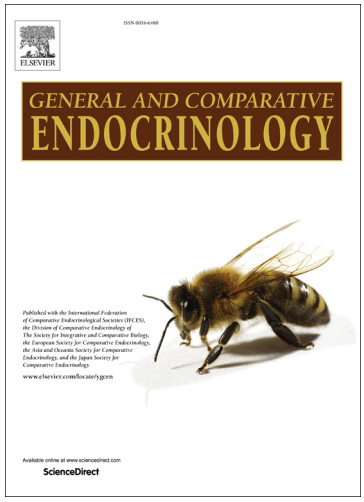

Sex and seasonal differences in mRNA expression of estrogen receptor α (ESR1) in red-sided garter snakes (*Thamnophis sirtalis parietalis*)

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PII: S0016-6480(17)30878-X
DOI: https://doi.org/10.1016/j.ygcen.2018.05.026
Reference: YGCEN 12952

To appear in: *General and Comparative Endocrinology*

Received Date: 31 December 2017
Revised Date: 30 April 2018
Accepted Date: 24 May 2018

Please cite this article as: Ashton, S.E., Vernasco, B.J., Moore, I.T., Rockwell Parker, M., Sex and seasonal differences in mRNA expression of estrogen receptor α (ESR1) in red-sided garter snakes (*Thamnophis sirtalis parietalis*), *General and Comparative Endocrinology* (2018), doi: https://doi.org/10.1016/j.ygcen.2018.05.026

Sex and seasonal differences in mRNA expression of estrogen receptor α (ESR1) in red-sided garter snakes (*Thamnophis sirtalis parietalis*)

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Key words: hormone receptor, sex steroids, gene expression, vitellogenesis, reptile, qPCR, seasonality

Abstract

Estrogens are important regulators of reproductive physiology including sexual signal expression and vitellogenesis. For the regulation to occur, the hormone must bind and activate receptors in target tissues, and expression of the receptors can vary by sex and/or season. By simultaneously comparing circulating hormone levels with receptor expression, a more complete understanding of hormone action can be gained. Our study species, the red-sided garter snake (*Thamnophis sirtalis parietalis*), provides an excellent opportunity to study the interaction between sex steroid hormones and