Differences in habenula kisspeptin expression and its effects on stress coping styles in zebrafish, *Danio rerio*

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**Background**

**Stress Coping Styles**

<table>
<thead>
<tr>
<th>Proactive</th>
<th>Reactive</th>
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<tbody>
<tr>
<td>High</td>
<td>Low</td>
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**Habenulo-Raphe Connection**

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**Objective**

Our objective is to investigate whether there is a difference in kisspeptin sensitivity between proactive and reactive stress coping styles.

**Hypothesis**

Proactive zebrafish will be more sensitive to kisspeptin and this plays a role in the increased 5-HT expression.

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**Materials and Methods**

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**Conclusion and Discussion**

- Despite trying to optimize the in situ hybridization reaction parameters by running different permutations, we have yet to identify a parameter that demonstrates our probe is specifically binding to kiss1ra mRNA.
- Further investigation will be required to determine the specific issue.
- Given that we see signal on both antisense and sense it is possible that the issue lies in the probes specificity for binding to only kiss1ra mRNA.
- Alternate primers for kiss1ra mRNA will be reviewed.

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**References**

5. Bruno et al. 2015

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