

## Staff Summary for June 17-18, 2026

**16. Restricted Species Permit Application (consent)****Today's Item**Information Action 

Review and consider a restricted species permit application from The Scintillon Institute to possess transgenic zebrafish (*Danio rerio*) and the Department's recommendation.

**Summary of Previous/Future Actions**

- Received notice of application April 15-16, 2026
- **Today, consider action on permit issuance June 17-18, 2026**

**Background**

California Fish and Game Code Section 15007, subdivision (d), authorizes medical or scientific research conducted on transgenic finfish species by accredited California academic institutions, or by private entities for research only, through a restricted species permit issued by the Department pursuant to Section 671 of Title 14. Upon receipt of a permit application for medical or scientific research to be conducted on transgenic finfish species, Fish and Game Code Section 15007, subdivision (e), states that the Department must notify the California State Legislature's Joint Committee on Fisheries and Aquaculture and the Commission at least 30 days prior to the approval or disapproval of the permit.

Additionally, pursuant to Section 671.1, subsection (a)(8)(H), when the Department approves a restricted species permit for transgenic aquatic animals, the Commission must review the Department's determination during a regularly scheduled public meeting. The Commission may deny the issuance of a permit if it determines the applicant cannot meet regulatory requirements for importation, transportation, possession, and confinement of transgenic aquatic animals.

At its April 2026 meeting, the Commission received the Department's memo and recommendation (Exhibit 1), and The Scintillon Institute's permit application (Exhibit 2) with the required emergency action plan provided separately (Exhibit 3). The Department confirmed notification of the Joint Committee on Fisheries and Aquaculture and affirmed that the institute agrees to all required containment and security conditions as specified in Title 14. Following its review, the Department determined that the applicant has met the regulatory requirements for permit approval.

The requirement for an emergency action plan in subsection (c)(3)(I) of Section 671.1 states that the plan shall be titled, with a revision date, updated annually, and include several elements at a minimum:

- a. List of the re-capture equipment available, including but not limited to darting equipment, nets, traps, and chemical immobilization drugs;
- b. description of humane lethal dispatch methods and a list of qualified personnel who are trained to carry out the methods;
- c. list of medical supplies/first aid kits and where they are located;
- d. description of mobile transport equipment on hand;

## Staff Summary for June 17-18, 2026

- e. list of emergency telephone numbers that includes the local Department regional office and 911; and
- f. written plan of action for emergencies.

After staff review, and what appears to be minimal experience by the institute with importing, transporting or possessing live, transgenic, aquatic animals, staff recommends The Scintillon Institute complete the submitted emergency action plan with the required elements, such as emergency telephone numbers, and augment it with further details regarding protocols to implement the described emergency measures and the specifics of housing transgenic aquatic species. Staff can work with the institute to update its emergency action plan accordingly.

**Significant Public Comments (N/A)****Recommendation**

**Commission staff:** Allow issuance of the permit by the Department under a motion to adopt the consent calendar. Direct staff to work with The Scintillon Institute to complete and augment the institute's emergency action plan within 60 days.

**Department:** Allow issuance of a restricted species permit to The Scintillon Institute to possess transgenic zebrafish (*Danio rerio*) for biomedical research.

**Exhibits**

1. [Department memo, received March 24, 2026](#)
2. [Scintillon Institute permit application, received by the Commission March 24, 2026](#)
3. [Emergency action plan, received by the Commission March 24, 2026](#)

**Motion**

Moved by \_\_\_\_\_ and seconded by \_\_\_\_\_ that the Commission adopts the staff recommendations for items 12-17 on the consent calendar.

# Memorandum

Date: March 24, 2026

*Original on file:  
Received March 24, 2026*

To: Melissa Miller-Henson  
Executive Director  
Fish and Game Commission

From: Meghan Hertel  
Director

Subject: **Agenda Item for the April 15-16, 2026 Meeting: Receipt of Restricted Species Permit Application from The Scintillon Institute to Possess Transgenic Zebrafish**

The Scintillon Institute in San Diego, California, applied for a Restricted Species Permit to possess transgenic zebrafish (*Danio rerio*). According to Title 14, Section 671.1(a)(8)(H), all approved applications to possess a transgenic aquatic animal shall be reviewed by the Fish and Game Commission (Commission) at a regularly scheduled meeting. The Commission may deny the issuance of a permit if it determines that the applicant is unable to meet the regulatory requirements for the importation, transportation, possession, and confinement of transgenic aquatic animals.

The transgenic zebrafish will be used for biomedical research at The Scintillon Institute. [Zebrafish have become a popular and commonly used organism for the study of vertebrate gene function and human genetic disease.](#) The Department of Fish and Wildlife (Department) currently permits approximately 20 facilities to possess transgenic zebrafish for the purpose of biomedical research. The Scintillon Institute agreed to comply with containment and security conditions as specified in Title 14 of the California Code of Regulations. The Department's Fisheries Branch coordinated with the regional staff responsible for this area and the Fish Health Lab. The Department recommends issuing The Scintillon Institute a Restricted Species Permit to possess transgenic zebrafish.

If you have any questions or need additional information on this matter, please contact Jay Rowan, Chief, Fisheries Branch at (916) 212-3164.

Melissa Miller-Henson, Executive Director  
Fish and Game Commission  
March 24, 2026  
Page 2

## Attachments

ec: Chad Dibble, Deputy Director  
Wildlife and Fisheries Division

Jay Rowan, Branch Chief  
Fisheries Branch  
Wildlife and Fisheries Division

Kevin Kwak, DMV, Ph.D.  
Statewide Fish Health Coordinator  
Fisheries Branch

Christine Richey, DVM  
Veterinarian Specialist  
Fisheries Branch

Kyle Evans, Env. Program Manager  
Central Region (Region 5)

Joseph Stanovich, Sr. Env. Scientist (Supervisor)  
Central Region (Region 5)

David Thesell, Deputy Executive Director  
Fish and Game Commission

Ari Cornman, Wildlife Advisor  
Fish and Game Commission



State of California – Department of Fish and Wildlife  
**2025 NEW RESTRICTED SPECIES PERMIT APPLICATION**  
 DFW 1312 (REV. 10/16/24)  
**IMPORTANT! YOU MAY NOT OBTAIN ANIMALS PRIOR TO APPROVAL**

RECEIVED

BY ERB

CDFW USE ONLY  
 PERMIT NUMBER

PERMIT WILL BE ISSUED IN  INDIVIDUAL NAME  BUSINESS NAME

SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY.

FIRST NAME Jiwu	M.I.	LAST NAME Wang	EMAIL ADDRESS echavin@scintillon.org
BUSINESS NAME (if applicable) The Scintillon Institute		DRIVER'S LICENSE OR DMV ID NUMBER/STATE A6872569 CA	DATE OF BIRTH
MAILING ADDRESS 6868 Nancy Ridge Drive		CONTACT NAME Erica Chavin	CONTACT TITLE Dir of Finance & Ops
CITY San Diego	STATE California	ZIP CODE 92121	BUSINESS TELEPHONE 858-657-9145
STREET ADDRESS (if different from mailing address) 6888 Nancy Ridge Drive			DAY TELEPHONE 760-889-6008
CITY San Diego	STATE CA	ZIP CODE 92121	

**CHECK TYPE OF PERMIT** \*Fees includes a nonrefundable three percent (3%) application fee, not to exceed \$7.50 per item. (Section 700.4, Title 14, California Code of Regulations (CCR)).

- ANIMAL CARE WELFARE SPECIES .....\$77.77
- ANIMAL CARE DETRIMENTAL SPECIES .....636.25
- AQUACULTURE.....636.25
- AZA DETRIMENTAL SPECIES .....636.25
- BREEDING.....636.25
- NONRESIDENT BROKER/DEALER.....1,265.25
- NONRESIDENT EXHIBITING.....1,265.25
- NONRESIDENT NUISANCE BIRD ABATEMENT .....1,265.25

- RESEARCH DETRIMENTAL SPECIES .....\$636.25
- RESIDENT\*\* BROKER/DEALER .....636.25
- RESIDENT\*\* EXHIBITING .....636.25
- RESIDENT\*\* NUISANCE BIRD ABATEMENT .....636.25
- SHELTER .....77.77
- SINGLE EVENT BREEDING .....77.77
- FISH .....636.25

\*\*Resident means any person who has resided continuously in the State of California for six months or more immediately prior to the date of their application for a license or permit, any person on active military duty with the Armed Forces of the United States or auxiliary branch thereof, or any person enrolled in the Job Corps established pursuant to Section 2883 of Title 29 of the United States Code.

STANDARD INSPECTION FEE IS BASED ON THE NUMBER OF ENCLOSURES

**CHECK NUMBER OF ENCLOSURES**

- 1-5 ENCLOSURES.....\$311.75
- 6-25 ENCLOSURES.....437.25
- 26-50 ENCLOSURES.....712.25
- 51-100 ENCLOSURES.....1,119.50
- 101-500+ ENCLOSURES.....4,130.50

PERMIT(S) FEE SUBTOTAL.....\$	636.25
NONREFUNDABLE APPLICATION FEE.....\$	151.67
STANDARD INSPECTION FEE (write-in inspection fee here)	
**AQUACULTURE INSPECTION FEE.....\$2,072.50	
Applicants for aquaculture permits shall pay this inspection fee	
***ELEM/OU INSPECTION FEE.....\$604.25	604.25
Applicants for research permits may pay the ELEM/OU inspection fee in lieu of the standard inspection fee***	
GRAND TOTAL.....\$	1392.17

WILL ANIMALS BE IMPORTED INTO CALIFORNIA?  YES, COMPLETE IMPORTATION SECTION  NO, EXPLAIN: Bred at SBP for research purposes

**IMPORTATION ONLY - COMPLETE NEXT PORTION OF THE APPLICATION IF YOU ARE IMPORTING ANIMALS INTO CALIFORNIA**

LIST SPECIES TO BE IMPORTED	NUMBER OF ANIMALS	ORIGIN (State or Country)
PERSON/BUSINESS SHIPPING ANIMALS		DAY TELEPHONE
ADDRESS	CITY	STATE ZIP CODE
NAME OF CARRIER	POINT OF ENTRY INTO CALIFORNIA	

I certify under penalty of perjury under the laws and regulations of the State of California that all information on this application is true and correct and I am not violating any city or county laws. I agree to comply with the provisions of Section 671, Title 14, of the CCR. I understand it is unlawful to use or possess a permit which was obtained by fraud or deceit (Fish and Game Code Section 1052b). I understand that if this information is found to be untrue or incorrect, the permit will be considered invalid and must be surrendered where purchased and I will be subject to criminal prosecution. I further understand that failure to comply with the terms and conditions of a permit may result in revocation of current permit and/or denial of future permits. Violation of this section is a misdemeanor, punishable by fine of not more than \$1,000.00, imprisonment in the county jail for not more than six months, or both the fine and the imprisonment. In addition I may be subject to civil penalties as stated in Fish and Game Code Section 2125. I further certify that the animal(s) and their housing will be inspected at least once more within the next six months.

APPLICANT'S SIGNATURE (Must be in ink) X	DATE 11/10/2025
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**FOR DEPARTMENT OF FISH AND WILDLIFE USE ONLY**

REVIEWED BY/DATE	TRANSACTION #	GO ID NUMBER	ISSUED BY/DATE
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## Hayes, Alyssa@Wildlife

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**From:** Erica Chavin <echavin@scintillon.org>  
**Sent:** Tuesday, December 30, 2025 9:40 AM  
**To:** Hayes, Alyssa@Wildlife  
**Subject:** RE: 2025 NEW Restricted Species Permit Application - The Scintillon Institute

**Categories:** Forwarded Elsewhere

**WARNING:** This message is from an external source. Verify the sender and exercise caution when clicking links or opening attachments.

Yes, some are transgenic.

Erica

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**From:** Hayes, Alyssa@Wildlife <Alyssa.Hayes@Wildlife.ca.gov>  
**Sent:** Tuesday, December 30, 2025 9:27 AM  
**To:** Erica Chavin <echavin@scintillon.org>  
**Subject:** RE: 2025 NEW Restricted Species Permit Application - The Scintillon Institute

Good morning Erica,

Thank you for your email.

Are any of the zebrafish your facility plans to acquire transgenic?

Please let me know,

Alyssa Hayes  
Restricted Species Analyst, Special Permit Unit  
License and Revenue Branch  
[alyssa.hayes@wildlife.ca.gov](mailto:alyssa.hayes@wildlife.ca.gov)  
Phone: (916) 902-9120



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**From:** Erica Chavin <echavin@scintillon.org>  
**Sent:** Tuesday, December 30, 2025 9:18 AM  
**To:** Hayes, Alyssa@Wildlife <[Alyssa.Hayes@Wildlife.ca.gov](mailto:Alyssa.Hayes@Wildlife.ca.gov)>  
**Subject:** RE: 2025 NEW Restricted Species Permit Application - The Scintillon Institute

You don't often get email from [echavin@scintillon.org](mailto:echavin@scintillon.org). [Learn why this is important](#)

**WARNING:** This message is from an external source. Verify the sender and exercise caution when clicking links or opening attachments.

Hi Alyssa,

Please find the completed inventory form attached. Please let us know if anything else is needed in order to move forward with approving the permit.

Happy New Year!

Thanks,

**Erica Chavin, EA | Sr. Director, Finance and Operations**

The Scintillon Research Institute

6868 Nancy Ridge Drive San Diego CA 92121

Direct: 760.889.6008 | [echavin@scintillon.org](mailto:echavin@scintillon.org)

*To illuminate the path from discovery to cure*

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**From:** Erica Chavin

**Sent:** Monday, December 29, 2025 9:40 AM

**To:** Hayes, Alyssa@Wildlife <[Alyssa.Hayes@Wildlife.ca.gov](mailto:Alyssa.Hayes@Wildlife.ca.gov)>

**Subject:** RE: 2025 NEW Restricted Species Permit Application - The Scintillon Institute

Hi Alyssa,

Thank you for the message. Yes, Scintillon is a research organization. Please find attached our OLAW assurance, Bylaws which state we are a research organization and my ID card. I will am still waiting on the animal inventory and will pass that along as soon as possible.

Thanks so much!

Erica

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**From:** Hayes, Alyssa@Wildlife <[Alyssa.Hayes@Wildlife.ca.gov](mailto:Alyssa.Hayes@Wildlife.ca.gov)>

**Sent:** Monday, December 29, 2025 8:22 AM

**To:** Erica Chavin <[echavin@scintillon.org](mailto:echavin@scintillon.org)>

**Subject:** 2025 NEW Restricted Species Permit Application - The Scintillon Institute

Good morning Erica,

California Department of Fish and Wildlife received your 2025 new restricted species permit application for The Scintillon Institute.

Please note the following was missing from your application. Please address the items listed below.

1. **Animal inventory form.** Please complete and provide the animal inventory for the restricted species you are looking to acquire at your facility. Please see inventory form listed above.
2. **Business ID.** Please provide supporting documentation to demonstrate that your facility is a “*university, college, governmental agency or other bona fide scientific institution*” ([CCR, Title 14, Section 671.1\(b\)\(9\)](#)) pursuant to [CCR, Title 14, Section 700.4](#).
3. **Individual ID.** Your application did not include individual ID pursuant to [CCR, Title 14, Section 700.4](#). Please provide valid individual ID for the owner of your business or permit contact person. Acceptable forms of individual IDs may include:
  - a. Any license document or GO ID number previously issued via ALDS

- b. A valid driver's license or identification card issued to him or her by the Department of Motor Vehicles or by the entity issuing driver's licenses from the licensee's state of domicile
  - c. US Birth Certificate
  - d. US Certificate or Report of Birth Abroad
  - e. Tribal Identification Card, as defined by each sovereign tribal nation
  - f. Birth Certificate or passport issued from a US Territory
  - g. US Passport
  - h. US Military Identification Cards (Active or reserve duty, dependent, retired member, discharged from service, medical/religious personnel)
  - i. Certificate of Naturalization or Citizenship
  - j. A foreign government-issued photo identification
- 4. Proof of federal program/funding.** Please provide proof of your facility's federal program/funding i.e. a letter from OLAW, AAALAC accreditation, etc. pursuant to [CCR, Title 14, Section 671.1\(c\)\(3\)\(L\)](#).
- 5.** Can you confirm whether you are a "*university, college, governmental research agency, or a bona fide scientific research institution*" ([CCR, Title 14, Section 671.1\(c\)\(3\)\(K\)](#))?

Please address the items above so that we may move forward with the application process.

Thank you,

Alyssa Hayes  
Restricted Species Analyst, Special Permit Unit  
License and Revenue Branch  
[alyssa.hayes@wildlife.ca.gov](mailto:alyssa.hayes@wildlife.ca.gov)  
Phone: (916) 902-9120





**INSTRUCTIONS FOR COMPLETING THE NEW RESTRICTED SPECIES PERMIT APPLICATION**

Read the enclosed California Department of Fish and Wildlife (Department) Manual No. 671 - Importation, Transportation and Possession of Restricted Species before completing the application. The manual will provide you with a list of animals for which a permit is required in California, a description of authorized permit activities, and caging requirements.

**Please allow 90 business days for processing your application and Department inspection.** Applications for transgenic species must go before the Fish and Game Commission, so you must allow an additional 30 business days. **Incomplete applications will be returned and may delay the issuance of your permit. Contact the License and Revenue Branch at (916) 928-5846 or [SPU@wildlife.ca.gov](mailto:SPU@wildlife.ca.gov) if you need additional information regarding restricted species permits.**

To complete this application, you must:

1. It is mandatory to complete all items unless exempted.
2. Sign and date the application in ink (an **original** signature is required).
3. Applicant must submit the inspection fee based on the number of enclosures that will be inspected, except for those applying for aquaculture, fish and research permits\*, aquaculture application must submit the aquaculture inspection fee. \* Research applicants may choose to pay either the standard inspection fee or the ELE/MOU inspection fee.
4. Provide an inventory of animals (DFW 1313). List animals you are qualified to possess, wish to acquire within the next year, and for which housing will be inspected. An **original** signature in ink is required.
5. Provide any other supporting documentation required by regulations.
6. Mail the completed application and supporting documentation with a cashier's check, money order, personal or business check\*, or credit card\*\* authorization form with the appropriate fee to the Department of Fish and Wildlife, License and Revenue Branch, PO Box 944209, Sacramento, CA 94244-2090 or apply in person. **DO NOT SEND CASH.**

**IMPORTANT: New applicants must also provide the following supporting documentation, except as otherwise indicated. Exceptions: Applications for animal care, aquaculture and fish are exempt from a, b, c, d and g. Applications for AZA and research permits are exempt from a, b, c, and g. Applications for broker/dealer are exempt from b, c and g.**

A statement of purpose describing in detail the planned use for each animal. Applicants shall include relevant materials, as appropriate, including any lists of prospective clients with their contact information or contracts with clients or websites, scripts, brochures or flyers promoting or describing the planned use of the animals. If the animals will be used in an educational program, the applicant shall provide an explanation why live restricted species are necessary and samples of the educational material and message that will be distributed (not required for breeding and single event breeding applications).

- b. A resume that provides dates and details documenting you or your full-time employee's qualifying experience caring for restricted animals at a facility engaged in a similar or directly related activity to the permit requested and for the animal(s) to be acquired. This experience shall have been acquired within the previous five years and include a total of at least one-year full-time hands-on experience caring for a species in the same family or closely related taxonomic family as the species requested.
- c. A letter of recommendation, written within the previous five years on **letterhead stationery, with an original signature**, from the facility where you or your full-time employee gained the experience, documenting the quality and extent of the knowledge and experience, as related to the species and permit requested.
- d. A copy of the U. S. Department of Agriculture (USDA) license (required only for mammals) and most recently completed USDA facility inspection report. This requirement is waived for new resident applicants. If approved, new resident permittees that have mammals must apply for and obtain a USDA license. Upon receipt of the license from USDA, the resident permittee must provide the Department with a copy within 10 business days of receipt (not required for animal care, nuisance bird abatement and shelter (non-exhibiting) applications).
- e. A copy of your Emergency Action Plan.
- f. A current map of all enclosures housing restricted species in California listed on the inventory of animals.
- g. A written statement detailing the type of business that will be conducted with the animals requested (required for aquaculture and fish applications only).
- h. A copy of your Breeding Plan (required for breeding and single event breeding applications only).
- i. Applicants for nonresident exhibiting permits shall submit a copy of their current and valid contract or other written confirmation that specifies each place and length of time where the exhibition will take place in California. If no contract is in effect at the time of application, copies of past contracts and/or written descriptions of anticipated performances being negotiated shall be substituted. In addition, applicants shall submit a completed Restricted Species Nonresident Exhibiting Permit Itinerary form (DFW 1316).
- j. A copy of your United States Fish and Wildlife Service (USFWS) permit if a permit is required by the USFWS for the restricted species animal(s) for which you applied. The Department may waive compliance for initial applications by California residents. If approved new resident permittees must apply for and obtain a USFWS permit. Upon receipt of the USFWS permit, the resident permittee must provide the Department with a copy within 10 business days of receipt.
- k. Applicants for a research permit shall include proof that the applicant is part of a federal program or have a permit meeting or exceeding federal requirements such as those under the NIH guidelines administered by an IACUC. In addition, applicants who are not a university, college or government research agency, shall submit the following: (1) at least one letter of recommendation from a university, college, governmental research agency or other bona fide scientific research institution, as recognized by the Department, with expertise with the species and in the field of the proposed project. The letter must contain specific reasons for the support and a statement verifying that the anticipated results are reasonably achievable using the species and techniques described; (2) a description of the proposed project stating the objectives, and if experimental or manipulative, a study plan based on the "Scientific Method"; (3) the estimated completion date of the project; and (4) the anticipated benefits of this research.

**IMPORTANT INFORMATION FROM THE CALIFORNIA DEPARTMENT OF PUBLIC HEALTH**

The California Department of Public Health (CDPH) has regulatory authority over the importation of specified carnivores (including skunks and raccoons), nonhuman primates and bats, due to potential health hazards.

Section 2606.8, Title 17, of the CCR, prohibits the importation of skunks because the hazard to the public from exposure to rabies is extremely high. The CDPH is concerned that certain wild animals could carry rabies and introduce new strains of rabies into the state of California. Therefore, the Department routinely denies requests for the importation and possession of skunks and raccoons. Exceptions may rarely be made for zoological or research institutions demonstrating an extraordinary need. The importation of other specified carnivores, bats, or nonhuman primates may be allowed under a CDPH permit in certain circumstances. **For more information on CDPH permits, please contact them at (916) 552-9740.**

**INDIVIDUAL AND BUSINESS IDENTIFICATION REQUIREMENTS**

Section 700.4(c), Title 14, of the CCR states any applicant applying for any license, tag, permit, reservation or other entitlement issued via the Automated License Data System (ALDS) shall provide valid identification. Acceptable forms of individual identification include:

- Any license document or Get Outdoors identification number (GO ID) previously issued via ALDS
- A valid driver's license or identification card issued to him or her by the Department of Motor Vehicles or by the entity issuing driver's licenses from the licensee's state of domicile
- US Military Identification Cards (Active or reserve duty, dependent, retired member, discharged from service, medical/religious personnel)
- US Certificate or Report of Birth Abroad
- US Birth Certificate
- Tribal Identification Card, as defined by each sovereign tribal nation
- US Passport
- A foreign government-issued photo identification
- Certificate of Naturalization or Citizenship
- Birth Certificate or passport issued from a US Territory

**NOTICE**

**Disclosure Statement**—Under Section 671.1, Title 14, of the CCR, the Department of Fish and Wildlife is authorized to collect information from applicants to maintain a record of licensure. All information requested on this application is mandatory unless otherwise indicated. All information except the street address and telephone number of the applicant may be provided to the public, if requested. All information related to a business may be released, including the residence address if it is the same as the business address. Other personal information submitted on this application may be released for law enforcement purposes, pursuant to court order, or for official natural resources management purposes.

A licensee may obtain a copy of his/her license records maintained by the Department by submitting a written request to the Custodian of Records, at the Department of Fish and Wildlife, License and Revenue Branch, PO Box 944209, Sacramento, CA 94244-2090. All requests must include the requester's name, address, and telephone number.

**PAYMENT POLICY**

\* **Personal or business checks** will be accepted by the Department if name and address are imprinted on the check. Checks returned to the Department due to insufficient funds will render your permit invalid. The Department may also deny the issuance or renewal of any permit if a person has failed to reimburse the Department for the amount due. Any activity performed without a valid permit is a violation of the Fish and Game Code and therefore subject to enforcement action.

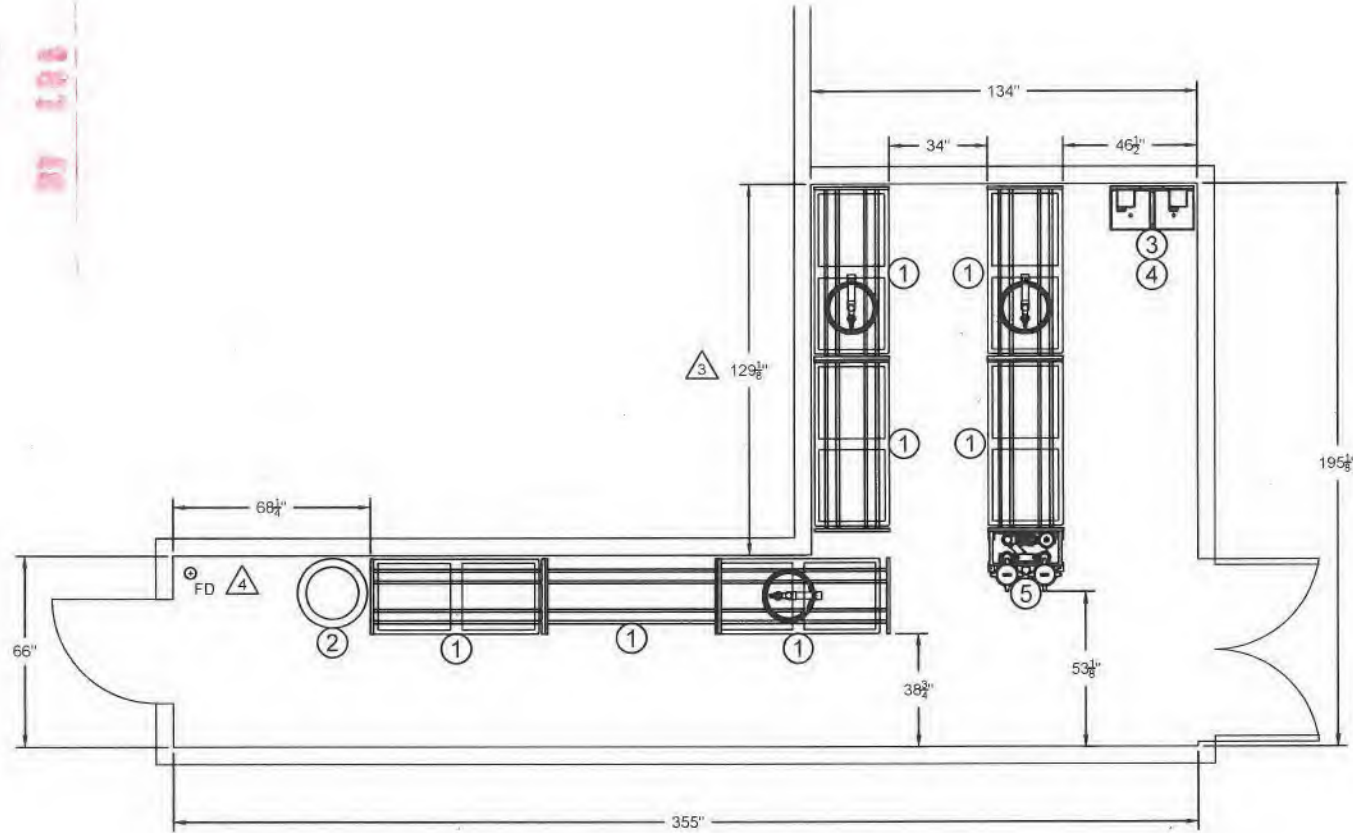
\*\* **Credit Cards**—Licenses, permits, tags, stamps, or registrations may be purchased with a Visa or MasterCard.

EXISTING EQUIPMENT SCHEDULE			
ITEM NO.	PART NO.	QTY	DESCRIPTION
1	ZAD760	7	7 SHELF, 60" DOUBLE SIDED RACK
2	MSTRND100	1	100 GALLON STORAGE TANK
3	DAD14	1	14 GALLON CHEMICAL DOSING FEED SYSTEM
4	MMCS1200	1	SENTINEL 1200 DOSING & MONITORING SYSTEM

NEW EQUIPMENT SCHEDULE			
ITEM NO.	PART NO.	QTY	DESCRIPTION
5	ZAFS050-UR	1	50 GPM UNDER RACK CENTRAL FILTRATION SYSTEM

NOTES:

1. DOUBLE SIDED RACKS TO BE PLACED ALONG THE WALL, ONE SIDE INACCESSIBLE
2. CUSTOMER TO REMOVE ALL BUILDING CASEWORK IN HALLWAY TO ALLOW FOR RACKS TO BE PLACED ALONG WALL.
3. CUSTOMER TO CONFIRM MARKED DIMENSIONS
4. CUSTOMER TO CUT IN NEW DRAIN PORT ON EXISTING DRAIN LINE. NEW PORT TO BE LESS THAN 12" AFF.



RECEIVED  
07 1 06



340 RANCHEROS DR.  
UNIT 180, SAN MARCOS  
CA. 92069  
PHONE 858-575-2025  
FAX 858-689-9326

Approved:  
Sealed:  
WT:  
Contract No:

SCINTILLON INSTITUTE

Planning Documents for:  
Scintillon Institute

LAYOUT

Rev	Date	Comments
A	05.01.25	Initial Layout
B	05.12.25	Added Floor Space
C	06.17.25	Corrected Equip List
D	06.18.25	Adjusted Room Dims
E	07.26.25	Revised Filtration
F	07.29.25	Revised Filtration
O	08.19.25	Revised to UR

Drawn by: C. NIELSEN  
Date: 2025.09.19  
Project #:

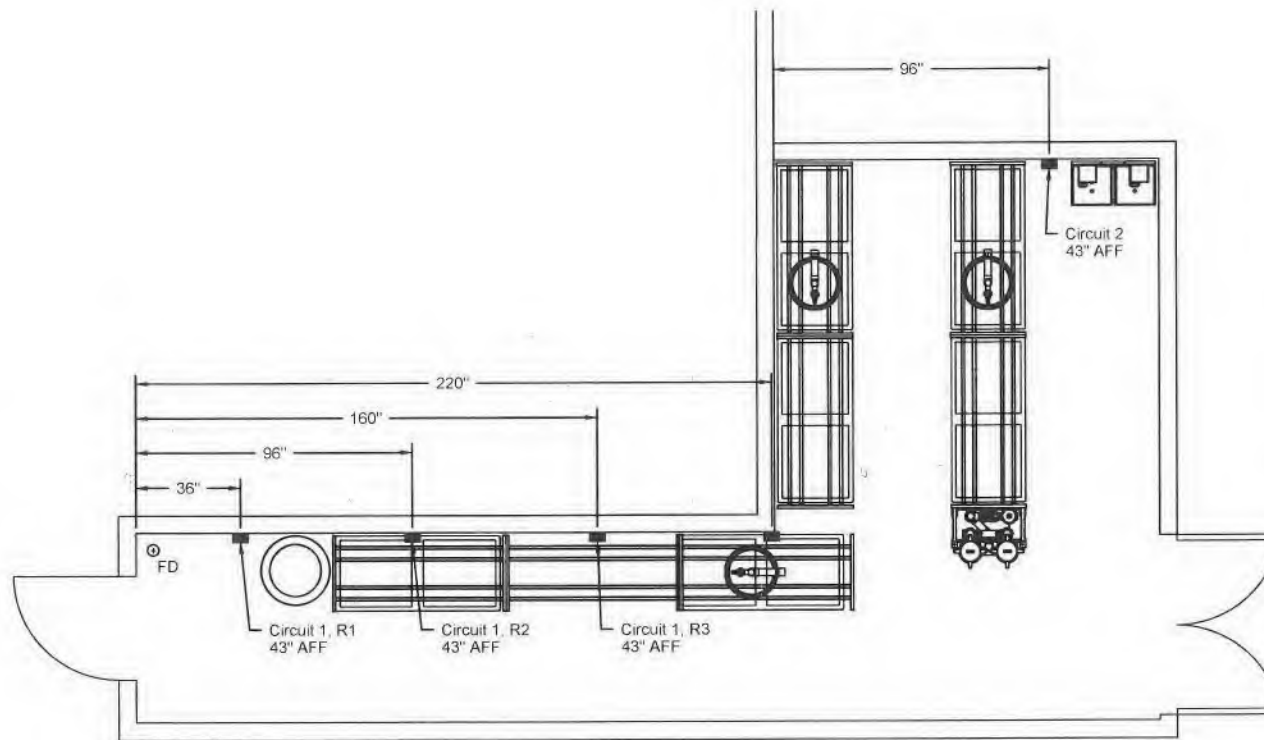
70476

Sheet No.  
**AQ1.0**

FLOOR PLAN  
SCALE: NTS


NOTE:

1. RO WATER SUPPLY IN ADJACENT ROOM. CUSTOMER TO CONNECT TO EXISTING STORAGE TANK.
2. RJ45 DATA CONNECTION TO BE WITHIN 50' OF THE DOSING AND MONITORING SYSTEM. EXTENDED ETHERNET CORD TO BE PROVIDED BY AQUANEERING



**FLOOR PLAN**

SCALE: NTS



**neering**

340 RANCHEROS DR.  
UNIT 180, SAN MARCOS  
CA, 92069  
PHONE 858-578-2028  
FAX 858-689-9325

Reference:
Scale:
W.P.:
Comments:

SCINTILLON INSTITUTE

MEP

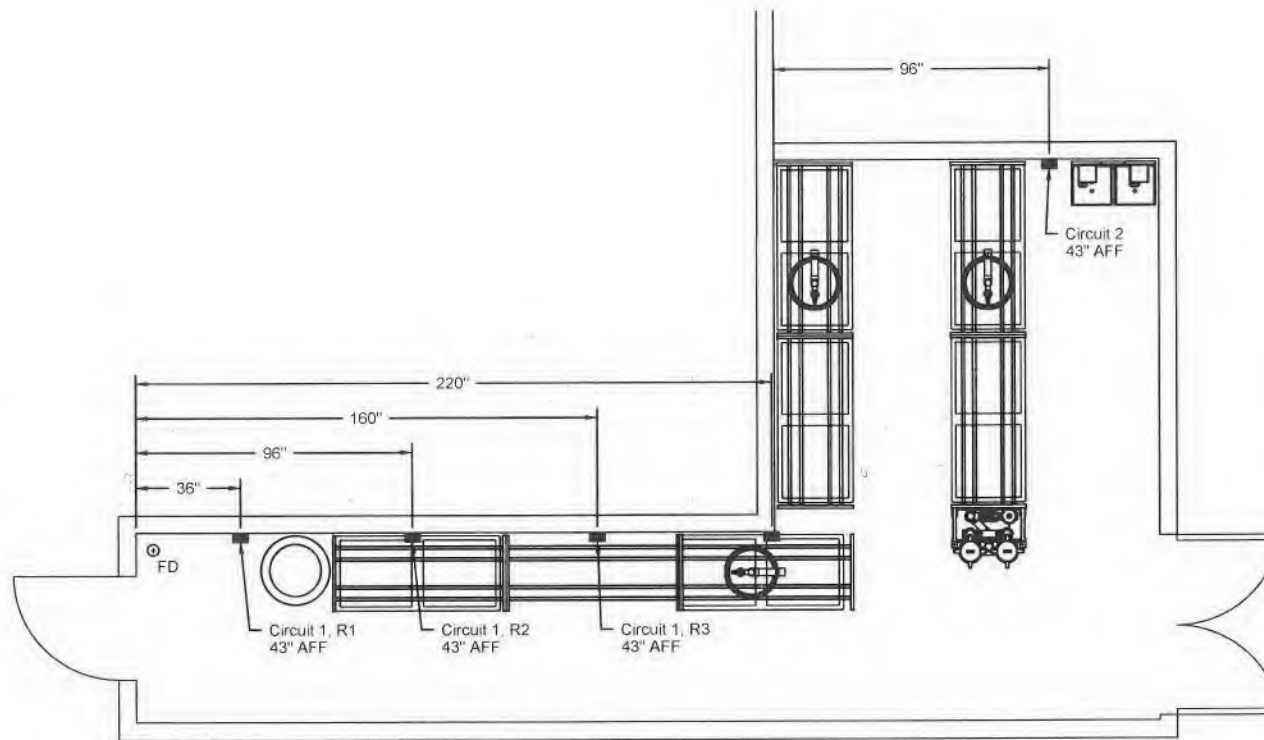
Rev#	Date	Comments
A	06.17.25	Initial Layout
B	06.18.25	Revised Circuits
C	06.25.25	Revised Circuits
D	06.27.25	Revised Circuits
E	09.19.25	Revised Circuits for Unit

Drawn by: C. NIELSEN  
Date: 2025.09.19  
Project #: 70476  
Sheet No.

**AQ5.0**


NOTE:

1. RO WATER SUPPLY IN ADJACENT ROOM. CUSTOMER TO CONNECT TO EXISTING STORAGE TANK.
2. RJ45 DATA CONNECTION TO BE WITHIN 50' OF THE DOSING AND MONITORING SYSTEM. EXTENDED ETHERNET CORD TO BE PROVIDED BY AQUANEERING



**FLOOR PLAN**

SCALE: NTS



**aqua**  
**neering**

340 RANCHEROS DR.  
UNIT 180, SAN MARCOS  
CA, 92069  
PHONE 858-578-2028  
FAX 858-689-9325

Reference:
Scale:
Rev:
Comments:

**SCINTILLON INSTITUTE**

**MEP**

Rev	Date	Comments
A	06.17.23	Initial Layout
B	06.18.23	Revised Circuits
C	06.25.23	Revised Circuits
D	06.27.23	Revised Circuits
E	09.19.23	Revised Circuits for Unit

Drawn by: C. NIELSEN  
Date: 2025.09.19  
Project #: 70476  
Sheet No.

**AQ5.0**



340 Rancheros Dr. San Marcos, CA 92069  
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Rev.	Date	Description
A	06.17.25	Initial Release
B	06.25.25	Revised Circuits
C	06.27.25	Revised Circuits
D	09.19.25	Revised for UR

**Circuit Card: Scintillon Institute - 70476**

Circuit #	Size (Volts)	Amps	Phase	Emergency Power	Component	Actual Draw (Amps)	Connection	Room	Comments
1	120	20	1	Y	See Below	13.2 (Total per Circuit)		Hallway	NOTE B
R1					Timed Water Exchange	2.2	Wall Receptacle	Hallway	NOTE D
R2					Not Used	0	Wall Receptacle	Hallway	NOTE D
R3					(x5) FBB Pumps	11	Wall Receptacle	Hallway	NOTE D
2	120	20	1	Y	Rack Pump / Float Switch / Dosing & Monitoring	11	Wall Receptacle	Garage / New Room	NOTE E & C

NOTE A: ALL ELECTRICAL JUNCTIONS (INCLUDING OUTLETS) ARE THE RESPONSIBILITY OF THE PURCHASER AND ARE TO BE INSTALLED BY A LICENSED ELECTRICIAN IN ACCORDANCE WITH LOCAL AND NATIONAL SAFETY CODES.  
 ANY LOCAL REQUIREMENTS FOR GFI PROTECTION ARE THE RESPONSIBILITY OF THE OWNER  
 AQUANEERING DOES NOT USE GROUND FAULT INTERRUPTORS

NOTE B: CIRCUIT IS SPLIT BETWEEN MULTIPLE RECEPTACLES

NOTE C: CIRCUIT REQUIRES AN RJ45 DATA CONNECTION MOUNTED

NOTE D: CIRCUIT REQUIRES AN EXISTING QUAD WALL RECEPTACLE TO BE MOUNTED @ ~44" AFF.

NOTE E: CIRCUIT REQUIRES A DUPLEX WALL RECEPTACLE TO BE MOUNTED @ ~44" AFF.

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## Animal Welfare Assurance

### The Scintillon Institute D16-00933 (A4744-01)

I, Jiwu Wang, PhD, as named Institutional Official for animal care and use at The Scintillon Institute, provide assurance that this Institution will comply with the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals (Policy).

#### I. Applicability of Assurance

This Assurance applies whenever this Institution conducts the following activities: all research, research training, experimentation, biological testing, and related activities involving live vertebrate animals supported by the PHS, HHS and NSF, and/or NASA. This Assurance covers only those facilities and components listed below.

- A. The following are branches and components over which this Institution has legal authority, included are those that operate under a different name:
  - All components of the Scintillon Institute that are physically located at: 6868 Nancy Ridge Drive, San Diego CA 92121 (animal housing and labs).
  - There are no off-site satellite facilities.
- B. The following are other institution(s), or branches and components of another institution: None. Not applicable. There are no other institutions or branches of other institutions, covered by this Assurance.

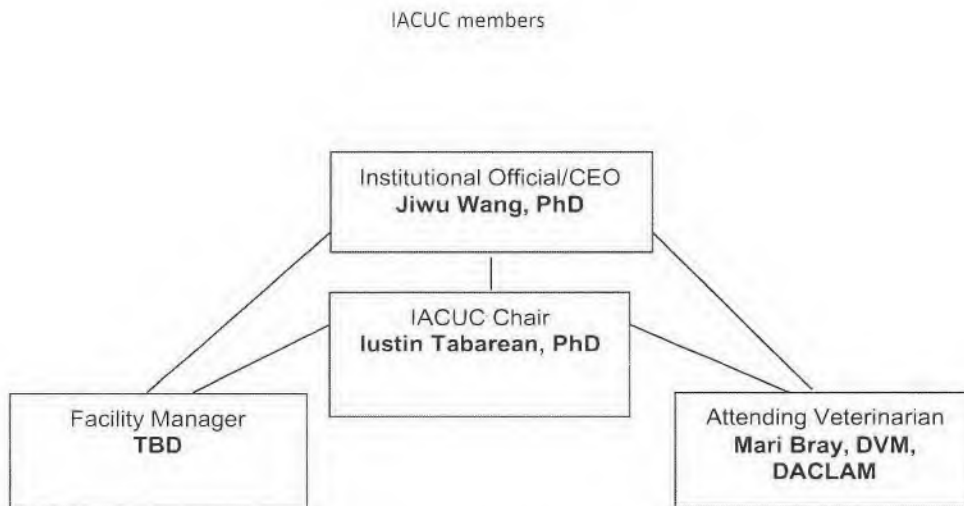
#### II. Institutional Commitment

- A. This Institution will comply with all applicable provisions of the Animal Welfare Act and other Federal statutes and regulations relating to animals.
- B. This Institution is guided by the "U.S. Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training."
- C. This Institution acknowledges and accepts responsibility for the care and use of animals involved in activities covered by this Assurance. As partial fulfillment of this responsibility, this Institution will ensure that all individuals involved in the care and use of laboratory animals understand their individual and collective responsibilities for compliance with this Assurance, and other applicable laws and regulations pertaining to animal care and use.
- D. This Institution has established and will maintain a program for activities involving animals according to the Guide for the Care and Use of Laboratory Animals (Guide).
- E. This Institution agrees to ensure that all performance sites engaged in activities

involving live vertebrate animals under consortium (sub-award) or subcontract agreements have an Animal Welfare Assurance and that the activities have Institutional Animal Care and Use Committee (IACUC) approval.

### III. Institutional Program for Animal Care and Use

- A. The lines of authority and responsibility for administering the program and ensuring compliance with this Policy are as follows:



As indicated above, there are direct and open lines of communication between the IACUC and the Institutional Official (IO) and between the Veterinarian and the IO.

- B. The qualifications, authority, and percent of time contributed by the veterinarian(s) who will participate in the program are as follows:

1. Name: Mari V Bray

Qualifications:

**Degrees**: DVM, The Ohio State University 1982; Residency at Yale University in lab animal medicine, DACLAM, 1994

**Training and/or experience in laboratory animal medicine or in the use of the species at the institution:** *[Briefly describe the veterinarian's training or experience in laboratory animal science and medicine or with the species housed. Do not include or attach a CV.]*: Dr. Bray has been practicing laboratory animal medicine since she completed a post-doctorate program in 1992, and has been a licensed veterinarian since 1986. She has extensive experience in clinical medicine, diagnostics, protocol processing and

review, program oversight, etc. Dr. Bray continues her training in Laboratory Animal Science by reading journals, attending national meetings, such as ACLAM, annually and keeping in contact with others in her field. In addition, she is a Diplomate of the American College of Laboratory Animal Medicine.

Responsibilities: Dr. Bray has delegated program authority and responsibility in the Institution's animal care and use program. Dr. Bray has unrestricted access to all of the animals. Dr. Bray has the responsibility of monitoring the operation of the animal facility. As consulting veterinarian, she provides professional services and expertise in maintaining research animals in optimal health, in treating animals in emergency situations, periodical inspection of animals, animal quarters, and facilities to assure continual compliance with the Animal Welfare Act and other established guidelines and programs for sanitation and maintenance. Dr. Bray provides guidance to investigators and all personnel involved in the care and use of animals to ensure appropriate handling, immobilization, sedation, analgesia, anesthesia, euthanasia, and oversees the surgery programs, including the postsurgical care.

Time Contributed to Program: As the institutional consulting veterinarian and member of the IACUC, she is contracted to be on-site on a regular schedule (at least every month) to review the animal use protocols, inspect the animal facility, and attend to the needs of the animals kept at the facility. She also comes on site on an as needed basis for animal health issues. During her site visits 100% of her time is contributed to the Institution's program. In addition to this time, she reviews all documents off-site. In terms of a 40 hour work week, it is estimated that she would spend an average of 1-3% of her time per month for this program; however that may increase if need arises.

## 2. Provisions for Back-up Veterinary Care:

Name: Alice Smith

### Qualifications:

Degrees: DVM, The Ohio State University

Training or experience in laboratory animal medicine or in the use of the species at the institution: Dr. Smith has been practicing in the field of laboratory animal medicine for over 20 years at institutes such as the Salk Institute. She is currently employed at UCSD in their animal care program. She has extensive experience in the use of mice and rats in research.

Responsibilities: Dr. Smith is on backup call for animal health emergencies if Dr. Bray is unavailable.

Time contributed to Program: Dr. Smith is only available for backup animal health emergencies when Dr. Bray is unavailable. 100% of her time would be contributed to the animal care and use program. She may spend 1-2 hours per year at the Institute.

## 3. Provisions for Care when Veterinarian is not Onsite Full-time:

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Name: Francisco Beltran

Position Title: Animal Technician

Responsibilities: Mr. Beltran is responsible for the daily animal care and use and facility management as the veterinarians are not on site full-time.

- C. The IACUC at this Institution is properly appointed according to PHS Policy IV.A.3.a. and is qualified through the experience and expertise of its members to oversee the Institution's animal care and use program and facilities. The President, as Chief Executive Officer (C.E.O.), appoints the members of the IACUC. The IACUC consists of at least five members, and its membership meets the composition requirements of PHS Policy IV.A.3.b. Part VIII is a list of the chairperson and members of the IACUC and their names, degrees, profession, titles or specialties, and institutional affiliations.
- D. The IACUC will:
1. **Review at least once every six months the Institution's program for humane care and use of animals, using the Guide as a basis for evaluation. The IACUC procedures for conducting semiannual program reviews are as follows:**
    - A quorum of the members of the committee shall be present for all program reviews, which will often be scheduled to be done in combination with the facility inspection.
    - These will be scheduled at least one month in advance, and all members of the committee will be invited to attend.
    - The committee will use the Guide for the Care and Use of Laboratory Animals, the PHS Policy, and the Code of Federal Regulations as references for conducting their review.
    - Each portion of the program will be thoroughly reviewed using the OLAW sample Semiannual Program and Facility Review Checklist in conjunction with the Guide.
    - Items reviewed include, but is not limited to a review of the following:
      - a. Institutional Policies and Responsibilities,
      - b. Husbandry and Veterinary Care (all aspects),
      - c. Animal Care and Use Program
      - d. Occupational Health and Safety
      - e. Disaster Planning and Emergency Preparedness
      - f. IACUC Membership and Functions
      - g. IACUC Protocol Review
      - h. Personnel Qualifications and Training
      - i. Personnel Security
      - j. Investigating and Reporting Animal Welfare Concerns
      - k. Drug Storage and Control

- In addition, the evaluation will periodically include a review of the Institution's PHS Assurance.
  - If any deficiencies are noted during the review, they will be categorized as significant or minor and a reasonable and specific correction schedule will be developed by the committee. The IACUC considers a significant deficiency to be one that is or maybe a threat to the health and/or safety of the animals or personnel.
  - Any IACUC approved departures from the Guide will be noted, and justifications for approved departures included in the report.
  - Every effort will be made to include as many of the committee members as possible for each program review and no member will be involuntarily excluded for participation in any portion of the reviews.
  - Minority views on all aspects will be incorporated into the review.
2. **Inspect at least once every six months all of the Institution's animal facilities, including satellite facilities and animal surgical sites, using the Guide as a basis for evaluation. The IACUC procedures for conducting semiannual facility inspections are as follows:**
- At least two voting members of the committee shall be present for all inspections of the institute's animal facilities and animal surgical areas.
  - These will be scheduled to be done in advance, and all members of the committee will be invited to attend.
  - The committee will use the Guide for the Care and Use of Laboratory Animals, the PHS Policy, and the Code of Federal Regulations as references for conducting their review and inspection.
  - The animal facilities will be thoroughly inspected using the OLAW sample Semiannual Program and Facility Review Checklist.
  - The areas of inspection will include, but is not necessarily limited to an inspection of the following:
    - a. All Animal Housing Rooms
    - b. All Animal Procedural Rooms and Areas
    - c. Feed and Bedding Storage Areas
    - d. Rodent Surgical Procedural Rooms
    - e. Surgical areas and Supplies,
    - f. Expiration Dates of animal supplies and drugs
  - If any deficiencies are noted during the review, they will be categorized as significant or minor and a reasonable and specific correction schedule will be developed by the committee. The IACUC considers a significant deficiency to be one that is or maybe a threat to the health and/or safety of the animals or personnel
  - Any IACUC approved departures from the Guide will be noted, and justifications for

approved departures included in the report.

- Every effort will be made to include as many of the committee members as possible for each inspection and no member will be involuntarily excluded for participation in any portion of the inspections.

- Minority views on all aspects will be incorporated into the inspection.

**3. Prepare reports of the IACUC evaluations according to PHS Policy IV.B.3. and submit the reports to the Institutional Official. The IACUC procedures for developing reports and submitting them to the Institutional Official are as follows:**

- Individual IACUC members will convey their observations to the IACUC Chairperson who, in turn, will draft the reports using the sample OLAW Semiannual Report to the Institutional Official format from the OLAW website.

- The reports will contain a description of the nature and extent of the Institution's adherence to the Guide and the PHS Policy

- The reports will identify specifically any departures from the provisions of the Guide and the PHS Policy and state the reasons for each departure. If there are no departures it will be so noted in the reports.

- Any "Approved" departures will be approved as part of a protocol, protocol amendment, or another written document using either FCR or DMR.

- Any departures from the provisions of the Guide that are not IACUC approved are considered a deficiency and are addressed as such. The IACUC will then develop a reasonable plan and schedule for discontinuing the departure or will have the departure properly reviewed and approved. In addition, these would be reported to OLAW through the IO

- The reports will distinguish significant deficiencies from minor deficiencies. If program or facility deficiencies are noted, the reports will contain a reasonable and specific plan and schedule for correcting each deficiency.

- If at any time in the future any of the institution's facilities are accredited by AAALAC International the reports will identify those facilities as such.

- Any concerns noted by a member of the IACUC or by individuals within or outside the Institution, whether during program review or facility inspection, will be noted.

- Copies of the draft reports will be reviewed, revised as appropriate, and approved by the Committee.

- The final reports will be signed by a majority of the IACUC members and will include any minority opinions. If there are no minority opinions, the reports will so state.

- The completed reports will be submitted to the Institutional Official in a timely manner—usually within 30 days following the evaluation.

- All noted deficiencies will be followed up by a designated member of the IACUC, or an appointee thereof, and the changes reported to and reviewed by the IACUC and reported to the IO once corrected.

**4. Review concerns involving the care and use of animals at the institution. The IACUC procedures for reviewing concerns are as follows:**

- There is a "Whistle-blowing" policy whereby deficiencies in animal care and treatment may be reported by individuals within or outside the institution without discrimination for reporting violations of standards under The Guide. This is posted on the animal room doors.
- Any of the persons on the IACUC may be contacted in confidence by any method. In addition, reports of concerns can be submitted anonymously via a form that is placed into a comments box placed outside the animal facility.
- Personnel shall be protected against reprisal by the company.
- The names and contact numbers of IACUC members, veterinarian and IO can be found on the company's display case, website and the animal holding room door.
- All members of the IACUC and the IO are informed of any animal welfare concerns reported to the Institute.
- A full investigation will then ensue by members of the IACUC designated by the chairperson.
- The investigation can consist of interviewing personnel, reviewing data and other research documents, and any other lawful investigative methods deemed necessary by the subcommittee.
- The results of the investigation will be brought back to the full committee for review and for decision as to whether there is a deficiency and, if so, determine how to most efficiently and effectively resolve it.
- The committee will then determine if punitive action is warranted, up to and including recommendation for dismissal of an employee or suspension of an animal use protocol.
- Records of reported concerns and all subsequent action taken are compiled in a separate section of the IACUC Meeting Binder. A brief summary is also noted in IACUC meeting minutes.
- The Committee will report such actions, in writing, to the IO and, as warranted, to OLAW. Reports to the IO may be either via meeting minutes, semiannual report of IACUC evaluations, or separate document. Reports to OLAW will be in writing and through the IO. Preliminary reports to both the IO and OLAW may be made verbally.

**5. Make written recommendations to the Institutional Official regarding any aspect of**

**the institution's animal program, facilities, or personnel training. The procedures for making recommendations to the Institutional Official are as follows:**

- The IACUC will make written recommendations to the Institutional Official regarding any aspect of the institution's animal program, facilities, or personnel training.
- These recommendations may be formulated during six-month program reviews and facility inspections or may be formulated during any other IACUC meeting in which there is a quorum present and the majority of the quorum vote to make a recommendation and/or to implement changes.
- Written recommendations are included in the IACUC semi-annual evaluations or may be addressed in a separate letter for issues that occur during IACUC meetings that occur at other times of the year.
- These written recommendations are reviewed by the committee, revised as appropriate and then submitted to Institutional Officer.
- Minority views will be included in these recommendations.
- Recommendations will be forwarded to the Institutional Official within 30 days after their development.
- On an as needed basis, issues deemed urgent that arise will be communicated to the Institutional Official within 5 days after their development, within one day if an emergency. Any person within the institute can bring things to the Institutional Official, including the Attending Veterinarian and IACUC members.

**6. Review and approve, require modifications in (to secure approval), or withhold approval of PHS-supported activities related to the care and use of animals according to PHS Policy IV.C.1-3. The IACUC procedures for protocol review are as follows:**

- Protocols are submitted for review by the Principal Investigator for the research project to the IACUC chair. Protocols are submitted/received in either a hard paper copy or via email attachment.
- The veterinarian will pre-review all protocols.
- Members of the IACUC are notified prior to the semi-annual or protocol review meeting by e-mail of any new protocols to be reviewed.
- The Chair distributes protocols to all IACUC members by email attachment prior to the review.
- No member may participate in the IACUC review or approval of a protocol in which the member has a conflicting interest (e.g., is personally involved in the project) except to provide information requested by the IACUC; nor may a member who has a conflicting interest contribute to the constitution of a quorum.

- In addition, the IACUC reserves the right to use a non-voting consultant for additional assistance with protocol review. This person cannot vote, but can provide guidance to the IACUC.
- If at any time telecommunications are used to conduct meetings all members will be given notice of the meeting. Any use of telecommunications will be in accordance with NIH Notice NOT-OD-06-052 of March 24<sup>th</sup>, 2006, entitled Guidance on Use of Telecommunications for IACUC Meetings under the PHS Policy on Humane Care and Use of Laboratory Animals.
  - Documents normally provided to members during a physically-convened meeting are provided to all members in advance of the meeting.
  - All members have access to the documents and the technology necessary to fully participate.
  - A quorum of voting members is convened when required by PHS Policy.
  - The forum allows for real time verbal interaction equivalent to that occurring in a physically-convened meeting (i.e., members can actively and equally participate and there is simultaneous communication).
  - If a vote is called for, the vote occurs during the meeting and is taken in a manner that ensures an accurate count of the vote. A mail ballot or individual telephone polling cannot substitute for a convened meeting.
  - Opinions of absent members that are transmitted by mail, telephone, fax or e-mail may be considered by the convened IACUC members but may not be counted as votes or considered as part of the quorum.
  - Written minutes of the meeting are maintained in accord with the PHS Policy, IV.E.1.b.
- All protocol review documents, including related correspondence, will be dated and kept on file and made available to regulatory inspectors.

### **Full-Committee Review (FCR)**

- Protocols are reviewed by a convened meeting of the full committee and approval is granted only after review by a quorum (>50%) of the IACUC and with the approval vote of a simple majority (51%) of the quorum present.

Full committee reviews are conducted only in person (including teleconference) with a quorum of the committee meeting. Any person who is on the protocol or has a conflict of interest is not considered a part of the quorum for the purposes of discussion and voting and is recused from the discussion and voting on the protocol. The IACUC will ensure there is a quorum for voting after determination of who must recuse. If the quorum is lost, that item will be sent out for DMR review instead. The IACUC may decide to discuss the protocol, but will not vote on it if the quorum is lost.

- The committee examines the written responses to an application for animal research, which is designed to conform to the standards of the Guide. The questions determine the identity and qualifications of all animal handlers, funding, summary in lay terms of the proposal, justification of the choice, strain, number and length of use of animals, criteria of detecting discomfort, proposed measures to avoid pain and suffering, method of euthanasia, presence of biohazards and special needs and related topics.

- All questions that are to go to the principal investigator are recorded. Voting is done by a show of hands (or oral vote if by teleconference).
- Following discussion, voting is conducted on whether to
  - a. approve the protocol,
  - b. require modifications (in order to secure approval) or
  - c. withhold approval.
- **Review of Required Modifications Subsequent to FCR.** When the IACUC requires modifications (to secure approval), of a protocol, such modifications are reviewed as follows:
  - a. FCR or DMR following all applicable procedures as delineated in the PHS Policy and elsewhere in Part III.D.6 of this Assurance.

Or

- b. DMR if approved unanimously by all members at the meeting at which the required modifications are developed/delineated AND if all IACUC members have previously agreed in writing (note, this is documented in our IACUC policy and SOP, which is reviewed annually) that the quorum of members present at a convened meeting may decide by unanimous decision to use DMR subsequent to FCR when modification is needed to secure approval. However, any member of the IACUC may, at any time, request to see the revised protocol and/or request FCR of the protocol. The IACUC Chair appoints the designated reviewer. Minor modifications of an administrative nature, i.e., typographical or grammatical errors, required signatures, etc. may be confirmed by IACUC administrative/support personnel. The approval of the committee to DMR after FCR is documented annually, as noted above, by signatures of committee members.

### **Designated-Member Review (DMR)**

- The designated-reviewer method is an alternate procedure for protocol review. The application form is the same as for the full IACUC review.
- In this method, prior to review all members are provided with complete copies of the proposed projects. Each member has the opportunity to request full committee review.
- Polling of members after receipt of necessary materials will be a mechanism for providing all IACUC members with the prior opportunity to call for full review. Polling in this instance is not an approval vote on the proposed research.
- Records of such polling will be maintained to document that the opportunity for members to call for full-committee review has been provided. Polling may be done by mail, email, or phone contact by the IACUC chairperson.
- If no member calls for full committee review, then the IACUC chairperson may designate one or more qualified IACUC members to review the proposed research project and to have authority to approve, require modifications to secure approval, or request full

committee review of those research projects.

- Any IACUC members may make suggestions or comments to the designated reviewers' for consideration only; concurrence to allow DMR may not be conditional.
- If multiple designated reviewers are used and modifications are made to original protocol then a final revised protocol (i.e., an identical document with all required modifications included) will be sent to all designated reviewers for review and approval.
- If multiple designated reviewers are used their decision must be unanimous; if not the protocol will be sent for full committee review.
- The possible outcomes of DMR are as follows:
  - a. Approval of protocol
  - b. Require modifications (in order to secure approval)
  - c. Sent for FCR
- Expedition of protocols can occur as a Designated-Member Review for investigators requiring a faster review of their research proposal. It is done as indicated above.
- In both methods of review, the PI is welcome to make modifications in order to secure approval. Questions from committee members are sent to the PI by the IACUC chair, as a memo, for both methods of review. Once responses have been received the responses will either be sent back to the full committee (after convened meeting review) or back to the designated reviewers (after DMR review). Once all questions and concerns have been adequately addressed and all reviewers agree it can be approved, the protocol will receive final approval and work can begin. All reviewers receive the same versions of the documents at every step.
- In order to approve proposed protocols or proposed significant changes in ongoing protocols, the IACUC will conduct a review [by FCR or DMR] of those components related to the care and use of animals and determine that the proposed protocols are in accordance with the PHS Policy. In making this determination, the IACUC will confirm that the protocol will be conducted in accordance with the Animal Welfare Act insofar as it applies to the activity, and that the protocol is consistent with the Guide unless acceptable justification for a departure is presented. Further, the IACUC shall determine that the protocol conforms to the institution's PHS Assurance and meets the following requirements:
  - a. Procedures with animals will avoid or minimize discomfort, distress, and pain to the animals, consistent with sound research design.
  - b. Procedures that may cause more than momentary or slight pain or distress to the animals will be performed with appropriate sedation, analgesia, or anesthesia, unless the procedure is justified for scientific reasons in writing by the investigator.
  - c. Animals that would otherwise experience severe or chronic pain or distress that cannot be relieved will be painlessly killed at the end of the procedure or, if

appropriate, during the procedure.

- d. The living conditions of animals will be appropriate for their species and contribute to their health and comfort. The housing, feeding, and nonmedical care of the animals will be directed by a veterinarian or other scientist trained and experienced in the proper care, handling, and use of the species being maintained or studied.
- e. Medical care for animals will be available and provided as necessary by a qualified veterinarian.
- f. Personnel conducting procedures on the species being maintained or studied will be appropriately qualified and trained in those procedures.
- g. Methods of euthanasia used will be consistent with the current American Veterinary Medical Association (AVMA) Guidelines for the Euthanasia of Animals unless a deviation is justified for scientific reasons in writing by the investigator.

- No study is to begin before IACUC review and approval has occurred.

**7. Review and approve, require modifications in (to secure approval), or withhold approval of proposed significant changes regarding the use of animals in ongoing activities according to PHS Policy IV.C. The IACUC procedures for reviewing proposed significant changes in ongoing research projects are as follows:**

- Review and approval of significant changes are handled in the same manner as new protocols, using our modification form. See Paragraph III.D.6. above.

- Examples of changes considered to be significant include, but are not limited to, changes:

- a. in the objectives of a study;
- b. from non-survival to survival surgery;
- c. resulting in greater pain, distress, discomfort or in a greater degree of invasiveness;
- d. in the species
- e. in Principal Investigator;
- f. that impact personnel safety;
- g. in anesthetic agent(s), sedation, analgesics, experimental compounds or the use or withholding of analgesics;
- h. in the method of euthanasia;
- i. in the duration, frequency, type or number of procedures performed on an animal
- j. in approximate number of animals used and
- k. in the housing and or use of animals in a location that is not part of the animal program overseen by the IACUC

- Review and approval of items a. – k. must be by FCR or DMR.

- The IACUC policy includes specific evaluation criteria and each modification must address the rationale for the original number of animals used, approved study

objectives, and possible negative impacts on animal welfare.

- As with protocols, all correspondence, including questions asked and changes made, are documented in emails and in the minutes of meetings.

**8. Notify investigators and the institution in writing of its decision to approve or withhold approval of those activities related to the care and use of animals, or of modifications required to secure IACUC approval as set forth in the PHS Policy at IV.C.4. The IACUC procedures to notify investigators and the institution of its decisions regarding protocol review are as follows:**

- After review, the IACUC notifies investigators in writing of its decision to approve or withhold approval of those activities related to the care and use of animals, or of any modifications required to secure IACUC approval via written correspondence by email.
- If the IACUC decision is to require modifications to secure approval the modifications will be delineated in the written notification.
- If the IACUC decides to withhold approval of an activity the correspondence includes a statement of the reasons for its decision and gives the investigator an opportunity to respond in person or in writing.
- The IACUC notifies the Institution of its decision to approve or withhold approval of those activities related to the care and use of animals, or of modifications required to secure IACUC approval by providing the Institutional Official copies of the IACUC meeting minutes. If the IACUC decides to withhold approval of an activity, the minutes include a statement of the reasons for its decision.
- Written communication of the IACUC to investigators is the responsibility of the IACUC Chair and copies of all correspondence are maintained by the IACUC Chair. Communication for significant changes to protocols is the same as for protocols (see Part III.D.6. above).

**9. Conduct continuing review of each previously approved, ongoing activity covered by PHS Policy at appropriate intervals as determined by the IACUC, including a complete review at least once every three years according to PHS Policy IV.C.1.-5. The IACUC procedures for conducting continuing reviews are as follows:**

- Post-approval monitoring occurs as part of the monthly veterinary visits, during which documentation is reviewed, as well as animal housing and physical facilities. In addition, the key facility personnel monitor all procedures being performed in the facility in order to ensure that nothing is done that is not already approved on a protocol.
- USDA Regulated Species – Currently, there are no USDA covered species at this institution. However, if USDA regulated species are ever housed or used, protocols involving USDA regulated species would be reviewed by members of the IACUC as per other species and in accordance with the Animal Welfare Act.
- In Non-USDA Regulated Species – agreement with The Guide, the IACUC conducts a complete de novo review of all protocols, utilizing all of the criteria mandated for the initial

review, at least once every three years.

- Protocols are approved for a maximum of 36 months. That is, all protocols expire no later than the three-year anniversary of the initial IACUC review.
- If activities will continue beyond the expiration date, prior to the expiration date of the original or preceding protocol, a new protocol must be submitted, reviewed, and approved as described in Section III.D.6. above. This review must be completed and fully approved prior to the expiration date in order for the research to continue.

**10. Be authorized to suspend an activity involving animals according to PHS Policy IV.C.6. The IACUC procedures for suspending an ongoing activity are as follows:**

- The IACUC may suspend an activity that it previously approved if it determines that the activity is not being conducted in accordance with applicable provisions of the Animal Welfare Act, the Guide, the institution's Assurance, or IV.C.1.a.-g. of the PHS Policy.
- In compliance to the Guide, prior to suspension of any research protocol, the project will be reviewed at a meeting of a convened quorum of the IACUC. The ongoing activity will only be suspended if agreed to by a majority of the quorum present.
- If suspension is not the choice of the IACUC, then the IACUC can instead write a warning letter or take action as deemed necessary by the majority of the quorum. All minority opinions will be recorded.
- If the IACUC suspends an activity involving animals due to noncompliance with the Policy, Animal Welfare Act, the *Guide*, or the institution's Assurance, the Institutional Official in consultation with the IACUC shall review the reasons for suspension, take appropriate corrective action, and report that action with a full explanation in writing to OLAW. Preliminary reports may be made verbally.

**E. The risk-based occupational health and safety program for personnel working in laboratory animal facilities and personnel who have frequent contact with animals is as follows:**

**1. Administration/management.**

- The Institution's Safety Officer is responsible for the overall management (development, implementation, monitoring, etc.) of the Safety Program for personnel involved in the care and/or use of laboratory animals. The Safety Officer works with a contracted Occupational Health professional company to plan and monitor the program.

**2. Scope.**

- The program covers all personnel entering the animal facility, including students, contractors, IACUC members, etc.
- Participation in the program is mandatory for all personnel working with the animals. For maintenance, engineering contractors and IACUC members, who will not work directly with the animals, are treated as in section 8 below. To date none of

covered personnel working directly with animals have declined to participate.

- Personnel are provided and asked to complete the health history forms at the time of hire. These forms are not kept in-house, nor are they examined by any Scintillon personnel. All personnel that will come into contact with animals are required to complete this risk assessment at hire and every 3 years as described below.

### **3. Health Histories and Evaluations.**

- Initially, all animal facility personnel are asked to complete a medical history questionnaire, and an animal allergies questionnaire to determine their health status and whether they have special needs such as immunosuppression or animal allergies before they are allowed to work in this facility. These questionnaires are not collected internally, nor does any Scintillon employee read these once the forms have been completed by the employee.
- These questionnaires are evaluated by the personal physician of the employee to determine if there are any additional safety precautions (such as PPE) required for that individual, without revealing any personal medical information. Employees will take the forms to the personal physician, who knows their entire health history, and take along a position description to show their physician what it is they do. In addition, they take other training information, such as the allergy training information. In this way the personal physician will know what the job hazards might be. In addition, we let them know that if there are any questions from the physician they can contact our safety officer. This physician then sends a form indicating any required PPE or that the person is cleared with no PPE requirements to the Safety Officer.
- The forms are maintained by the Safety Officer.

### **4. Hazard Identification and Risk Assessment.**

- The program is based on hazard identification, risk assessment, and developing and implementing measures to minimize identified hazards and risks. This assessment has been performed by the Safety Officer in conjunction with Occupational Health experts.
- On an ongoing basis, the Safety Officer reviews all documents for any health and safety issues that present themselves in any protocol or amendment up for approval.
- Semiannually, during the IACUC program evaluation, the IACUC looks for any health and safety issues that present themselves.
- The facilities and equipment are maintained regularly. The safety officer performs regular inspections looking for hazards or additional risks. Fume or biosafety hoods are used when necessary and validated annually.

### **5. Procedures in Place to Alleviate Hazards and Minimize Risks.**

- Some potential hazards and risks identified at the Institution include allergens, chemical agents, animal bites, physical hazards, and zoonosis. Zoonosis is a minimal risk, however, as only rodents from approved vendors are received into the facility.

- All personnel entering the animal facility are trained by the Institution's Safety Officer regarding these safety issues (including potential biohazards) in the animal facility. Training includes proper handling, disposal and emergency procedures for each hazard. It also includes training or advise on precautions to be taken during personnel pregnancy, illness, or decreased immunocompetence, in order to ensure this training occurs before those conditions have occurred or, in the case of new employees who already have these conditions. See point 7, below.
- MSDS's are available online for all chemicals used in the Institute. All personnel are trained in control and prevention of risks to which they are exposed.
- All personnel are educated in the use and importance of personal hygiene and protective equipment, such as gloves, safety glasses, goggles, masks, and laboratory coats, including when these are required. In addition, annual safety training is performed on these and other safety issues for all personnel. Annual training also includes re-training on precautions to be taken during personnel pregnancy, illness, or decreased immunocompetence, in order to ensure this training occurs before those conditions have occurred. Personnel are reminded they can contact safety for additional advice, if needed. See point 7, below.
- Monthly, the Institution's Safety Officer does a facility safety inspection for any visible hazards and reports them to the Institutional Officer. They are corrected either at the time or in as timely a manner as possible.
- Animals come from approved vendors only. At this time only mice are used at the Institution and vendor health information is surveyed by the consulting veterinarian to determine if any zoonosis are present.
- In order to reduce exposure to allergens personnel are provided PPE (gloves, hair net, surgical face mask and lab coats) and animals are housed in microisolator or IVC cages.

## **6. Immunizations.**

- Personnel will be made aware of the benefits of hepatitis and tetanus vaccinations and trained in the potential health risks and problems associated with working with the animals. Access to vaccinations is provided by the institution to all who need/request it. In other words, all vaccinations are offered by the institution.

## **7. Precautions taken during pregnancy, illness or decreased immunocompetence.**

- Personnel are advised during training that if they are planning to become pregnant, are pregnant, are ill, or have impaired immunocompetence that they should consult a health care professional/physician regarding such conditions and how they might pertain to their working with laboratory animals. Personnel have the option to visit their personal physician or the Occupational Health Facility listed in point 7, below.
- If warranted, any work restrictions and/or accommodations are coordinated among the individual, his/her health care professional, supervisor, human resources, Safety

Officer, etc.

**8. Provisions for personnel who are not involved in animal care and/or use but nevertheless need to enter areas when animals are housed or used.**

- The housekeeping staff is not routinely allowed access to any of our animal care or use rooms.
- When building maintenance, IACUC non-affiliated members, housekeeping, or any other non-animal personnel must access the rooms, they are first trained on appropriate precautions and potential risks and provided with proper personal protective equipment. They are offered the opportunity to enroll in the entire program by completing the health questionnaires as above. If they choose this option, they are not allowed to enter until clearance is provided by the physician.
- If needed a member of the animal care staff or the Institutional Officer will escort them into the room.

**9. Availability and procedures for treatment of bites, scratches, illness or injury.**

- All full-time employees are eligible for a health program which covers preventive and emergency care and hospitalization. In the event of an injury or illness incurred while on the job, all employees (full or part-time) are covered under worker's compensation and have free access to medical treatment. There are first aid kits on-site. The closest emergency and urgent care facilities are posted on the entry to the animal facility, along with a map. These locations are:

Scripps Memorial Hospital La Jolla  
9888 Genessee Avenue  
San Diego CA 92037

Concentra Medical Center  
7590 Miramar Road, Suite C  
San Diego CA 92121

- Employees must see their supervisor or administration immediately to assist with any medical attention and to obtain workers' compensation forms (with the exception of extreme emergencies, for which 911 is contacted).

**10. Procedures/program for reporting and tracking injuries and illnesses.**

- All injuries or illnesses are reported to the immediate supervisor who will then contact the Safety Officer. Records of all occupational injuries and illnesses are maintained by the Human Resource Manager.
- F. The total gross number of square feet in each animal facility (including each satellite facility), the species of animals housed therein, and the average daily inventory of animals by species, in each facility is provided in Part X., Facility and Species Inventory.
- G. The training or instruction available to scientists, animal technicians, and other personnel involved in animal care, treatment, or use is as follows:

## 1. IACUC Members

- All members are provided with copies of the Institutional Assurance and have reviewed the IACUC policies and SOPs. In addition, they are provided with the electronic version of the Guide for the Care and Use of Laboratory Animals, the PHS Policy for the Humane Care and Use of Laboratory Animals, the current AVMA Guidelines for the Euthanasia of Animals and the link to all information on OLAW website.
- The IACUC members are required to take training on the AALAS website ([www.aalaslearninglibrary.org](http://www.aalaslearninglibrary.org)) initially (this includes training on research or testing methods that minimize the number of animals required to obtain valid results and minimize distress that is provided to scientists, animal technicians, and other personnel involved in animal care, treatment, or use) and then on a regular basis (they are encouraged to take different courses are taken each year, and are required to take Essentials for IACUC members at least every 3 years). In addition, they are encouraged to attend local meetings (SDAALAS meetings) as well as offered to attend IACUC 101 courses.
- In addition, new IACUC members receive orientation to the program and additional training on laws/regulations and how to conduct a facility inspection and program review. This training is also made available to all animal users. This is provided by the Attending Veterinarian.
- Each member is provided with a copy of the Assurance, which is also reviewed periodically at convened meetings.
- During regularly scheduled IACUC meetings, the AV provides training on any new or upcoming issues. In addition, articles pertaining to IACUC functions may be distributed at meetings for discussion. Alternatively, the AV may provide a slide show of pertinent subjects. This type of training is done at least annually.
- During semiannual reviews, training requirements are part of the program review.

## 2. Animal Care and Use Personnel

- All new personnel are informed during individual animal care and use training session where a copy of current Assurance is kept and are encouraged to read on their own free time. During this session the trainer and new staff member cover briefly all sections of the Assurance. This training session is repeated yearly in a group animal care and use personnel annual staff meeting.
- The IACUC is informed of new animal care and/or use staff and their qualifications at the semi-annual meeting or if added to a protocol. All animal care and use staff members have a qualification sheet that is kept up to date with their qualifications/skills as they are certified. New personnel must complete online training at [www.aalaslearninglibrary.org](http://www.aalaslearninglibrary.org) and provide course completion certificates prior to handling animals. This training includes instruction on research or testing methods that minimize the number of animals required to obtain valid results and minimize distress that is provided to scientists, animal technicians, and other personnel involved

in animal care, treatment, or use (“Working with the IACUC” and “Working with Mice” and “Working with Rats” are required, along with “Aseptic Surgery in Rodents”, if surgery will be performed). The IACUC have full access to these sheets and confirm training for new personnel. The IACUC reviews all adverse events reports (e.g., animal illness, or death), injury reports, etc. In addition, they review records to determine if there are other issues (deaths, unanticipated events, etc., not yet reported) during or after surgeries or other procedures during the semiannual walkthrough. The veterinarian reports anything seen during monthly walkthroughs to the IACUC as they occur. If issues occur, the IACUC will discuss at a convened meeting. If anyone is working at the time of the semiannual inspection, IACUC members will evaluate staff skills.

- All new personnel fill in a personal qualifications sheet for animal use prior to any animal usage. These are reviewed by IACUC chair or veterinarian. In addition, the protocol personnel section contains this information, as well as who will provide training, if training is needed.
- All new personnel are then thoroughly instructed by experienced personnel knowledgeable in the use and care of laboratory animals in the procedures for which they are responsible. This is documented and available for the IACUC to review.
- Animal facility staff receive on-the-job training and are required to read all SOPs and training modules.
- General training for all personnel working with animals will include information on laws and regulations, training or instruction in the humane practice of animal care and use, including training or instruction on research or testing methods that minimize the numbers of animals required to obtain valid results and limit animal pain or distress. This includes completion of courses at [www.aalaslearninglibrary.org](http://www.aalaslearninglibrary.org), such as Working with IACUC, Working with Mice, Working with Rats and Working with Frogs (species requirements vary based on work individual will be performing).
- General training may include viewing video tapes on appropriate handling and basic techniques of mice.
- Training is done prior to using animals, with additional training performed at least every three years, more often as needed.
- All training, both informal and formal is documented and this information is kept in individual personnel records.

#### **IV. Institutional Program Evaluation and Accreditation**

- A. All of this Institution's programs and facilities (including satellite facilities) for activities involving animals have been evaluated by the IACUC within the past six months and will be reevaluated by the IACUC at least once every six months according to PHS Policy IV.B.1.-2. Reports have been and will continue to be prepared according to PHS Policy IV.B.3. All IACUC semiannual reports will include a description of the nature and extent of this Institution's adherence to the PHS Policy and the Guide. Any

departures from the Guide will be identified specifically and reasons for each departure will be stated. Reports will distinguish significant deficiencies from minor deficiencies. Where program or facility deficiencies are noted, reports will contain a reasonable and specific plan and schedule for correcting each deficiency. Semiannual reports of the IACUC's evaluations will be submitted to the Institutional Official. Semiannual reports of IACUC evaluations will be maintained by this Institution and made available to the OLAW upon request.

- B. This Institution is Category 2 — not accredited by the Association for Assessment and Accreditation of Laboratory Animal Care International (AAALAC). As noted above, reports of the IACUC's semiannual evaluations (program reviews and facility inspections) will be made available upon request. The report of the most recent evaluations (program review and facility inspection) is attached.

## V. Recordkeeping Requirements

- A. This Institution will maintain for at least three years:
  - 1. A copy of this Assurance and any modifications made to it, as approved by the PHS
  - 2. Minutes of IACUC meetings, including records of attendance, activities of the committee, and committee deliberations
  - 3. Records of applications, proposals, and proposed significant changes in the care and use of animals and whether IACUC approval was granted or withheld
  - 4. Records of semiannual IACUC reports and recommendations (including minority views) as forwarded to the Institutional Official, Jiwu Wang, PhD.
  - 5. Records of accrediting body determinations
- B. This Institution will maintain records that relate directly to applications, proposals, and proposed changes in ongoing activities reviewed and approved by the IACUC for the duration of the activity and for an additional three years after completion of the activity.
- C. All records shall be accessible for inspection and copying by authorized OLAW or other PHS representatives at reasonable times and in a reasonable manner.

## VI. Reporting Requirements


- A. The Institutional reporting period is the federal fiscal year (October 1 – September 30). The IACUC, through the Institutional Official, will submit an annual report to OLAW after September 30, but on or before December 1 of each year. The annual report will include:
  - 1. Any change in the accreditation status of the Institution (e.g., if the Institution obtains accreditation by AAALAC or AAALAC accreditation is revoked)

2. Any change in the description of the Institution's program for animal care and use as described in this Assurance
  3. Any change in the IACUC membership
  4. Notification of the dates that the IACUC conducted its semiannual evaluations of the Institution's program and facilities (including satellite facilities) and submitted the evaluations to the Institutional Official, Jiwu Wang, PhD.
  5. Any minority views filed by members of the IACUC
- B. The IACUC, through the Institutional Official, will promptly provide OLAW with a full explanation of the circumstances and actions taken with respect to:
1. Any serious or continuing noncompliance with the PHS Policy
  2. Any serious deviations from the provisions of the Guide
  3. Any suspension of an activity by the IACUC

Reports filed under VI.A. and VI.B. above should include any minority views filed by members of the IACUC.

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VII. Institutional Endorsement and PHS Approval

A. Authorized Institutional Official	
Name: Jiwu Wang, PhD	
Title: President & CEO	
Name of Institution: Scintillon Institute	
Address: <i>(street, city, state, country, postal code)</i> 6868 Nancy Ridge Drive San Diego, CA 92121	
Phone: 858-657-9145	Fax:
E-mail: <a href="mailto:jiuwawang@scintillon.org">jiuwawang@scintillon.org</a>	
Acting officially in an authorized capacity on behalf of this Institution and with an understanding of the Institution's responsibilities under this Assurance, I assure the humane care and use of animals as specified above.	
Signature: 	Date: 03/19/2024

B. PHS Approving Official <i>(to be completed by OLAW)</i>	
Name/Title: Office of Laboratory Animal Welfare (OLAW) National Institutes of Health 6705 Rockledge Drive RKL1, Suite 360, MSC 7982 Bethesda, MD USA 20892-7982 (FedEx Zip Code 20817) Phone: +1 (301) 496-7163 Fax: +1 (301) 915-9465	
Signature:	Date:
Assurance Number:	
Effective Date:	Expiration Date:

**VIII. Membership of the IACUC**

Date: 03/18/2024			
Name of Institution: The Scintillon Institute			
Assurance Number:			
IACUC Chairperson			
Name* : Iustin Tabarean			
Title* : Associate Professor		Degree/Credentials* : PhD	
Address* : (street, city, state, zip code) 6868 Nancy Ridge Drive San Diego, CA 92121			
E-mail* : tabarean@scintillon.org			
Phone* : 858-657-9145		Fax* :	
IACUC Roster			
Name of Member/ Code**	Degree/ Credentials	Position Title***	PHS Policy Membership Requirements****
Mari V. Bray	DVM, DAACLAM	Attending Veterinarian (consultant)	Veterinarian
Stuart Weintraub	BA	Entrepreneur	Non- affiliated Non- lab animal user Non-Scientist
Nobuki Nakanishi	PhD	Scientist	Scientist
Dan Ang	None	Safety Officer	Member
Iustin Tabarean	PhD	Chairperson	Scientist

\* This information is mandatory.

\*\* Names of members, other than the chairperson and veterinarian, may be represented by a number or symbol in this submission to OLAW. Sufficient information to determine that all appointees are appropriately qualified must be provided and the identity of each member must be readily ascertainable by the institution and available to authorized OLAW or other PHS representatives upon request.

\*\*\* List specific position titles for all members, including nonaffiliated (e.g., banker, teacher, volunteer fireman; not "community member" or "retired").

\*\*\*\* PHS Policy Membership Requirements:

*Veterinarian*      veterinarian with training or experience in laboratory animal science and medicine or in the use of the species at the institution, who has direct or delegated program authority and responsibility for activities involving animals at the institution.

*Scientist*            practicing scientist experienced in research involving animals.

*Nonscientist*       member whose primary concerns are in a nonscientific area (e.g., ethicist, lawyer, member of the clergy).

*Nonaffiliated*      individual who is not affiliated with the institution in any way other than as a member of the IACUC and is not a member of the immediate family of a person who is affiliated with the institution. This member is expected to represent general community interests in the proper care and use of animals and should not be a laboratory animal user. A consulting veterinarian may not be considered nonaffiliated.

All members must be appointed by the CEO (or individual with specific written delegation to appoint members) and must be voting members. Non-voting members and alternate members must be so identified.

#### IX. Other Key Contacts (optional)

If there are other individuals within the Institution who may be contacted regarding this Assurance, please provide information below.

Contact #1	
Name: Erica Chavin	
Title: Director of Finance & Operations	
Phone: 760-889-6008	E-mail: <a href="mailto:echavin@scintillon.org">echavin@scintillon.org</a>
Contact #2	
Name:	
Title:	
Phone:	E-mail:



## **Scintillon Institute Breeding Protocol**

In order to prevent waste accumulation, wait at least 3 hours after last feeding before putting fish in breeding tanks. Labels should indicate stock numbers and description of any ambiguous looking male or female (e.g. long tail, spotted, bigger, etc.) to avoid mixing stocks.

Crosses shall be taken down as soon as practical and fish put back in system. If feeding has already been completed, the fish are to be fed by the individual responsible for the cross.

Breeding tanks and used nets are to be soaked in hot water and rinsed with DI H<sub>2</sub>O.

Breeding tanks shall be cleaned when empty and put away as soon as practicable.

# SCINTILLON INSTITUTE Animal Facility Vivarium Disaster Plan

## INTRODUCTION

Animal facilities may be subject to unexpected conditions that result in the catastrophic failure of critical systems or significant personnel absenteeism or other unexpected events that severely compromise ongoing animal care and well-being (ILAR 2010). The animal facility has very special needs in the case of emergencies, due to the fact they are responsible for the humane care and use of live animals. All live animals are housed in SCINTILLON INSTITUTE, and because of this, this facility is recognized as having high priority for disaster assessment in case of emergencies.

The animal facility is equipped with 100% emergency generator power. These generators can run 2-7 days before refueling is necessary, depending on use. They supply power to HVAC and lighting systems as well as to all emergency power outlets (over 90% of outlets in the animal facility are on emergency power). Emergency power outlets are red or marked as emergency power.

Key members of the staff have undergone additional training and have been given necessary access to the animal facility for evaluation of animal health and welfare, and facility condition, as soon as possible after an emergency.

## COMMUNICATIONS

Phone: Check phones - voice mail may be functional. On-site main phone number: (858) 657-9145

Off-site phone number - if able to dial out: 911

## PRESERVATION OF ANIMALS

Investigators must consider how they will preserve animals that are necessary for critical research activities or are irreplaceable. PI's are encouraged and reminded regularly to have embryos or sperm of vital strains of mice or rats frozen and stored offsite, preferable in two areas of the country, to ensure these lines are not lost in case of a disaster. The Attending Veterinarian (AV) is available to discuss options and assist with planning for the preservation of these animals. Sheltering in place for the animals will be the most likely scenario unless there is significant damage to the building and the building is unsound. If animals escape, and personnel cannot catch them immediately, live traps baited with food and water source will be set to re-capture animals. Emergency personnel, such as animal control and police, will be notified that there were escapees and provided a description of the escaped animals. Currently, laboratory rodents are the only species housed in the animal facility.

## FOOD AND WATER SUPPLIES

The laboratory animal facilities will be prepared to provide support to a limited animal population for up to 7 days without utilities. We have sources of water for the animals. Water will be retrieved from their source in a large underground holding tank. There is a one month supply of food for all species in the facilities at all times.

## SECURITY

Police are to be contacted immediately if there is a potential threat, such as a break-in, intruder, bomb threat, etc. All personnel that enter the animal facility must be employees or have a visitor's badge given to them by the site manager.

## SCENARIOS

The type of action taken depends on the extent of damage sustained within the facility.

### I DISASTER OCCURS DURING REGULAR BUSINESS HOURS

Immediately following an event (earthquake, explosion, or fire, e.g.) all staff are expected to assemble outside of the building in the parking lot area assigned to research (see map, attached). A member of the Animal Facility Emergency Response Team (Animal Facility-ERT) will use our staff checklist to account for all staff members at work that day. If anyone is missing, the Emergency team for the SCINTILLON INSTITUTE will be notified immediately to assist in locating the missing person(s). We expect the SCINTILLON INSTITUTE emergency team to grant us access within 4 hours of

**SCINTILLON INSTITUTE**  
**Animal Facility**  
**Vivarium Disaster Plan**

determination that the building is safe. Information between the Site emergency response command post and the animal facility will be delivered via messenger.

**II. DISASTER OCCURS DURING NON-BUSINESS HOURS**

Once families and personal property have been secured, key animal facility staff are expected to report to work as soon as possible following a disaster. The first Animal Facility-ERT member to arrive on scene shall initiate a sign-in/out notice for animal facility staff to sign upon arrival. It should be posted on the loading dock door with instructions for staff members who arrive later. Secondly, establish contact with the site emergency command post in order to gain access to the building. animal facility staff must be granted access to the building within 4 hours of determination that the building is safe. Some of our emergency equipment may be obtained through the site emergency command post. Information between the Site emergency response command post and the animal facility will be delivered via messenger.

**HUMAN LIFE SAFETY AND MEDICAL CARE**

The site emergency command post will be located in a safe, secure area, headed by security. Designated area in the 6868 parking lot. Safety coordinates the response team for that building. All floors are equipped with emergency two-way radios and contact is established with site command and orders are given by safety. All search and rescue will be provided by the SCINTILLON INSTITUTE emergency team or by the San Diego County Fire Department, who will be dispersed as needed. Teams from each building will also provide all human life safety and medical attention. The medical triage area will be located in a safe and secure area, depending upon location of injured. If sheltering-in-place is required of personnel, the hospital has sufficient food and water to maintain personnel for an extended time (at least a week).

**RESPONSIBILITY OF animal facility STAFF FOR RECOVERY**

The primary role of the animal facility staff will be to assess the health and welfare of the animals within the building. Once the animal facility staff has received approval to enter the building the team captain shall give assignments to animal facility personnel, who will be paired with a buddy, to go into the building to make their animal assessments. Each pair will be given a specific area of the facility to check. Initially staff will go to their assigned areas, make a visual and mechanical assessment of the area, then immediately report their findings to the team captain. Once reports from all sections of the facility have been received, the team captain will prioritize the order of action that will be taken to bring recovery of the facility. Staff will be expected to work until the team captain has determined that all animals have been secured, provided with adequate food and water, treated if necessary or euthanized. This initial action and clean up must be completed within the first 10 hours following an event, if the building is deemed safe, in case it is not possible to get immediate refueling for the generator. Once the facility and animals have been adequately secured, staff will be dismissed by safety-and must sign out as they leave. Staff is expected to return to work at their next regularly scheduled shift, unless otherwise directed.

**PLAN A - MAJOR DESTRUCTION/BUILDING UNSOUND**

**DAY ONE**

Research animals will not be moved out of the building, as it is not practical to do so. Therefore, if the building is deemed unsafe to work in safety will work with the site emergency command post to identify Voluntary Hazmat trained personnel to go in and euthanize animals, once clearance has been given by safety. Untrained animal facility staff may not enter unsafe structures. One CO2 canister is kept in the necropsy room, 3 are on the deck, and euthanasia solution is kept in the controlled substances lockbox in the surgical dressing room.

**PLAN B - MAJOR DESTRUCTION/BUILDING SOUND**

**DAY ONE**

1. Once the SCINTILLON INSTITUTE emergency team has determined the building safety, the animal facility staff will assess the status of the animals, as detailed above. The veterinary health staff will assess severely injured animals and a determination will be made to treat or euthanize on a case-by-case basis.
2. Animals found loose in the rooms will be caught, caged with food and water and labeled with date found and location.
3. Uninjured rodents whose primary housing is intact will be provided with food and water.
4. If utilities are disabled, emergency food and water sources will be used. Rodent cages will only be changed if wet or damaged. Cages on individually ventilated cage (IVC) racks will be removed from the rack and tops removed.
5. Water will be retrieved from their source in a large underground holding tank by an emergency pump, which pumps the water into our water lines. If water lines are broken water will be hand-transported in carboys

**SCINTILLON INSTITUTE**  
**Animal Facility**  
**Vivarium Disaster Plan**

6. Conventionally housed animals will be provided water via existing water bottles, which will only be topped off as needed, not changed, until the operation returns to normal.
7. All debris in the animal rooms, procedure rooms and hallways will be cleaned up.

**DAY TWO**

1. Staff should resume their regular assignments, unless otherwise directed by their supervisors. Until utilities are restored, basic room checks for health, food and water is what will be required. If generators run out of fuel or were damaged and are not functioning, flashlights will be necessary to complete these tasks. Be sure to monitor the temperatures of the rooms. If temperatures are out of range for that room, veterinary staff will be consulted as to methods of heating/cooling, or necessity of euthanizing animals.
2. If we are without water for several days, we must conserve clean caging as much as possible. Therefore, rodent cages will only be changed if they are wet or badly soiled.
3. Researchers will be asked to euthanize any animals that are not absolutely vital to their projects.
4. Waste will be stored in the regular trash area, and carcasses will be stored as below.

**DAY THREE AND FOUR**

1. A basic room check will be done in each animal room for health, food and water assessment.
2. Rodent cages will be changed as needed only until utilities are restored. If necessary, rodent cages will be reused by dumping out dirty bedding and refilling them with clean bedding in the animal room, within a change station where possible. If a change station is not available, a dust mask must be worn when changing bedding. Note: all change stations and biosafety cabinets are plugged into emergency power.
3. The vet staff will determine if it is necessary to remove microisolator bonnets from cages.

**DAY FIVE**

If the building utilities have not been restored, then an evaluation of the operation will be required to determine whether or not it is possible/feasible to continue to provide care to remaining animals or if they should be euthanized and/or evacuated.

**PLAN C- MODERATE DESTRUCTION/BUILDING SOUND**

**DAY ONE**

1. Utilities are temporarily disabled (48 hours or less) or we have partial utilities. We will only provide services necessary to the animals, such as health assessment, medical care, food and water, until building utilities are restored.
2. Follow steps 1-8 as in plan B, day one.

**PLAN D-MINOR TO NO DAMAGE**

**DAY ONE**

1. Animal health and welfare will be assessed and animals will be provided with appropriate food, water and medical attention.
2. Assuming there is no damage or utility loss to the building the operation will proceed as normal.

**RECEIVING ANIMALS**

In the event that we are unable to stop shipment of animal orders, we must be prepared to receive and house animals that are delivered to us. Future orders must be stopped. Under normal conditions we should have enough clean equipment available to do so and these animals shall be placed directly into isolation. If we do not have cage cards ready and are unable to generate them, cages shall be grouped by order and the packing slips can be taped directly to each cage group until someone has time to hand write or computer generated cage cards.

**CLOTHING FOR STAFF**

If we run out of clean scrubs we will re-use lab coats or disposable garments.

**SCINTILLON INSTITUTE**  
**Animal Facility**  
**Vivarium Disaster Plan**

**VITAL RECORDS**

All vital records (animal research protocols) are stored by the IACUC coordinator on the server. All animal facility computers are backed up daily on the computers. Computer program monitors entrance of all personnel that use their pin codes 24 hours per day

**DISPOSAL OF DEAD ANIMALS**

D&D Disposal is capable of dispatching a truck for an emergency pickup given 3 hours notice. They will be contacted to pick up the carcasses. If emergency power is working, as many as possible will be stored in the refrigerators. If there is no possibility of a dead animal pickup and emergency power is not available, the refrigerators and freezers will be loaded to capacity and closed. Any additional carcasses will be placed in the dumpsters behind the loading dock and covered in lime acquired from grounds maintenance department.

**SCINTILLON INSTITUTE  
Animal Facility  
Vivarium Disaster Plan**

**Table 1  
Notification Action Summary**

On-site Notification: Report all emergencies, including bomb threats, to security. Security and safety department will initiate an appropriate response plan and will determine building safety and personnel entrance. Security, safety and a designee from the animal facility (if necessary) will tour building and determine physical plant and animal welfare concerns. These are evaluated and triaged to determine priority of treatments and repairs.

Vivarium employee will also be directed by security command post to notify the appropriate response groups and maintain communication with on-site groups.

**Animal Facility Emergency Team**

Type	Name	Phone
Primary Contact		
<b>Name</b>	<b>Pager</b>	<b>Phone</b>
Mari Bray	858-663-6107	(858) 486-6107

**Animal facility Weekend and Holiday Animal Caretakers**

Name	Pager
------	-------

The primary contact makes the determination at the time of the emergency who will be contacted, depending on personnel available and potential extent of damage. Most likely, at least two people will be designated for each half of the vivarium. If additional personnel are available, some may be assigned to or in the dirty corridors. First priority is employee life safety, then assessing animals and animal rooms. All personnel will work as groups of two or more – never alone.

**SCINTILLON INSTITUTE  
Animal Facility  
Vivarium Disaster Plan**

**Table 2  
Off-site Notification**

Off-Site Notification: The following organizations may be notified of an emergency condition, if appropriate.

<b>Agency Type</b>	<b>Phone</b>
Allele Biotech (Dan Ang)	(858) 349-4666

**SCINTILLON INSTITUTE  
Animal Facility  
Vivarium Disaster Plan**

Table 3

Fire Extinguishers, eyewash, showers and emergency equipment Maintained at the Facility

See map attached

**Description**

Safety glasses

Hard hats

Goggles

Water

Flashlights

Bolt cutters

Master Keys

First aid kits

Fire extinguishers

Other tools

**SCINTILLON INSTITUTE  
Animal Facility  
Vivarium Disaster Plan**

**Table 4  
Holders of the Contingency Plan**

Emergency Response Plan - SCINTILLON INSTITUTE (*site plan*) Animal Facility Manager, Safety officer and Security Office.

**SCINTILLON INSTITUTE  
Animal Facility  
Vivarium Disaster Plan**

Table 5  
SCINTILLON INSTITUTE  
Vivarium

Emergency Response Report – 1 per room

1. Principal Investigator:  
Emergency Phone, if listed:  
Phone:
2. Date:  
Time:  
Nature of Incident:  
Room #:  
Species:
3. Name of Material:  
Quantity Spilled:  
Disposition of Recovered Material:
4. Extent of Animal Injuries:
5. Assessment of Hazards to Animal Health or Environment Checklist

<b>Damage Extent:</b>	<b>Critical</b>	<b>Moderate</b>	<b>Minimal</b>	<b>None</b>
Water				
Food				
Air				
Light				
Room security				
Access				
Intact caging				

\_\_\_\_\_

Signature of Reporter

\_\_\_\_\_

Date



DEPARTMENT OF HEALTH & HUMAN SERVICES

PUBLIC HEALTH SERVICE  
NATIONAL INSTITUTES OF HEALTH

FOR US POSTAL SERVICE DELIVERY:

Office of Laboratory Animal Welfare  
Division of Assurances  
6700B Rockledge Drive  
Suite 2500, MSC 6910  
Bethesda, Maryland 20892-6910  
Home Page: <https://olaw.nih.gov>

FOR EXPRESS MAIL:

Office of Laboratory Animal Welfare  
Division of Assurances  
6700B Rockledge Drive, Suite 2500  
Bethesda, Maryland 20817  
Telephone: (301) 496-7163

March 19, 2024

Re: Assurance Approval for **D16-00933 (A4744-01)**

Jiwu Wang, Ph.D.  
President and CEO, Institutional Official  
Scintillon Institute  
6868 Nancy Ridge Drive  
San Diego, California 92121

Dear Dr. Wang,

I am pleased to inform you that the Office of Laboratory Animal Welfare (OLAW) reviewed and approved your institution's Animal Welfare Assurance (Assurance) that was submitted in accordance with the Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals (Policy), revised 2015.

Your Assurance, identification number, **D16-00933 (A4744-01)** became effective on **March 19, 2024**, and will expire on **March 31, 2028**. Please include the Assurance number on all correspondence to OLAW. You will receive a copy of the signed Assurance document by email. The signature page provides verification of approval by OLAW and specifies the period during which your institution's Assurance is effective.

The Assurance is a key document that sets forth the responsibilities and procedures of your Institution regarding the care and use of laboratory animals according to the PHS Policy. The practices described in the Assurance document must be followed by all individuals in the animal care and use program.

If I may be of any further assistance, please do not hesitate to contact me.

Sincerely,

Temeri Wilder-Kofie, DVM, MPH, DACLAM  
Division of Assurances  
OLAW, National Institutes of Health

cc: <IACUC Contact>  
<POC>

## Bylaws of The Scintillon Institute

### Article 1 Offices

#### Section 1. Principal Office

The principal office of the corporation is located in San Diego County, State of California.

#### Section 2. Change of Address

The designation of the county or state of the corporation's principal office may be changed by amendment of these bylaws. The board of directors may change the principal office from one location to another within the named county by noting the changed address and effective date below, and such changes of address shall not be deemed, nor require, an amendment of these bylaws:

New Address: 6404 Nancy Ridge Drive  
San Diego, CA 92121

Dated: August 8, 2012

New Address: \_\_\_\_\_

Dated: \_\_\_\_\_, 20\_\_

New Address: \_\_\_\_\_

Dated: \_\_\_\_\_, 20\_\_

#### Section 3. Other Offices

The corporation may also have offices at such other places, within or without its state of incorporation, where it is qualified to do business, as its business and activities may require, and as the board of directors may, from time to time, designate.

### Article 2 Nonprofit Purposes

#### Section 1. IRC Section 501(c)(3) Purposes

This corporation is organized exclusively for one or more of the purposes as specified in Section 501(c)(3) of the Internal Revenue Code, including, for such purposes, the making

of distributions to organizations that qualify as exempt organizations under Section 501(c)(3) of the Internal Revenue Code.

## **Section 2. Specific Objectives and Purposes**

The specific objectives and purposes of this corporation shall be: to advance science, and to educate the public on subjects useful to the individual and beneficial to the community.

## **Article 3 Directors**

### **Section 1. Number**

The corporation shall have at least 2 directors and collectively they shall be known as the board of directors.

### **Section 2. Qualifications**

Directors shall be of the age of majority in this state.

### **Section 3. Powers**

Subject to the provisions of the laws of this state and any limitations in the articles of incorporation and these bylaws relating to action required or permitted to be taken or approved by the members, if any, of this corporation, the activities and affairs of this corporation shall be conducted and all corporate powers shall be exercised by or under the direction of the board of directors.

### **Section 4. Duties**

It shall be the duty of the directors to:

- a. Perform any and all duties imposed on them collectively or individually by law, by the articles of incorporation, or by these bylaws;
- b. Appoint and remove, employ and discharge, and, except as otherwise provided in these bylaws, prescribe the duties and fix the compensation, if any, of all officers, agents, and employees of the corporation;
- c. Supervise all officers, agents, and employees of the corporation to assure that their duties are performed properly;
- d. Meet at such times and places as required by these bylaws;
- e. Register their addresses with the secretary of the corporation, and notices of meetings mailed or telegraphed to them at such addresses shall be valid notices thereof.

### **Section 5. Term of Office**

Each director shall hold office for a period of 2 years and until his or her successor is elected and qualifies. Each director can serve 1 or multiple terms.

### **Section 6. Compensation**

Directors shall serve without compensation except that a reasonable fee may be paid to directors for attending regular and special meetings of the board. In addition, they shall be allowed reasonable advancement or reimbursement of expenses incurred in the performance of their duties. Any payments to directors shall be approved in advance in accordance with this corporation's conflict of interest policy, as set forth in Article 9 of these bylaws.

### **Section 7. Place of Meetings**

Meetings shall be held at the principal office of the corporation unless otherwise provided by the board or at such other place as may be designated from time to time by resolution of the board of directors or the executive committee.

### **Section 8. Regular Meetings**

Regular meetings of directors shall be held on December 12 at 9:00 a.m., unless such day falls on a legal holiday, in which event the regular meeting shall be held at the same hour and place on the next business day.

If this corporation makes no provision for members, then, at the regular meeting of directors held on December 12, directors shall be elected by the board of directors. Voting for the election of directors shall be by written ballot. Each director shall cast one vote per candidate, and may vote for as many candidates as the number of candidates to be elected to the board. The candidates receiving the highest number of votes up to the number of directors to be elected shall be elected to serve on the board.

### **Section 9. Special Meetings**

Special meetings of the board of directors may be called by the chairperson of the board, the president, the vice president, the secretary, by any two directors, or, if different, by the persons specifically authorized under the laws of this state to call special meetings of the board. Such meetings shall be held at the principal office of the corporation or, if different, at the place designated by the person or persons calling the special meeting.

### **Section 10. Notice of Meetings**

Unless otherwise provided by the articles of incorporation, these bylaws, or provisions of law, the following provisions shall govern the giving of notice for meetings of the board of directors:

- a. **Regular Meetings.** No notice need be given of any regular meeting of the board of directors.
- b. **Special Meetings.** At least one week prior notice shall be given by the secretary of the corporation to each director of each special meeting of the board. Such notice may be oral or written, may be given personally, by first class mail, by telephone or by facsimile machine, and shall state the place, date, and time of the meeting and the matters proposed to be acted upon at the meeting. In the case of facsimile notification, the director to be contacted shall acknowledge personal receipt of the facsimile notice by a return message or telephone call within twenty-four hours of the first facsimile transmission.
- c. **Waiver of Notice.** Whenever any notice of a meeting is required to be given to any director of this corporation under provisions of the articles of incorporation, these bylaws, or the law of this state, a waiver of notice in writing signed by the director, whether before or after the time of the meeting, shall be equivalent to the giving of such notice.

### **Section 11. Quorum for Meetings**

A quorum shall consist of 2 of the members of the board of directors.

Except as otherwise provided under the articles of incorporation, these bylaws, or provisions of law, no business shall be considered by the board at any meeting at which the required quorum is not present, and the only motion which the chair shall entertain at such meeting is a motion to adjourn.

### **Section 12. Majority Action as Board Action**

Every act or decision done or made by a majority of the directors present at a meeting duly held at which a quorum is present is the act of the board of directors, unless the articles of incorporation, these bylaws, or provisions of law require a greater percentage or different voting rules for approval of a matter by the board.

### **Section 13. Conduct of Meetings**

Meetings of the board of directors shall be presided over by the chairperson of the board, or, if no such person has been so designated, or in his or her absence, the president of the corporation, or in his or her absence, by the vice president of the corporation, or in the absence of each of these persons, by a chairperson chosen by a majority of the directors present at the meeting. The secretary of the corporation shall act as secretary of all meetings of the board, provided that, in his or her absence, the presiding officer shall appoint another person to act as secretary of the meeting.

Meetings shall be governed by the chairperson of the board, insofar as such rules are not inconsistent with or in conflict with the articles of incorporation, these bylaws, or with provisions of law.

#### **Section 14. Vacancies**

Vacancies on the board of directors shall exist (1) on the death, resignation, or removal of any director, and (2) whenever the number of authorized directors is increased.

Any director may resign effective upon giving written notice to the chairperson of the board, the president, the secretary, or the board of directors, unless the notice specifies a later time for the effectiveness of such resignation. No director may resign if the corporation would then be left without a duly elected director or directors in charge of its affairs, except upon notice to the office of the attorney general or other appropriate agency of this state.

Directors may be removed from office, with or without cause, as permitted by and in accordance with the laws of this state.

Unless otherwise prohibited by the articles of incorporation, these bylaws, or provisions of law, vacancies on the board may be filled by approval of the board of directors. If the number of directors then in office is less than a quorum, a vacancy on the board may be filled by approval of a majority of the directors then in office or by a sole remaining director. A person elected to fill a vacancy on the board shall hold office until the next election of the board of directors or until his or her death, resignation, or removal from office.

#### **Section 15. Nonliability of Directors**

The directors shall not be personally liable for the debts, liabilities, or other obligations of the corporation.

#### **Section 16. Indemnification by Corporation of Directors and Officers**

The directors and officers of the corporation shall be indemnified by the corporation to the fullest extent permissible under the laws of this state.

#### **Section 17. Insurance for Corporate Agents**

Except as may be otherwise provided under provisions of law, the board of directors may adopt a resolution authorizing the purchase and maintenance of insurance on behalf of any agent of the corporation (including a director, officer, employee, or other agent of the corporation) against liabilities asserted against or incurred by the agent in such capacity or arising out of the agent's status as such, whether or not the corporation would have the power to indemnify the agent against such liability under the articles of incorporation, these bylaws, or provisions of law.

### **Article 4 Officers**

### **Section 1. Designation of Officers**

The officers of the corporation shall be a president, a vice president, a secretary, and a treasurer. The corporation may also have a chairperson of the board, one or more vice presidents, assistant secretaries, assistant treasurers, and other such officers with such titles as may be determined from time to time by the board of directors.

### **Section 2. Qualifications**

Any person may serve as officer of this corporation.

### **Section 3. Election and Term of Office**

Officers shall be elected by the board of directors, at any time, and each officer shall hold office until he or she resigns or is removed or is otherwise disqualified to serve, or until his or her successor shall be elected and qualified, whichever occurs first.

### **Section 4. Removal and Resignation**

Any officer may be removed, either with or without cause, by the board of directors, at any time. Any officer may resign at any time by giving written notice to the board of directors or to the president or secretary of the corporation. Any such resignation shall take effect at the date of receipt of such notice or at any later date specified therein, and, unless otherwise specified therein, the acceptance of such resignation shall not be necessary to make it effective. The above provisions of this section shall be superseded by any conflicting terms of a contract which has been approved or ratified by the board of directors relating to the employment of any officer of the corporation.

### **Section 5. Vacancies**

Any vacancy caused by the death, resignation, removal, disqualification, or otherwise, of any officer shall be filled by the board of directors. In the event of a vacancy in any office other than that of president, such vacancy may be filled temporarily by appointment by the president until such time as the board shall fill the vacancy. Vacancies occurring in offices of officers appointed at the discretion of the board may or may not be filled as the board shall determine.

### **Section 6. Duties of President**

The president shall be the chief executive officer of the corporation and shall, subject to the control of the board of directors, supervise and control the affairs of the corporation and the activities of the officers. He or she shall perform all duties incident to his or her office and such other duties as may be required by law, by the articles of incorporation, or by these bylaws, or which may be prescribed from time to time by the board of directors. Unless another person is specifically appointed as chairperson of the board of directors, the president shall preside at all meetings of the board of directors and, if this corporation

has members, at all meetings of the members. Except as otherwise expressly provided by law, by the articles of incorporation, or by these bylaws, he or she shall, in the name of the corporation, execute such deeds, mortgages, bonds, contracts, checks, or other instruments which may from time to time be authorized by the board of directors.

### **Section 7. Duties of Vice President**

In the absence of the president, or in the event of his or her inability or refusal to act, the vice president shall perform all the duties of the president, and when so acting shall have all the powers of, and be subject to all the restrictions on, the president. The vice president shall have other powers and perform such other duties as may be prescribed by law, by the articles of incorporation, or by these bylaws, or as may be prescribed by the board of directors.

### **Section 8. Duties of Secretary**

The secretary shall:

Certify and keep at the principal office of the corporation the original, or a copy, of these bylaws as amended or otherwise altered to date.

Keep at the principal office of the corporation or at such other place as the board may determine, a book of minutes of all meetings of the directors, and, if applicable, meetings of committees of directors and of members, recording therein the time and place of holding, whether regular or special, how called, how notice thereof was given, the names of those present or represented at the meeting, and the proceedings thereof.

Ensure that the minutes of meetings of the corporation, any written consents approving action taken without a meeting, and any supporting documents pertaining to meetings, minutes, and consents shall be contemporaneously recorded in the corporate records of this corporation. "Contemporaneously" in this context means that the minutes, consents, and supporting documents shall be recorded in the records of this corporation by the later of (1) the next meeting of the board, committee, membership, or other body for which the minutes, consents, or supporting documents are being recorded, or (2) sixty (60) days after the date of the meeting or written consent.

See that all notices are duly given in accordance with the provisions of these bylaws or as required by law.

Be custodian of the records and of the seal of the corporation and affix the seal, as authorized by law or the provisions of these bylaws, to duly executed documents of the corporation.

Keep at the principal office of the corporation a membership book containing the name and address of each and any members, and, in the case where any membership has been terminated, he or she shall record such fact in the membership book together with the date on which such membership ceased.

Exhibit at all reasonable times to any director of the corporation, or to his or her agent or attorney, on request therefor, the bylaws, the membership book, and the minutes of the

proceedings of the directors of the corporation.

In general, perform all duties incident to the office of secretary and such other duties as may be required by law, by the articles of incorporation, or by these bylaws, or which may be assigned to him or her from time to time by the board of directors.

### **Section 9. Duties of Treasurer**

The treasurer shall:

Have charge and custody of, and be responsible for, all funds and securities of the corporation, and deposit all such funds in the name of the corporation in such banks, trust companies, or other depositories as shall be selected by the board of directors.

Receive, and give receipt for, monies due and payable to the corporation from any source whatsoever.

Disburse, or cause to be disbursed, the funds of the corporation as may be directed by the board of directors, taking proper vouchers for such disbursements.

Keep and maintain adequate and correct accounts of the corporation's properties and business transactions, including accounts of its assets, liabilities, receipts, disbursements, gains, and losses.

Exhibit at all reasonable times the books of account and financial records to any director of the corporation, or to his or her agent or attorney, on request therefor.

Render to the president and directors, whenever requested, an account of any or all of his or her transactions as treasurer and of the financial condition of the corporation.

Prepare, or cause to be prepared, and certify, or cause to be certified, the financial statements to be included in any required reports.

In general, perform all duties incident to the office of treasurer and such other duties as may be required by law, by the articles of incorporation of the corporation, or by these bylaws, or which may be assigned to him or her from time to time by the board of directors.

### **Section 10. Compensation**

The salaries of the officers, if any, shall be fixed from time to time by resolution of the board of directors. In all cases, any salaries received by officers of this corporation shall be reasonable and given in return for services actually rendered to or for the corporation. All officer salaries shall be approved in advance in accordance with this corporation's conflict of interest policy, as set forth in Article 9 of these bylaws.

## **Article 5 Committees**

### **Section 1. Executive Committee**

The board of directors may, by a majority vote of its members, designate an Executive Committee consisting of 1 or more board members and may delegate to such committee the powers and authority of the board in the management of the business and affairs of the corporation, to the extent permitted, and, except as may otherwise be provided, by provisions of law.

By a majority vote of its members, the board may at any time revoke or modify any or all of the executive committee authority so delegated, increase or decrease but not below two (2) the number of the members of the executive committee, and fill vacancies on the Executive Committee from the members of the board. The executive committee shall keep regular minutes of its proceedings, cause them to be filed with the corporate records, and report the same to the board from time to time as the board may require.

### **Section 2. Other Committees**

The corporation shall have such other committees as may from time to time be designated by resolution of the board of directors. These committees may consist of persons who are not also members of the board and shall act in an advisory capacity to the board.

### **Section 3. Meetings and Action of Committees**

Meetings and action of committees shall be governed by, noticed, held, and taken in accordance with the provisions of these bylaws concerning meetings of the board of directors, with such changes in the context of such bylaw provisions as are necessary to substitute the committee and its members for the board of directors and its members, except that the time for regular and special meetings of committees may be fixed by resolution of the board of directors or by the committee. The board of directors may also adopt rules and regulations pertaining to the conduct of meetings of committees to the extent that such rules and regulations are not inconsistent with the provisions of these bylaws.

## **Article 6 Execution of Instruments, Deposits, and Funds**

### **Section 1. Execution of Instruments**

The board of directors, except as otherwise provided in these bylaws, may by resolution authorize any officer or agent of the corporation to enter into any contract or execute and deliver any instrument in the name of and on behalf of the corporation, and such authority may be general or confined to specific instances. Unless so authorized, no officer, agent, or employee shall have any power or authority to bind the corporation by any contract or engagement or to pledge its credit or to render it liable monetarily for any purpose or in any amount.

### **Section 2. Checks and Notes**

Except as otherwise specifically determined by resolution of the board of directors, or as otherwise required by law, checks, drafts, promissory notes, orders for the payment of money, and other evidence of indebtedness of the corporation shall be signed by the treasurer or by the president of the corporation.

### **Section 3. Deposits**

All funds of the corporation shall be deposited from time to time to the credit of the corporation in such banks, trust companies, or other depositories as the board of directors may select.

### **Section 4. Gifts**

The board of directors may accept on behalf of the corporation any contribution, gift, bequest, or devise for the nonprofit purposes of this corporation.

## **Article 7 Corporate Records, Reports, and Seal**

### **Section 1. Maintenance of Corporate Records**

The corporation shall keep at its principal office:

- a. Minutes of all meetings of directors, committees of the board, and, if this corporation has members, of all meetings of members, indicating the time and place of holding such meetings, whether regular or special, how called, the notice given, and the names of those present and the proceedings thereof;
- b. Adequate and correct books and records of account, including accounts of its properties and business transactions and accounts of its assets, liabilities, receipts, disbursements, gains, and losses;
- c. A record of its members, if any, indicating their names and addresses and, if applicable, the class of membership held by each member and the termination date of any membership;
- d. A copy of the corporation's articles of incorporation and bylaws as amended to date, which shall be open to inspection by the members, if any, of the corporation at all reasonable times during office hours.

### **Section 2. Corporate Seal**

The board of directors may adopt, use, and at will alter, a corporate seal. Such seal shall be kept at the principal office of the corporation. Failure to affix the seal to corporate instruments, however, shall not affect the validity of any such instrument.

### **Section 3. Directors' Inspection Rights**

Every director shall have the absolute right at any reasonable time to inspect and copy all books, records, and documents of every kind and to inspect the physical properties of the corporation, and shall have such other rights to inspect the books, records, and properties of this corporation as may be required under the articles of incorporation, other provisions of these bylaws, and provisions of law.

#### **Section 4. Members' Inspection Rights**

If this corporation has any members, then each and every member shall have the following inspection rights, for a purpose reasonably related to such person's interest as a member:

- a. To inspect and copy the record of all members' names, addresses, and voting rights, at reasonable times, upon written demand on the secretary of the corporation, which demand shall state the purpose for which the inspection rights are requested.
- b. To obtain from the secretary of the corporation, upon written demand on, and payment of a reasonable charge to, the secretary of the corporation, a list of the names, addresses, and voting rights of those members entitled to vote for the election of directors as of the most recent record date for which the list has been compiled or as of the date specified by the member subsequent to the date of demand. The demand shall state the purpose for which the list is requested. The membership list shall be made available within a reasonable time after the demand is received by the secretary of the corporation or after the date specified therein as of which the list is to be compiled.
- c. To inspect at any reasonable time the books, records, or minutes of proceedings of the members or of the board or committees of the board, upon written demand on the secretary of the corporation by the member, for a purpose reasonably related to such person's interests as a member.

Members shall have such other rights to inspect the books, records, and properties of this corporation as may be required under the articles of incorporation, other provisions of these bylaws, and provisions of law.

#### **Section 5. Right to Copy and Make Extracts**

Any inspection under the provisions of this article may be made in person or by agent or attorney and the right to inspection shall include the right to copy and make extracts.

#### **Section 6. Periodic Report**

The board shall cause any annual or periodic report required under law to be prepared and delivered to an office of this state or to the members, if any, of this corporation, to be so prepared and delivered within the time limits set by law.

## **Article 8 IRC 501(c)(3) Tax Exemption Provisions**

### **Section 1. Limitations on Activities**

No substantial part of the activities of this corporation shall be the carrying on of propaganda, or otherwise attempting to influence legislation (except as otherwise provided by Section 501(h) of the Internal Revenue Code), and this corporation shall not participate in, or intervene in (including the publishing or distribution of statements), any political campaign on behalf of, or in opposition to, any candidate for public office.

Notwithstanding any other provisions of these bylaws, this corporation shall not carry on any activities not permitted to be carried on (a) by a corporation exempt from federal income tax under Section 501(c)(3) of the Internal Revenue Code, or (b) by a corporation, contributions to which are deductible under Section 170(c)(2) of the Internal Revenue Code.

### **Section 2. Prohibition Against Private Inurement**

No part of the net earnings of this corporation shall inure to the benefit of, or be distributable to, its members, directors or trustees, officers, or other private persons, except that the corporation shall be authorized and empowered to pay reasonable compensation for services rendered and to make payments and distributions in furtherance of the purposes of this corporation.

### **Section 3. Distribution of Assets**

Upon the dissolution of this corporation, its assets remaining after payment, or provision for payment, of all debts and liabilities of this corporation, shall be distributed for one or more exempt purposes within the meaning of Section 501(c)(3) of the Internal Revenue Code or shall be distributed to the federal government, or to a state or local government, for a public purpose. Such distribution shall be made in accordance with all applicable provisions of the laws of this state.

### **Section 4. Private Foundation Requirements and Restrictions**

In any taxable year in which this corporation is a private foundation as described in Section 509(a) of the Internal Revenue Code, the corporation 1) shall distribute its income for said period at such time and manner as not to subject it to tax under Section 4942 of the Internal Revenue Code; 2) shall not engage in any act of self-dealing as defined in Section 4941(d) of the Internal Revenue Code; 3) shall not retain any excess business holdings as defined in Section 4943(c) of the Internal Revenue Code; 4) shall not make any investments in such manner as to subject the corporation to tax under Section 4944 of the Internal Revenue Code; and 5) shall not make any taxable expenditures as defined in Section 4945(d) of the Internal Revenue Code.

## Article 9 Conflict of Interest and Compensation Approval Policies

### Section 1. Purpose of Conflict of Interest Policy

The purpose of this conflict of interest policy is to protect this tax-exempt corporation's interest when it is contemplating entering into a transaction or arrangement that might benefit the private interest of an officer or director of the corporation or any "disqualified person" as defined in Section 4958(f)(1) of the Internal Revenue Code and as amplified by Section 53.4958-3 of the IRS Regulations and which might result in a possible "excess benefit transaction" as defined in Section 4958(c)(1)(A) of the Internal Revenue Code and as amplified by Section 53.4958 of the IRS Regulations. This policy is intended to supplement but not replace any applicable state and federal laws governing conflict of interest applicable to nonprofit and charitable organizations.

### Section 2. Definitions

- a. Interested Person.** Any director, principal officer, member of a committee with governing board delegated powers, or any other person who is a "disqualified person" as defined in Section 4958(f)(1) of the Internal Revenue Code and as amplified by Section 53.4958-3 of the IRS Regulations, who has a direct or indirect financial interest, as defined below, is an interested person.
- b. Financial Interest.** A person has a financial interest if the person has, directly or indirectly, through business, investment, or family:
  - 1. An ownership or investment interest in any entity with which the corporation has a transaction or arrangement;
  - 2. A compensation arrangement with the corporation or with any entity or individual with which the corporation has a transaction or arrangement; or
  - 3. A potential ownership or investment interest in, or compensation arrangement with, any entity or individual with which the corporation is negotiating a transaction or arrangement.

Compensation includes direct and indirect remuneration as well as gifts or favors that are not insubstantial.

A financial interest is not necessarily a conflict of interest. Under Section 3, paragraph B, a person who has a financial interest may have a conflict of interest only if the appropriate governing board or committee decides that a conflict of interest exists.

### Section 3. Conflict of Interest Avoidance Procedures

- a. Duty to Disclose.** In connection with any actual or possible conflict of interest, an interested person must disclose the existence of the financial interest and be given the opportunity to disclose all material facts to the directors and members of committees with governing board delegated powers considering the proposed transaction or arrangement.
- b. Determining Whether a Conflict of Interest Exists.** After disclosure of the

financial interest and all material facts, and after any discussion with the interested person, he/she shall leave the governing board or committee meeting while the determination of a conflict of interest is discussed and voted upon. The remaining board or committee members shall decide if a conflict of interest exists.

- c. Procedures for Addressing the Conflict of Interest.** An interested person may make a presentation at the governing board or committee meeting, but after the presentation, he/she shall leave the meeting during the discussion of, and the vote on, the transaction or arrangement involving the possible conflict of interest.

The chairperson of the governing board or committee shall, if appropriate, appoint a disinterested person or committee to investigate alternatives to the proposed transaction or arrangement.

After exercising due diligence, the governing board or committee shall determine whether the corporation can obtain with reasonable efforts a more advantageous transaction or arrangement from a person or entity that would not give rise to a conflict of interest.

If a more advantageous transaction or arrangement is not reasonably possible under circumstances not producing a conflict of interest, the governing board or committee shall determine by a majority vote of the disinterested directors whether the transaction or arrangement is in the corporation's best interest, for its own benefit, and whether it is fair and reasonable. In conformity with the above determination, it shall make its decision as to whether to enter into the transaction or arrangement.

- d. Violations of the Conflicts of Interest Policy.** If the governing board or committee has reasonable cause to believe a member has failed to disclose actual or possible conflicts of interest, it shall inform the member of the basis for such belief and afford the member an opportunity to explain the alleged failure to disclose.

If, after hearing the member's response and after making further investigation as warranted by the circumstances, the governing board or committee determines the member has failed to disclose an actual or possible conflict of interest, it shall take appropriate disciplinary and corrective action.

#### **Section 4. Records of Board and Board Committee Proceedings**

The minutes of meetings of the governing board and all committees with board delegated powers shall contain:

- a. The names of the persons who disclosed or otherwise were found to have a financial interest in connection with an actual or possible conflict of interest, the nature of the financial interest, any action taken to determine whether a conflict of interest was present, and the governing board's or committee's decision as to whether a conflict of interest in fact existed.
- b. The names of the persons who were present for discussions and votes relating to the transaction or arrangement, the content of the discussion, including any alternatives to the proposed transaction or arrangement, and a record of any votes

taken in connection with the proceedings.

#### **Section 5. Compensation Approval Policies**

A voting member of the governing board who receives compensation, directly or indirectly, from the corporation for services is precluded from voting on matters pertaining to that member's compensation.

A voting member of any committee whose jurisdiction includes compensation matters and who receives compensation, directly or indirectly, from the corporation for services is precluded from voting on matters pertaining to that member's compensation.

No voting member of the governing board or any committee whose jurisdiction includes compensation matters and who receives compensation, directly or indirectly, from the corporation, either individually or collectively, is prohibited from providing information to any committee regarding compensation.

#### **Section 6. Annual Statements**

Each director, principal officer, and member of a committee with governing board delegated powers shall annually sign a statement which affirms such person:

- a. has received a copy of the conflicts of interest policy;
- b. has read and understands the policy;
- c. has agreed to comply with the policy; and
- d. understands the corporation is charitable and in order to maintain its federal tax exemption it must engage primarily in activities which accomplish one or more of its tax-exempt purposes.

#### **Section 7. Periodic Reviews**

To ensure the corporation operates in a manner consistent with charitable purposes and does not engage in activities that could jeopardize its tax-exempt status, periodic reviews shall be conducted. The periodic reviews shall, at a minimum, include the following subjects:

- a. Whether compensation arrangements and benefits are reasonable, based on competent survey information, and the result of arm's-length bargaining.
- b. Whether partnerships, joint ventures, and arrangements with management organizations conform to the corporation's written policies, are properly recorded, reflect reasonable investment or payments for goods and services, further charitable purposes, and do not result in inurement, impermissible private benefit, or in an excess benefit transaction.

#### **Section 8. Use of Outside Experts**

When conducting the periodic reviews as provided for in Section 7, the corporation may, but need not, use outside advisors. If outside experts are used, their use shall not relieve the governing board of its responsibility for ensuring periodic reviews are conducted.

### **Article 10 Amendment of Bylaws**

### **Section 1. Amendment**

Subject to the power of the members, if any, of this corporation to adopt, amend, or repeal the bylaws of this corporation and except as may otherwise be specified under provisions of law, these bylaws, or any of them, may be altered, amended, or repealed and new bylaws adopted by approval of the board of directors.

### **Article 11 Construction and Terms**

If there is any conflict between the provisions of these bylaws and the articles of incorporation of this corporation, the provisions of the articles of incorporation shall govern.

Should any of the provisions or portions of these bylaws be held unenforceable or invalid for any reason, the remaining provisions and portions of these bylaws shall be unaffected by such holding.

All references in these bylaws to the articles of incorporation shall be to the articles of incorporation, articles of organization, certificate of incorporation, organizational charter, corporate charter, or other founding document of this corporation filed with an office of this state and used to establish the legal existence of this corporation.


All references in these bylaws to a section or sections of the Internal Revenue Code shall be to such sections of the Internal Revenue Code of 1986 as amended from time to time, or to corresponding provisions of any future federal tax code.

**ADOPTION OF BYLAWS**

We, the undersigned, are all of the initial directors or incorporators of this corporation, and we consent to, and hereby do, adopt the foregoing bylaws, consisting of sixteen preceding pages, as the bylaws of this corporation.

Dated: 11/2/15

  
\_\_\_\_\_  
Jiwu Wang, President/Director

  
\_\_\_\_\_  
Nathan C. Shaner, Secretary

California <sup>USA</sup> DRIVER LICENSE



DI [REDACTED]  
E: [REDACTED] NONE  
LN CHAVIN  
FN ERICA JOY  
E [REDACTED]  
C [REDACTED]  
D [REDACTED]



CLASS: C - Veh w/GVWR 526000, No MC  
ENDORSEMENTS: None  
RESTRICTIONS: None



This license is issued as a license to drive a motor vehicle. It does not establish eligibility for employment, voter registration, or public benefits.



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## **Additional Details for Scintillon Fish and Wildlife Application 2025**

2. A description of the proposed project stating the objectives, and if experimental or manipulative, a study plan based on the “Scientific Method”.

As part of NIH (National Institute of Health) reviewed and approved research projects, including for zebrafish husbandry and research, zebrafish (*Danio Rerio*) larvae will be used as a vertebrate genetic model system to investigate the molecular regulation of cell and tissue processes during organogenesis and disease (e.g. heart, skeletal muscle, liver, pancreas, and nervous system). This includes understanding the impact of key signaling pathways on the function and fate of impacted cells and the regenerative response of stem cells in disease models and following tissue damage. Zebrafish will be utilized as human genetic disease research model to investigate the molecular pathology underlying the emergence of primary disease pathology and for the identification of novel therapeutic approaches to correct or attenuate these pathologies.

3. The estimated completion date of the project.

May 2028

4. The anticipated benefits of this research.

Our research will advance the understanding of the molecular pathology of human diseases affecting the tissue and cell types, specifically organ-specific stem cells and how they function during regeneration and fail in disease conditions. These diseases include diabetes, liver disease and muscular dystrophy. Our primary focus will be on pediatric genetic diseases, including Alagille Syndrome and Duchenne Muscular Dystrophy for which there are no curative therapies. We anticipate that insights gained from this work will lead to new therapeutic avenues to treat these classes of liver and muscle diseases.

Jan 6, 2026

Whom It May Concern:

I am writing to provide a recommendation for Dr. P. Duc Si Dong, Ph.D., in support of his CDF&W Restricted Species Permit application involving research studies with zebrafish (transgenic *Danio rerio*). The zebrafish is a vertebrate model system that develops externally and therefore is visually accessible. Coupled with large clutch sizes and ease of genetic manipulation, the zebrafish is a very effective biological system for modeling human development and disease and testing chemicals/drugs to correct these diseases. His lab's research involves studying genes involved in organ development (pancreas, liver, duct and intestine) with implications for human developmental diseases such as Alagille Syndrome, Congenital Diseases, Type 1 and 2 Diabetes, Pancreas Disease, Liver Disease, and Colon Cancer. His work with transgenic zebrafish is funded by NIH.

Dr. Dong received his Biology Bachelor of Science degree in 1996 from the University of California, Irvine, where he was involved in molecular evolution and limb regeneration research. He earned his Ph.D. in Cell and Molecular Biology at the University of Wisconsin, Madison in 2002, investigating cell/tissue identity master regulatory genes. His postdoctoral research at the University of California, San Francisco was focused on developmental genetics of the liver and pancreas and is where he gained his expertise working with transgenic zebrafish. Dr. Dong was recruited as an Assistant Professor to Sanford Burnham Prebys in 2008, working at SBP for 17 years until his recent departure in 2025. He maintains a position at SBP as an Adjunct Professor. He is a recipient of the NIH Director's New Innovator Award and the W. M. Keck Foundation Award, which funds the development of *in vivo* lineage reprogramming technologies to generate replacement cells and organs directly within a living vertebrate.

Dr. Dong has extensive expertise in all aspects of zebrafish husbandry and experimental work related to this species. At SBP his responsibilities included management oversight for the fish rooms, including training research staff in fish handling, food prep, feeding schedules, husbandry, breeding and colony maintenance, developing operational SOPs, record keeping, animal health checks, animal welfare, humane euthanasia, and monitoring the water quality and system parameters of the fish automated housing system (Aquaneering). Dr. Dong also has experience drafting and managing IACUC animal protocols. Under his oversight, the zebrafish colony at SBP was successfully maintained for 17 years at high standards of animal health and care.

Upon his departure, SBP's Institutional Official agreed to house Dr. Dong's zebrafish colony at SBP until his new employer's fish housing system was ready to accept the transfer of his transgenic zebrafish for housing at Scintillon, under a CDF&W Research

Restricted Species Permit. In the meantime, Dr. Dong's researchers will continue to have access to SBP's fish room for colony health checks, feeding and husbandry, and housing systems monitoring. I am confident in Dr. Dong's ability to continue to provide excellent animal care and colony oversight for his species in his new lab at Scintillon in San Diego.

Please do not hesitate to contact me for further information.

Sincerely,

*Mary O'Rourke-Braxtan*

Mary O'Rourke-Braxtan



**Mary O'Rourke-Braxtan**  
Director, Animal Resources

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**M:** 760 822 0199

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## **Emergency Action Plan for Scintillon Institute Zebrafish Facility**

Copies of the Animal Resources Disaster Plan are available in Building 1 and 3, and with Scintillon Safety Personnel.

A. Safety of personnel is the first priority. Staff who are assigned to Building 3, fish rooms will be checked by personnel with phones to ensure their safety in an emergency situation.

B. Aquatic systems are recirculating closed-water systems. However, escaped fish will be caught with a net and placed in holding tanks.

C. If fish are severely injured or if the situation prevents proper care of the fish, the fish may need to be transferred to a different location or euthanized.

D. Dead fish will be collected, inventoried, bagged, and placed in freezers.

E. Aquatic tank systems are recirculating closed-water systems. Aquatic systems have back-up pumps and are ready to recirculate. Large DI water storage tanks are available on-site for tank water replacement.

F. Aquatic tank electrical systems and HVAC systems can be connected to emergency back-up generators.

G. Electrical systems maintaining food and carcass freezers can be connected to emergency back-up generators. There is a minimum 1-week food storage on-site in Building 3 in Dong Lab freezers.