

Coumestrol uterotrophic activity

- response abnormal, Makaverich *et al*
- response normal, Ashby *et al*

Soy baby milk uterotrophic activity

- Immature rats +ve, Ashby *et al*
- OVX rats -ve, Ashby *et al*

Thigpen *et al*: use of phytoestrogen-free diet

- Purina 5001 (most phytoestrogen rich) vom Saal *et al*
- Phytoestrogen-free diet uterotrophic Thigpen *et al*
Ashby *et al*

Resveratrol

- Super ER agonist to MCF-7 cells, Gehm *et al*
- Very weak estrogen, Ashby *et al*
- Very weak estrogen, Turner *et al*

First synthetic estrogen

- Vaginal cornification in OVX rats, Cook *et al* 1936
- No vaginal or uterotrophic effects, Ashby *et al* 1999

Day of VO versus IUP

- Wild mice, Zelinski and Vandenburg
- CF1 mice, Welshons *et al*

DDE rat reproductive tissue weights

- +ve, CD rats 200mg/kg, O'Conner *et al* (1999)
- -ve, Long Evans rats 200mg/kg O'Conner *et al* (1999)

Mouse litter size/estrogen sensitivity

- CD-1 mice highly sensitive, vom Saal 1999
- CD-1 mice insensitive, Spearow *et al* 1999

BBP reduced rat testis weights

- Sharpe *et al*
- Ashby *et al*
- Nair *et al*
- Sharpe *et al*

BPA Mouse prostate/testis

- vom Saal and colleagues
- Cagen *et al*
- Ashby *et al*

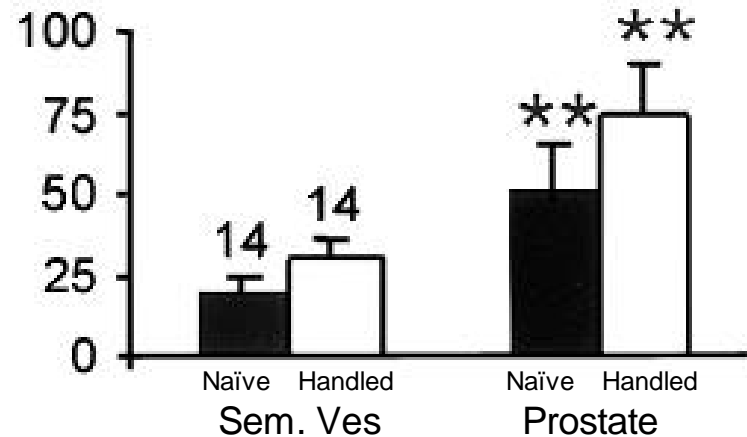
NP mammary glands in Noble rats

- Colerangle and Roy
- Ashby *et al* (Noble rats)
- Ashby *et al* (AP rats)

3 Min/d Handling pnd 1-24

Morton *et al*, Endocrinology 72, 439-442 (1963)

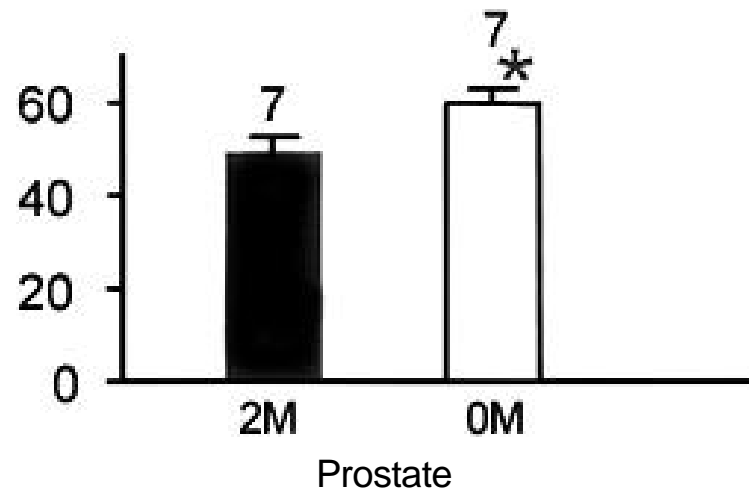
Wistar rat tissues.
Mg/100g bwt
(+SD) at pnd 35
(gp housed)



Intra-uterine position

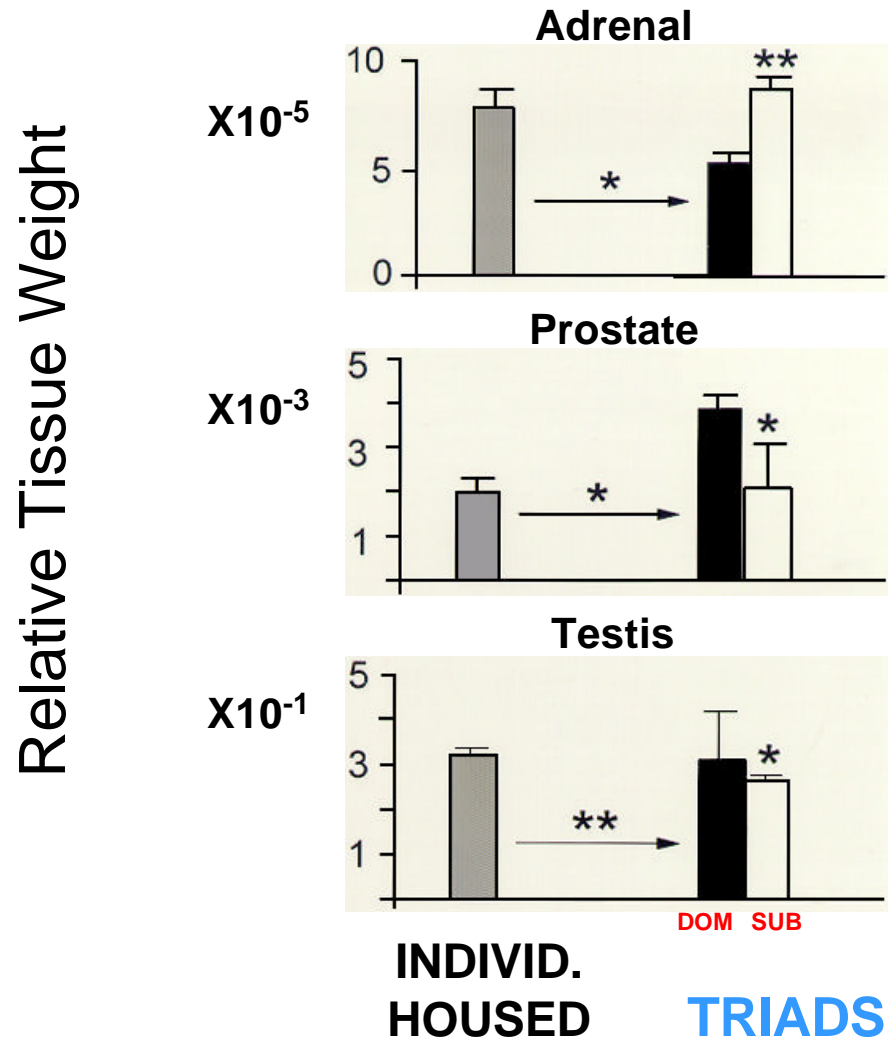
Nonneman *et al*, Biol. of Reproduction 47, 723-729 (1992)

CF-1 Mouse
Prostate (mg+SE)
at pnd 110



Mandl and Zuckerman 1951	Surgical Stress pnd21	VO advanced~5d
Morton <i>et al</i> 1963	Handling 3m/d pnd 1-24	<p>♂ Advanced VO (cf 2 M females)</p> <p>♀ Prostate wt. ↑ (cf 0 M males at pnd 110)</p> <p>Sem. ves. wt. ↓</p>
Branchev and Schiari 1968	Isolation 3m/d pnd1-21	<p>♂ VO unaffected</p> <p>♀ Bw. ↑ Prostate/sem. ves. normal.</p> <p>Suggest use <u>litter</u> as unit.</p>
Grota 1971	Handling 3m/d pnd 1-21	<p>♂ Advance in early peak of T.</p> <p>Hypo/pit. Axis develop. advanced</p>
Kortenbrod 1977	Handling 3m/d pnd 1-21	<p>♂ Delay in early peak of T and LH.</p> <p>PS delayed.</p>

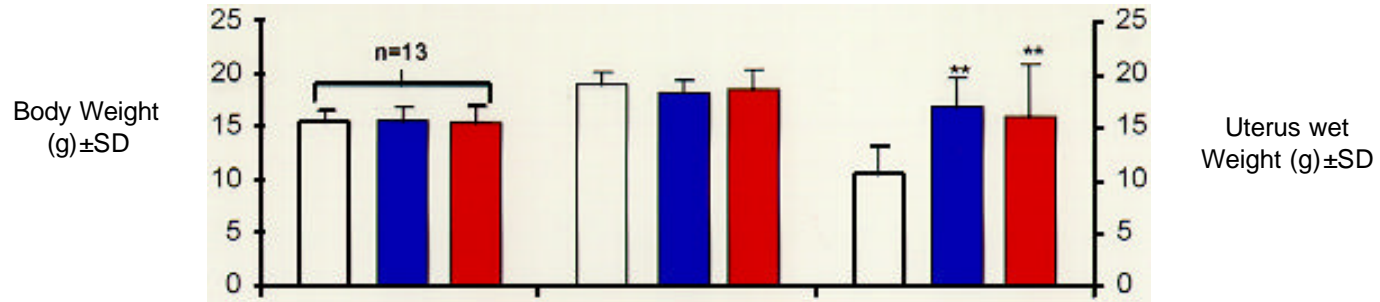
Social Status and Mouse Tissue Weights



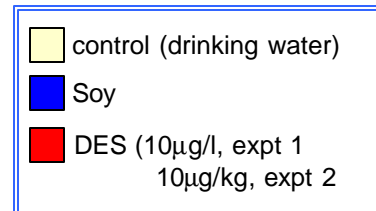
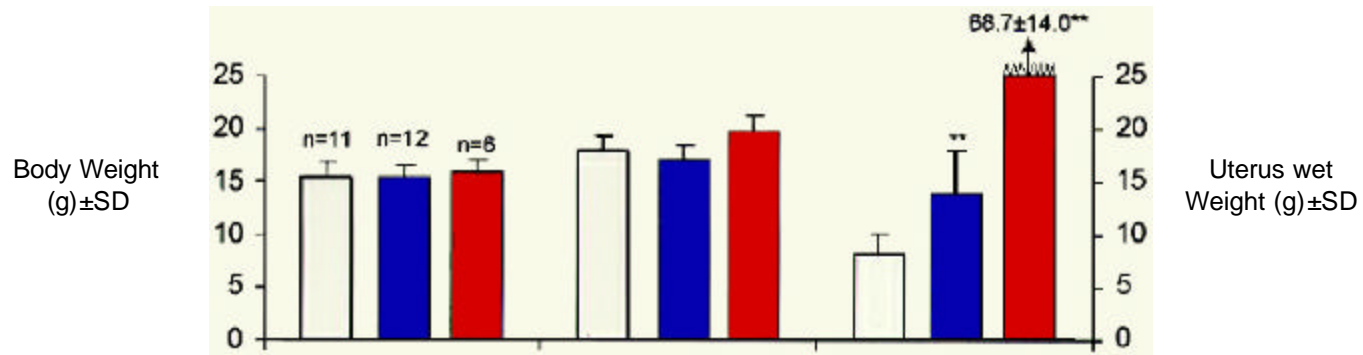
Bartos and Brain, *Bull. Zool.* 60, 293-296 (1993).

Immature Rodent Uterotrophic Assay Soy in Mice

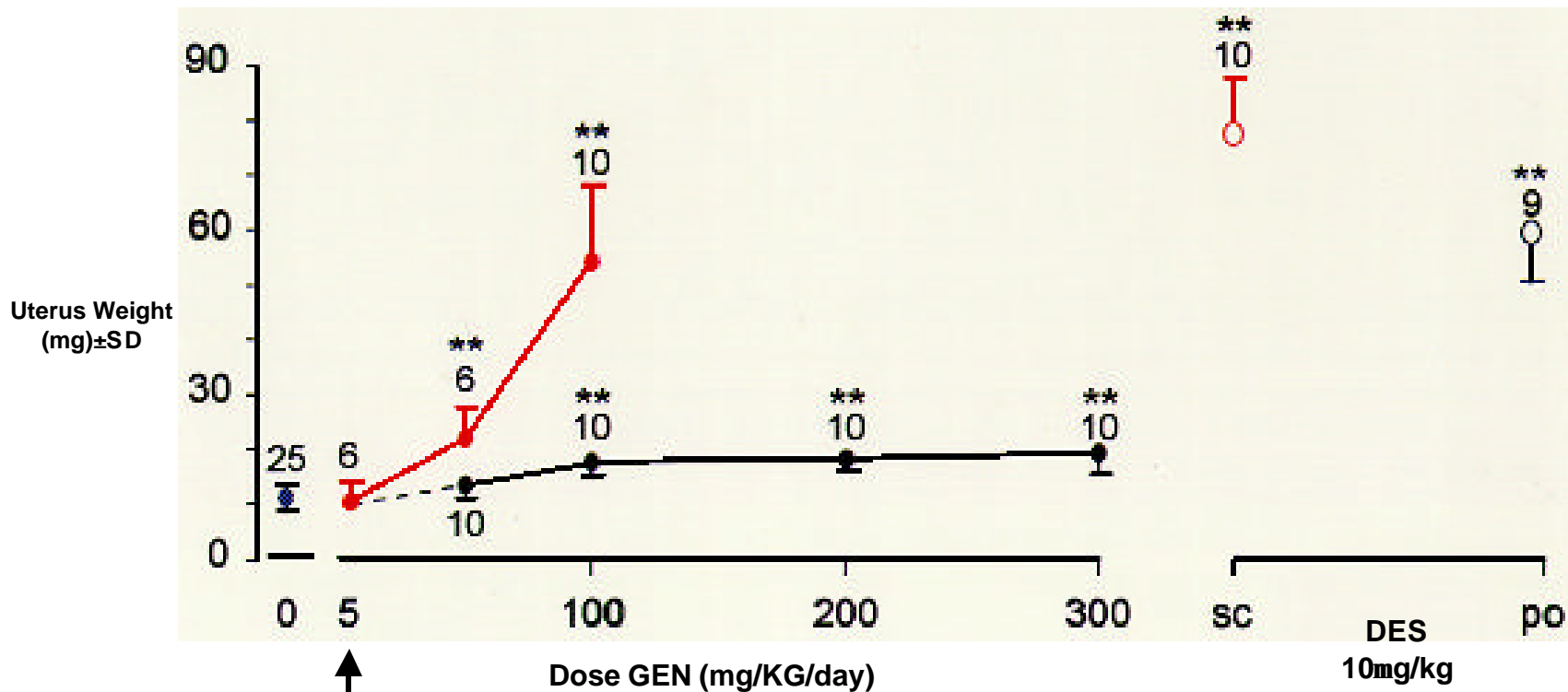
Expt 1



Expt 2



Immature Rodent Uterotrophic Assay GEN in Mice



↑
Calculated
GEN intake
from Soy

Rat, oral negative up to 50 mg/kg/day

Estrogenic Activity of “Phytoestrogen-free” Diet

