Metabolic Adaptations in Rainbow Trout Liver across Seawater Temperatures

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Abstract

Understanding the metabolic responses of aquatic organisms to environmental changes, such as temperature 'uctuaR á R p and 20°C. Liver tissue samples were collected and subjected to non-targeted metabolomic analysis using liquid chromatography-mass spectrometry (LC-MS). Our results revealed signi, cant variations in the amino acid and lipid pro, les across the di erent temperature conditions. At 10°C, there was a noticeable increase in certain amino acids, indicating potential metabolic adjustments to lower temperatures. Conversely, at 20°C, lipid metabolism appeared to be

temperature-dependent metabolic changes is essential for optimizing aquaculture practices and predicting the impacts of environmental 'uctuations on aquatic ecosystems.

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