



25 Years of Endocrine Disruption Research: Insights from the Director of NIEHS

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CHE Partnership Call
September 28, 2016

2016 is a Landmark Year For Environmental Health and Endocrine Disruption Research

- 50th Anniversary of NIEHS
- 25th Anniversary of the Wingspread Conference on Environmental Endocrine Disruption
- 100th Anniversary of The Endocrine Society
- 20th Anniversary of *Our Stolen Future*





25 Years of Endocrine Disruption Research: Past Lessons and Future Directions

A Celebration of the People and the Science

Videocast

[EDC Meeting Day 1 \(Monday, September 19\)](https://videocast.nih.gov/summary.asp?Live=19928&bhcp=1)

<https://videocast.nih.gov/summary.asp?Live=19928&bhcp=1>

[EDC Meeting Day 2 \(Tuesday, September 20\)](https://videocast.nih.gov/summary.asp?Live=19932&bhcp=1)

<https://videocast.nih.gov/summary.asp?Live=19932&bhcp=1>



Congressional Briefing on EDCs

From Hormones to Brain Development: 25 Years of Groundbreaking Research on Endocrine Disrupting Chemicals

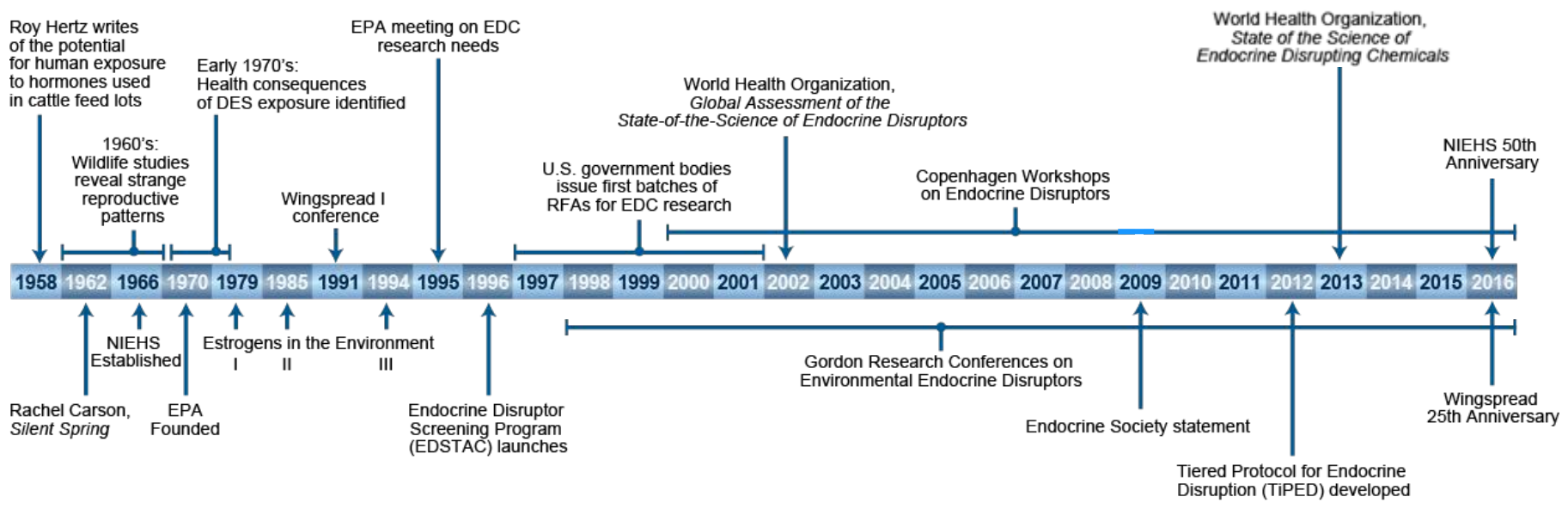
Sponsored by the Endocrine Society

Wednesday, September 21, 2016

12:00 p.m. - 1:30 p.m.

406 Dirksen Senate Office Building (EPW Hearing Room)

Celebrating the Past, Present and Future



Celebrating the Pioneers of EDC Research

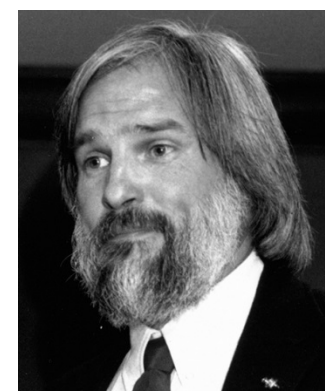
- **Theo Colborn** : (1927-2014) Conceptualized the idea of EDCs, Founded the Endocrine Disruption Exchange (TEDX)
- **“Pete” Myers**: Works behind the scenes: organizes meetings, secures funding, communicates the importance of EHS
- **Lou Guillette**: (1956-2016) Leader in field of EDCs and was a brilliant scientist, educator, mentor, communicator , and translator of work in wildlife to animals and humans



Theo Colborn



Pete Myers



Lou Guillette

Wingspread Conference on Environmental Endocrine Disruption – 1991

- Turning point in the development of the field. Birth of the term “Endocrine Disrupting Chemical”



Wingspread Consensus Statement

- *We are certain of the following:
A large number of man-made chemicals that have been released into the environment, as well as a few natural ones, have the potential to disrupt the endocrine system of animals, including humans*

**Statement from the work session on chemically-induced alterations in sexual development:
the wildlife/human connection.¹**

*Wingspread Conference Center
Racine, Wisconsin
July 1991.*

25 Years Later: We are Certain that EDCs:

- Disrupt normal hormone action
- Implicated in many different health conditions
- Found in nearly every person tested, often higher levels in children
- Effects occur at exposure levels found in our environment



25 Years Later: We are Still Working to Define EDCs

An **endocrine disruptor** is an exogenous substance or mixture that alters the function(s) of the endocrine system and consequently causes adverse health effects in an intact organism, or its progeny, or (sub)populations.

- 2002 IPCS
- 2012 WHO/UNEP

An **endocrine disruptor** is an exogenous chemical, or mixture of chemicals, that interferes with any aspect of hormone action.

- 2012/2015 The Endocrine Society



Goals for the Future of EDCs:

- Understanding the complexity of mixtures—more than just chemicals
- EDCs effect more than just receptors and single systems
- Premarket testing, avoid regrettable replacements
- 21st Century Testing: Smarter, faster and cheaper
- Variably and susceptibility
- Data availability and transparency
- Transdisciplinary: science & community



Goals for the Future of EDCs:

We all share the same Goal: A Safer Future!

- Build on the lessons learned since Wingspread
- Acknowledge the controversies
- Collaborate to work through the tough issues
- Discuss, debate, and communicate the best science...but keep our end goals in mind



Working **Together** We Can Improve Human Health Across the Lifespan and Across the Globe

Thank you!



NIEHS Strategic Plan Website: <http://www.niehs.nih.gov/strategicplan>

