

**Panel Scientific and Technical Review Form**  
(Note: Review comments will be anonymous, but public.)

**Proposal number: 2001-K201**

**Short Proposal Title: Genetic structure of Central Valley salmon**

**1a) Are the objectives and hypotheses clearly stated?**

*Summary of Reviewers comments:*

Reviewer: Yes – some objectives have been objectives of previous work; some hypotheses have been addressed (e.g. Banks et al. 2000, CJFAS).

Reviewer: Yes – comprehensive. Previous studies have looked at different markers, different techniques, different locales. The otolith work as a complement is an excellent contribution.

Reviewer: Hypothesis #1 (util. Of method) already evaluated in publications. One goal, to develop comprehensive database and construct an ecosystem level model, not explained.

Reviewer: Yes, very well developed.

*Panel Summary:*

Hypotheses are clear. Some hypotheses may have already been addressed, but text of proposal seems to assert a scope of work larger than that encompassed by the stated hypotheses.

**1b1) Does the conceptual model clearly explain the underlying basis for the proposed work?**

*Summary of Reviewers comments:*

Yes.

*Panel Summary:*

Concur.

**1b2) Is the approach well designed and appropriate for meeting the objectives of the project?**

*Summary of Reviewers comments:*

Reviewer: concern about comparability of data collected by different molecular techniques (specifically: microsatellite data with protein data). Investigators should have a rough idea of the resolving power of protein technique already from 1998-99 sampling.

Reviewer: serious reservations about viability of otolith microstructure technique for meeting the objective of confirming run timing, helping confirm stream of origin, age, and discrimination of naturally produced and hatchery-reared individuals.

Reviewer: Looking at allozymes at coarse level good complement to microsatellite work, and will allow greater power and information to be extracted from information.

***Panel Summary:***

Concur with concerns about viability of otolith microstructure technique value; concur that allozyme and microsatellite are complementary and using both is a good idea. Proposal is unclear whether previously collected and archived samples will be analyzed for microsatellite DNA as part of this study.

**1c1) Has the applicant justified the selection of research, pilot or demonstration project, or a full-scale implementation project?**

***Summary of Reviewers comments:***

Yes.

***Panel Summary:***

Yes.

**1c2) Is the project likely to generate information that can be used to inform future decision making?**

***Summary of Reviewers comments:***

Yes.

***Panel Summary:***

Yes.

**2a) Are the monitoring and information assessment plans adequate to assess the outcome of the project?**

***Summary of Reviewers comments:***

Reviewer: No details were provided in proposal for sampling plan. If this is a comparative methodologies project such a plan is necessary.

Reviewer: No details provided for sampling plan.

Reviewer: No mention of how genetic systems will be checked for temporal stability.

***Panel Summary:***

Concur that the sampling plan wasn't detailed. Panel has concerns about correct identification of fishes in some circumstances.

**2b) Are data collection, data management, data analysis, and reporting plans well-described, scientifically sound and adequate to meet the proposed objectives?**

***Summary of Reviewers comments:***

Reviewer: allozymes unlikely to be useful to measure gene flow among populations.

Reviewer: raised doubts whether 50-100 individuals are adequate for establishing fine-resolution distinction.

Reviewer: with this much money, with these people, we shouldn't be expecting gray literature – these results should appear in the peer-reviewed literature.

Reviewer: allozyme and microsatellite techniques are scientifically sound techniques that are appropriate for this study. Otoliths dubious.

***Panel Summary:***

Panel generally concurs with criticisms of reviewers, but views the proposal as generally scientifically sound and adequate to meet proposed objectives.

**3) Is the proposed work likely to be technically feasible?**

***Summary of Reviewers comments:***

Reviewers: otoliths, microsatellites, and allozyme methods proposed here have all been successfully used in other studies of various salmonid fishes.

Reviewer: Yes

Reviewer: Yes, but accomplishing objectives dependent on otolith microstructure work may not be technically feasible.

***Panel Summary:***

Yes.

**4) Is the proposed project team qualified to efficiently and effectively implement the proposed project?**

***Summary of Reviewers comments:***

Yes.

One reviewer: microsatellite work is technically demanding, so no verification in proposal that suitably qualified staff are available.

***Panel Summary:***

Yes.

**5)Other comments**

Reviewer 1: Good

Reviewer 2: Very good.

Reviewer 3: Good. Genetic data has large potential to be useful. Proposal does not justify cost.

Reviewer 4: Excellent

Reviewer: justification for three ultrafreezers not given. Proposal seems very overpriced.

**Overall Evaluation**

**PANEL SUMMARY COMMENTS**

Panel Comment:

Panel views the project as ambitious and comprehensive; justification for funding is not an issue. An alternative to full funding is to partially fund the project as a “pilot project” using archived materials already on hand. We agree with reviewers that the full project seems expensive, but disagree with reviewers in that we have no doubts about the ability of the investigators to succeed. Panel suggests a careful review to assure that this project doesn’t duplicate existing research.

Summary Rating

Excellent

Very Good

Good

Fair

Poor

Your Rating: VERY GOOD