There is increasing use of soy products in the diet of the population and especially as non dairy sources of protein and in individuals with milk allergy. However, soy beans contain compounds called phytochemicals, which have the capacity to act in the same manner as the female hormone estrogen. The male sex is very sensitive to the biological effects of agents acting as the female hormone in the body. Thus, this project is designed to determine whether consumption of soy diets affect testis function.
**Quarterly Activities/ Project Description**

Xenoestrogen regulation of Leydig cells was assessed in male offspring at different stages of development. Exposures to isoflavones early in development interfered with Leydig cell division and acquisition of steroidogenic capacity, which affected androgen levels in the adult testis. For example, testicular testosterone levels were similar to or greater than in control animals after exposure to soy isoflavones, which were, paradoxically, associated with deficits in androgen biosynthesis per unit Leydig cell. Thus, adult testis function is impacted by exposures to xenoestrogens occurring early in development, possibly disrupting testicular and serum testosterone levels in a dose- and time-dependent manner. Disturbances in androgen secretion have implication for male reproductive health. For example, androgen insufficiency in the prepubertal period has been linked to abnormal development of the male urogenital tract (e.g., hypospadias and cryptorchidism). In contrast, enhanced testicular and serum testosterone concentrations may accelerate pubertal development and/or increase the risk for germ cell tumors.

**Activity Codes (NAICS or NTEE-NPC) (up to 10)**

- Activity Code 1 B43 - NTEE
- Activity Code 2
- Activity Code 3
- Activity Code 4
- Activity Code 5
- Activity Code 6
- Activity Code 7
- Activity Code 8
- Activity Code 9
- Activity Code 10

**Project Status**

Completed 50% or more

**Total Federal Amount ARRA** 10036.97

**Funds Received/ Invoiced**

**Number of Jobs** 0.38

**Description of Jobs Created** Undergraduate students
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Total Federal Amount of ARRA 11337.24

Expended

Total Federal ARRA 0.00

Infrastructure Expenditure

Infrastructure Purpose and Rationale
### Report Information

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### Infrastructure Contact

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### Primary Place of Performance

- **Address 1**: College of Veterinary Medicine
- **Address 2**: 109 Greene Hall
- **City**: Auburn University
- **Country Code**: US
- **State**: AL
- **ZIP Code + 4**: 36849 - 0001
- **Congressional District**: 02

### Recipient Highly Compensated Officers

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### Report Audit Trail

- **Created By**: Cindy Selman
- **Date Created**: 04/01/2011 04:55 PM
- **Last Updated By**: Cindy Selman
- **Last Updated On**: 04/07/2011 09:03 AM