

Curriculum Vitae

Saber Khodabandeh

I- EDUCATIONAL RECORDS:

- 1996, B.Sc in Biology from Tabriz University, IRAN.
 - 1998, M.Sc in Marine Biology from Tarbiat modarres University, IRAN.
 - 2004, Ph.D in Eco-physiology of aquatic animal from University of Montpellier II, FRANCE.
 - Post-doc in Molecular Biology, obtained from University of St Andrews, Scotland.
 - Experience in immunocytochemistry and Electron Microscope obtained from University of Cambridge, England, and University of San Francisco, USA.
-

II- RECENT RESEARCH:

Some of the recently research that I have done, are listed below:

- Ontogeny of osmoregulation in crustacean (*Astacus*, *Homarus* and *Palaemon*) and fish (*Mugil auratus*=*Liza aurata*, *Acipenser persicus*).
- Ontogeny of antennal gland in the *Astacus* and *Homarus*, by light and electron microscope.
- Immunohistochemical localization of Na-K ATPase, H-ATPase and Na-K-2Cl co-transport in embryos and post-embryos of the *Astacus* and *Homarus* by immunohistochemistry.
- Biology of *Triops cancriformis* in the West Azarbaijan seasonal pools.
- Na⁺,K⁺-ATPase in the gut of the Zygoptera, *Ischnura elegans*, and Anisoptera, *Libellula lydia*, larvae (Insecta, Odonata): activity and immunocytochemical localization
- Investigate patterns of mRNA and their correlation with Na-K ATPase enzyme activity.
- Try for amplification of an aquaporin (AQP) from *Astacus*, *Homarus* and *Palaemon* gills and antennal glands RNA and cDNA. (Gene cloning, PCR,...).
- Ionocytes Ultrastucture in the gill of *Silurus glanis*.
- Study of post-embryonic development in the sturgeon fish.

- Ontogeny of osmoregulation in Iranian sturgeon, *Acipenser persicus*.
- Effects of Mercury on the ionocyte cells of gill in *Mugil auratus*.
- Effects of Mercury on the ionocyte cells of gill in *Mugil auratus*
- Effects of UV radiation on the ionocyte cells of gill in *Salmo trutta caspius*.
- Identification and isolation of some bioactive materials from sea animals.

III- RESEARCH INTERESTS:

- Investigation on effects of the different ecological factors (salinity, pollutions, ...) on physiology (survival, body composition, energy metabolism, growth and osmoregulation in the aquatic animals.
- Effects of different ecological factors (UV, Salinity, Temperature, ...), on some bioactive materials concentration in sea animals (Marine Biotechnology =Identification, isolation and protective effect of some bioactive materials on different stresses in cultured cells).
 - Use of the Molecular Biology techniques in Aquaculture.

IV- INTERNATIONAL PUBLICATIONS 2002-2009:

- 1- Khodabandeh, S. et al., (2002). Régime alimentaire d'un Cnidaire envahissant, *Mnemiopsis leidyi*, le long de la côte iranienne de la mer Caspienne. Zoologi-France, Procceing of Berst conference 2002, pp45.
- 2- Khodabandeh, S. et al., (2002). Recherche sur la distribution et la densité des cnidaires, *Mnemiopsis leidyi*, le long de côte méridionale de mer Caspienne. Zoologi-France, Procceing of Berst conference, 2002, pp55.
- 3- Khodabandeh S., Kutnik M., Charmantier-Daures M., Charmantier G., (2002). Ontogeny of the antennal glands in the Crayfish *Astacus leptodactylus*. Integrative and Comparative Biology, 42 (6): 1255.
- 4- Khodabandeh S., Kutnik M., Charmantier-Daures M., Charmantier G., (2003). Structure and development of the antennal glands in *Astacus leptodactylus*. Comparative Biochemistry and Physiology, 134/A: S94.
- 5- Khodabandeh, S. (2003). The cyst envelope structure and the post-embryonic development of *Artemia urmiana* (Crustacean): A Light and Electron Microscopic study. Integrative and Comparative Biology, 43 (6): 941.
- 6- Khodabandeh, S., Charmantier, G., Charmantier-Daures, M., (2004). From embryo to adult: ontogeny of the antennal glands in the lobster *Homarus gammarus*. Integrative and Comparative Biology, 44 (6): 712.
- 7- Khodabandeh, S., and Talaei, R., (2004). Immunocytochemical localization of Na/K-ATPase in the gut of the Zygopteran larvae (Odonata). Integrative and Comparative Biology (Formerly American Zoologist), 44 (6). 718.
- 8-Ontogeny of the antennal glands in the Crayfish, *Astacus leptodactylus* (Crustacea, Decapoda): anatomical and cell differentiation. Cell & Tissue Research, 319:153-165.

- Khodabandeh S., Charmantier G., Blasco C., Grousset E., Charmantier-Daures M., (2005).**
9- Khodabandeh S., Kutnik M., Aujoulat F., Charmantier G., Charmantier-Daures M., (2005). Ontogeny of the antennal glands in the Crayfish, *Astacus leptodactylus* of the antennal glands in the Crayfish, *Astacus leptodactylus* (Crustacea, Decapoda): immunolocalization of Na⁺,K⁺-ATPase. *Cell & Tissue Research*, 319:167-174.
- 10- Khodabandeh S., Charmantier G., Charmantier-Daures M., (2005).** Ultrastructural studies and Na⁺,K⁺-ATPase immunolocalization in the antennal urinary glands of the lobster *Homarus gammarus* (Crustacea, Decapoda). *Journal of Histochemistry & Cytochemistry*, 53(10): 1203-1214.
- 11- Khodabandeh, S., Charmantier, G., Charmantier-Daures, M., (2006).** Immunolocalization of Na⁺,K⁺-ATPase in various tissues during the embryonic and post-embryonic development of the lobster *Homarus gammarus* (Crustacea, Decapoda). *Journal of Crustacean Biology*, 26(4): 515-523.
- 12- Khodabandeh, S., and Abtahi, B. (2006).** Effects of Sodium chloride, Formalin and Iodine on the hatchings success of the common carp, *Cyprinus carpio*, eggs. *Journal of Applied Ichthyology*, 22, 54-56.
- 13- Khodabandeh, S. (2006).** Na⁺,K⁺-ATPase in the gut of the Zygoptera, *Ischnura elegans*, and Anisoptera, *Libellula lydia*, larvae (Odonata): activity and immunocytochemical localization. *Zoological Studies*, 45(4): 510-516.
- 14- Khodabandeh, S. and Taghizadeh, Z. 2006.** Immunolocalization of Na⁺, K⁺-ATPase and ionocytes in the gills of Catfish, *Silurus glanis*. *Yakhteh*, 8(29): 45-52.
- 15- Khodabandeh, S (2007).** Ultrastructure and Osmoregulatory Function of Branchial Chamber in the Larvae of Dragonfly: *Libellula lydia* (Odonata). *Journal of Agriculture Science and Technology*, 9:119-127.
- 16- Khodabandeh, S., Golzari, A., 2007.** The Branchial Chamber Structure and Osmoregulatory Function in the Prawn, *Palaemon elegans* from the Caspian Sea. *Iranian Journal of Fisheries Sciences*, 7(1)71-88.
- 17- Khodabandeh, S et al., (2007).** Salinity tolerance capacity in Persian Sturgeon, *Acipenser persicus* *Comparative Biochemistry and Physiology-Part A*, S94, 93.
- 18- Khodabandeh, S et al. (2007).** Occurrence of the Tadpole Shrimp, *Triops cancriformis* (Bosc, 1801) (Crustacea: Notostraca), in Iran. *Zoology in the Middle East*, 42:35-36.
- 19- Golzari, A., Khodabandeh, S. and Seyfabadi, J. 2009.** Some Biological Characteristics of Tadpole Shrimo, *Triops cancriformis*, from Seasonal pools of West Azarbaijan (Iran). *Journal of*

Agriculture Science and Technology, Vol. 11: 81-90.

20- Mosafer Khorjestan, S.; Khodabandeh, S., and Khoshnood, Z., 2009. Mitochondria Rich-Cells Localization and Effect of Salinity on their Distribution in Kidney Tubules of Persian Sturgeon *Acipenser persicus*. *Yakhteh Medical Journal*, Vol. 10(4): 280-287.

21- Khodabandeh, S., Khoshnood, Z. and Mosafer, S. 2009. Immunolocalization of Na⁺,K⁺-ATPase-rich cells in the gill and urinary system of Persian Sturgeon, *Acipenser persicus*, fry. *Aquaculture Research*, 40:329-336.

22- Khodabandeh, S., Sahriari Moghaddam, M. and Abtahi, B., 2009. Changes in chloride cell abundance, Na⁺, K⁺-ATPase immunolocalization and activity in the gills of golden grey mullet, *Liza aurata*, fry during adaptation to different salinities. *Yakhteh*, 11(1): 49-54.

V- INTERNATIONAL CONFERENCE PARTICIPATION :

1- Khodabandeh, S. et al. Distribution and density of ctenophores along the southern reach of the Caspian Sea. February 2001 Moscow, RUSSIA. Abstract of this presentation is published in the conference abstract book.

2- Khodabandeh, S. et al. Régime alimentaire d'un Cnidaire envahissant, *Mnemiopsis leidy*, le long de la côte iranienne de la mer Caspienne. Septembre 2002, Brest, France.

3- Khodabandeh, S. et al. Recherche sur la distribution et la densité des cnidaires, *Mnemiopsis leidy*, le long de côte méridionale de mer Caspienne. Septembre 2002, Brest, France.

4- Khodabandeh, S et al. Structure and development of the antennal glands in *Astacus leptodactylus*. SEB (Society for Experimental Biology) Annual Meeting, 31 mars - 4 April 2003, Southampton, UK.

5- Khodabandeh, S et al. Ontogeny of the antennal glands in the Crayfish, *Astacus leptodactylus*. SICB Annual Meeting, 4 - 6 January 2003, Toronto, Canada. Abstract of this presentation is published in the conference abstract book.

6 ...; Khodabandeh, S,.... Study of osmotic pressure and ion regulation of an invasive Comb-jelly, *Mnemiopsis leidy*, in the Caspian Sea. SEB (Society for Experimental Biology), www.sebiology.com, Annual Meeting, 31 mars - 4 April 2003, Southampton, UK. Abstract of this presentation is published in the conference abstract book.

7- ...; Khodabandeh, S,.... Ctenophores of the Caspian Sea and their Socio-Economic. February of 2001, Moscow, RUSSIA. Abstract of this presentation is published in the conference abstract book.

8- ...; Khodabandeh, S,.... Nutrition of the Caspian Ctenophores. The Second International Iran

and Russia Conference. February 2001 Moscow, RUSSIA. Abstract of this presentation is published in the conference abstract book.

9- ...; Khodabandeh, S,.... Some Biological features of Caspian Sea Ctenophores. February 2001, Timirazew University, Moscow, RUSSIA. Abstract of this presentation is published in the conference abstract book.

10- Khodabandeh, S. The cyst envelope structure and the post-embryonic development of *Artemia urmiana* (Crustacean): A Light and Electron Microscopic study.

SICB Annual Meeting, January 5-9, 2004, New Orleans, Louisiana, USA. Abstract of this presentation is published in the conference abstract book.

11- ...; Khodabandeh, S. Study of seasonal fluctuation of an invasive ctenophore, *Mnemiopsis leidy*, along the Iranian coast of Caspian Sea. SEB (Society for Experimental Biology), www.sebiology.com, Annual Meeting, April 2004,

11- ...; Khodabandeh, S. Study of seasonal fluctuation of an invasive ctenophore, *Mnemiopsis leidy*, along the Iranian coast of Caspian Sea. SEB (Society for Experimental Biology), www.sebiology.com, Annual Meeting, April 2004, Edinburgh, Scotland. Abstract of this presentation is published in the conference abstract book.

12- ...; Khodabandeh, S. Reproduction and embryonic development of the Comb-jelly, *Mnemiopsis leidy*, in the south Caspian Sea conditions. SEB (Society for Experimental Biology), www.sebiology.com, Annual Meeting, April 2004, Edinburgh, Scotland. Abstract of this presentation is published in the conference abstract book.

13- ...; Khodabandeh, S. Comparison of sensitivity to cadmium pollution in *Mnemiopsis leidy* (Ctenophora), *Acartia clausi* (Crustacea) and *Gammarus* spp. (Crustacea). SEB (Society for Experimental Biology), www.sebiology.com, Annual Meeting, April 2004, Edinburgh, Scotland. Abstract of this presentation is published in the conference abstract book.

14- Khodabandeh, S., and Abtahi, B. Effects of Formalin and Iodine on the hatchings success of the common carp, *Cyprinus carpio*, eggs. 10th IRSE2003, University of Cambridge, UK, 31 May 2003.

15- Khodabandeh, S. Immunolocalization of Na⁺,K⁺-ATPase in the malpighian tubules of the Dragonfly larvae (*Libellula sp.*). 12th Iranian Researchers' Seminar in Europe, University of Manchester, July 2004, UK.

16- Khodabandeh, S., Charmantier, G., Charmantier-Daures, M. "From embryo to adult: ontogeny of the antennal glands in the lobster *Homarus gammarus*". Meeting annual de la "Society of Integrative and Comparative Biology" (SICB), 4-6 January 2005, San Diego, USA. Abstract of this presentation is published in the conference abstract book.

17- Khodabandeh, S., and Talaei, R. Immunocytochemical localization of Na/K-ATPase in the gut of the Zygopteran larvae (Odonata). Meeting annual de la "Society of Integrative and Comparative Biology" (SICB), 4-6 January 2005, San Diego, USA. Abstract of this presentation is published in the conference abstract book.

18- Khodabandeh, S., Charmantier, G., Charmantier-Daures, M. Na⁺,K⁺-ATPase

- immunolocalization and ontogeny of osmoregulatory epithelia in the developing lobster *HOMARUS GAMMARUS* (Crustacea, Decapoda). ICC6-Glasgow, July 2005, Scotland.
- 19- Khodabandeh, S., and Rogers, C. First record of tadpole shrimp, *TRIOPS CANCRIFORMIS* (Bosc, 1801-1802) (Branchiopoda, Notostraca) in Iran. ICC6-Glasgow, July 2005, Scotland.
- 20- Khodabandeh, S., and Abtahi, B. The laboratory culture of the shrimp *Palaemon elegans* (Decapoda, Crustacea) as a live food source for aquaculture: osmoregulation and determination of the optimum salinity. SEB, Annual Meeting, July 2005, Barcelona, Spain.
- 21- Khodabandeh, S., and Hassani Nalossi, A. Ionic and osmotic regulation of the hemolymph of the larvae of the Dragonfly and Damselfly: Na⁺,K⁺-ATPase activity and immunolocalization. SEB, Annual Meeting, July 2005, Barcelona, Spain.
- 22- Effects of copper on branchial Na⁺,K⁺-ATPase immunoreactivity in *Astacus leptodactylus* (Crustacea, Decapoda). “Society of Integrative and Comparative Biology” (SICB), 4-6 January 2006, Orlando, USA.
- 23- Immunolocalization of Na⁺/K⁺ pump in the branchial cavity of *Palaemon elegans* (Decapoda, Crustacea) and effects of mercury on Na⁺,K⁺-ATPase immunoreactivity. “Society of Integrative and Comparative Biology” (SICB), 4-6 January 2006, Orlando, USA.
- 24- Accumulation and the toxic effects of Mercury on survival and gill structure of *Mugil auratus*. “Society of Integrative and Comparative Biology” (SICB), 4-6 January 2006, Orlando, USA.
- 25- Khodabandeh, S., Golzari, A., Saifabady, J., 2006. Some Biological characters of *Triops cancriformis* in the vernal pools of West Azarbaijan, Iran. SEB, Annual Meeting, April 2006 Canterbury, UK.
- 26- Khodabandeh, S., Taghizadeh, Z., Abtahi, B., 2006. Morphological and histological features of the Persian Sturgeon, *Acipenser persicus*, during prelarvae development. Society for Experimental Biology, Annual Meeting, April 2006, Canterbury, UK.
- 27- Khodabandeh, S and Shahriari, M. (2007). Na⁺/K⁺-2Cl-cotransporter Immunolocalization and Gene Expression in The Gills of The Golden Grey Mullet, *Mugil auratus* , Acclimated to The Brackish Water and Sea Water “Society of Integrative and Comparative Biology” (SICB), 3-7 January 2007, Phoenix, USA.
- 28- Khodabandeh Saber, Shahrirari Mohsen and Abtahi Behroz. (2007). Na⁺,K⁺-ATPase immunolocalization, activity and gene expression in *Mugil auratus* fry gills: after acclimated to artificial salinities “Society of Integrative and Comparative Biology” (SICB), 3-7 January 2007, Phoenix, USA.
- 29- Khodabandeh, S., Taghizadeh, Z., Abtahi B., Charmantier, G., Charmantier-Daures, M. 2007. Ultrastructure and osmoregulatory function of the kidney in the *Acipenser persicus* at larval stage. Society of Integrative and Comparative Biology (SICB), 3-7 January 2007, Phoenix, USA.
- 30- Khodabandeh, S., Taghizadeh, Z., Abtahi B., Charmantier, G., Charmantier-Daures, M. 2007.

Ontogeny of kidney in the Persian Sturgeon, *Acipenser persicus*: Implication in osmoregulation.
Society of Integrative and Comparative Biology (SICB), 3-7 January 2007, Phoenix, USA.