

# Biobehavioral Influences on Cancer Biology

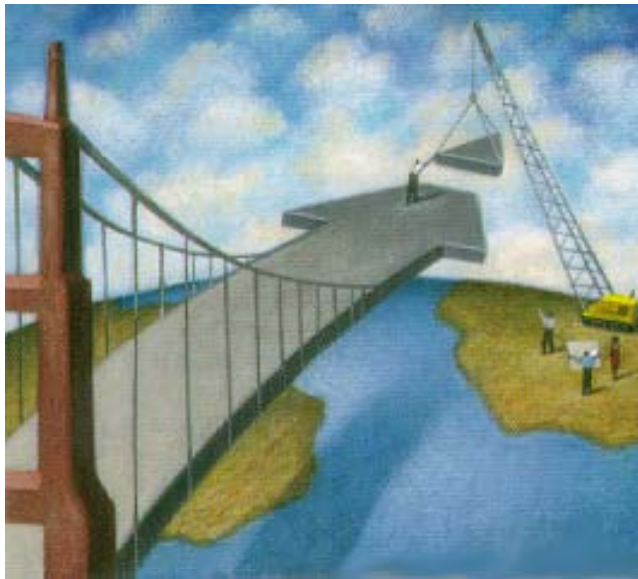
AN EMERGING OPPORTUNITY

# Overarching Themes\*

- **Stress biology can influence tumor biology**
  - 1.5 – 3-fold effects observed
- **Mechanisms are being elucidated**
  - Neuroendocrine regulation of:
    - Neoplastic cell growth
    - Tumor gene expression
    - Viral gene expression
    - Cell-mediated immunity
    - Invasion
    - Tumor growth and progression
- **Opportunity to test adjuvant interventions**

\* See also: *Biobehavioral Influences on Cancer Biology: An Emerging Opportunity* (2007)

# Future Directions



- Breadth of effects
- Biological mechanisms
- Clinical impact

# Opportunities



- **Basic science**
- Quantitative experimental models
- Pharmacologic and molecular tools
- In vivo models of human tumor biology
- **Translational science**
- Pilot trials for neuroendocrine modifiers
- Biomarkers for biobehavioral influences
- **Transdisciplinary science**

# Symposium Purpose

- **Facilitate knowledge of this emerging area in the NCI behavioral research portfolio**
- **Obtain BSA input on how NCI can best:**
  - **Expand the breadth and depth of this transdisciplinary science**
  - **Catalyze productive high impact collaborations**

# Biobehavioral Influences on Cancer Biology

AN EMERGING OPPORTUNITY

Integrated model of bio-behavioural influences on cancer pathogenesis through neuroendocrine pathways

