):		
	(gs)	<del>-</del>
C8S4.14 - Predrug tension 4.0mM (g):		
	(gs)	-



C8S4.15 - Pleteau tension 4.0mM (g):		
	(gs)	-
C8S4.16 - Predrug tension 8.0mM (g):		
	(gs)	-
C8S4.17 - Pleteau tension 8.0mM (g):		
	(gs)	-
C8S4.18 - Predrug tension 32.0mM (g):		
	(gs)	-
C8S4.19 - Pleteau tension 32.0mM (g):		
	(gs)	-
C8S4.20 - CSC (mM)		
		-
C8S4.21 - % response at 2mM		-
C8S4.22 - Do you consider the tension developed to be abnormal?	○ Yes ○ No	
C8S4.22.1 - If yes, at what concentration?		
		-
C8S4.22.2 - If yes, at what CSC?		-
C8S4.22.3 - If yes, at what % response?		
		-
C8S4.23 - Length (cm)		
	(cms)	<u> </u>
C8S4.24 - Wet weight (g)		
	(gs)	-



Strip 5 (CAFFEINE ALONE)		
C8S5.1 - Hours between excision to completion of test (hrs):	(hrs)	-
C8S5.2 - Stimulation - duration (milliseconds):		
	(milliseconds)	_
C8S5.3 - Stimulation - frequency (Hz):		
	(Hz)	-
C8S5.4 - Stimulation - voltage (volts):		
	(volts)	_
C8S5.5 - Stimulation - current (mA):		
	(mA)	_
C8S5.6 - Was a length/tension curve done?	○ Yes ○ No	
C8S5.7 - Pre-drug twitch tension (g) (measure from baseline for twitch tension only)		
	(gs)	_
C8S5.8 - Predrug tension 0.5mM (g):		
	(gs)	_
C8S5.9 - Pleteau tension 0.5mM (g):		
	(gs)	_
C8S5.10 - Predrug tension 1.0mM (g):		
	(gs)	-
C8S5.11 - Pleteau tension 1.0mM (g):		
	(gs)	-
C8S5.12 - Predrug tension 2.0mM (g):		
	(gs)	_
C8S5.13 - Pleteau tension 2.0mM (g):		
	(gs)	_
C8S5.14 - Predrug tension 4.0mM (g):		
	(gs)	-



C8S5.15 - Pleteau tension 4.0mM (g):		
	(gs)	-
C8S5.16 - Predrug tension 8.0mM (g):		
	(gs)	-
C8S5.17 - Pleteau tension 8.0mM (g):		
	(gs)	-
C8S5.18 - Predrug tension 32.0mM (g):		
	(gs)	-
C8S5.19 - Pleteau tension 32.0mM (g):		
	(gs)	-
C8S5.20 - CSC (mM)		
		-
C8S5.21 - % response at 2mM		-
C8S5.22 - Do you consider the tension developed to be abnormal?	○ Yes ○ No	
C8S5.22.1 - If yes, at what concentration?		
COSE 22.2. If you at what CSC2		-
C8S5.22.2 - If yes, at what CSC?		-
C8S5.22.3 - If yes, at what % response?		
		-
C8S5.23 - Length (cm)		_
	(cms)	
C8S5.24 - Wet weight (g)		
	(gs)	-



Strip 6 (CAFFEINE ALONE)		
C8S6.1 - Hours between excision to completion of test (hrs):	(hrs)	-
C8S6.2 - Stimulation - duration (milliseconds):		
	(milliseconds)	-
C8S6.3 - Stimulation - frequency (Hz):		
	(Hz)	-
C8S6.4 - Stimulation - voltage (volts):		
	(volts)	-
C8S6.5 - Stimulation - current (mA):		
	(mA)	-
C8S6.6 - Was a length/tension curve done?	○ Yes ○ No	
C8S6.7 - Pre-drug twitch tension (g) (measure from baseline for twitch tension only)		
	(gs)	-
C8S6.8 - Predrug tension 0.5mM (g):		
	(gs)	-
C8S6.9 - Pleteau tension 0.5mM (g):		
	(gs)	-
C8S6.10 - Predrug tension 1.0mM (g):		
	(gs)	-
C8S6.11 - Pleteau tension 1.0mM (g):		
	(gs)	-
C8S6.12 - Predrug tension 2.0mM (g):		
	(gs)	-
C8S6.13 - Pleteau tension 2.0mM (g):		
	(gs)	-
C8S6.14 - Predrug tension 4.0mM (g):		
	(gs)	-



C8S6.15 - Pleteau tension 4.0mM (g):		
	(gs)	-
C8S6.16 - Predrug tension 8.0mM (g):		
	(gs)	-
C8S6.17 - Pleteau tension 8.0mM (g):		
	(gs)	-
C8S6.18 - Predrug tension 32.0mM (g):		
	(gs)	-
C8S6.19 - Pleteau tension 32.0mM (g):		
	(gs)	-
C8S6.20 - CSC (mM)		
		-
C8S6.21 - % response at 2mM		-
C8S6.22 - Do you consider the tension developed to be abnormal?		
C8S6.22.1 - If yes, at what concentration?		
		-
C8S6.22.2 - If yes, at what CSC?		-
C8S6.22.3 - If yes, at what % response?		
		-
C8S6.23 - Length (cm)		
	(cms)	<u> </u>
C8S6.24 - Wet weight (g)		
	(gs)	-



Strip 7 (CAFFEINE ALONE)		
C8S7.1 - Hours between excision to completion of test (hrs):	(hrs)	-
C8S7.2 - Stimulation - duration (milliseconds):		
	(milliseconds)	-
C8S7.3 - Stimulation - frequency (Hz):		
	(Hz)	-
C8S7.4 - Stimulation - voltage (volts):		
	(volts)	-
C8S7.5 - Stimulation - current (mA):		
	(mA)	-
C8S7.6 - Was a length/tension curve done?	○ Yes ○ No	
C8S7.7 - Pre-drug twitch tension (g) (measure from baseline for twitch tension only)		
	(gs)	-
C8S7.8 - Predrug tension 0.5mM (g):		
	(gs)	-
C8S7.9 - Pleteau tension 0.5mM (g):		
	(gs)	-
C8S7.10 - Predrug tension 1.0mM (g):		
	(gs)	-
C8S7.11 - Pleteau tension 1.0mM (g):		
	(gs)	-
C8S7.12 - Predrug tension 2.0mM (g):		
	(gs)	-
C8S7.13 - Pleteau tension 2.0mM (g):		
	(gs)	-
C8S7.14 - Predrug tension 4.0mM (g):		
	(gs)	-



C8S7.15 - Pleteau tension 4.0mM (g):		
	(gs)	-
C8S7.16 - Predrug tension 8.0mM (g):		
	(gs)	-
C8S7.17 - Pleteau tension 8.0mM (g):		
	(gs)	-
C8S7.18 - Predrug tension 32.0mM (g):		
	(gs)	-
C8S7.19 - Pleteau tension 32.0mM (g):		
	(gs)	-
C8S7.20 - CSC (mM)		
		-
C8S7.21 - % response at 2mM		-
C8S7.22 - Do you consider the tension developed to be abnormal?	○ Yes ○ No	
C8S7.22.1 - If yes, at what concentration?		
C0C7 22 2 If was at what CCC2		-
C8S7.22.2 - If yes, at what CSC?		-
C8S7.22.3 - If yes, at what % response?		
		-
C8S7.23 - Length (cm)		
	(cms)	<del>-</del>
C8S7.24 - Wet weight (g)		
	(gs)	-



Continue to add more contracture test results?	
If there's no more Contracture tests to report, then you have completed (of Form C - Biopsy Report) 100%	,
C9.1 - I certify that the information contained in this Biopsy Report is complete and accurate.	
○ Yes ○ No	
C9.2 - Date of completion:	
I certify that the information contained in this Biopsy Report is complete and accurate.	
Signature Date:	
C9.3 - Would you like to fill out the following Ores No contracture test results? (if you answer no, the Biopsy Report will end here)	

- 1. HALOTHANE 1% & CAFFEINE 2. HALOTHANE 2%



Strip 1 (HALOTHANE 1% & CAFFEINE - optional)		
Hours between excision to completion of test (hrs):		
	(hrs)	_
Stimulation - duration (milliseconds):		
	(milliseconds)	_
Stimulation - frequency (Hz):		
	(Hz)	_
Stimulation - voltage (volts):		
	(volts)	_
Stimulation - current (mA):		
	(mA)	_
Was a length/tension curve done?	○ Yes ○ No	
Pre-drug twitch tension (g) (measure from baseline for twitch tension only)		
	(gs)	_
Pre-drug tension 1% hal(g):		
	(gs)	_
Low point tension 1% hal(g)		
	(gs)	_
Contracture tension developed to 1% hal(g):		
	(gs)	_
Predrug tension 0.25mM (g):		
	(gs)	_
Pleteau tension 0.25mM (g):		
	(gs)	_
Predrug tension 0.5mM (g):		
	(gs)	_
Pleteau tension 0.5mM (g):		
	(gs)	_



Predrug tension 1.0mM (g):		
	(gs)	-
Pleteau tension 1.0mM (g):		
	(gs)	-
Predrug tension 2.0mM (g):		
	(gs)	-
Pleteau tension 2.0mM (g):		
	(gs)	-
Predrug tension 4.0mM (g):		
	(gs)	-
Pleteau tension 4.0mM (g):		
	(gs)	-
Predrug tension 32.0mM (g):		
	(gs)	-
Pleteau tension 32.0mM (g):		
	(gs)	-
HCSC (mM)		
		-
Do you consider the tension developed to be abnormal?		
If yes, at what concentration?		
		-
If yes, at what HCSC?		-
Length (cm)		
	(cms)	-
Wet weight (g)		
	(gs)	-



Strip 2 (HALOTHANE 1% & CAFFEINE - optional)		
Hours between excision to completion of test (hrs):		
	(hrs)	_
Stimulation - duration (milliseconds):		
	(milliseconds)	_
Stimulation - frequency (Hz):		
	(Hz)	_
Stimulation - voltage (volts):		
	(volts)	_
Stimulation - current (mA):		
	(mA)	_
Was a length/tension curve done?	○ Yes ○ No	
Pre-drug twitch tension (g) (measure from baseline for twitch tension only)		
(measure from baseline for twicen tension only)	(gs)	_
Pre-drug tension 1% hal(g):		
	(gs)	_
Low point tension 1% hal(g)		
	(gs)	_
Contracture tension developed to 1% hal(g):		
	(gs)	_
Predrug tension 0.25mM (g):		
	(gs)	_
Pleteau tension 0.25mM (g):		
	(gs)	_
Predrug tension 0.5mM (g):		
	(gs)	_
Pleteau tension 0.5mM (g):		
	(gs)	_



Predrug tension 1.0mM (g):		
	(gs)	-
Pleteau tension 1.0mM (g):		
	(gs)	-
Predrug tension 2.0mM (g):		
	(gs)	-
Pleteau tension 2.0mM (g):		
	(gs)	-
Predrug tension 4.0mM (g):		
	(gs)	_
Pleteau tension 4.0mM (g):		
	(gs)	_
Predrug tension 32.0mM (g):		
	(gs)	_
Pleteau tension 32.0mM (g):		
	(gs)	-
HCSC (mM)		
		_
Do you consider the tension developed to be abnormal?		
If yes, at what concentration?		
		_
If yes, at what HCSC?		
		-
Length (cm)		_
	(cms)	
Wet weight (g)		
	(gs)	-



Strip 3 (HALOTHANE 1% & CAFFEINE - optional)		
Hours between excision to completion of test (hrs):		
	(hrs)	_
Stimulation - duration (milliseconds):		
	(milliseconds)	_
Stimulation - frequency (Hz):		
	(Hz)	_
Stimulation - voltage (volts):		
	(volts)	_
Stimulation - current (mA):		
	(mA)	_
Was a length/tension curve done?	○ Yes ○ No	
Pre-drug twitch tension (g) (measure from baseline for twitch tension only)		
(measure from baseline for twicen tension only)	(gs)	_
Pre-drug tension 1% hal(g):		
	(gs)	_
Low point tension 1% hal(g)		
	(gs)	_
Contracture tension developed to 1% hal(g):		
	(gs)	_
Predrug tension 0.25mM (g):		
	(gs)	_
Pleteau tension 0.25mM (g):		
	(gs)	_
Predrug tension 0.5mM (g):		
	(gs)	_
Pleteau tension 0.5mM (g):		
	(gs)	_



Predrug tension 1.0mM (g):		
	(gs)	-
Pleteau tension 1.0mM (g):		
	(gs)	-
Predrug tension 2.0mM (g):		
	(gs)	-
Pleteau tension 2.0mM (g):		
	(gs)	-
Predrug tension 4.0mM (g):		
	(gs)	_
Pleteau tension 4.0mM (g):		
	(gs)	_
Predrug tension 32.0mM (g):		
	(gs)	_
Pleteau tension 32.0mM (g):		
	(gs)	-
HCSC (mM)		
		_
Do you consider the tension developed to be abnormal?		
If yes, at what concentration?		
		_
If yes, at what HCSC?		
		-
Length (cm)		_
	(cms)	
Wet weight (g)		
	(gs)	_



Strip 1 (HALOTHANE AT 2% - optional)		
Hours between excision to completion of test (hrs):		
	(hrs)	
Stimulation - duration (milliseconds):		
	(milliseconds)	
Stimulation - frequency (Hz):		
	(Hz)	
Stimulation - voltage (volts):		
	(volts)	
Stimulation - current (mA):		
	(mA)	
Was a length/tension curve done?	○ Yes ○ No	
Pre-drug twitch tension (g)		
(measure from baseline for twitch tension only)	(gs)	
Pre-drug tension 2% hal(g):		
	(gs)	
Low point tension 2% hal(g)		
	(gs)	
Contracture tension developed to 2% hal(g):		
	(gs)	
Do you consider the tension developed to be abnormal?	○ Yes ○ No	
Length (cm):		
	(cms)	
Wet weight (g):		
	(gs)	



Strip 2 (HALOTHANE AT 2% - optional)		
Hours between excision to completion of test (hrs):		
	(hrs)	_
Stimulation - duration (milliseconds):		
	(milliseconds)	_
Stimulation - frequency (Hz):		
	(Hz)	_
Stimulation - voltage (volts):		
	(volts)	_
Stimulation - current (mA):		
	(mA)	_
Was a length/tension curve done?	○ Yes ○ No	
Pre-drug twitch tension (g) (measure from baseline for twitch tension only)		
(measure from baseline for twitch tension only)	(gs)	_
Pre-drug tension 2% hal(g):		
	(gs)	_
Low point tension 2% hal(g)		
	(gs)	_
Contracture tension developed to 2% hal(g):		
	(gs)	_
Do you consider the tension developed to be abnormal?	○ Yes ○ No	
Length (cm):		
	(cms)	_
Wet weight (g):		
	(gs)	_



Strip 3 (HALOTHANE AT 2% - optional)		
Hours between excision to completion of test (hrs):		
	(hrs)	_
Stimulation - duration (milliseconds):		
	(milliseconds)	-
Stimulation - frequency (Hz):		
	(Hz)	-
Stimulation - voltage (volts):		
	(volts)	-
Stimulation - current (mA):		
	(mA)	-
Was a length/tension curve done?	○ Yes ○ No	
Pre-drug twitch tension (g)		
(measure from baseline for twitch tension only)	(gs)	-
Pre-drug tension 2% hal(g):		
	(gs)	-
Low point tension 2% hal(g)		
	(gs)	-
Contracture tension developed to 2% hal(g):		
	(gs)	-
Do you consider the tension developed to be abnormal?	○ Yes ○ No	
Length (cm):		
	(cms)	-
Wet weight (g):		
	(gs)	-



NEXT SURVEY FORM	
Do you still want to fill out the Clinical Information about the participant?	○ Yes ○ No

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