

Fish Biology and pollution Laboratory



Assiut University

Alaa El-Din Hamid Sayed

Associate professor (Fish Biology and pollution)

JSPS Postdoctoral Fellow

Personal information

Place and date of Birth

Awlad Rayik, Assiut, Monday 25-04-1983

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Nationality

Egyptian

Researcher information

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Content

- 1. Curriculum Vitae
- 2. Teaching Record, Memberships and Journal Reviwer
- 3. Research Interest and Publications
- 4. Workshops and Additional Skills
- 5. Rresearch Experience and Conferences/Presentations.



1. Curriculum Vitae

Academic education

2004 B. Sc (Zoology), Zoology Department, Faculty of Science, Assiut University, Assiut, Egypt (honours degree with 85.178%).

2006 Diploma in Science (Fish Biology), Zoology Department, Faculty of Science, Assiut University, Egypt (very good, 87%).

2008 M.Sc. (Zoology, Fish Biology), Department of Zoology, Faculty of Science, Assiut University, Egypt.

2011 Ph.D. (Zoology, Fish Biology), Department of Zoology, Faculty of Science, Assiut University, Egypt.

Academic positions

2004- 2008	Demonstrator, Zoology Department, Faculty of Science, Assiut University, Egypt.
2008- 2011	Assistant lecturer, Department of Zoology, Faculty of Science, Assiut University, Egypt
2011-2016	Lecturer, Department of Zoology, Faculty of Science, Assiut University, Egypt
2016-now	Associate professor at Zoology, Faculty of Science, Assiut University, Egypt

Related Work Experience

2006- 2008	Member of Developmental Educational Museum of Egypt Fauna Project.
2005 till now	Member of Quality Assurance and Accreditation Unit (QAAU) at the Faculty of Science, Assiut University
2009- 2011	Member of Higher Education Labs Certification Project, Molecular Biology Unit (MBU), Assiut University.
2009 till now	Member of training staff (Protein Analysis and PCR) at the Molecular Biology Unit (MBU), Assiut University.
2009- 2011	Member of the River Nile Biomonitoring of Pollution Project. Al-Azhar University, Assiut Branch.
2011-2012	Visiting researcher at Laboratory of Genome Stability, Department of Integrated Biosciences, Graduate School of Frontier Sciences, The University of Tokyo, Japan
2012-2015	Member of the New Assiut Barrage and Hydro-Power Plant Project in Collaboration with DAAD.
2013-2015	PI of the study of the side effects of methyl testosterone on the tilapia culture in Egypt project at the Faculty of Science, Assiut University
2015-Now	JSPS fellowsship at Laboratory of Genome Stability, Department of Integrated Biosciences, Graduate School of Frontier Sciences, The University of Tokyo, Japan

Language skills:

Arabic native language

English good knowledge (TOEFL)

Germany Dutsch (Grundstufe I)
French limited knowledge
Japanese limited knowledge

Computer Skills:

ICDL/ECDL Certified

2. Teaching Record, Memberships and Journal Reviwer

Teaching Record

- 1. Instructor for undergraduate students (faculties of; Science, Vertinary Medicine, Pharmacy, Education, and Agriculture) since 2004- 2011 the following practical Courses (Cell Biology, Cytology, Histology, Taxonomy of Invertebrates, Taxonomy of vertebrates, and Fish Biology).
- 2. Teachenig the undergratude students (Faculties of; Science, Education) since 2011 the following theoretical courses (Chordates, Fish Biology, General Zoology and Evalution).
- 3. Teaching the graduate students (M.Sc.) the following courses (Fish Development and Endocrinology, Advances Techniques in Fish biology)

Memberships

- 1- Member of Egyptian-German Scocitey of Zoology (2010- now)
- 2- Member of Egyptian Scocitey of Entomology (2009- now)
- 3- Member of Egyptian association for the Development of Fisheries Resources & Human Health (2011)
- 4- Member of The Egyptian Society of Experimental Biology (2011)
- 5- Member of Asia-Pacific Chemical, Biological & Environmental Engineering Society (2012-now)
- 6- Member of the American Chemical Society (2013)
- 7- Memebr of the Egyptian Society of Animal Production, Egypt (2015- now).
- 8- Memebr of the Arabian Aquaculture Society, Egypt (2015- now).

Journal Reviwer

- 1. International Journal of Fisheries and Aquaculture (www.academicjournals.org/IJFA)
- 2. International Journal of Biochemistry and Biotechnology (www.academicjournals.org/IJFA)
- 3. Journal of Toxicology and Environmental Health Sciences (www.academicjournals.org/JTEHS)
- 4. Toxicological & Environmental Chemistry (hartmut.frank@uni-bayreuth.de)
- 5. Ecotoxicology and Enivromental Safty (<u>ees.ees.0.2c4b9c.52f3a056@eesmail.elsevier.com</u>)
- 6. Aquaculture Research (marc.verdegem@wur.nl)

Journal Editoal board member

- 1. Journal of Etiology and Animal Health (http://crescopublications.org/journals/jeah.php)
- 2. International journal of Fisheries science and Research (http://smjournals.com/fisheries-science-research/editorial-board.php).
- 3. Journal of Analytical Toxicology and Applications (https://www.pulsus.com/journal-analytical-toxicology-applications/editorial-board.html)
- 4. Journal of Coastal Life Medicine (http://www.jclmm.com/board.htm

3. Research and Publications

Research Statement

The main topic of my research interest is the study of the effects of pollution (Air, chemical and water) and its toxicity on fish, my master thesis was entitled "Effect of ultraviolet radiation on the morphological, histological and biochemical characteristics of the early developmental stages of African catfish, *Clarias gariepinus* (Burchell, 1822)." And my Ph.D. Thesis entitled "Effects of 4-nonylphenol on some organs, hormones, and the embryonic development of the African catfish *Clarias gariepinus* (Burchell; 1822).

Publications

2018

- 1- Alaa El-Din H. Sayed; Usama M. Mahmoud; Fatma Essa The microstructure of buccal cavity and alimentary canal of Siganus rivulatus: Scanning electron microscope study, Microsc Res Tech. 2018;1–9
- 2- Hossein AnvariFara, A.K.Amirkolaie, AliM.Jalali, d,e, H. K. Miandare, <u>Alaa H. "Sayed</u>, Semalşisağ Üçüncü, Hossein Ouraj, Marcello Ceci, Nicla Romano Environmental pollution and toxic substances: Cellular apoptosis as a key parameter in asensible model like fish Aquatic Toxicology 204 (2018) 144–159
- 3- <u>Alaa El-Din H. Sayed:</u> Hamdy A. M. Soliman; Hiroshi Mitani UVA-induced neurotoxicity in Japanese medaka (*Oryzias latipes*) Photochemical & Photobiological Sciences, 10.1039/c8pp00169c
- 4- Ahmed M. Kotb, Mahmoud Abd-Elkareem, Nasser S. Abou Khalil, <u>Alaa El-Din H. Sayed</u>, Protective effect of Nigella sativa on 4-nonylphenol-induced nephrotoxicity in Clarias gariepinus (Burchell, 1822), Science of the Total Environment 619–620 (2018) 692–699.
- 5- <u>Alaa El-Din H. Sayed</u>; Hamdy A. M. Soliman Modulatory effects of green tea extract against the hepatotoxic effects of 4-nonylphenol in catfish (Clarias gariepinus). Ecotoxicol Environ Saf. 2018 Nov 17;149:159-165.
- 6- Mahmoud Abd-Elkareem, Nasser Sayed Abou Khalil, <u>Alaa El-Din H. Sayed</u>, Hepatotoxic responses of 4-nonylphenol on African catfish (*Clarias gariepinus*): Antixoidant and histochemical biomarkers, Fish Physiology and Biochemistry. https://doi.org/10.1007/s10695-018-0485-1
- 7- Alaa El-Din H. Sayed, Rania F. Ismail, Hiroshi Mitani Oocyte atresia in WT (HdrR) and P53 (-/-) medaka (Oryzias latipes) exposed to UVA Journal of Photochemistry & Photobiology, B: Biology 183 (2018) 57–63.
- 8- Alaa El-Din H. Sayed. UVA induced DNA damage and apoptosis in red blood cells of African catfish (Clarias gariepinus)
 Photochemistery and Photobiology DOI: 10.1111/php.12818
- 9- Alaa El-Din H. Sayed, Chisato Kataoka, Shoji Oda; Shosaku Kashiwada, Hiroshi Mitani, Erythrocytes alterations and apoptosis in medaka (Oryzias latipes) after 4-Nonylphenol exposure, Environmental Toxicology and Pharmacology 58 (2018) 98–104.
- 10- Alaa El-Din H. Sayed; Mohammad M. N. Authman The Protective Role of Spirulina platensis to Alleviate the Sodium Dodecyl Sulfate Toxic Effects in the Catfish Clarias gariepinus (Burchell, 1822), Ecotoxicology and Environmental Safety; 163, (2018) 136-144.

- 11- <u>Alaa El-Din H. Sayed</u>, Tomomi Watanabe-Asaka, Shoji Oda; Shosaku Kashiwada, Hiroshi Mitani γ-H2AX foci as indication for the DNA damage in erythrocytes of medaka (Oryzias latipes) intoxicated with 4-nonylphenol, Environmental Science and Pollution Research, https://doi.org/10.1007/s11356-018-2985-z
- 12- Alaa El-Din H. Sayed: Mahmoud M. S. Farrag; Basem S. Abdelaty; Mohammed M. M. Toutou; Ola I. Muhammad, Histological alterations in some organs of monosex tilapia (Oreochromis niloticus, Linnaeus, 1758) produced using methyltestosterone, Egyptian Journal of Aquatic Biology & Fisheries, 22, 4, 2018, 141-151.

2017

- 13- Nasser Sayed Abou Khalil, Mahmoud Abd-Elkareem, <u>Alaa El-Din H. Sayed</u>, Nigella sativa seed protects against nonylphenol-induced hematotoxicity in Clarias gariepinus (Burchell, 1822): Oxidant/antioxidant rebalance, Aquaculture Nutrition 2017; 1–8
- **14-** <u>Alaa El-Din Hamid Sayed.</u> Kento Igarashi, Tomomi Watanabe-Asaka, Hiroshi Mitani Double strand break repair and γ -H2AX formation in erythrocytes of medaka (Oryzias latipes) after γ irradiation, Environmental Pollution 224 (2017) 35-43.
- 15- <u>Alaa El-Din Hamid Sayed</u>, Heba Salah Hamed, 2017. Induction of apoptosis and DNA damage by 4-nonylphenol in African catfish (Clarias gariepinus) and the antioxidant role of Cydonia oblonga. Ecotoxicology and Environmental Safety 139, 139:197-101
- 16- <u>Alaa El-Din H. Sayed</u> and Rania F. K. Ismail, Endocrine disruption, Oxidative Stress, and histological changes Induced by 4-nonylphenol in Clarias gariepinus; the protective role of Cydonia oblonga. Fish Physiology and Biochemistery DOI 10.1007/s10695-017-0355-2
- 17- <u>Alaa El-Din Hamid Sayed</u>, Hiroshi Mitani, Immunostaining of UVA-induced DNA damage in erythrocytes of medaka (Oryzias latipes) Journal of Photochemistry & Photobiology, B: Biology 171 (2017) 90–95
- 18- Alaa El-Din H. Sayed, Yasser S. El-Sayed, Ali H. El-Far, Hepatoprotective efficacy of Spirulina platensis against lead-induced oxidative stress and genotoxicity in catfish; Clarias gariepinus, Ecotoxicology and Environmental Safety 10.1016/j.ecoenv.2017.05.013
- 19- Mustafa A. Fawzy, <u>Alaa El-Din H. Sayed</u> and Nasser Sayed Abou Khalil, Effects of Dietary Supplementation of Spirulina platensis on the Physiological Parameters of Clarias gariepinus After Exposure to Food Shortage Stress, Health Sciences Research 2017; 4(1): 1-5.
- **20-** Rana Al-Awadhi, Usama M. Mahmoud; <u>Alaa El-Din H. Sayed</u> and Ahmed S.A. Harabawy, Scale Characteristics of Three Fish Species of Genus Epinephelus From the Arabian Gulf at Kuwait, Egypt. Acad. J. Biolog. Sci., 9(1): 21-32 (2017).
- 21- <u>Alaa El-Din H. Sayed;</u> Hamdy A. M. Soliman Developmental toxicity and DNA damaging properties of silver nanoparticles in the catfish (Clarias gariepinus), Mutat Res Gen Tox En 822 (2017) 34–40

2016

- 22- <u>Alaa El-Din H. Sayed</u> and Hiroshi Mitani, Comparative study of morpho-histology of Ovaries of WT (HdrR) and P53 (-/-) of medaka (*Oryzias latipes*), International Journal of GEOMATE, Dec., 2016, Vol. 11, Issue 28, pp.2857-2861.
- 23- <u>Alaa El-Din H. Sayed</u>, Ekbal T. Wassif, Afaf I. Elballouz, Morphological study on the early developmental stages of the Egyptian toad, *Bufo regularies* tadpoles. Edorium J Anat Embryo 2016;3:1–14.
- 24- <u>Alaa El-Din Hamid Sayed</u>, Nadia Hussein Mohamed, Mady Ahmed Ismail, Wael Moustfa Abdel-Mageed, Ahmed Abdelfattah Mohamed Shoreit. Antioxidant and antiapoptotic activities of *Calotropis procera* latex on Catfish (*Clarias gariepinus*) exposed to toxic 4-nonylphenol. Ecotoxicology and Environmental Safety 128 (2016) 189–194.
- 25- <u>Alaa El-Din H. Sayed</u>, Usama M. Mahmoud. Imam. A. Mekkawy. Erythrocytes alterations of monosex tilapia (*Oreochromis niloticus*, Linnaeus, 1758) produced using methyltestosterone. Egyptian Journal of Aquatic Research Volume 42, Issue 1, March 2016. Pages 83–90.
- 26- Usama M Mahmoud, Ola I Muhammad and Alaa El-Din H Sayed, Characterization of Blood Cells, Hematological and Biochemical Parameters in Diplodus noct from the Red Sea, Journal of Marine Biology Oceanography 2016, 5:1.
- 27- <u>Alaa El-Din H. Sayed</u>; Nasser Sayed Abou Khalil, Estimation of the Modulatory Roles of Thieno [2,3-c]Pyrazole Compounds Versus the Toxicity of 4-Nonylphenol in African Catfish (*Clarias gariepinus*) International Journal of Biochemistry Research & Review 11(1): 1-8, 2016, Article no.IJBCRR.24384.

- 28- <u>Alaa El-Din H. Sayed</u>; Nasser S. Abou Khalil, Oxidative stress induction in monosex Nile tilapia (Oreochromis niloticus, Linnaeus, 1758): A field study on the side effects of methyltestosterone, Journal of Aquaculture Research and development, 7(3) 1-6
- 29- <u>Alaa El-Din H. Sayed.</u> Genotoxicity detection following exposure to silver nanoparticles in African catfish (*Clarias gariepinus*) Int. J. Nanoparticles, Vol. 9, No. 1, 2016
- 30- <u>Alaa El-Din H. Sayed.</u> Hala Abdel Fatah M. Younes, Melanomacrophage centers in Clarias gariepinus as an immunological biomarker for toxicity of silver nanoparticles Journal of Microscopy and Ultrastructure 5 (2017) 97–104
- 31- <u>Alaa El-Din H. Sayed</u>, Ekbal T. Wassif, Afaf I. Elballouz, Retina damage after exposure to UVA radiation on the early Developmental Stages of the Egyptian Toad Bufo regularis Reuss. Journal of Radiation Research and Applied Sciences 9 (2016) 409 -423
- 32- <u>Alaa El-Din Hamid Sayed</u>, Tomomi Watanabe-Asaka, Shoji Oda & Hiroshi Mitani, Apoptosis and morphological alterations after UVA irradiation in red blood cells of p53 deficient Japanese medaka (Oryzias latipes) Journal of Photochemistry & Photobiology, B: Biology 161 (2016) 1-8
- 33- <u>Alaa El-Din Hamid Sayed</u>, Tomomi Watanabe-Asaka, Shoji Oda & Hiroshi Mitani, Apoptotic cell death in erythrocytes of p53-deficient medaka (*Oryzias latipes*) after γ -Irradiation International Journal of Radiation Biology, VOL. 92, NO. 10, 572–576.
- 34- Alaa El-Din Hamid Sayed, Hiroshi Mitani, The notochord curvature in medaka (Oryzias latipes) embryos as a response to ultraviolet A irradiation, Journal of Photochemistry & Photobiology, B: Biology 164 (2016) 132–140
- 35- Usama M. Mahmoud, Fatma Essa, <u>Alaa El-Din H. Sayed</u> (2016) Surface architecture of the oropharyngeal cavity and the digestive tract of Mulloidichthys flavolineatus from the red sea, Egypt: A scanning electron microscope study Tissue and Cell 48 (2016) 624–633

2015

- 36- <u>Alaa El-Din H. Sayed</u>, Afaf I. Elballouz, Ekbal T. Wassif, Histological and Histochemical Studies on the Early Developmental Stages of the Egyptian Toad Bufo regularis Reuss Open Journal of Animal Sciences, 2015, 5 (2), 142-156.
- 37- <u>Alaa El-Din H. Sayed</u>, Rehab Moneeb. Hematological and biochemical values of healthy monosex tilapia (Oreochromis nilotucus) farmed at Egypt. The Journal of Basic & Applied Zoology (2015) 72, 36–42.
- **38-** Alaa El-Din H. Sayed, Heba Allah El Baghdady, Eman Zahran, Arsenic-induced genotoxicity in Nile tilapia (Orechromis niloticus); the role of Spirulina platensis extract, Environmental monitoring and assessment (2015) 187:75.
- 39- <u>Alaa El-Din H. Sayed</u>, Hematotoxic and biochemical effects of UVA on the Egyptian toad (Bufo regularis), International Journal of Radiation Biology (2015) 20, 1-7.
- **40-** <u>Alaa El-Din H. Sayed</u>; Adel M. Kamal El-Dean; Remon M. Zaki, and Abdullah Y. Abdulrazzaq, The biological activity of new thieno[2,3-c]pyrazole compounds as anti-oxidants against toxicity of 4-nonylphenol in Clarias gariepinus, Toxicology Reports 2 (2015) 1–9.

2014

- 41- <u>Alaa El-Din H. Sayed</u>, Shoji Oda, Hiroshi Mitani, Nuclear and cytoplasmic changes in erythrocytes of p53-deficient medaka (Oryzias latipes) after γ-irradiation. Mutation Research 771 (2014) 64–70.
- **42-** Alaa El-Din H. Sayed, Afaf I. Elballouz, Ekbal T. Wassif, Molecular Characterization on the Early Developmental Stages of the Egyptian Toad Bufo regularis Reuss, Open Journal of Genetics, 2014, 4, 343-354.
- **43-** Alaa El-Din H. Sayed and Mustafa A. Fawzy, Effect of Dietary Supplementation of *Spirulina platensis* on the Growth and Haematology of the Stressed Catfish *Clarias gariepinus*, Journal of Advances in Biology, Vol 5, No.2, 2014, 625-635.

2013

- **44-** Alaa El-Din H. Sayed, Usama M. Mahmoud, Imam A. Mekkawy, Genotoxicity induced by 4-Nonylphenol in adult and embryos of *Clarias gariepinus*. Global Advanced Research Journal of Environmental Science and Toxicology, 2(3): 107-118 (2013).
- **45-** <u>Alaa El-Din H. Sayed,</u> Hanem Abdel-Tawab, Sara Abdel Hakeem, Imam Mekkawy, The Protective Role of Quince Leaf Extract against the Adverse Impacts of Ultraviolet-A Radiation on Some Tissues of *Clarias gariepinus* (Burchell, 1822) Journal of Photochemistry and Photobiology B: Biology, 119,9-14 (2013).

2012

- **46-** <u>Alaa El-Din H. Sayed</u>, Imam A. Mekkawy, Usama M. Mahmoud, Reproductive biomarkers to identify Endocrine disruption in *Clarias gariepinus* exposed to 4-nonylphenol. Ecotoxicology and Environmental Saftey, 78 (2012) 310-9.
- 47- <u>Alaa El-Din H. Sayed</u>, Imam A. Mekkawy, Usama M. Mahmoud, Toxic effects of 4-nonylphenol on the embryonic development of African catfish *Clarias gariepinus* (Burchell; 1822). International Journal of Biology and Biological Sciences, 1(2), 2012, 034-046
- 48- <u>Alaa El-Din H. Sayed</u>, Sara Abdel Hakeem, Usama M. Mahmoud, Imam A. Mekkawy, 4-Nonylphenol induced morphological and histopathological malformations in Egyptian toad tadpoles. Global Advanced Research Journal of Environmental Science and Toxicology, 1(6): 143-151. (2012).

2011

- **49-** Zeinab A. El-Bakary, <u>Alaa El-Din H. Sayed</u>. Effects of short time UV-A exposures on compound eyes and haematological parameters in Procambarus clarkii (Girad, 1852). Ecotoxicology and Environmental Safety 74 (2011) 960–966
- 50- Imam A. Mekkawy, Usama M. Mahmoud, Alaa El-Din H. Sayed. Effects of 4-nonylphenol on blood cells of the African catfish Clarias gariepinus (Burchell, 1822) Tissue Cell 43 (2011) 223–229
- 51- Alaa El-Din H. Sayed, Imam A. Mekkawy, Usama M. Mahmoud, Effects of 4-nonylphenol on metabolic enzymes, some ions and biochemical blood parameters of the African catfish Clarias gariepinus (Burchell, 1822). African Journal of Biochemistry Research Vol. 5(9), 2011, 287-297.

2010

- 52- Imam, A.A. Mekkawy, Usama, M. Mahmoud, Alaa G. Osman, <u>Alaa El-Din H. Sayed</u>, Effects of ultraviolet—A on the activity of two metaboloic enzymes, DNA damage and lipid peroxidation during early developmental stages of the African catfish, Clarias gariepinus (Burchell, 1822). Fish Physiol Biochem (2010) 36:605–626
- 53- Alaa G.M. Osman, Mostafa Koutb, <u>Alaa El-Din H. Sayed</u>, Use of hematological parameters to assess the efficiency of quince (Cydonia oblonga Miller) leaf extract in alleviation of the effect of ultraviolet—A radiation on African catfish Clarias gariepinus (Burchell, 1822). Journal of Photochemistry and Photobiology B: Biology 99 (2010) 1–8

2009

54- Usama, M. Mahmoud, Imam, A.A. Mekkawy, <u>Alaa El-Din H. Sayed</u>, Ultraviolet radiation -A (366nm) induced morphological and histological malformations during embryogenesis of Clarias gariepinus (Burchell, 1822). Journal of Photochemistry and Photobiology B: Biology 95 (2009) 117–128

2007

55- <u>Alaa El-Din H. Sayed</u>, Ahmed Th. Ibrahim, Imam A.A. Mekkawy, Usama M. Mahmoud, Acute effects of Ultraviolet –A on some biochemical and histological parameters of African Catfish Clarias gariepinus (Burchell, 1822), Journal of Photochemistry and Photobiology B: Biology 89 (2007) 170–174.

Submitted publications in peer review process

- 1- Usama M. Mahmoud; Mervat N. Hana; <u>Alaa El-Din H. Sayed</u> Cytotoxic and hemotoxic effects of synthesized AgNPs on African Catfish (Clarias gariepinus), Tissue and Cell
- 2- Usama M. Mahmoud; Mervat N. Hana; <u>Alaa El-Din H. Sayed</u> Toxicity assessment on biochemical and oxidative stress of silver nanoparticles-exposed freshwater fish Clarias gariepinus, Fish Physiology and Biochmistery
- 3- <u>Alaa Sayed</u>, Hamdy A. M. Soliman and Mohamed Hamed Spirulina ameliorative effect against lead nitrate-induced cytotoxicity and genotoxicity in catfish Clarias gariepinus
- **4-** Alaa G. M. Osman, Mohamed Hamed, <u>Alaa Sayed</u> Modulatory role of Spirulina platensis against UVA-induced hemato-biochemical and cellular alterations in the African catfish (Clarias gariepinus)
- 5- Hamdy A. M. Soliman, Mohamed Hamed, Jae-Seong Leec, <u>Alaa El-Din H. Sayed</u> The novel protective role of sensitized derivate pyrazole carboxamide in the lead nitrate-exposed African catfish Clarias gariepinus
- **6-** Alaa El-Din H. Sayed, Mahmoud Abd-Elkareemb, Nasser S. Abou Khalil Cytopathological changes in hepatic melanomacrophage centers of Clarias gariepinus as an indication of 4-nonylphenol toxicity; Immunohistomorphometric study

- 7- Usama M. Mahmoud; Imam A. Mekkawy; Rehab H. Moneeb; <u>Alaa El-Din H. Sayed</u> Chelating Properties of Amphora coffeaeformis Extract on Arsenic-Induced Hematological and Biochemical Changes of Clarias gariepinus
- 8- <u>Alaa El-Din H. Sayed</u>, Daiki Kitamura, Shoji Oda; Shosaku Kashiwada, Hiroshi Mitani Spirulina platensis are able to chelate the arsenic toxicity in Oryzias latipes; A multi biomarker in vivo study

Book chapters

1- <u>Alaa El-Din H. Sayed</u>, Usama M. Mahmoud, Imam A. Mekkawy, Histopathological alterations in some organs of adults of *Clarias gariepinus* (Burchell, 1822) exposed to 4-nonylphenol. María-Dolores García (Editor). "Zoology", ISBN 979-953-307-477-0.

Books

- 1- Alaa El-Din H. Sayed, Imam A. Mekkawy, Usama M. Mahmoud, Effect of Ultraviolet Radiation on Catfish Embryos. Editor: N.Nicolaev, ISBN 978-3-8443-8894-7. LAP LAMBERT Acadamic Publishing GmbH & Co.KG, Germany.
- 2- <u>Alaa El-Din H. Sayed.</u> Imam A. Mekkawy, Usama M. Mahmoud, Effects of 4-Nonylphenol on African Catfish *Clarias gariepinus*. Editor: V.Rotaru, ISBN 978-3-8454-4467-3. LAP LAMBERT Acadamic Publishing GmbH & Co.KG, Germany.

4. Workshops, Scientific Visits and Additional Skills

Workshops:

- 1- (2003) attended at Scanning, Transmission, Electron Microscope Usage and Slides Preparation Workshop (3 weeks).
- **2-** (2005/2006), attended the workshop on Basic Principles and Techniques of PCR (30 Hours) Advanced Theoretical and Practical Topics on PCR (30 hours), And Principles and Applications of Real-Time PCR (30 hours).
- **3-** (2006), attended at workshop on Theoretical and Practical Approach for Primary Hepatocyte Cell Culture (30 hours), Computer-Assisted Molecular Design in Bioinformatics (30 hours), And Advanced Techniques on Protein and Their Applications (21 hrs).
- **4-** (6-10/4/2007) attended the workshop on Methods in Molecular Biology and its Applications in the Monitoring of the Environmental stress and Ecotoxicology, Zoology Department, Faculty of Science, Assuit University, Assiut, Egypt.
- **5-** (2008) attended the workshop on Enzyme Linked Immuno-Sorbant Assay (ELISA) Principals and Different Applications (10 hrs)
- **6-** (31/3/2009-1/4/2009) participated in training at workshop on Principles of Protein Analysis. Molecular Biology Unit at Assiut University.
- **7-** (8/11/2009-10/11/2009) participated in training at workshop on PCR principles and applications (Level 1). Molecular Biology Unit at Assiut University.
- **8-** (28/3/2010-30/3/2010) participated in training at workshop on Principles and Applications of DNA Sequencing & Cloning. Molecular Biology Unit at Assiut University.
- **9-** (3/5/2010-5/5/2010) participated in training at workshop on From Gene to Protein. Molecular Biology Unit at Assiut University.
- **10-** (20/11/2010-23/11/2010) completed 21 hours in the workshop of basic techniques of human and animal cell culture, educational and training workshop, molecular biology lab., Zoology department, Faculty of science, Assiut university, Assiut, Egypt.
- **11-** (24/10/2010-25/10/2010) participated in training at workshop on Protein Analysis and applications. Molecular Biology Unit at Assiut University.

- **12-** (18/12/2010-20/12/2010) participated in training at workshop on PCR principles and applications (Leve II). Molecular Biology Unit at Assiut University.
- 13- (27/3/2012) participated in training at workshop on Applications of bioinformatics in molecular biology. Molecular Biology Unit at Assiut University
- 14- (12/1/2013-17/1/2013) participated in training at workshop on SPSS, Assiut University, Egypt.
- **15-** (29/3/2014-31/3/2014) participated in training at workshop on Modern Detection Techniques in Biology (Genotoxicity & Immunoohistochemistery). Zoology Department, faculty of science, Al-Azhar University, Assiut branch.
- **16-** (24-26/3/2015) participated in training at workshop on Basic Techniques in Animal Cell Tissue Culture at Zoology department, Faculty of science, Assiut University, Assiut, Egypt.
- 17- (29/2/2016-4/3/2016) participated in training at Misaki Marine Biology Practical course, MMBS, Tokyo University, Japan.
- **18-** (6-9/7/2016) participated in training at Fish spawning and hatchery management workshop, Fish Farming and Technology Institute, Suaz canal university, Egypt.

Abroad Scientific Visits

- **1-** (1/12/2006 30/1/2007) attended at Molecular Biology and Functional Genomics Department, Stockholm University, Stockholm, Sweden as Molecular Biology training course.
- 2- (1/09/2011 30/01/2012) attaned at Genome Stability Lab., Department of Integrated Biosciences, Graduate School of Frontier Sciences, Tokyo University, Chiba, Japan as Visitor professor.

Additional Skills

- 1. (2016) Environment safety certificate, Environmental Research center, Tokyo University, Japan (Cert. no ES19Y01010577A).
- 2. (2009) ICDL/ECDL (International/European Computer Driving License) certificate.
- 3. (2008) has successfully completed the Oracle university course (User Adoption Services, Eagle program)
- **4.** (2002) attended at introduction to PC'S, Windows 98, Photoshop, Flash, PowerPoint, Html, FrontPage and Audio-Video training courses (120 hours).
- **5.** (2005/2006), attended at Teaching with Technology workshop (25 hours), and Acrobat, Building Simple Web Site, E-Learning with Learning Management System. (20 hours).
- **6.** (2005), attended at workshops on Hardware (20 hr.), Audio/Video (10 hr.), MS Windows, Word, and Excel (20 hr.), MS PowerPoint (20 hr.), HTML (20 hr.), MS FrontPage (20 hr.), Adobe PhotoShop (20 hr.), and Macromedia Flash (20 hr.)

5. Research Expoereince, Conferences/Presentations and awards

Research Expoereince

Electrophoresis (Cellulose acetate and SDS-PAGE) techniques.

Histology and Histochemistry for tissues microscopic preparations.

ELISA (Enzyme Linked Immuno-Sorbant Assay)

PCR (Plymerase Chain Reaction) and RAPID-PCR

Micronucleus test and apoptosis detection

Physiological and biochemical parameters analysis

Radition worker liscience

Conferences/Presentations

- **1-** (22 June, 2006), attended and participated in activities of the Second Conference of The Egyptian Society of the Experimental Biology. Faculty of Science, Alexandria University, Alexandria, Egypt.
- 2- (5-6 May, 2007), attended and participated in activities of The First Conference for Young Scientists Basic Science & Technology with oral presentation entitled "Effects of Ultraviolet radiation on some biochemical and histological parameters of African Catfish Clarias gariepinus (Burchell, 1822). Faculty of Science, Assiut University, Assiut, Egypt.
- **3-** (28-30 June, 2007), attended and participated in activities of The 1st International Arab African Fish Resources Conference of the Co-located with The 11st Conference of The Egyptian Society For The Development of Fisheries Resources & Human Health. Cairo International Convention Center, Cairo, Egypt.
- **4-** (27-29 November, 2007), attended and participated in activities of Conference on Applications of Environmental Sciences In Arab Region. Faculty of Science, South Valley University, Aswan, Egypt.
- **5-** (23 February, 2008), attended and participated in activities of The Fourth Conference of The Egyptian Society of The Experimental Biology. October 6 University, Cairo, Egypt.
- **6-** (18-19 October, 2008), attended and participated in activities of The Second Conference for Young Scientists Basic Science & Technology with oral presentation entitled "Ultraviolet radiation -A (366nm) induced morphological and histological malformations during embryogenesis of Clarias gariepinus (Burchell, 1822). Assiut, Egypt.
- 7- (4-5 March, 2009) attended the First International Conference of Biological Science. Assiut University, Assiut, Egypt.
- 8- (29 November- 1st December 2010) attended the 3rd global fisheries & Aquaculture research conference, Cairo, Egypt.
- **9-** (20 January 2011) attended the second scientific conference on environmental changes in lakes and wetlands in the Mediterranean region Guesthouse with oral presentation entitled "Effects of 4-nonylphenol on blood cells of the African catfish Clarias gariepinus (Burchell, 1822)", Ain Shams University, Cairo, Egypt.
- 10- (19-20 April, 2011), attended and participated in activities of The Third Conference for Young Scientists Basic Science & Technology with two oral presentations entitled "Effects of 4-nonylphenol on the embryonic development of African catfish Clarias gariepinus (Burchell; 1822)" and "Biochemical changes of African catfish Clarias gariepinus exposed to 4-nonylphenol)" Assiut, Egypt.
- 11- (30April- 2 May 2011), attended and participated in activities of The 19th Conference of Egyptian-German Scocity of Zoology with oral presentation entitled "Histopathological alterations in some body organs of adult Clarias gariepinus (Burchell, 1822) exposed to 4-nonylphenol" Bin Sueif University, Egypt.
- **12-** (8 December 2011) prsensetd alecture at GSFS, Tokyo Uniuversity entitled The Effects of 4-Nonylphenol as environmental pollutant on the African Catfish
- 13- (13-16 December 2011) attended The 34th Annual Meeting of the Molecular Biology Society of Japan held in Yokohama, Japan.
- **14-** (24-26 March 2012), attended and participated in activities of The 6th International Conference for Develoment and the Environment in the World, Assiut University, Egypt.
- **15-** (1-3 October 2012) attended the 5th global fisheries & Aquaculture research conference with oral peresentaion entitled" 4-Nonylphenol induced morphological and histopathological malformations in *Bufo regularis* tadpoles, Faculty of Agriculture, University of Cairo, Egypt.
- **16-** (10 October 2012) attended the Sixth scientific conference for Egyptian association for the Development of Fisheries Resources & Human Health with oral presentation entitled "The Protective Role Of Quince Leaf Extract Against The Adverse Impacts Of Ultraviolet-A Radiation On Some Tissues Of *Clarias gariepinus* (Burchell, 1822)", Ain Shams University. Cairo. Egypt.

- **17-** (21-23 September 2013) attended the firth international conference on new horizons in bascic and applied Science with oral presentation entitled "Genotoxicity induced by 4-Nonylphenol in adult and embryos of *Clarias gariepinus*", Hurghada, Egypt.
- **18-** (23-25 March 2014), attended and participated in activities of The 7th International Conference for Develoment and the Environment in the World with oral presentation entitled "Detection of Apoptosis and micronucleus after exposure to silver nanoparticles in *Clarias gariepinus*", Assiut University, Egypt.
- **19-** (18-20 October 2014), attended and participated in activities of The 20th Conference of Egyptian-German Scocity of Zoology with oral presentation entitled "Hematologic and biochemical values of healthy monosex tilapia (*Oreochromis nilotucus*) farmed at Egypt" Cairo, Egypt.
- **20-** (17-18 November 2014) attended the 7th global fisheries & Aquaculture research conference with oral presentation entitled "Erythrocytes alterations of monosex tilapia (*Oreochromis niloticus*, Linnaeus, 1758) produced using methyltestosterone", Cairo, Egypt.
- **21-** (19-21 November 2015) attended the 1th internation conference (SEE-Mie- 2015), with presentiotion entitled "Comparative study of morpho-histology of Ovaries of WT (HdrR) and P53 (-/-) of medaka (Oryzias latipes), Mie University, Tsu City, Japan.
- **22-** (16-19 June 2016) attended the 49th International Conference on Nanoscience, Nanotechnology and Advanced Materials (IC2NM) with oral presentation entitled "The notochord curvature in medaka (Oryzias latipes) embryos as a response to ultraviolet A irradiation ", Cairo, Egypt.
- **23-** (25 Februray 1 March 2017) attended the 13th Annual international conference & workshop of the egyptian society of experimental biology with oral presentation entitled "Erythrocytes alterations and histipathological changes in medaka (*Oryzias latipes*) embryos as a response to 4-Nonylphenol exposure", Cairo univeristy, Egypt.
- **24-** (7-8 May 2017) attended the international conference on natural science and environment (ICNSE) with oral presentation entitled " Immunostaining of UVA-induced DNA damage in erythrocytes of medaka (*Oryzias latipes*)", Nagoya, Japan.
- **25-** (30-31 August 2017) attended The 23rd Japanese Medaka and Zebrafish Meeting with posterl presentation entitled Erythrocyte alterations and apoptosis in medaka (Oryzias latipes) after 4-nonylphenol exposure, Yamanashi, Japan.
 - **26-** (20 October 2017) prsensetd alecture at GSFS, Tokyo Uniuversity entitled "Erythrocytes alterations as biomarkers for genotoxicity in fishes"
- **27-** (9-10 August 2018) attended the 428th international conference on Environmental and natural science (ICNSE) with oral presentation γ-H2AX foci as indication for the DNA damage in erythrocytes of medaka (*Oryzias latipes*) intoxicated with 4-nonylphenol, Yokohama, Japan.
 - 28- (22 August 2018) prsensetd alecture at GSFS, Tokyo Uniuversity entitled "Fish Biodiversity; Importance and Threats"
 - **29-** (25-26 August 2018) attended The 24rd Japanese Medaka and Zebrafish Meeting with posterl presentation entitled Spirulina platensis are able to chelate the arsenic toxicity in Oryzias latipes; A multi biomarker in vivo study, Nagoya, Japan.

Awards and grants

- 1- The prize of the best presentation entitled "Ultraviolet radiation -A (366nm) induced morphological and histological malformations during embryogenesis of *Clarias gariepinus* (Burchell, 1822)." In the The Second Conference for Young Scientists Basic Science & Technology
- 2- The prize of the best article entitled "Biochemical changes of African catfish Clarias gariepinus exposed to 4-nonylphenol" from Faculty of Science, Assiut University, Assiut, Egypt.
- 3- The African Union Young Scientist National Award 2011.
- 4- The prize of the best poster entitled "Apoptosis and micronucleus detection after exposure to silver nanoparticles in *Clarias gariepinus* (Burchell, 1822)" in the 7th International Conference on Environment and Development in the Arab World (23-25 March 2014), Assiut University, Assiut, Egypt.

- 5- The prize of the best Ph.D. Thesis entitled "Effects of 4-nonylphenol on some organs, hormones, and the embryonic development of the African catfish Clarias gariepinus (Burchell; 1822). Assiut University 2012/2013.
- 6- The prize of the best article entitled "Effect of Dietary Supplementation of Spirulina platensis on the Growth and Haematology of the Stressed Catfish *Clarias gariepinus*". Assiut University 2012/2013.
- 7- Tokyo university schoralship as visiting researcher from 15/09/2011-15/02/2012/
- 8- DAAD postdoc scholarship, spring 2015.
- 9- JSPS postdoctoral fellowship for overseas reserchers (standard) 2015-2017.
- 10- The prize of the high impact factor paper entitled "Reproductive biomarkers to identify Endocrine disruption in Clarias gariepinus exposed to 4-nonylphenol", Faculty of Science, Assiut University 2014.
- 11- The prize of the prof. Soliman Hozin for the basic science, Assiut University, Egypt, 2015.
- 12- The IIER excellent paper award for the paper entitled Immunostaining of UVA-induced DNA damage in erythrocytes of medaka (Oryzias latipes), the 103rd IIER international conference, Nagoya, Japan, 2017.
- 13- The State Encouragement Prize in Biological Sciences, Egypt 2016

Patent

Embryos incubator with oxygnetor and currnet flow water (No. 767/2015), Academy of Scientific Research and technology, Egypt.

May I suggest the following as referees:

Professor Dr. Hiroshi Mitani

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