

John C. Makemson

Born: 20 September 1942, San Francisco, California

Education: San Francisco State College: BA, 1964; MA, 1966 (Microbiology)
Washington State University: PhD, 1970 (Bacteriology, Biochemistry)

Professional Experience:

- 1970-1975 Assistant Professor, Dept. Biology, American University of Beirut.
- 1975-1977 Research Fellow, The Biological Laboratories, Harvard University.
- 1977-1978 Visiting Lecturer, Dept. Biology, San Francisco State University.
- 1978-1980 Assistant Professor, Dept. Biological Sciences, Florida International University, Miami, FL.
- 1980-1989 Associate Professor, Dept. Biological Sciences, Florida International University, Miami, FL.
- 1985-1988 Chairman, Dept. Biological Sciences, FIU
- 1989- present Professor, Department of Biological Sciences, FIU
- 1989-1990 Fulbright Scholar, Dept. Biology, University of Bahrain, Isa Town, Bahrain.
- 1990-1995 Director, NIH-Minority Biomedical Research Support Program at FIU.
- 1995-1997 Coordinator, College of Marine Sciences and Fisheries, Sultan Qaboos University; Professor, Department of Fisheries Science and Technology, SQU, Sultanate of Oman (on leave from FIU)
- 1999-2002 Chairman, Dept. Biological Sciences, FIU
- 2002-2005 External Examiner, BS programs in Biochemistry and Genetics & Molecular Biology, University of Malaya, Kuala Lumpur, Malaysia
- 2002-2004 External Advisor, Faculty Promotions, Institute of Biological Sciences, University of Malaya, Kuala Lumpur, Malaysia.
- 2007- present Director of Undergraduate Studies, Dept. Biological Sciences, FIU.

Refereed Publications:

- Makemson, J.C.** and R. Darwish. 1972. Calcium requirement and magnesium stimulation of *Escherichia coli* L-form induction. *Infect. Imm.* **6**:880-882.
- Makemson, J.C.** 1972. An interstitial water sampler for sandy beaches. *Limnol. Oceanog.* **17**:626-628.
- Khiyama, H.M. and **J.C. Makemson**. 1973. Sand beach bacteria: enumeration and characterization. *Appl. Microbiol.* **26**:292-297.
- Makemson, J.C.** 1973. Oxygen and carbon dioxide in interstitial water of two Lebanese sand beaches. *Netherlands J. Sea Res.* **7**:223-232.

- Makemson, J.C.** 1973. Control of *in vivo* luminescence in a psychrophilic marine photobacterium. Arch. Mikrobiol. **93**:347-358.
- Hajj, H. and **J.C. Makemson.** 1976. Determination of the growth of *Sphaerotilus discophorus* in the presence of manganese. Appl. Environ. Microbiol. **32**:699-702.
- Tu, S.-C., **J.C. Makemson,** J.E. Becvar and J.W. Hastings. 1977. Bacterial luciferase subunits are synthesized in equal quantities. J. Biol. Chem. **252**:803-805.
- Makemson, J.C.** and J.W. Hastings. 1979. Poising of the arginine pool and the control of bioluminescence in *Beneckeia harveyi*. J. Bacteriol. **140**:532-542.
- Makemson, J.C.** and J.W. Hastings. 1979. Glutamate in an osmoregulatory molecule in *Beneckeia harveyi*. Appl. Environ. Microbiol. **38**:178-180.
- Makemson, J.C.** and J.W. Hastings. 1979. Inhibition of bacterial bioluminescence by pargyline. Arch. Biochem. Biophys. **196**:396-402.
- Goldberg, W.M. and **J.C. Makemson.** 1981. Description of a tumorous condition in a gorgonian coral associated with a filamentous green algae. Proc. 4th Coral Reef Symp. **2**:685-697.
- Makemson, J.C.** and J.W. Hastings. 1982. Iron represses bioluminescence and affects catabolite repression of luminescence in *Vibrio harveyi*. Curr. Microbiol. **7**:181-186.
- Makemson, J.C.** 1983. A simple assay of cyclic-AMP phosphodiesterase in the presence of interfering enzymes. J. Microbiol. Meth. **1**:283-290.
- Goldberg, W.M., **J.C. Makemson** and S.B. Colley. 1984. *Entocladia endozoica* sp.nov., a pathogenic chlorophyte: structure, life history, physiology and effect on its coral host. Biol. Bull. **166**:368-383.
- Hastings, J.W., C.J. Potrikus, S.C. Gupta, M. Kurfurst and **J.C. Makemson.** 1985. Biochemistry and physiology of bioluminescent bacteria. Adv. Microbial Physiol. **26**:235-291.
- Makemson, J.C.** 1986. Luciferase dependent oxygen consumption of bioluminescent vibrios. J. Bacteriol. **165**:461-466.
- Makemson, J.C.** and J.W. Hastings. 1986. Luciferase dependent growth of cytochrome deficient *Vibrio harveyi*. FEMS Microbiol. Ecol. **38**:79-85.
- Hastings, J.W., **J.C. Makemson** and P.V. Dunlap. 1987. How are growth and luminescence regulated independently in exosymbionts? Symbiosis. **4**:3-24.

- Guerrero, M.A. and **J.C. Makemson**. 1989. The cytochromes of luminous bacteria and their coupling to bioluminescence. *Curr. Microbiol.* **18**:67-73.
- Makemson, J.C.** and A.S. Gordon. 1989. Total energy flux in a marine bioluminescent bacterium. *FEMS. Microbiol. Lett.* **57**:161-166.
- McGlannan, M. and **J.C. Makemson**. 1990. *In situ* and pure culture CO₂ fixation of *Thiothrix nivea*. *Appl. Environ. Microbiol.* **56**:730-738.
- Makemson, J.C.** 1990. A cyanide-aldehyde complex inhibits bacterial luciferase. *J. Bacteriol.* **172**:4725-4727.
- Makemson, J.C.** and J.W. Hastings. 1991. Bovine serum albumin interacts with bacterial luciferase. *J. Biolumin. Chemilumin.* **6**:131-136.
- Makemson, J.C.**, J.W. Hastings and J.M.E. Quirke. 1992. Binding and stabilization of a luciferase reaction intermediate by fatty amines, amides and nitriles. *Arch. Biochem.* **294**:361-366.
- Makemson, J.C.**, N.R. Fulayfil and P.W. Basson. 1992. Association of luminous bacteria with artificial and natural surfaces in Arabian Gulf seawater. *Appl. Environ. Microbiol.* **58**:2341-2343.
- Van Ert, L.M., C.F. Wimpee and **J.C. Makemson**. 1993. Identification of luminous bacteria based on sequence analysis of the *luxA* gene. (Invited Symposium Paper) pp 511-514 *in* Trends in Microbial Ecology, R. Guerrero and C. Pedros-Alio, eds., Spanish Society for Microbiology.
- Makemson, J.C.**, N.R. Fulayfil, W. Landry, L.M. Van Ert, C.F. Wimpee, E.A. Widder and J.F. Case. 1997. *Shewanella woodyi* (sp. nov.) a new exclusively respiratory luminous bacterium isolated from the Alboran Sea. *Int. J. Sys. Bacteriol.* **47**:1034-1039
- Makemson, J.C.**, N.R. Fluayfil and L.M. Van Ert. 1998. Differentiation of marine luminous bacteria using commercial identification plates. *J. Biolumin. Chemilumin.* **13**:147-156.
- Makemson, J.C.** and G.V. Hermosa. 1999. Luminous bacteria in fish guts in the Gulf of Oman. *Luminescence.* **14**:161-168.
- Makemson, J.C.** and A. Eberhard. 2001. Measurement of acyl-homoserine lactones with mass spectrometry. pp 111-114 *in* J.F. Case, P.J. Herring, B.H. Robison, S.H.D. Haddock, L.J. Kricka and P.E. Stanley, eds. Proceedings 11th Int. Symp. Biolumin. Chemlumin. World Scientific Pub. Co. Singapore.

Makemson, J.C., A. Eberhard and Kalai Mathee. 2006. Simple electrospray mass spectrometry detection of acylhomoserine lactones. *Luminescence*. **21**:1-6.

Meeting Presentations (58 Published Abstracts: year - # published)

1970 - 1; 1971 - 3; 1972 - 5; 1977 - 1; 1978 - 1; 1980 - 1; 1981 - 2; 1983 - 2;
1984 - 2; 1985 - 5; 1986 - 4; 1987 - 3; 1988 - 4; 1989 - 2; 1991 - 1; 1992 - 3;
1993 - 2; 1994 - 2; 1995 - 2; 1996 - 3; 1997 - 3; 1998 - 2; 1999 - 1; 2000 - 1;
2001 - 2; 2002 - 1, 2003-2, 2004-1, 2006-1

Grant History:

1970-73 Faculty Development Grants (Beirut) \$400,\$350,\$400
1974-75 Lebanese Research Council (Beirut) \$60,000
1975-77 NIH Special Fellowship (Harvard) \$32,000
1978-79 Faculty Development Grant (FIU) \$400
1979-80 FIU Foundation (FIU) \$4,000
1981-82 NSF (with W.M. Goldberg) (FIU) \$47,084
1982-83 NSF (with W.M. Goldberg) (FIU) \$20,000
1986 Am Soc Microbiol (NSF) Travel Grant \$900
1986-87 FAU/FIU Joint Center Grant (FIU) \$4,500
1987-88 FAU/FIU Joint Center Grant (FIU) \$4,690
1989-90 Fulbright Scholarship (at Univ. Bahrain) \$40,371
1992 NIH-MBRS Program at FIU, \$402,000
1993 NIH-MBRS Program at FIU, \$538,000
1994 NIH-MBRS Program at FIU, \$591,050
1994 NIH Small Instrumentation Grant, \$12,893
1994 Florida Dept. Education: Summer Young Scientist Program, \$19,000
1995 NIH MBRS Program at FIU, \$1,032,000
1996 Sultan Qaboos University Research Grant \$2,500
1998 Florida Power and Light, \$2,000
2002-03 FREA (ABR-NIH) \$4,500
2003-04 FREA (ABR-NIH) \$4,000

Graduate Theses Directly Supervised:

American University of Beirut - 8 MS
Florida International University - 6 MS
Current FIU Graduate Students: 1 MS

Professional Memberships and Associations:

American Association for the Advancement of Science
American Chemical Society
American Institute of Biological Sciences
American Society for Microbiology
Sigma Xi
International Society for Microbial Ecology
International Society for Bioluminescence and Chemiluminescence.

Teaching:

American University of Beirut:	General Microbiology
1970-1975	Chemical Oceanography (Graduate)
	Marine Microbiology
	Botany

	Food Microbiology
San Francisco State University: 1977-1978	General Microbiology Microbial Physiology Sanitary Microbiology Microbial Bioluminescence (Graduate)
University of Illinois 1978 Summer	General Biochemistry Lab
Harvard University: 1980 Summer	General Microbiology
Florida International University: 1978-present	General Microbiology Marine Microbiology (Graduate) General Biochemistry Microbial Bioluminescence (Graduate) Pathogenic Microbiology Food Microbiology Readings in Microbiology (Graduate) Microbial Diversity (Graduate) Bio- and Chemo-luminescence Workshop (Graduate) Immunology General Biology Introductory Microbiology (nonscience majors) Molecular+Cellular Biology (Graduate, proteomics) Undergraduate Seminar Introduction to Biological Research
University of Bahrain: 1989-1990	General Microbiology Advanced Genetics Pathogenic Microbiology
Sultan Qaboos University: 1995-1997	Aquaculture Food Microbiology I and II