

Present Conference Title

Environmental Hormones: Past, Present, Future

Definitions

1. Hormone - a Messenger
2. Estrogen; Androgen; Peptide; Protein
3. Endogenous, Exogenous
4. Iatrogenic Effects (Exogenous)
5. Environmental Effects (Exogenous)

Alternate Title for Conference

Biomedical And Environmental Aspects of Hormones: Past, Present, Future

David Platt Rall

(1926-1999)

Assistant Surgeon General

Director, National Toxicology Program

Director, National Institute of Environmental
Health Sciences (NIEHS)

Estrogens in the Environment I

(1979)

“The objectives of the Symposium, stated quite simply, were to determine what an estrogen is and how it works, and what effect estrogenic substances might have on human health.”



FIRST SYMPOSIUM

**ESTROGENS
In The Environment**

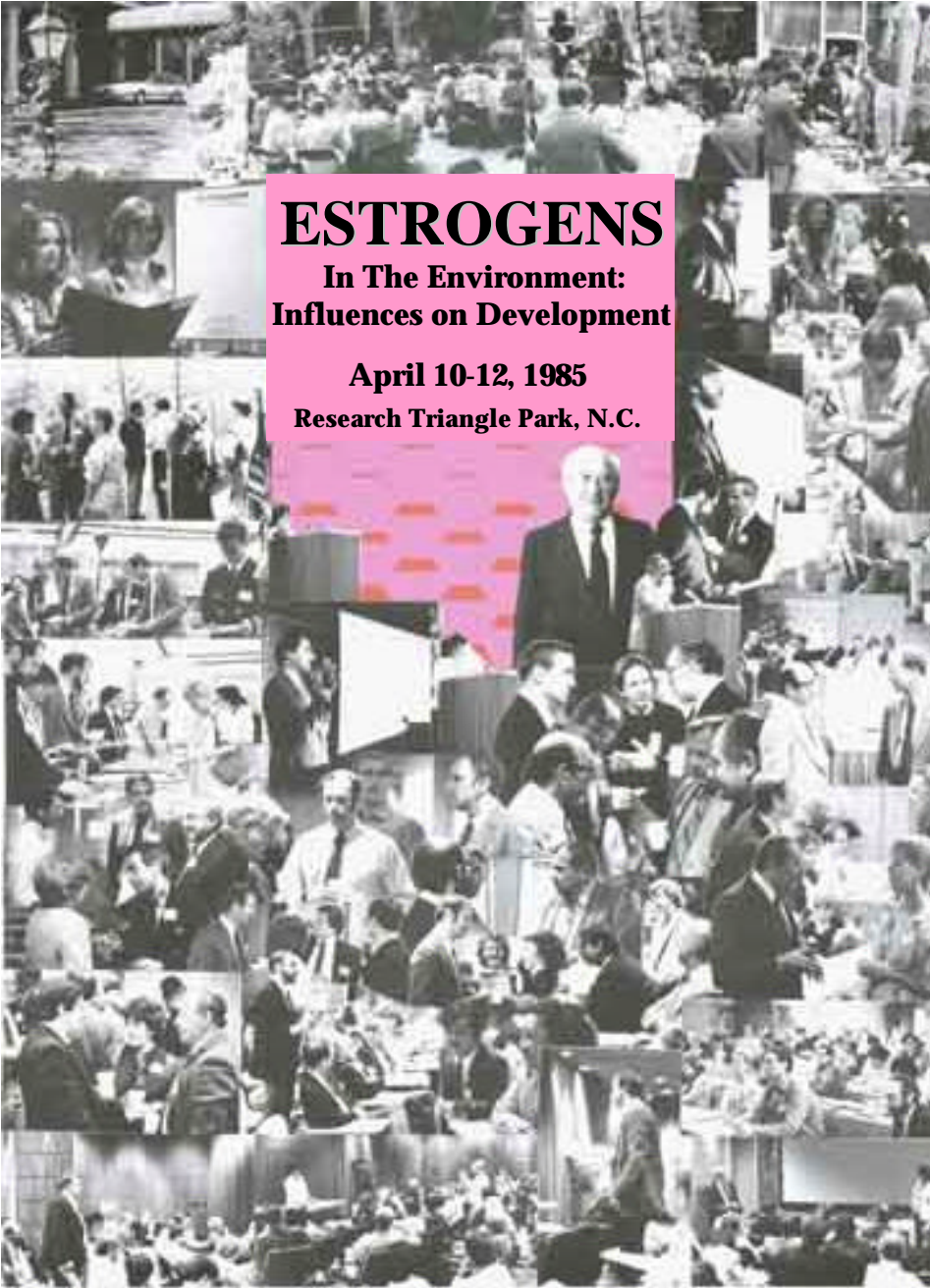
September 10-12, 1979
Raleigh, N.C.

Estrogens in the Environment II

Influences on Development

(1985)

“...in this current meeting, the influence of estrogenic compounds on development in animals and humans was a new and important focus.”



ESTROGENS

**In The Environment:
Influences on Development**

April 10-12, 1985

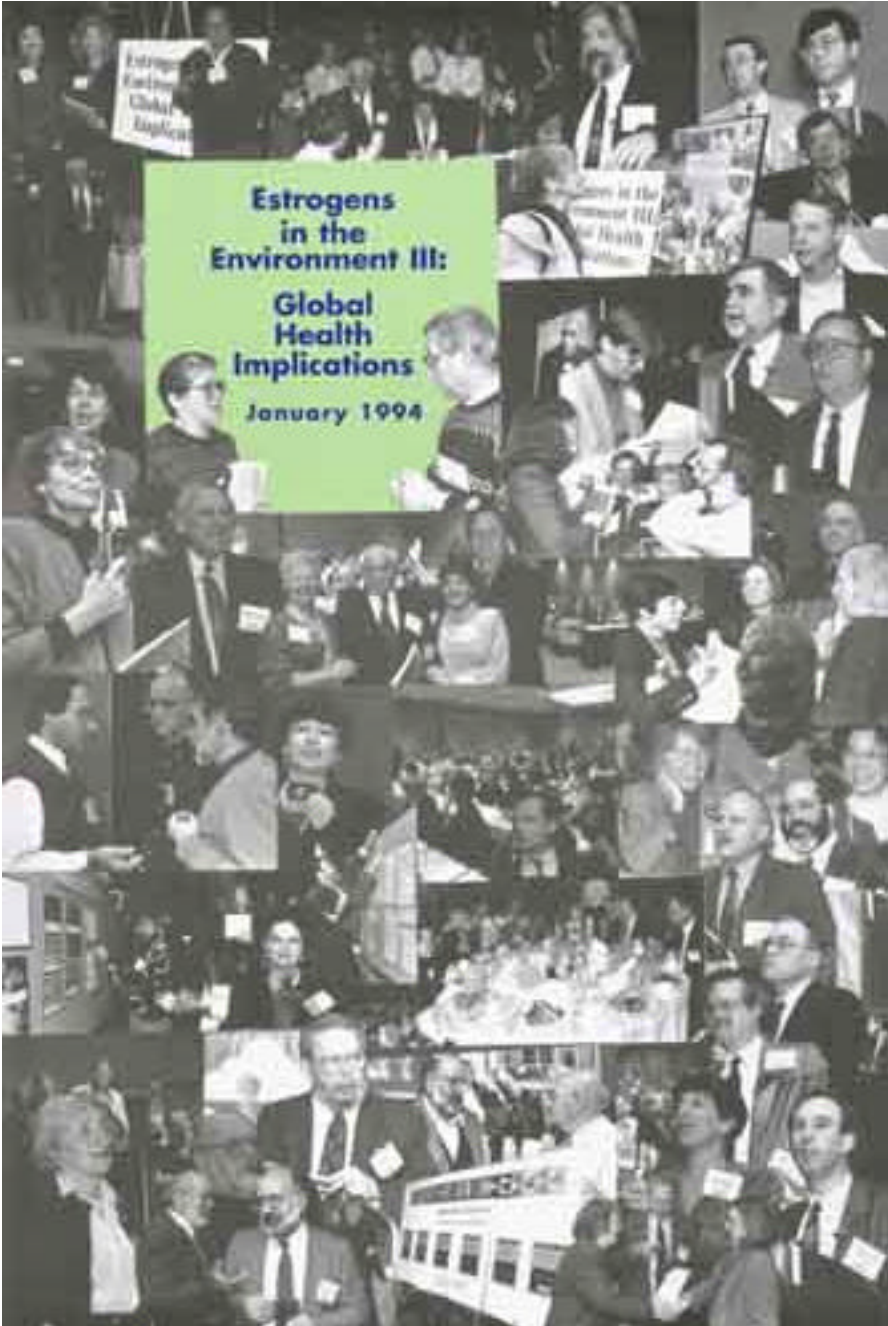
Research Triangle Park, N.C.

Estrogens in the Environment III

Global Health Implications

(1994)

“...that the wildlife effects that are seen may be an early indication of the consequences of human exposures.”



“Estrogens in unexpected places”

[Feldman, Korach]

Methoxychlor (Tulner, 1961)
in animal room

Phytoestrogens (Thigpen et al, 1985)
in animal feed

Phenol Red (Berthois et al, 1986)
in cell culture

Bisphenol-A (Krishnan et al, 1993)
in yeast culture

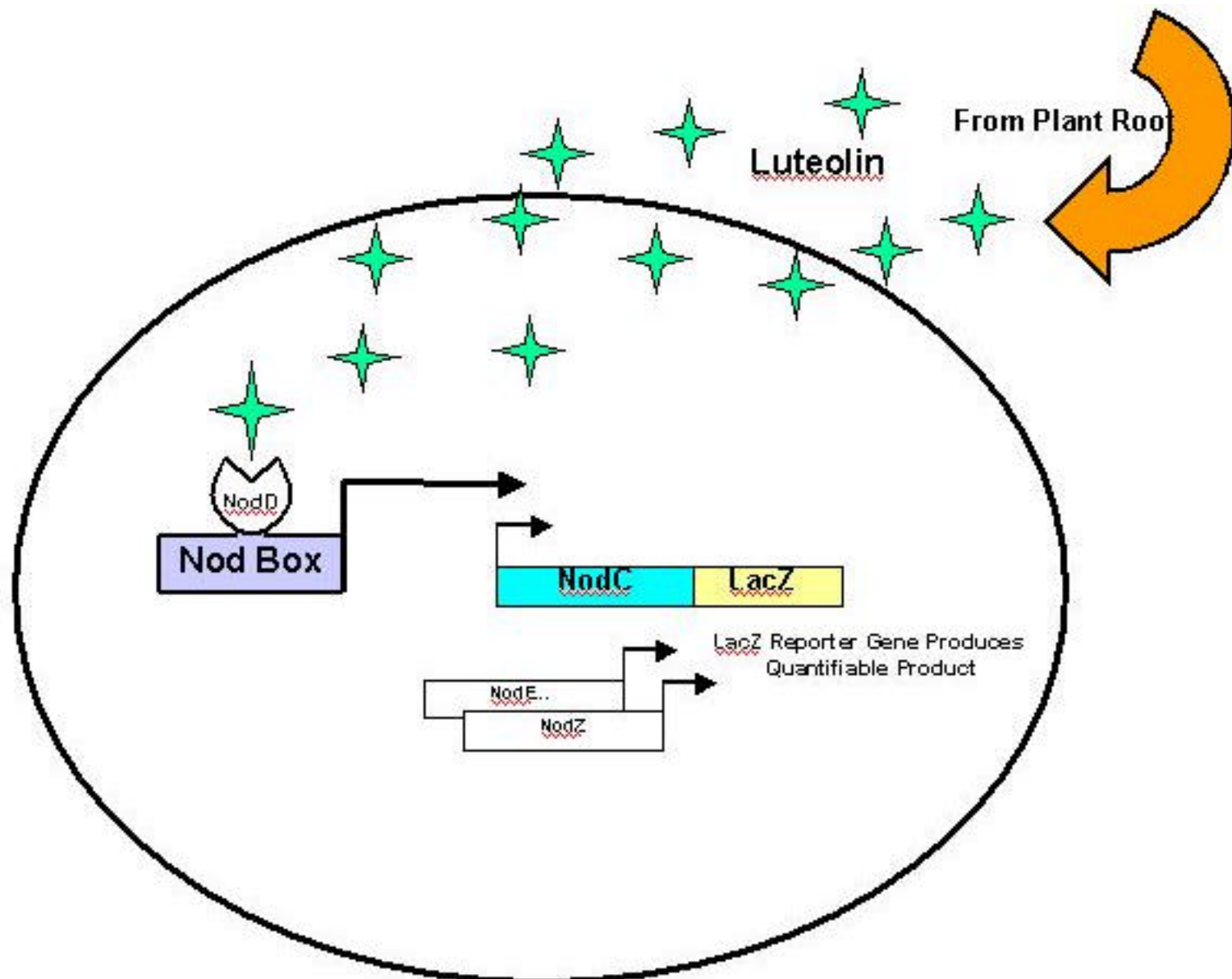
(Reid & Wilson) 1944

Symbiotic Signals and Networks

the interface between internal and external

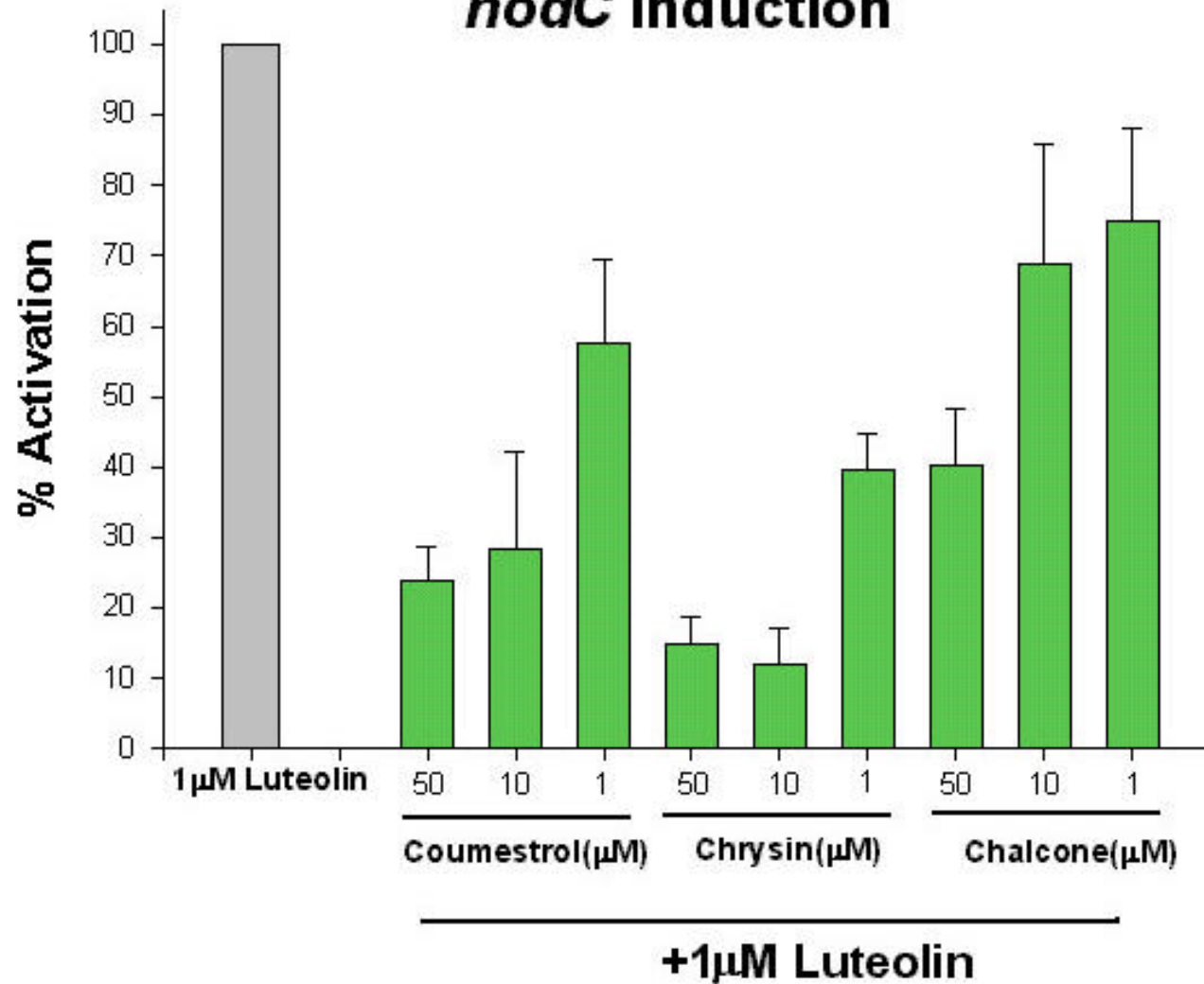
or

individual and organism



Rhizobium meliloti strain 1021pRmM57 is a wild type strain which harbors a plasmid-borne *nodC-LacZ* fusion and a copy of *NodD* (4). Luteolin binding to *NodD*'s ligand binding domain turns on a series of functional Nod genes required for symbiosis.

Certain Phytochemicals Repress *nodC* Induction



NodC Activation Altered by Various Pesticides

