



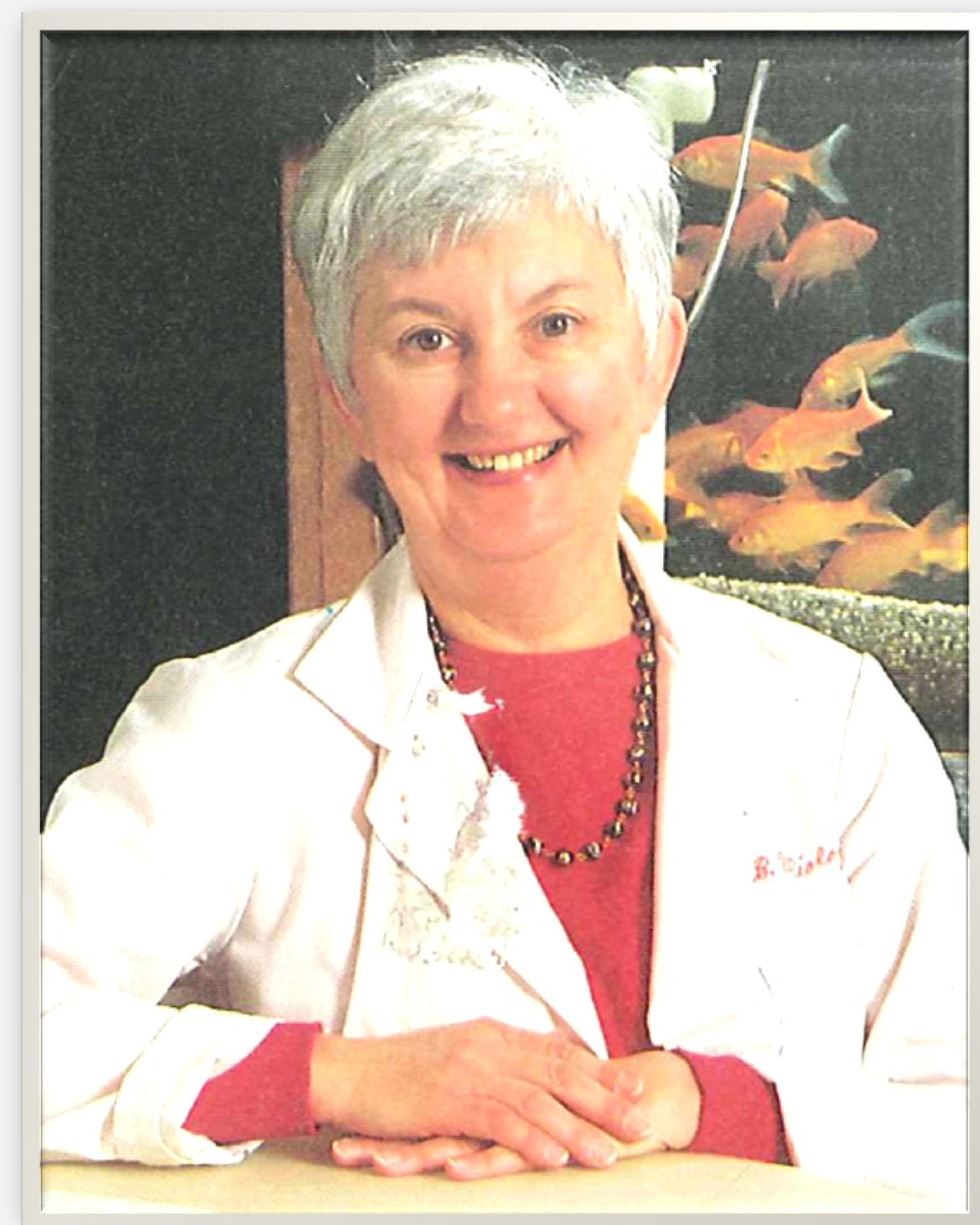
7th INTERNATIONAL SYMPOSIUM ON FISH ENDOCRINOLOGY

SEPTEMBER 3–6, 2012 — BUENOS AIRES — ARGENTINA

Lifetime Achievement Award

Dr. GLORIA V. CALLARD

Department of Biology
Boston University
Boston, USA



Tufts University, B.S. 1959 (Biology); Rutgers University, M.S. 1962; Ph.D. 1964 (Zoology/Physiology)

Major Areas of Scientific Contribution

Neuroendocrinology

- Pioneered studies on brain aromatase and estrogen in vertebrates
- Investigated the physiological and developmental effects of estrogen formation in specific brain areas and circuits

Spermatogenesis

- Focused on the roles of steroid hormones, paying particular attention to estrogen and estrogen sensitive control points
- Popularized the “shark testis model” to study the regulation of spermatogenesis

Aquatic toxicology

- Studied the effects of environmental pollutants and other xenobiotics that disrupt normal endocrine and neuroendocrine mechanisms of reproduction

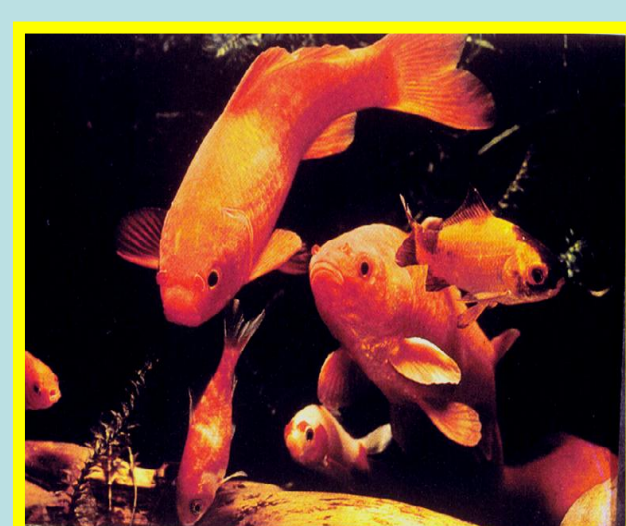


Harvard Medical School, 1981

Fish Models



Squalus acanthias,
spiny dogfish shark



Carassius auratus,
common goldfish



Danio rerio,
zebrafish



Fundulus heteroclitus,
killfish (mummichog)



Raja erinacea,
little skate



Hong Kong Int. Comp.
Endocrinol. Conf. 1980.
Pete Jansens (& wife)
Neil Holmes (& wife)
Gloria Callard

Mentoring

During her career as a scientist, and in addition to that of tens of undergraduate students, Dr. Callard supervised the work of 10 M.Sc. students, 19 Ph.D. students and 14 postdocs from several countries.



Ian and Gloria Callard with students.
Mount Desert Island Biological
Laboratory, Maine, Summer 1982



The Gloria Callard lab. Boston University, 2002



In Martti Parvinen's lab in 1988 when on
sabbatical in Turku, Finland.



Ian and Gloria Callard with participants of the
Animal Model Conference, Mount Desert Island Biological
Laboratory, Maine, Summer 1992

Publications

Author of more than 290 publications in scientific journals, books and conference proceedings, including more than 120 peer-reviewed papers in international journals that have been cited around 4000 times, with an *h*-index of 35 (Institute for Scientific Information)

Ten most cited papers:

1. Callard GV, Petro Z, Ryan KJ, 1978. Phylogenetic distribution of aromatase and other androgen-converting enzymes in central nervous system. ENDOCRINOLOGY 103: 2283-2290.
2. Kishida M, Callard GV, 2001. Distinct cytochrome P450 aromatase isoforms in zebrafish (*Danio rerio*) brain and ovary are differentially programmed and estrogen regulated during early development. ENDOCRINOLOGY 142:740-750.
3. Tchoudakova A, Callard GV, 1998. Identification of multiple CYP19 genes encoding different cytochrome P450 aromatase isozymes in brain and ovary. ENDOCRINOLOGY 139: 2179-2189.
4. Callard GV; Petro Z; Ryan KJ, 1978. Conversion of androgen to estrogen and other steroids in vertebrate brain. AMERICAN ZOOLOGIST 18:511-523.
5. Callard GV, Tchoudakova AV, Kishida M *et al.*, 2001. Tissue distribution, developmental programming, estrogen regulation and promoter characteristics of cyp19 genes in teleost fish. JOURNAL OF STEROID BIOCHEMISTRY AND MOLECULAR BIOLOGY 79(S1): 305-314.
6. Schlinger BA, Callard GV, 1989. Localization of aromatase in synaptosomal and microsomal subfractions of quail (*Coturnix coturnix japonica*) brain. NEUROENDOCRINOLOGY 49: 434-441.
7. Pasmanik M, Callard GV, 1985. Aromatase and 5-alpha-reductase in the teleost brain, spinal cord and pituitary gland. GENERAL AND COMPARATIVE ENDOCRINOLOGY 60 :244-251.
8. Pasmanik M, Callard GV 1988. Changes in brain and aromatase and 5-alpha-reductase activities correlate significantly with seasonal reproductive cycles in goldfish (*Carassius auratus*). ENDOCRINOLOGY 122 :1349-1356.
9. Gelinas D, Pitoc GA, Callard GV, 1998. Isolation of a goldfish brain cytochrome P450 aromatase cDNA: mRNA expression during the seasonal cycle and after steroid treatment. MOLECULAR AND CELLULAR ENDOCRINOLOGY 138: 81-93.
10. Callard IP, Callard GV, Lance V *et al.* 1978. Testicular regulation in non-mammalian vertebrates. BIOL. REPRODUCTION 18: 16-43.

Nominated by:
Francesc Piferrer, Institute of Marine Sciences, Barcelona, Spain (GVC Postdoc, 1991–1992)
Metsada Pasmanik, Tel Aviv University, Tel Aviv, Israel (GVC Ph.D. student, 1982–1987)
Barney Schlinger, Univ California Los Angeles, USA (GVC Ph.D. student 1981–1988)