



# Is Draxxin a good substitute for Gallimycin?

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# Draxxin – a Team Effort

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Cowlitz Salmon Hatchery – staff

Little White Salmon Hatchery – staff



# Why do we need Draxxin?



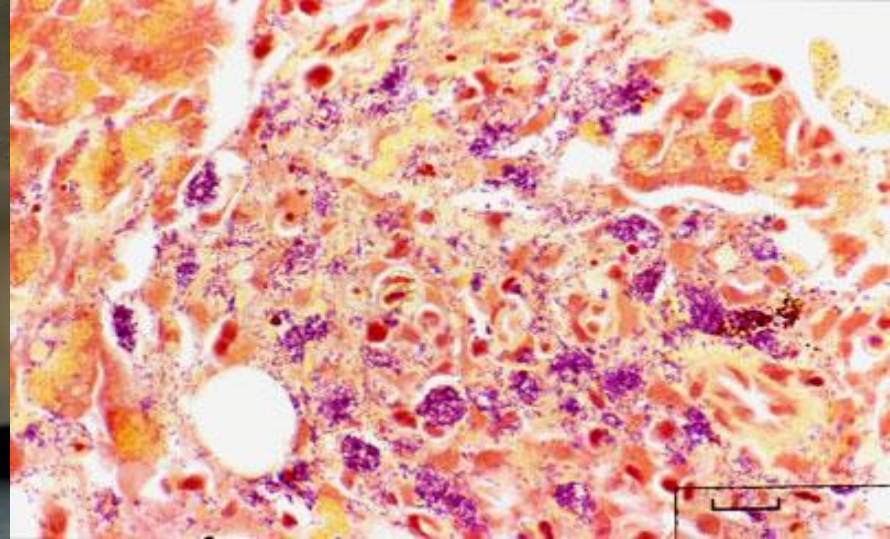


# BKD – *Renibacterium salmoninarum*

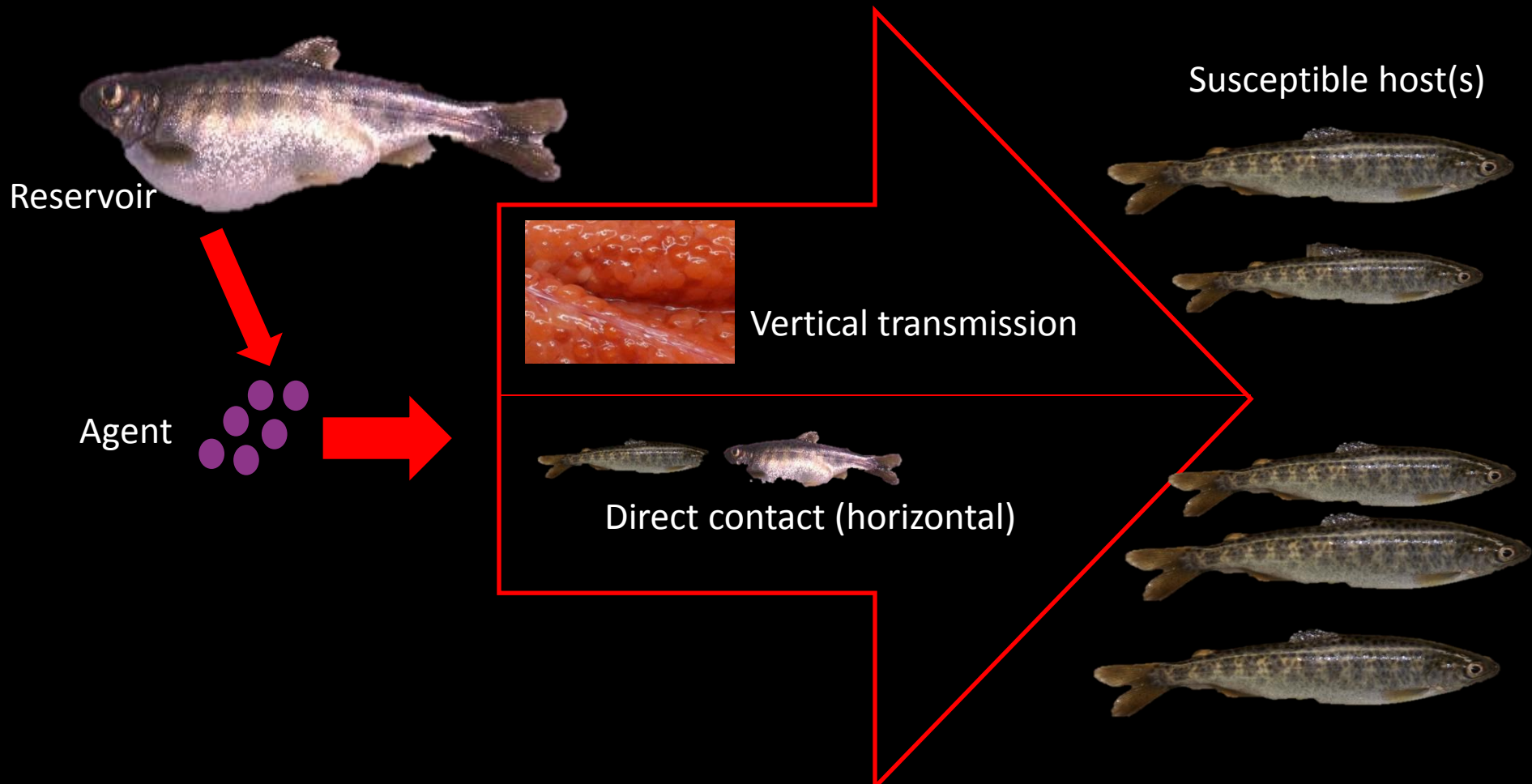


Chronic, granulomatous inflammation

Morbidity and mortality, especially in spring Chinook



# Management and control of BKD

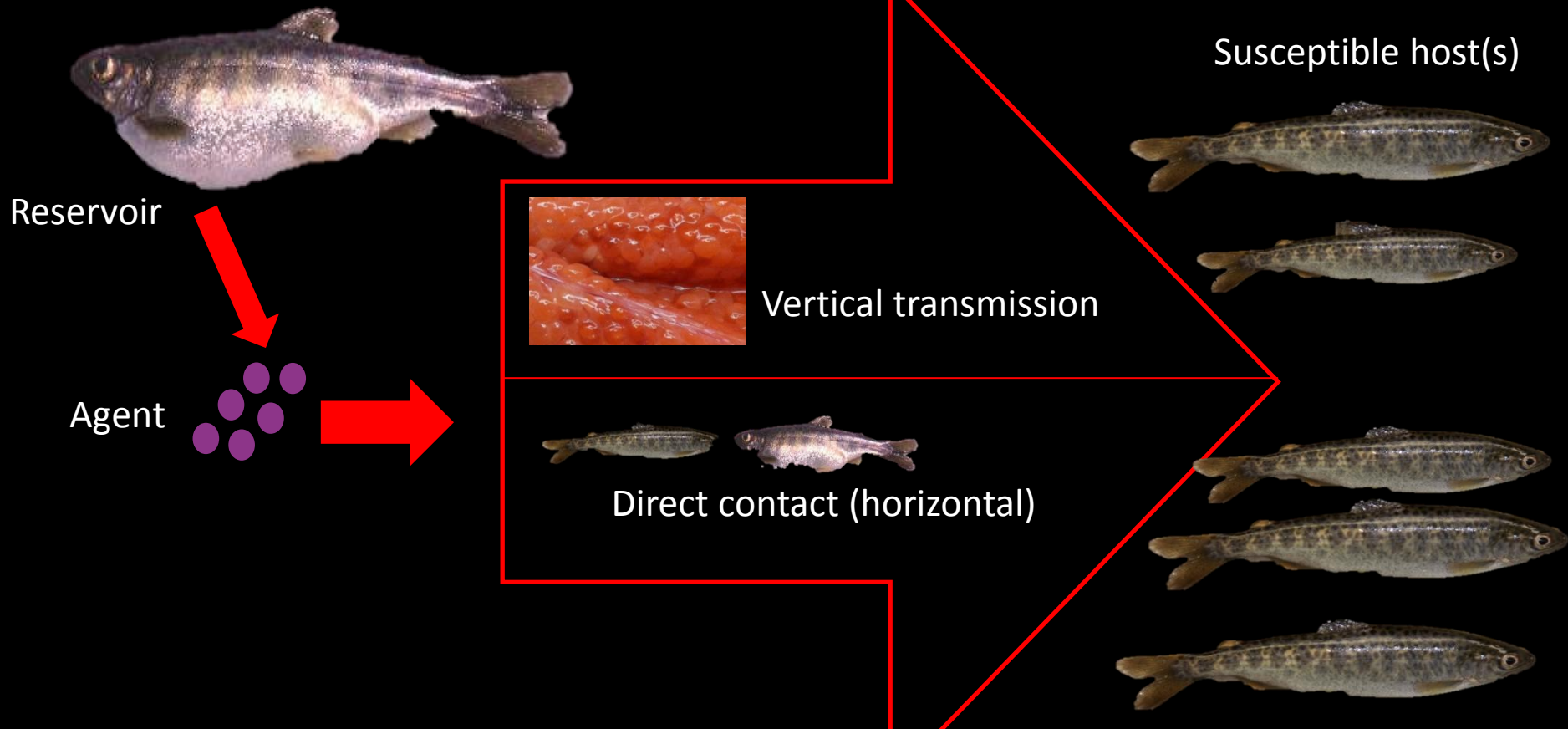


# Management and control of BKD

**Prevention is KEY!!**

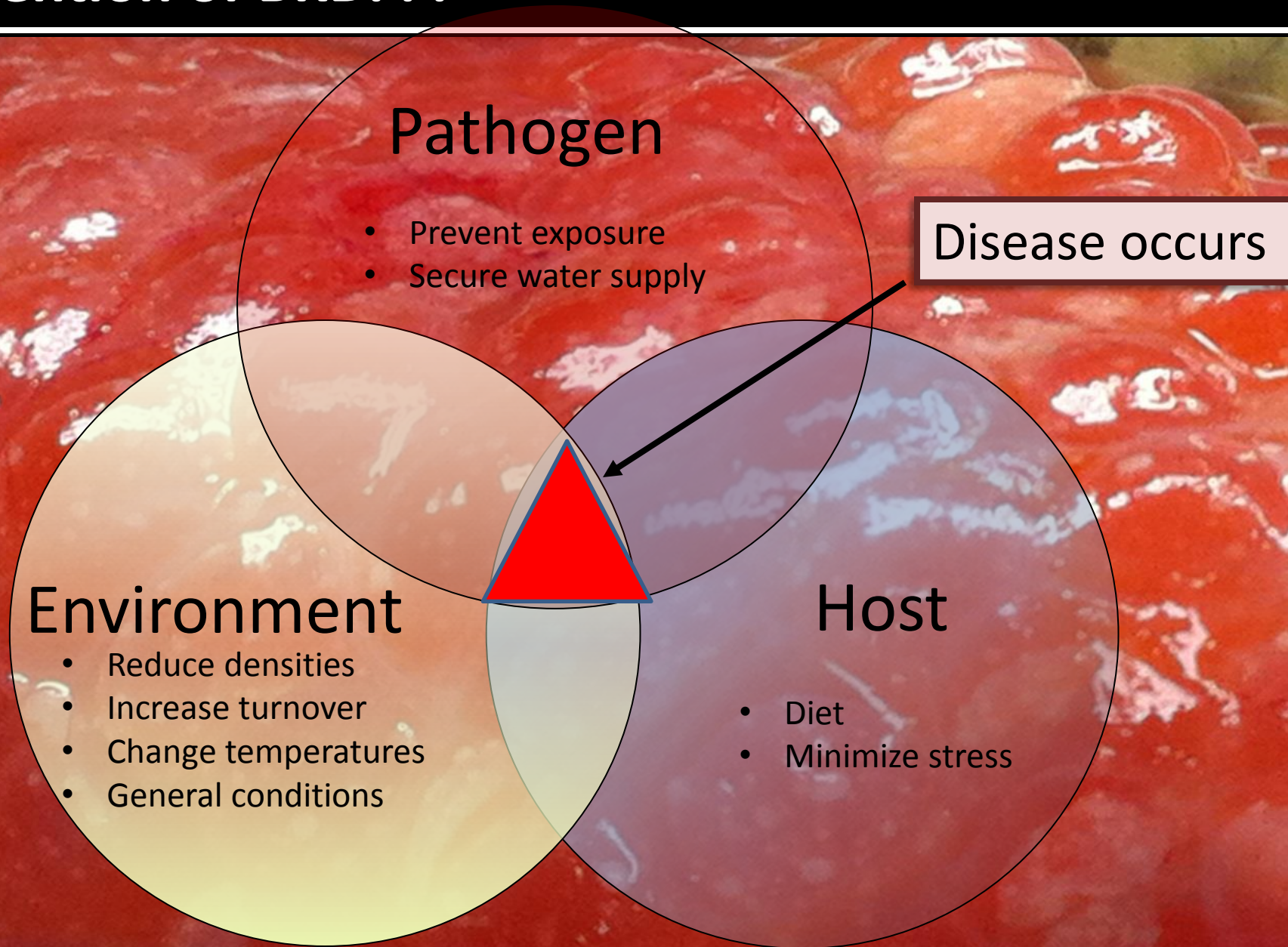
ELISA based culling

Adult injections



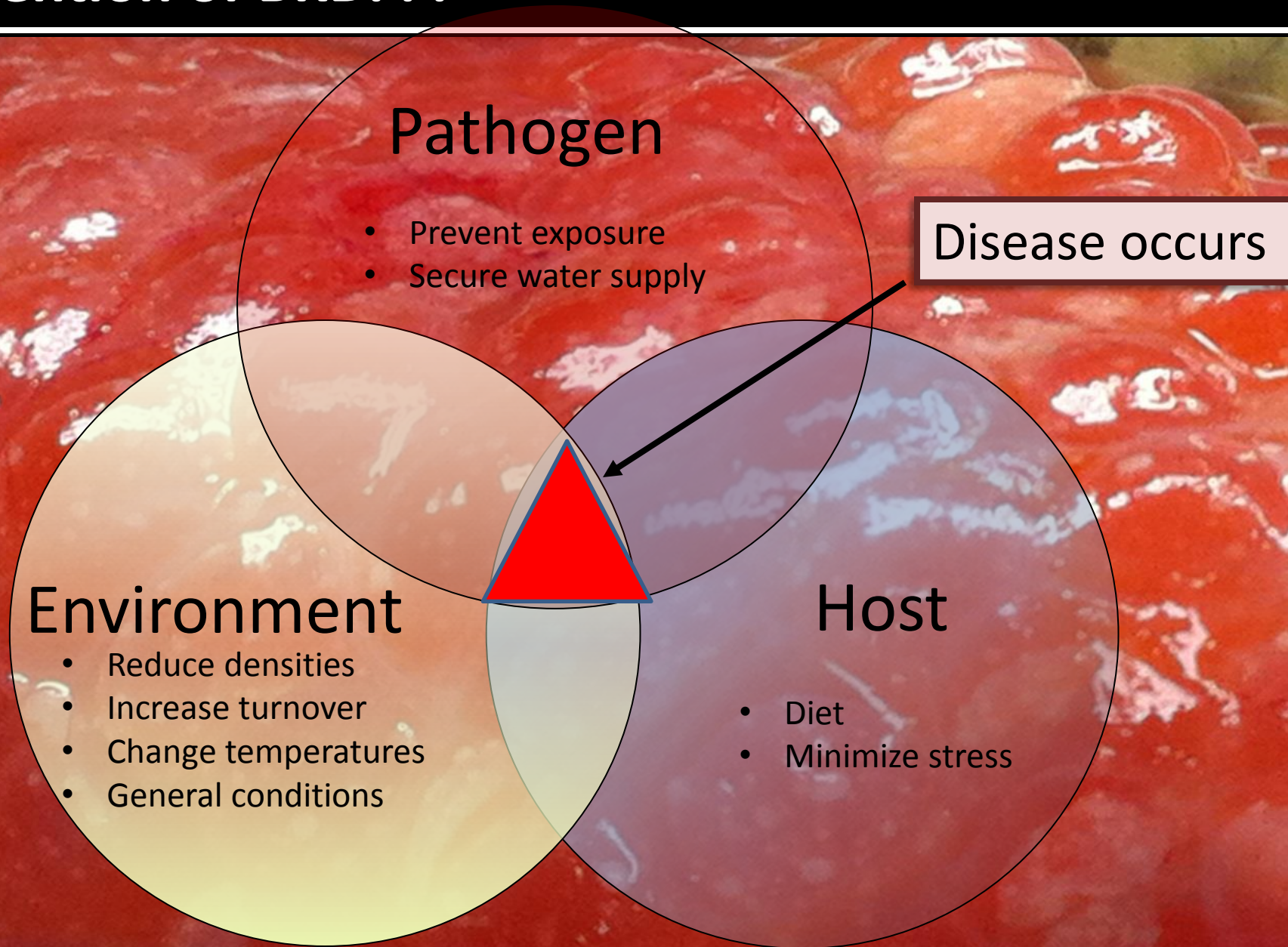


# Prevention of BKD...





# Prevention of BKD...

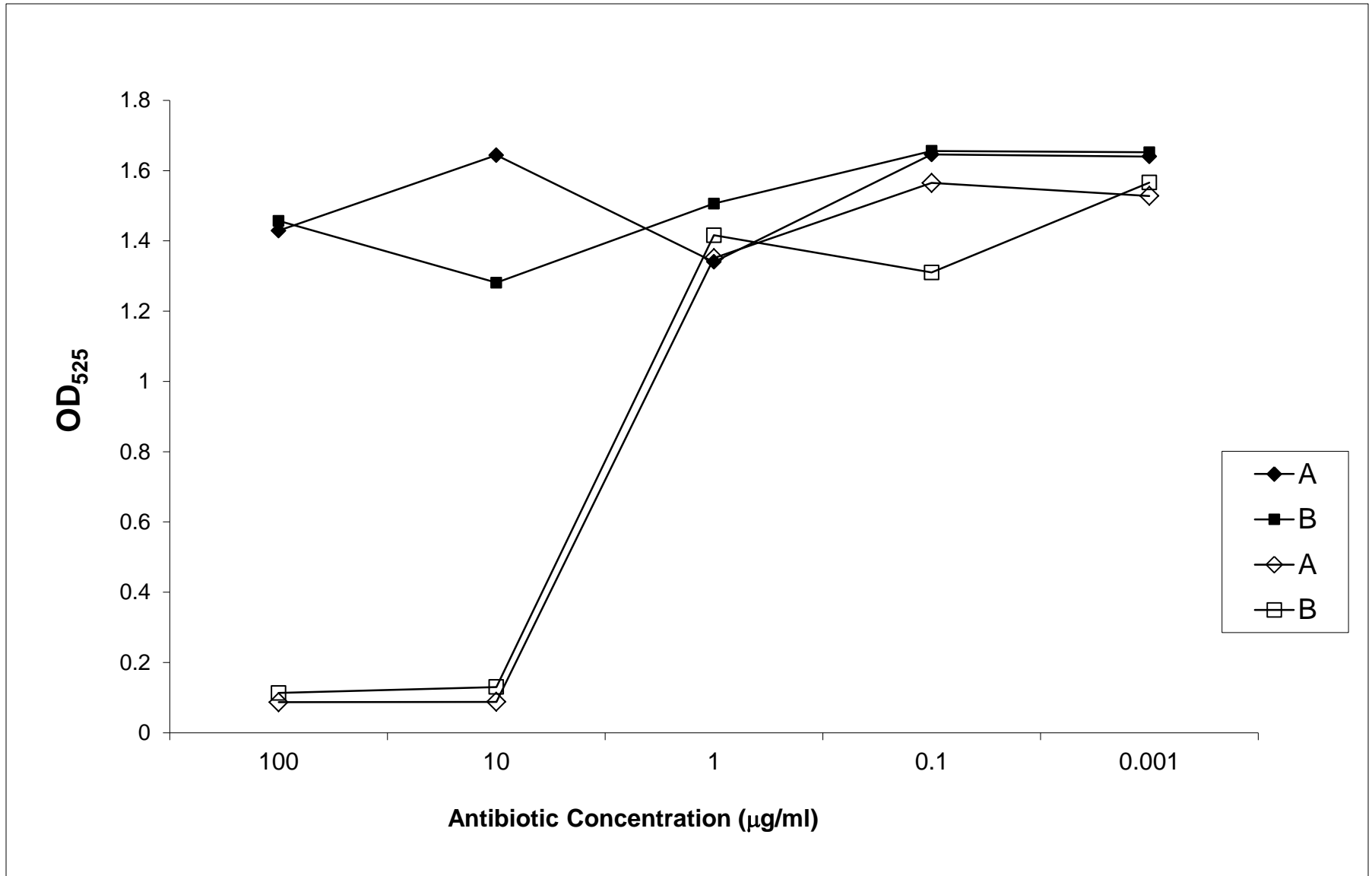




# Pathogen (BKD) control – Adult Injections



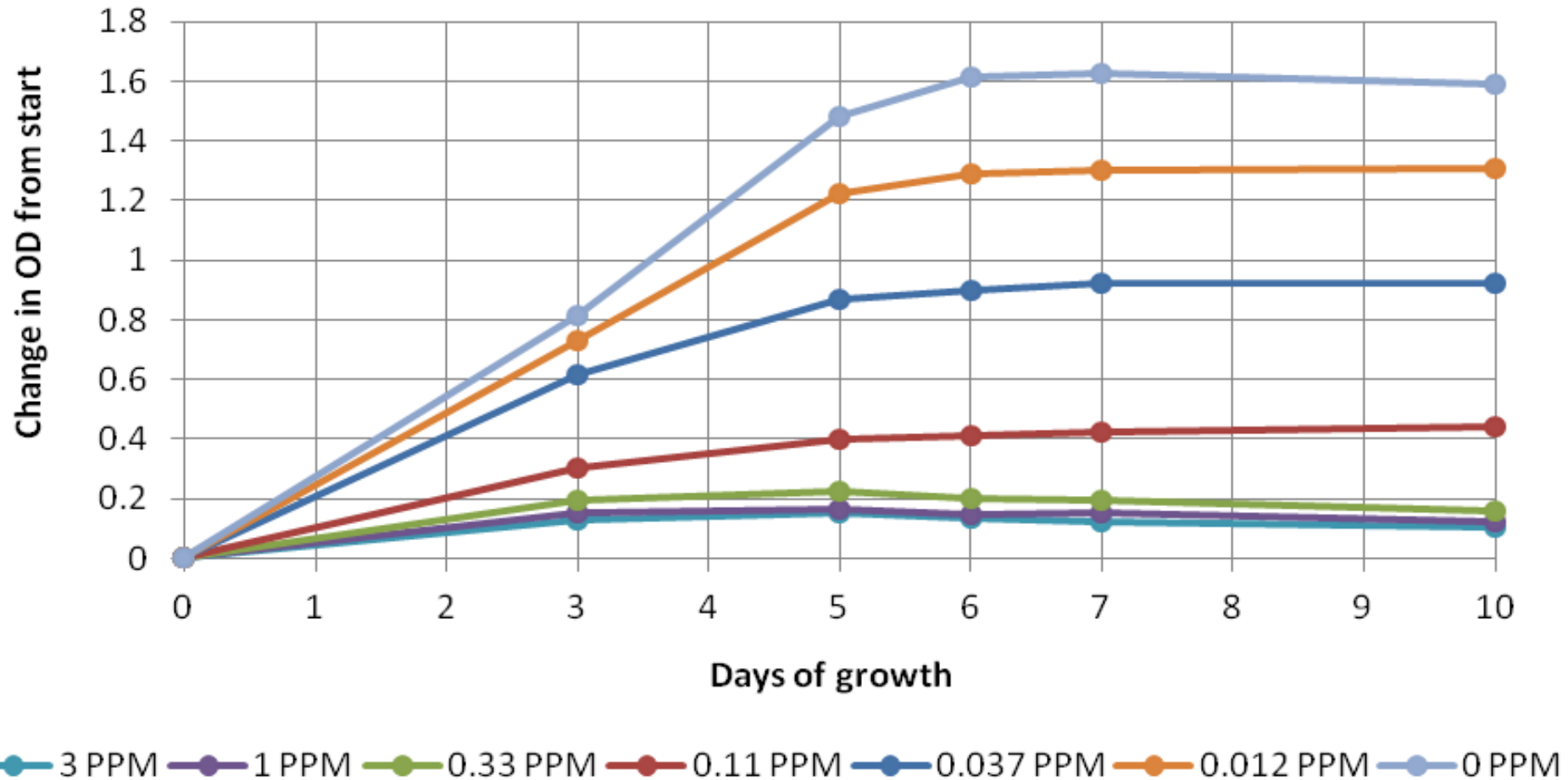
# Draxxin (Tulathromycin) – a good substitute?





# Draxxin (Tulathromycin) – a good substitute?

Growth in Draxxin



# Draxxin (Tulathromycin) – a good substitute?

- Preliminary results (in vivo) indicated a 0.5ppm (ug/mL)
- But does this hold true in vitro??

**Other studies?? (USGS, NOAA, USFWS)**

**Priority → Pilot Pharmacokinetics study**

Little White Salmon Hatchery

Cowlitz Salmon Hatchery



# Draxxin pK study design

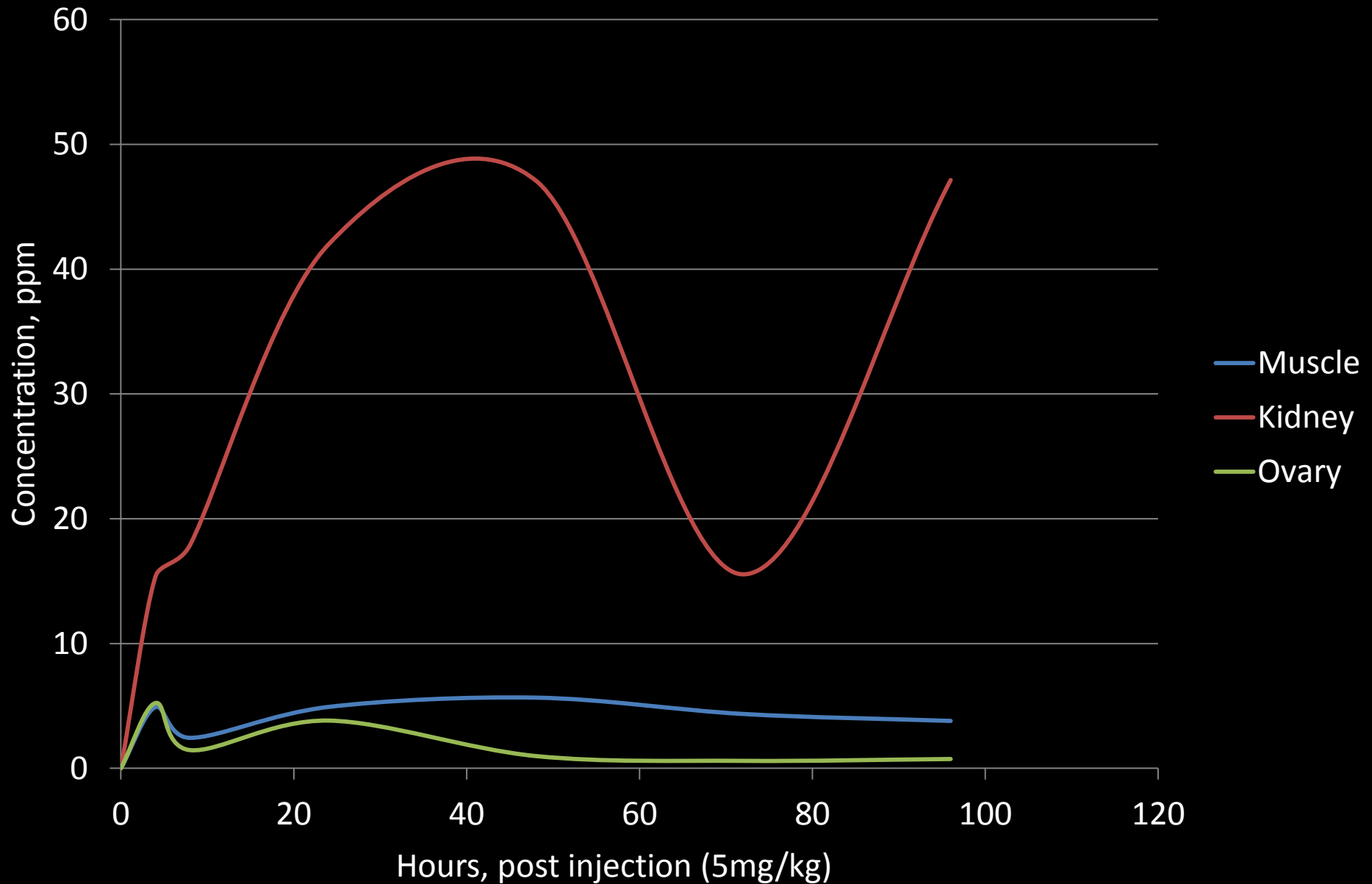
- 5mg/kg IC injections in adult, female SCS at LWS and CSH
- Sacrifice fish at various time points over a 57 day period
- Measure drug concentration in ovary, kidney, and muscle

**Objective:** Does Draxxin reach therapeutic levels after IC injection?

Time	Injected Fish Sampled	Uninjected Fish Sampled	Tissues Collected For LC-MassSpec	Tissues Collected for Histo
0 (Monday)	3	1	Muscle, Kidney, Ovary	Heart, Liver, Kidney, Intestine
4 (Monday)	3		Muscle, Kidney, Ovary	
8 (Monday)	3		Muscle, Kidney, Ovary	
Day1 (Tues)	3		Muscle, Kidney, Ovary	Heart, Liver Kidney, Intestine
Day 2 (Weds)	3		Muscle, Kidney, Ovary	
Day 3 (Thursday)	3			
Day 4 (Friday)	3			
Day 7 (Monday)	3		Muscle, Kidney, Ovary	Heart, Liver Kidney, Intestine
Day 9 (Weds)	3		Muscle, Kidney, Ovary	
Day 11 (Friday)	3		Muscle, Kidney, Ovary	
Day 14 (Monday)	3		Muscle, Kidney, Ovary	
Day 21 (Monday)	3	1	Muscle, Kidney, Ovary	
Day 28 (Monday)	3		Muscle, Kidney, Ovary	Heart, Liver Kidney, Intestine
Day 35 (Monday)	3		Muscle, Kidney, Ovary	
Day 42 (Monday)	3		Muscle, Kidney, Ovary	
Day 49 (Monday)	3		Muscle, Kidney, Ovary	Heart, Liver Kidney, Intestine



# Preliminary results . . . (LWS)



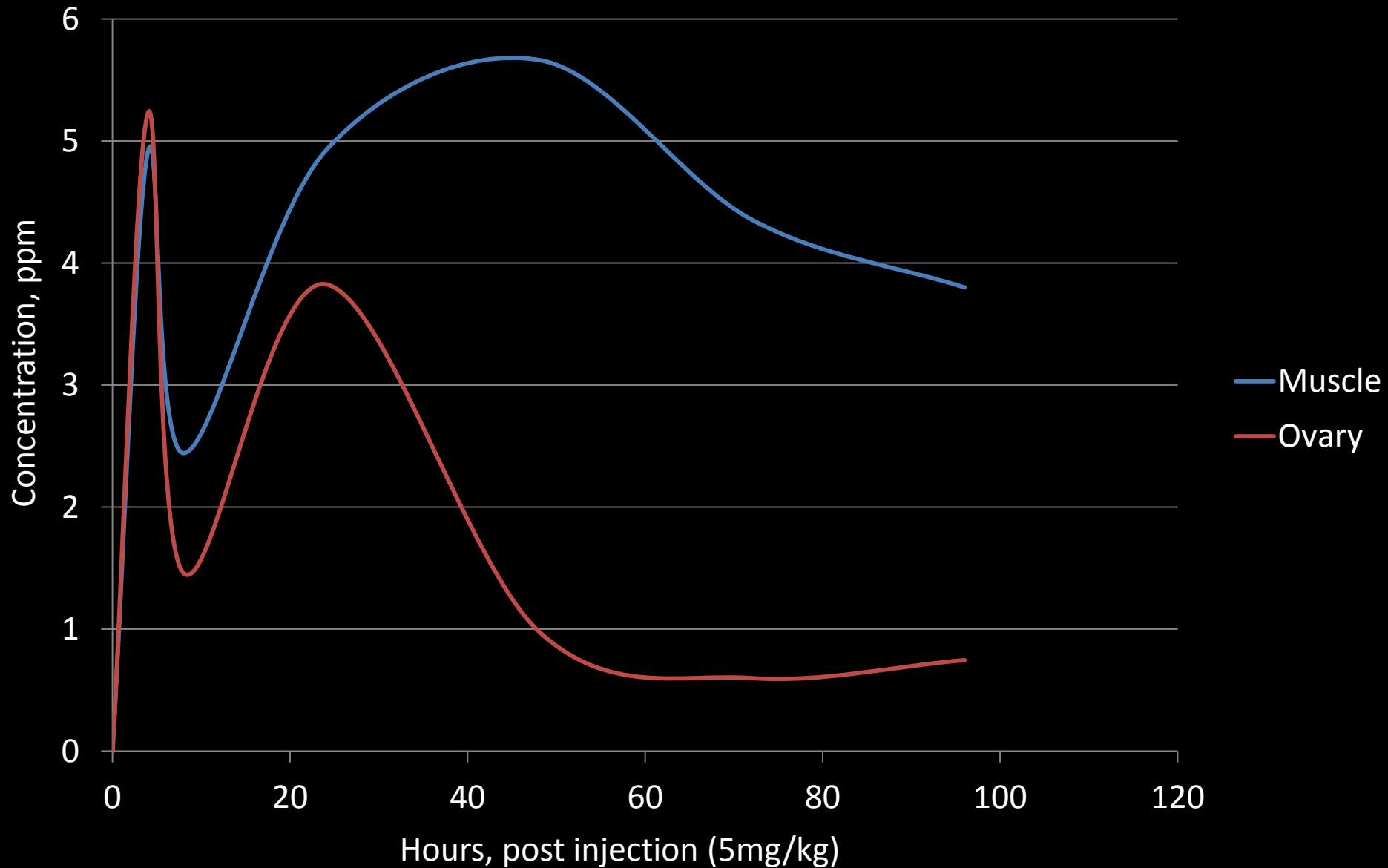
**Preliminary results . . .**

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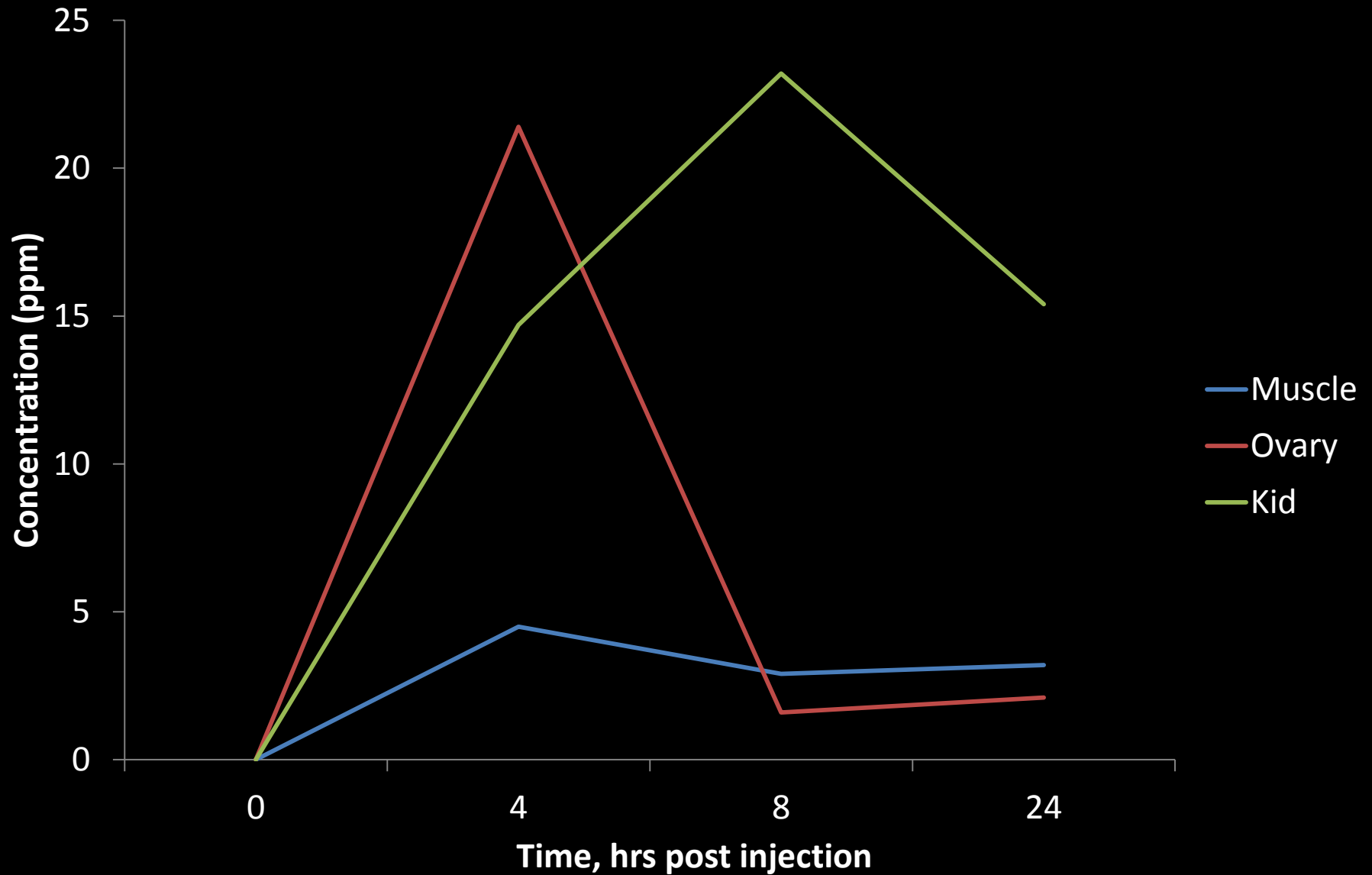
**It works!!**



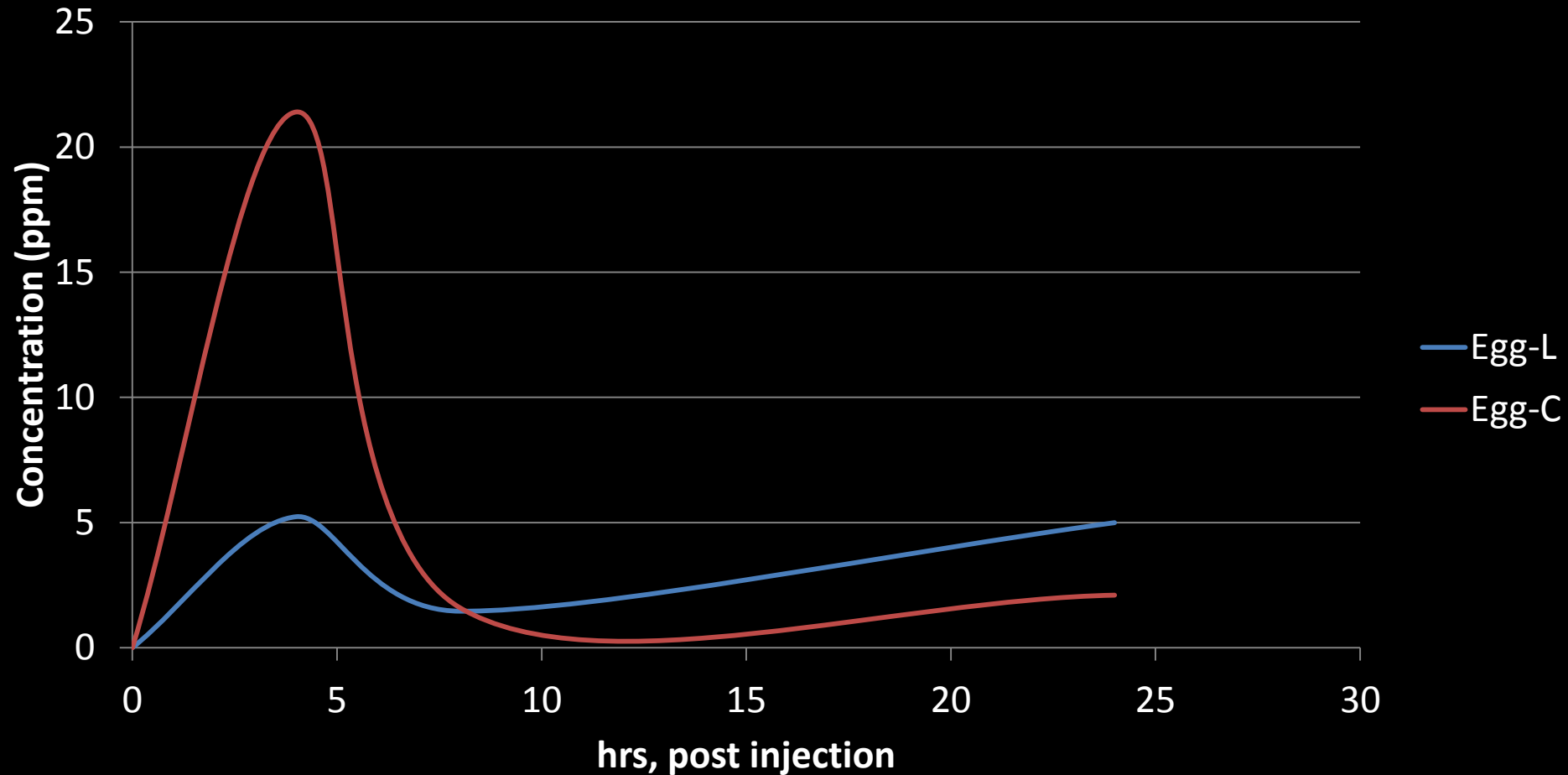
# Preliminary results . . . (LWS)



# CSH preliminary results (to 24 hours)

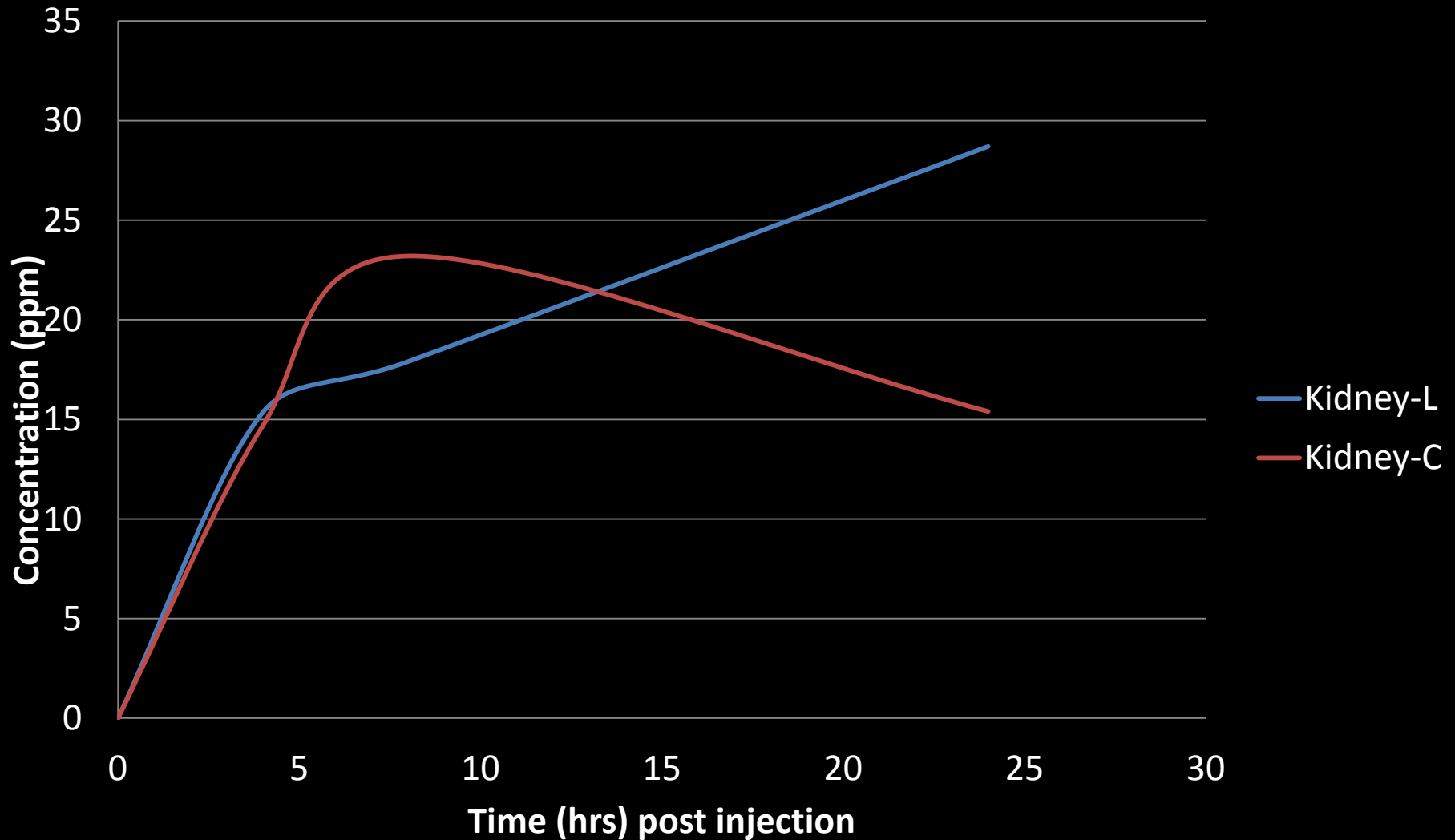


# LWS vs CSH – Eggs/Ovaries

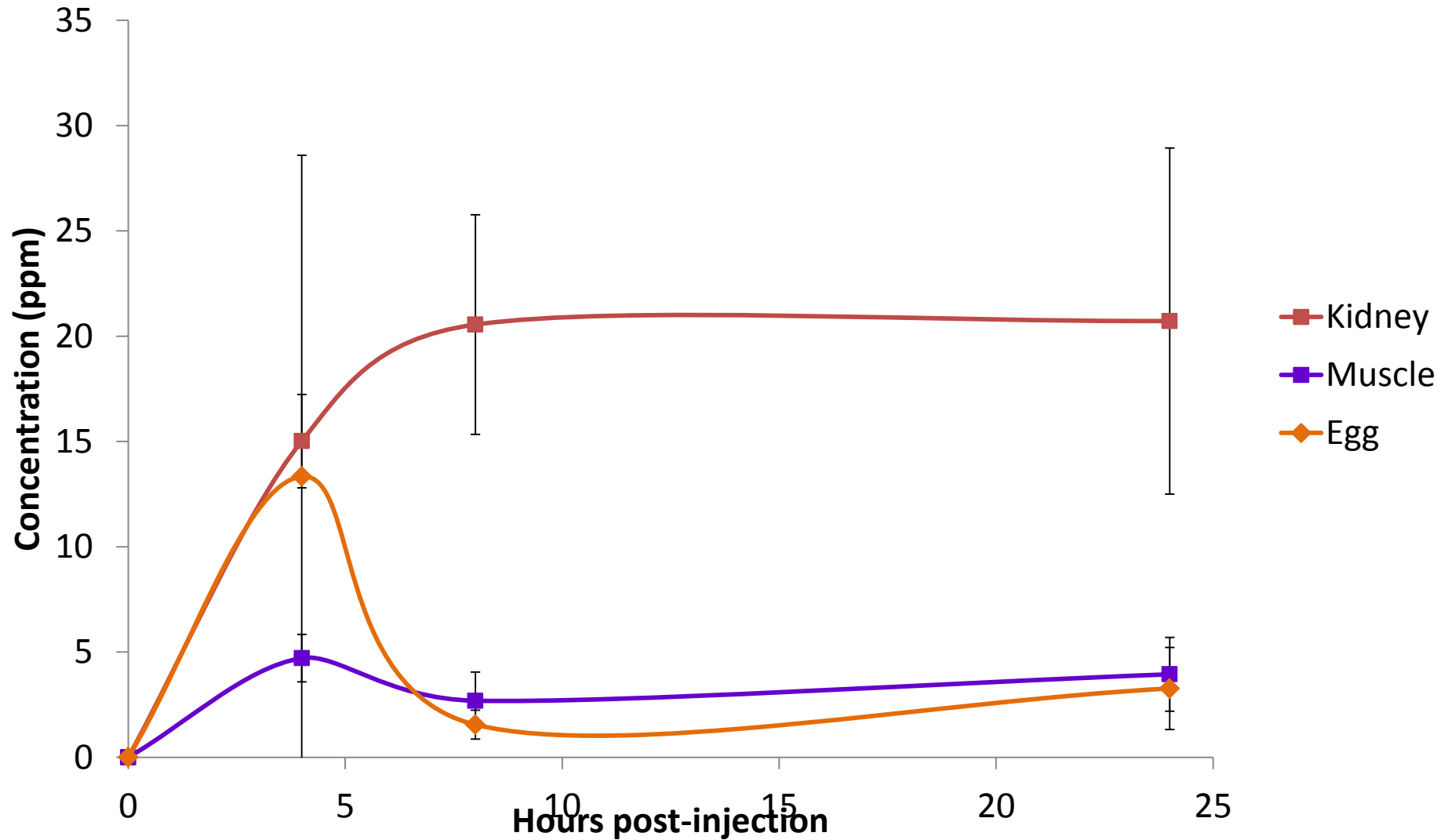




# LWS vs CSH – Kidney



# LWS and CSH – combined



# In conclusion . . .

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## Need the rest of the data...

Questions remain:

- How long at therapeutic levels?
- NE of carcasses → and withdrawal period?
- Does Draxxin really work??



## Do we really need it???



# Questions?

