

THANK YOU, ANN, AMY, MATT, AARON for the opportunity to be here. Thanks also to the community, I love the work you do and honored to be with you all....

I'm Rob and I co-own xenopus 1 with my wife Lissett
We are, by volume the largest supplier of frogs for research in the United States and worldwide. **I'm here in partly to explain why that is important.** I look forward to answering any questions after this presentation.

The three main things I want to talk about are

1. The economics of supplying frogs at the present time
2. The problems facing the model that are particularly noticeable to me, they aren't secrets
3. How the economics of supplying frogs connects to problems facing the model creating the need community driven efforts for sustainability and growth.

So, as the main supplier, we've been able to do some awesome things...FOR EXAMPLE, keep costs low. The real cost of adult frogs is over 63.00 each, however we manage to subsidize the adult frog price with sales of ovaries, oocytes, and testes. This is **REAL work and gives REAL value to** researchers. We are selling frogs cheaper than what it costs to house a frog in a research setting. Another good thing: exports make our business commercially viable. **So thank you to all our out worldwide customers YOU are keeping the model alive.** And even with the pressures on price and volume, we are proud to support this conference, the embryology conference, and the Cold Spring Harbor xenopus course, AND consider the relevance of supporting Model Welfare. About 65% of the market is export. That leaves about 2,400 frogs for the US market. That is less than 100,000 dollars. You can see why Nasco left the frog business. Despite the pressures on price and cost and lack of

regulatory clarity and uniformity that make exports **COSTLY AND DIFFICULT**, science requires frogs for everywhere for high standards, replicability and uniformity. We take pride in providing that. Another real awesome thing: logistics out of Detroit is of great value, actually, vital to the model. We have 40 years of relationships direct with the airlines. We go direct into Frankfurt, for example. We really value each and every customer - we are not just dipping our toes in this, we are all in, and each and every sale in the US is important for both both *laevis* and *tropicalis*.

But, there is **widespread confusion about rules, frog welfare, and health, and limited focus on what Model Welfare actually means**. Frogs are an afterthought. The OIE doesn't have species specific recommendations for frogs for research, thus, countries oversight are making things up, and they do not understand how hardy xenopus really are, contributing to a tremendous amount of unnecessary work and pressure on costs. Regulators borrow whatever whatever shiny object they see to put barriers. This is a real threat. It will need to be addressed for survival of xenopus laevis and tropicalis as model organisms.

For husbandry, for example, **While there have been some "methods papers" in general we, are not collectively, collaboratively steering the narratives, or adding context.** Here's a short husbandry case history from Vanderbilt University I was given permission to share. The Dewar lab there works with Xenopus egg extract system (like the Yang Lab the Walter lab, Chen lab and many more) and they were getting really low sperm yields from their male frogs that we had supplied. We shipped them frog testes, same frogs, same material, just housed in different places. They assumed there must be some sort of pathogenicity problem based on recent research/standards of housing, but there was nothing detected. We also consulted with them to modify their housing conditions and they were able to fix

the issue. This is one example, but there's multiple similar cases. Collectively, these situations show how even following the all the existing guidelines and best practices is not a solution to the threat of lack of understanding, and more work needs to be done. This is why we want to support the **community based approach to standards of care within the Xenopus Model Welfare Organization.**

As for problems, everyone's heard a lot of things, many have suffered, we could elaborate further on everything, from transport, to import criteria, to wacky health certificates, to overzealous veterinarians and care and use committee issues, **to outright harrasment—let's do our best to move away from that stuff with regards to our beloved Model.**

So think community developed standards of care, shared, contextualized, centralized, accessible, curated knowledge, case histories, science and clarity where there is no data. Xenopus will not survive anymore being a regulatory afterthought or random criteria from other models.

---The Xenopus Model will suffer from a **fragmented approach** and suffer without having a broad, inclusive, community based support and vision for Model Welfare.

Thank you for allowing us be a partner, together we can move to strategic, collaborative, community driven efforts towards sustainability and growth of the Model System.

SO, THIS IS ALL IMPORTANT towards that:

1. We'd like to sponsor a regular hybrid-format seminar series that will give members of the community from all over the world a connection on a regular basis. We propose 10-20 of these events over the next two years. Researchers will give public talks about their research or whatever Xenopus related public/zoomed engaging their university communities using Xenopus

2. We want to support the building up the xenopus welfare organization and creating a plan of action-**collaborators needed now. We need to fill out the Executive Board, get some veterinarians on board. We'll then build our plan of action with broader support and involvement required.**
3. Printing a xenopus book that will showcase the amazing work that is being done with the system – a lab – PI – research spotlight book with **all xenopus users in it.**
4. Our continued support of courses and conferences such as this one.
5. **Support research:** We have an exciting engagement now with Michigan State and we are looking at doing some work with Vanderbilt, and we're always looking for new partners.

To sum up-we wanted to share who we are and what we do what we do, Besides **having the best laevis and tropicalis frogs available** **Of course, buy our frogs!** We discussed economics and have connected it to the the threats against the model and have offered to support the community with a strategic vision of how to fix them. We want a scope that will be good for all existing and future users of xenopus because it will promote uniformity and reliability, and promote more reproducibility with sustained model growth, **true custodianship of the model,** together. In short, it will make the model much stronger, and the community stronger, the people using the frogs happier and the frogs happier.

I am ready for any questions about xensopuswelfare.org, the strategies for growth-zoom events- Again, Let us help you, a plan of action could include immediate sign up on xenopuswelfare.org executive board, veterinary integration, a strategic working group, immediate proposals for campus talks and getting the word out to all xenopus users on the planet about the talks and the book, **or any other ideas. OF COURSE!**

