

MINUTES
SALAMANDER TOXICITY STUDY CALL
September 28, 2016
10:00 AM PDT

Attendees: Gerry McChesney (USFWS), John Isanhart (DOI), Gary Witmer (USDA), Vance Vredenburg (San Francisco State University)

- 1) Salamander captures (San Francisco State University):
 - a) Timeline to start and estimate how long to reach needed sample size
 - a. Upon first rain, will begin captures. If no rain soon, will search for salamanders anyway but will take longer to capture needed sample size.
 - b. Need to check for disease. For fungal and DNA testing, take simple skin swab; quick analysis. Infection levels have been low for these species (about $\leq 10\%$). Get Results in a day or so.
 - b) Permits
 - a. Vance has been in touch with CDFW permitting folks. Permits expected soon.
 - b. All other permits/approvals for housing in place.
 - c) When to ship to USDA: all at once or as available?
 - a. Start with *Desmognathus*. Then send *Ambystoma* after *Desmognathus* trials done.
 - b. For SFSU, may be better to send all at once (less shipping). But for USDA, may be easier to send in phases so they are not overwhelmed.
 - c. If in phases, 35 at a time is a good amount.
 - d) Criteria for rejection (e.g., salamander tests positive for infection, injured, etc.)
 - a. If infected, will not be included in the study.
 - e) Salamander ages
 - a. Prefer adults, but may accept immatures if enough adults cannot be obtained. Be strategic in assigning different age classes to toxicity trial treatment groups.
- 2) Lab Trials (USDA):
 - a) When can USDA be ready to start?
 - a. Probably mid-October.
 - b) Do all trials need to be done at once or can they be done in phases if max. Sample size is not ready?
 - a. Could do in phases. May be easier.
 - b. Need 2 week quarantine. Not sure if time at UCSF counts. Gary will check. If so, then SFSU will quarantine for at least two weeks.
 - c) Timeline: How long to conduct trials?
 - a. 10-day exposure, then 2 weeks observation per group.
 - d) Housing of salamanders
 - a. Per Vance: Easy. Do really well. Can be kept singly or in groups. But keep singly during quarantine. Recommend housing singly for duration just in case fungal infection starts; can spread quickly.
 - b. If infected, can go downhill quickly or if otherwise healthy, can live a long time.

- c. Vance sent Gary Standard Operating Procedure for salamander housing.