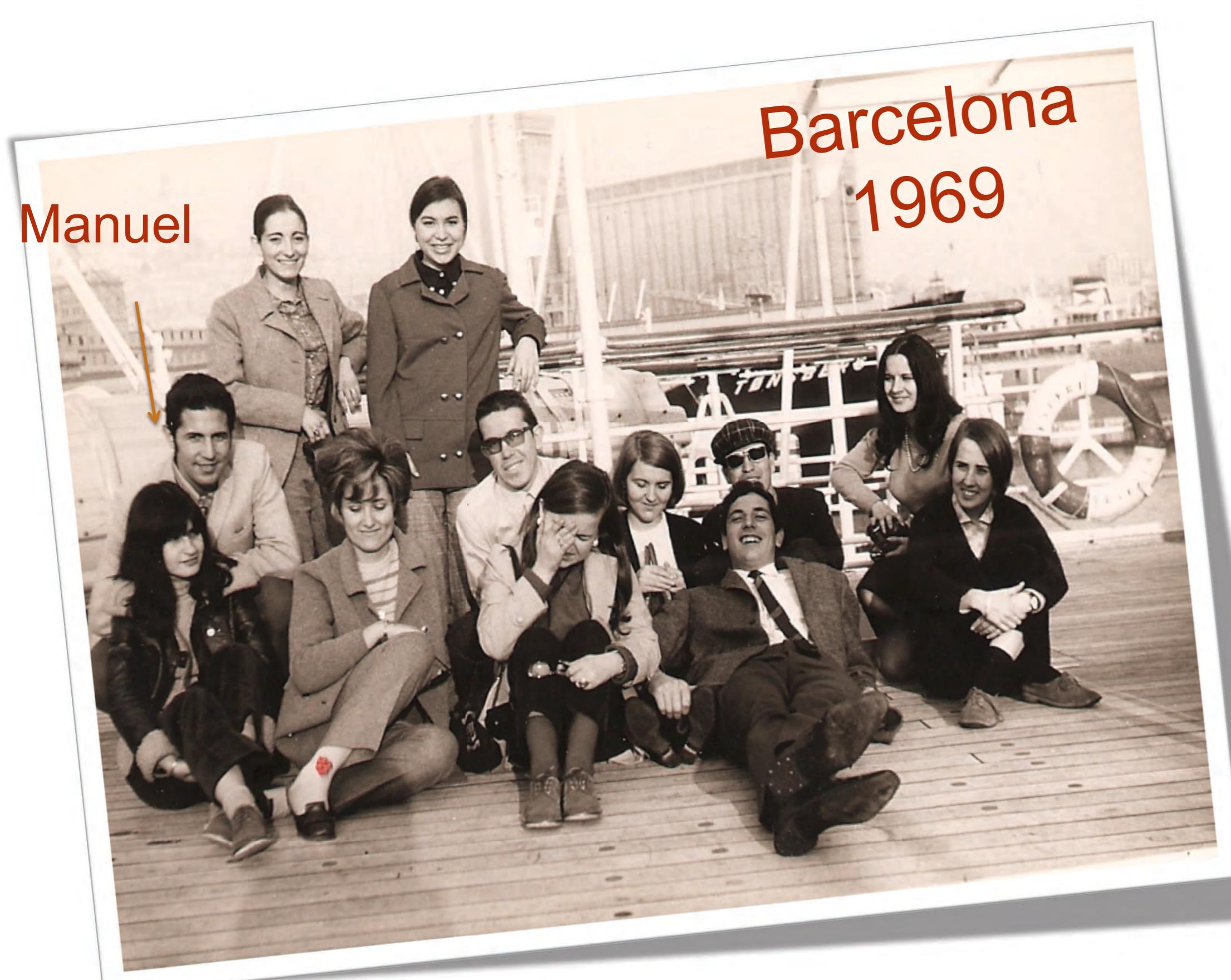


# The 8th International Symposium of Fish Endocrinology is honoured to recognize the Lifetime achievements of

## DR. MANUEL CARRILLO ESTEVEZ RESEARCH PROFESSOR (CSIC) INSTITUTO DE ACUICULTURA DE TORRE DE LA SAL, SPAIN

**8ISFE** 8<sup>th</sup> International Symposium  
on Fish Endocrinology  
Gothenburg, Sweden  
June 28<sup>th</sup> to July 2<sup>nd</sup> 2016



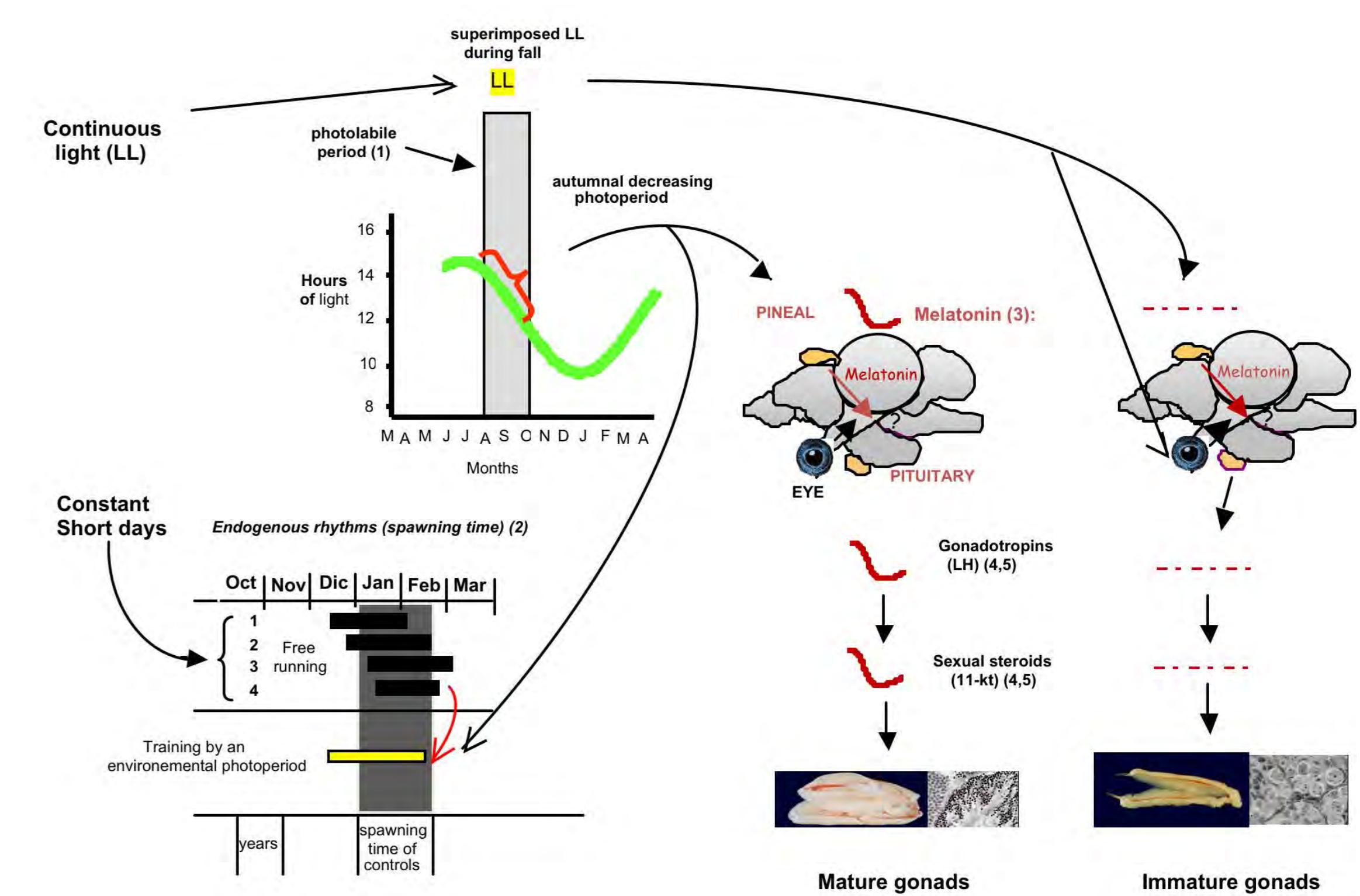
### Brief Career History

- 1970 BSc University of Barcelona.
- 1975 PhD University of Barcelona.
- 1973-75 Titular Scientist, CSIC-Fisheries Research Institute of Barcelona.
- 1975-76 Fulbright Postdoctoral fellow, Oceanic Institute Hawaii USA.
- 1975-87 Tenured Scientist at CSIC-Fisheries Research Institute Barcelona (IIP) and CSIC-Aquaculture Institute of Torre de la Sal (IATS).
- 1983-1990 Director of the CSIC-Aquaculture Institute of Torre de la Sal (IATS).
- 1987-93 Research Scientist at CSIC-Aquaculture Institute of Torre de la Sal (IATS).
- 1993-2014 Research Professor, CSIC-Aquaculture Institute of Torre de la Sal (IATS).

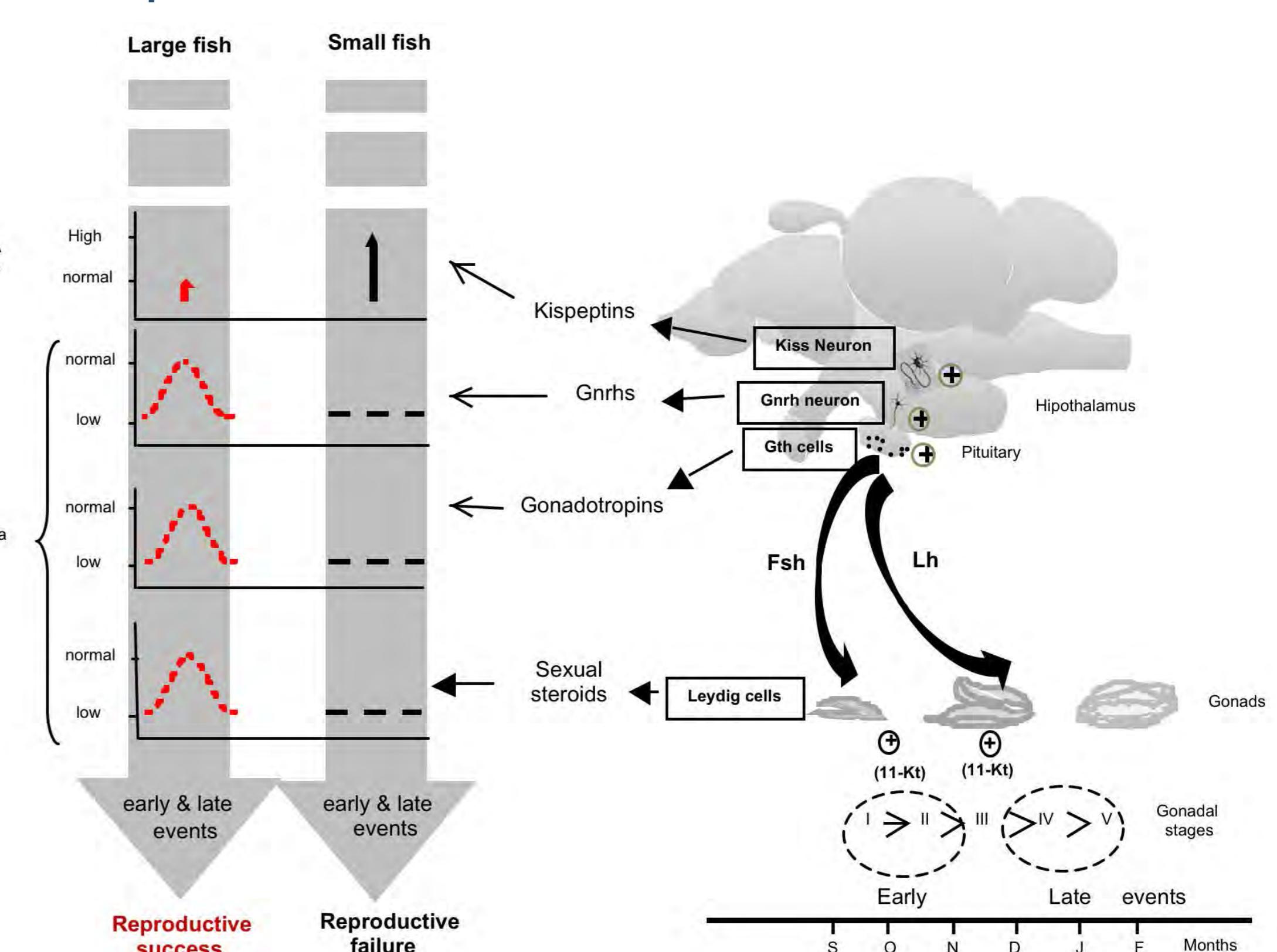


### MAJOR AREAS OF SCIENTIFIC CONTRIBUTIONS

- Deciphering the hormonal and environmental factors that control spawning in fish
- Elucidating the nutritional requirements of broodfish and their effects on egg quality
- Discovering a photolabile period involved in the onset of puberty of sea bass
- Demonstrating that photoperiod affects key genes in the brain and plasma daily hormonal rhythms involved in gametogenesis onset
- Elucidating molecular kisspeptin characterization and their role on fish reproduction
- Establishing the mechanisms and ways to control puberty in fish
  - Arresting early puberty
  - Delaying onset of puberty
- Small and large fish endocrinology



Effects of constant photoperiods on the rhythms of reproductive hormones that affect spawning time and gonad development in sea bass.



Suggested cascade of hormonal events in large and small fish. Large fish during the early and final stages of gametogenesis displayed higher hormone levels than small fish which lost their hormonal rhythms.



### SELECTED PUBLICATIONS

- M. CARRILLO, S. ZANUY, F. PRAT, R. SERRANO y N. BROMAGE (1993). Environmental and hormonal control of reproduction in sea bass. In: Recent Advances in Aquaculture IV (N.Bromage, et al; Eds.), pp: 43-54. Blackwell Scientific Publications, Oxford, UK.
- M. CARRILLO, S. ZANUY, F. PRAT, J. CERDA, J. RAMOS, E. MAÑANOS, N. BROMAGE (1995). Sea bass (*Dicentrarchus labrax*) In: Broodstock Management and Egg and Larval Quality (N. Bromage, R.J.Roberts Edit.). Blackwell Science Publications, Oxford, UK.
- M. CARRILLO, S. ZANUY, F. PRAT, J. CERDA, E. MAÑANOS, N. BROMAGE, J. RAMOS, O. KAH (1995). Nutritional and photoperiod effects on hormonal cycles and quality of spawning of sea bass (*Dicentrarchus labrax* L.). *Neth.J.Zool.*, 45 (1/2): 204-209. Netherlands.
- H. MIGAUD, G. BELL, E. CABRITA, B. MCANDREW, A. DAVIE, J. BOBE, M.P. HERRAEZ, M. CARRILLO (2013). Gamete quality and broodstock management in temperate fish. *Reviews in Aquaculture* 5 (suppl. 1), s194-s223
- M. CARRILLO, S. ZANUY, A. FELIP, M. J. BAYARRI, G. MOLÉS, A. GÓMEZ (2009). Hormonal and environmental control of puberty in perciform fish. The Case of Sea Bass. *Trends in Comparative Endocrinology and Neurobiology: Ann. N.Y. Acad. Sci.* 1163, 49-59.
- M. CARRILLO, F. ESPIGARES, A. FELIP, S. ESCOBAR, R. RODRÍGUEZ, M.V. ALVARADO, A.GÓMEZ, S. ZANUY (2015). Updating control of puberty in male European sea bass: a holistic approach. *Gen. Comp. Endocrinol.* 221: 42-53.
- M. J. BAYARRY, S. ZANUY, O. YILMAZ, M. CARRILLO (2009) Effects of continuous light on the reproductive system of European sea bass as gauged by alterations of circadian variations during their first reproductive cycle. *Chronobiology International*. 26(2):1-16.
- M. J. BAYARRY, J. FALCÓN, S. ZANUY y M. CARRILLO (2010). Continuous light and melatonin: daily and annual variations of brain binding sites and plasma concentration during the first reproductive cycle of sea bass. *Gen. Comp. Endocrinol.* 169: 58-64.
- M. TENA-SEMPERE, A. FELIP, A. GÓMEZ, S. ZANUY, M. CARRILLO (2012). Comparative insights of the kisspeptin/kisspeptin receptor system: Lessons from nonmammalian vertebrates. *Gen. Comp. Endocrinol.* 175 (2): 234-243.
- A. FELIP, S. ZANUY, B. MURIACH, J. M. CERDÁ-REVERTER, M. CARRILLO (2008). Reduction of sexual maturation in male *Dicentrarchus labrax* by continuous light both before and during gametogenesis. *Aquaculture* 275(1-4):347-355.
- B. M. CARRILLO, I. BEGTASHI, L. RODRÍGUEZ, M. C. MARIN, S. ZANUY (2010). Long photoperiod on sea cages delays timing of first spermiation and enhances growth in male European sea bass (*Dicentrarchus labrax*). *Aquaculture* 299: 157-164.
- M. CARRILLO, F. ESPIGARES, A. FELIP, S. ESCOBAR, R. RODRÍGUEZ, M.V. ALVARADO, A.GÓMEZ, S. ZANUY (2015). Updating control of puberty in male European sea bass: a holistic approach. *Gen. Comp. Endocrinol.* 221: 42-53.