Professor Dr. JahanAraKhanam

Department of Biochemistry and Molecular Biology University of Rajshahi, Rajshahi-6205, Bangladesh. Tel: Office +880-0721-750041 ext. 4109, Res. +88-Mobile Ph.: +8801914254928 E- mail: jakbiochem@gmail.com

EDUCATION

Ph. D (1998) : Department of Chemistry, Jadavpur University, Calcatta-700032, India. **Title of the thesis:** Hydroxamic Acids as Antineoplastic, Antiepileptic and Anti inflammatory Agents.

M. Sc (1981): Department of Biochemistry and Molecular Biology, University of Rajshahi, Rajshahi-6205, Bangladesh.

<u>B. Sc (1980)</u>: Department of Applied Chemistry and Chemical technology, University of Rajshahi, Rajshahi-6205, Bangladesh.

Employment

November, 2002- Present; Professor, Department of Biochemistry and Molecular Biology, University of Rajshahi, Rajshahi-6205, Bangladesh.

October, 1997- November, 2002; Associate Professor, Department of Biochemistry and Molecular Biology, University of Rajshahi, Rajshahi-6205, Bangladesh.

October, 1987- October, 1997; Assistant Professor, Department of Biochemistry and Molecular Biology, University of Rajshahi, Rajshahi-6205, Bangladesh.

October, 1984- October, 1987; Lecturer, Department of Biochemistry and Molecular Biology, University of Rajshahi, Rajshahi-6205, Bangladesh.

Technique Used: Tissue culture, Cell culture, Electrophoresis, ELISA, Immunohistochemical staining, Western blotting, recombinant DNA technology etc.

Society Affiliation: Bangladesh Biochemical Society

Scholarship: Awarded SAARC scholarship while Ph. D degree.

FIELD OF SPECIALITY: Oncomedicine and Anticancer Drug Design, Study of Cancer.

Research experience:22(Twentytwo) years in the above field.

Research Work in M. Sc Courses:

1. Title of thesis: Antineoplastic and Antimicrobial activity of Cyanocarboxamic acid, some medicinal plant extract and Monociliummetabolites. Name of Research Scholar- Santunu **Rov Examination-1996** 2. Title of thesis: Antineoplastic activity of some medicinal plants. Name of Research Scholar- Md. MasudRana Examination-1997 3. Title of thesis: Synthesis and Characterization of Semicarbazone and Study of itsAntifumgal and AntibacterialActivities. Name of Research Scholar- Md. Akhtar-Uzzaman Examination-1998 4. Title of thesis: Antineoplastic and Antifungal and Antibacterial activities of Copper (II) complex of Ethylene diamine withSchiff-base. Name of Research Scholar- Md.Asad-Ud-Daula Examination-1999 5. Title of thesis: Antineoplastic and Antifungal and Antibacterial activities of Nikel(II) Tyrosine complex. Name of Research Scholar- Md. RafigulIslam Examination-2000 6. Title of thesis: Insecticidal and Antifungal and Antibacterial activity of Nikel (II) Cystein complex. Name of Research Scholar- Sultana Yeasmin (Lata). Examination-2001 7. Title of thesis: Antineoplastic and Antibacterial activities of N,N Dihydroxy Benzyl Aniline (DBA) and Dimethyl Glyoxime(DMG) Name of Research Scholar- Md. Mostafizur Rahman Examination-2002. 8. Title of thesis: Antineoplastic and Antibacterial activities of N-(1-phenyl -2 Hydroxy-2 phenyl Ethylinedine)-2, 4'- DinitrophenylHydrazone(PDH). Name of Research Scholar- Md. Sultan Salauddin Examination-2004

9. Antineoplastic and Insecticidal activity of N-(2hydroxybenzyldiene) 2' hydroxyl phenyl-

imine aqua Nikel (II) complex [Ni 9H₂O)HHP].

Name of Research Scholar- IsmatAra

Hossain Examination-2005

10. Antineoplastic, Antibacterial and Toxicological Studies of Acetone Semicarbazone(ASC).

Name of Research Scholar- Md. FarhadulIslam

Examination-2006

- Antineoplastic activity of medicinal plants. Name of Research Scholar- HasinaKhatun Examination-2008
- 12. Antineoplastic activity of Metabolites Extracted from Isolated Soil Bacteria. Name of Research Scholar- Soby Ghosh Examination-2009
- 13. Antiprpliferative Activity of BenzophenomeThio-micarbazone Against EAC cells in Mice Model Name of Research Scholar- RubayaPervin
- 14. Examination- 2012
- 15. In Vivo Antineoplastic Activity of Chalcones Name of Research Scholar- MahbubaKhatun Examination- 2013
- 16. Antineoplastic Activity of MicheliaChampaca Seed Against EAC cell line in vivo. Name of Research Scholar- LaboniKhatun Examination- 2014
- Antioxidant and Antiproliferative Activity of Methanolic Extract of Phyllunthusacidus fruit Name of Research Scholar- MdShohidul Islam Examination- 2015
- Phytochemical Investigations, Antioxidant and antineoplastic activity of MicheliaChampaca Bark Name of Research Scholar- RoksanaYeasmin Examination- 2016
- 19. Antiproliferative activity of Salicylaldehydethiosemicarbazone Against EAC cells both in vitro and in vivo

Name of Research Scholar- Suraya Akhter Examination- 2017

20. Study of Antiproliferative and Apoptotic Properties of SyzygiumCumini Bark MethanolicExtracts Against EAC cells

Name of Research Scholar- LaboniKhatun Examination- 2019

Research Work in P. Phil/ PhD Courses:

1. Title of thesis: Anticancer activity and phytochemicals study of Eucalyptus species in Bangladesh".

Name of Research Scholar- Md. Farhadul

Islam. Awarded 2014

2. Title of thesis: Cervical cancer Screening by Simple Visual Inspection after Aceticacid.

Name of Research Scholar-Dr. NahidYusuf

Awarded-2015

Research Projects/Funding Received

Title of the Projects	Funding Year/Funding	Funded by	Role	Remark
	no.			
Development of Drugs Design in the	1998-1999	Rajshahi	Principal	Completed
treatment of cancer	A-2/5/52/B/98-99	University	Investigator	_
Development of Anticancer Drugs	1998-1999	Ministry of	Principal	Completed
from medicinal plant extracts	-1/98/292(62)	Science &	Investigator	
-		Technology		
		Bangladesh		
Study of Anticancer Activity of	2004-2005	Rajshahi	Principal	Completed
some metal complexes	A-105/-	University	Investigator	
	5/52/Science/2004-05	-	_	
Study of Antineoplastic and anti-	2007-2008	UGC	Principal	Completed
inflammatory Activities of medicinal	6(76)UGC/Chem/1027	Bangladesh	Investigator	•
plant extracts		-		
Development of Research Lab in a	2011-2012	Ministry of	Principal	Completed
view to Formulate Novel Anticancer	39.009/002.01.00.04/832	Science &	Investigator	-
Drugs for future		Technology		
-		Bangladesh		
Development of Anticancer Drug	2013-2014	Ministry of	Principal	Completed
Design laboratory in Advanced level	10 M-15/2007 part-2/212	Education	Investigator	-
in a view to Formulate Novel	-	Bangladesh		
Anticancer Drugs		-		
Study of Growth inhibitory Effect of	2011-2012	Bangladesh	Principal	Completed
EAC cells and Apoptosis Inducing		medical	Investigator	-
activities of Microbial Extracts		Research		
		Council		
Anticancer Activity of Chalcons in	2013-2014	UGC	Principal	Completed
vivo Against EAC cells	6(75)/UGC/RSP?Bka/(2	Bangladesh	Investigator	_
-	2)/2013/4732	-	_	
Antiproliferative Activity of	2014-2015	Rajshahi	Principal	Completed
Metabolites Extracted From Isolated	622-5/52/Research	University	Investigator	
Microorganisms of Environment	grant/Science/2012	UGC		
Antiproliferative activity of a Schiff	2017-2018	Rajshahi	Principal	Completed
base in vivo and in vitro culture of	15/52/RU.Science-09/17-	University	Investigator	_
EAC cells	18/70			
Phytochemical profiling, antioxidant	2019-2020	Rajshahi	Principal	Continuing
activity of AnnonaAquamosa L. fruit	1182/5/52	University	Investigator	
pulp and its Anticancer efficiency				
with understanding molecular				
mechanism in Ehrlich Ascites				
Carcinoma (EAC) cells in Swiss				
Albino mice				

Other Experiences: Teaching 36 years in University of Rajshahi, Rajshahi-6205, Bangladesh.

Administration: Acted as Chairman in the dept. of Biochemistry and molecular Biology,

Provost; House Tutor in Women Hall of University of Rajshahi, Rajshahi-6205, Bangladesh.

LANGUAGES: Bengali, English, Hindi.

COMPUTER: General Computing skills in Windows, Office and Internet (E-mail, Browsing).Microsoft power point.

Workshops attendant/ ABSTRACTS IN PROCEEDINGS (Presented Oral):

Workshops attendant: (i) International workshop on "Basic Molecular Biology and Recombinant DNA Technology" from 04.04.1987 to 18.04.1987 at Rajshahi University, Bangladesh.

(ii) National workshop on "Low cost equipments for Chemical Education" from 05.04.1986 to 11.04.1986 at Rajshahi University, Bangladesh.

2. Papers Presented: (i) "Antineoplastic Activity of Cu BHA complex against EhrlichAscites Carcinoma in vivo" in XVI annual conference of the Indian association of Biochemical Scientists held on 3rd – 5th November 1995 at Calcatta,India.

(ii) "AliphaticHydroxamic Acids against Ehrlich Ascites Carcinoma (EAC) in vivo" in

VI Biennial National Cancer Congress held on 4th to 7th February, 1994 at calcatta,India.

SI	Title & authors	Journal	Year of
No	The & autions	Journal	publication
01.	Studies on the Boichemical and Nutritional	The Rajshahi University	1988
01.	Aspects of the Different Varieties of Mangoes of	Studies. (Part-B) 16, PP	1700
	Rajshahi Region. N. Absar, M. Shahjahan, J. A.	209-219	
	Khanam, M. Quaisuddin, M Hassan & M. K.	209 219	
	Rahman.		
02.	Antineoplastic Activity of Copper-	Indian J. Pharmacology	1997
	Benzohydroxamic Acid Complex AgainstEhrlich	29, PP157-161	
	Ascites Carcinoma (EAC) in Mice. J. A.		
	Khanam, S. P. Bag, B. Sur & P.Sur.		
03.	Chloroaceto Hydroxamic Acid as Antitumor	Neoplasma 44 (3). PP	1997
	Agent Against Ehrlich Ascites Carcinoma in	197-201	
	Mice. P. Sur, S. P. Bag, B. Sur &J. A.Khanam,		
04.	Seasonal Variation of the Pollution Levels of	The Rajshahi University	1997
	Surface Water of Godagri Region in Western Part	Studies. (Part-B), 25	
	of Bangladesh. J. A. Khanam, A. K. Azad, M. R		
	Haque& M.S. Zaman.		
05.	Studies on Central Nervous System with	Indian. J. Pharmacology,	1997
	Benzohydroxamic Acid. J. A. Khanam, M. Das,	29, PP 433-434	
	A Gomes, S. P Bag & P. Sur.		
06.	Physico Chemical and Bacteriological Analysis of	J. Bio-Sci., 6, PP 155-	1998
	a Few Surface and Under Ground Water Samples	159	
	formNawabganj and Rajsahi Metropolis A Case		
	Study. J. A. Khanam, & M. K. Hasan.		
07.	Comparative Study of Antineoplastic Activity of	Med. J. Isl. Acad. Sci.,	1998
	Some Aliphatic and Aromatic Hydroxamic Acids	11(2) PP 57-64	
	Against Earlich Ascites Carcinoma (EAC)in		
	Mice. J. A. Khanam, S. P. Bag, B. Sur & P. Sur.		1000
08.	Antineoplastic Activity of	Bang. J. Biochem., 5,	1999
	Chloroacetohydroxamic Acid in Combination	PP25-34.	
	with Ultrasound. J. A. Khanam.		

LIST OF PUBLICATIONS

09.	Antitumour and Anti-inflammatory Activities of Hydroxmic Acids and Hydoxyurea. J. A. Khanam.	Saudi Pharm. J., 8 (I) PP.39-42	2000
10.	In vivo Cytostatic Activity of a Flavonoid Isolated from ClerodendumIndicum on Ehrlich Ascite Carcinoma (EAC) Cells Injected in Mice. M.A. A. Rahman, M. T. M. Z. Azam, J. A. Khanam, & M. A. Gafur.	J. Asiat. Soc. Bangladesh, 26(2) PP. 289-291	2000
11.	Antineoplastic Activity of Chloroacetohydroxamic Acid in Combination with Bleomycin Against Ehrlich Ascites Carcinoma (EAC) in Mice. J. A.Khanam&A. Y. K. M. MasudRana.	The Sciences, 1 (5)PP. 288-291	2001
12.	Antineoplastic Activity of Cyanohydroxamic Acid (Sodium Salt) Against Ehrlich Ascites Carcinoma in Mice. J. A. Khanam, S. Ray & A. Y. K.M. MasudRana.	The Sciences 1 (5) PP. 339-342	2001
13.	In Vitro Antibacterial Activity of 2,2-Diamino-1- AzavinylAminoamide. J. A. Khanam, A. Y. K. M. MasudRana, M. Akhtaruzzaman& M. Shajajahan.	J. Med. Scic. 2 (4) PP (198-201)	2002
14.	Analysis of Ground Water Samples Collected from Hand and Deep Tube Wells of Godagari Region in Western Part of Bangladesh. J. A. Khanam, A. K. Azad, M. S. Zaman& M.A. Mottaleb.	The Rajshahi University Studies Part (B) (in press)	2000
15.	Aristolochiaindica. Whole plant Extract as an Antineoplastic Agent, A. Y. K. M. MasudRana and J. A. Khanam.	J. Med. Sci. 2 (4) pp (202-205)	2002
16.	Antibacterial and Antifungal Activity of 2- oxo- Benzylidine (3-oxo-Aniline) Cu (II)- ethylidinediamme. M. Asad-ud-Danla, J. A. Khanam & A. Y. K. M.MasudRana	J. Med. Sci, 4 (2); 124- 127	2004
17.	Antineoplastic Screening of Some Medicinal Plants Against Ehrlich Ascities Carcinoma in Mice. A. Y. K. M. MasudRana, J. A. Khanam & M. Asad-ud-Daula.	J. Med Sci. 4 (2),; 142- 145	2004
18.	Antimicrobial Activity of Metal cystineComplexes. J. A. Khanam. M. F. Begum. J.Ara, M. Jesmin, M.A. Taher& M.M. Ali	Dhaka University J. Pharm. Sci. 5 (1-2):29- 32	2006
19.	Toxicity of Some Metal Cystine Complexes Against Confused Flour Beetle, Tribolium Castanceum (Coleoptera: Tenebrionidae)	Bang. J. Life. Sci, 19(1) 115-119	2007
20.	Antineoplastic Activity of Nickel (II) Cystine Complex Against Ehrlich Ascities Carcinoma in Swiss Albino Mice. M. Jesmin, M.M. Ali, A.K. Biswas, M.R. Habib & J. A. Khanam.	Med. J. Isl. World Acad. Sci. 16(3)135- 142	2007

21.	Biological Screening of a novel nickel (II) tyrosinecomplex.M.R.Islam,S.M.R.Islam, A.S.M Noman. J. A. Khanam, M.M. Ali, S. Alam and M.W.Lee.	Mycobiology35(I): 25-27	2007
22.	Antineoplastic Activity of Bis-TyrosinediawuaNi (II) Against Ehrlich Against Ehrlich Ascites Carcinoma J. A. Khanam. M.S.Salahuddin, M.R. Habib, M. R. Islam, M. Jesmin, M.K. Sarker&M. M. Ali	Dhaka University J. Pharm. Sci. 7 (I),33-37	2008
23.	Antimicrobial Activity of Some Schiff Base Derived from Benozin. Salicylaldihyde, Aminophenol and 2.4 Dinitrophenyl Hydrazine. M. Jesmin M.M. Ali, M.S. Salahuddin, M.R. Habib, M.R. Habiob&J. A. Khanam.	Mycobiology 36(I),70-73	2008
24.	Antineoplastic Activity of N- Salicylideneglycinato-di-aqua Ni (II) Complex Against Ehrlich Ascites Carcinoma (EAC) Cells inMiceM.M.Ali,M.Jesmin,M.K.Sarker,M.S. Salahuddin, M.R. Habib and J. A. Khanam.	Int. J. BiolChen. Sci. 2(3); 292-98	2008
25.	Pesticidal Activity of Schiff Base Complexes Derived from some Divalent Metal Acetates, Glycine and Salicylaldehyde. M. Jesmin M.M. Ali.M.N.IslamM.N.Islam,S.M.S.Shariarand J. A. Khanam.	J. Sci. Foundation 6(2), 49-56,	2008
26.	Pesticidal activity of some schiff bases derived from benzoin salicylaldehyde, aminphenol and 2,4-dinitrophenol hydrazine.M.M.Ali, M.Jesmin, S.M.A.Sahan, J.A.Khanam ,M.F.Islamand M. N. Islam.	J. Sc. Research 1(3), 641-646	2009
27	Anticancer activity of some transition metal complexes of a schiff base derived from salicylaldehyde and glycin. M. M. Ali, M.Jesmin, M. N. Islam, S. M. S. Shahriar, M. R. Habib,M. F. Islam and J. A. Khanam .	ACGC Chem. Res. Comm. (Malaysia)23;13-22	2009
28	Mercury(II) Cystine complex as antineoplastic agent. M. Jesmin, M.M. Ali, M. R. Rahman, M. R. Habib and J. A. Khanam	Med. J. Isl. W. Acad. Sci.17:2, 81-86	2009
29.	Cytotoxic Nature of Three Triazole Derivatives, M. H. Morshed, M. F. Islam, M. A Yousuf G.M.G. Hossain, M. R. Habib and J.A.Khanam .	Journal of Engineering Science1(1), 121-125.	2010
30.	Antineoplastic activity of some schiff bases derived from benzoin salicylaldehyde, aminphenol and 2,4-dinitrophenol hydrazine. M.Jesmin, M. M. Ali and J. A. Khanam .	<i>Thai. J. Pharm. Sci.</i> 2010; 34 :20-31.	2010

31.	Antineoplastic activity of acetone semicarbazone (ASC) against Ehrlich Ascites Carcinoma (EAC) bearing mice. J. A. Khanam, M.F. Islam, M. Jesmin and M. M. Ali	<i>J.Natn.Sci.Foundation</i> <i>Sri Lanka</i> 38 (4):225- 231	2010
32.	Early Detection of Cervical Intraepithelial Lesions by Simple Visual Inspection after Acetic Acid among Women in Rajshahi Medical College Hospital. N. Yusuf, M. F. Islam, H. Akhter, J. A. Khanam	Anatolian Journal of Obstetrics & Gynecology; 2(1): 70- 72.	2011
33.	Bioassay of Eucalyptus Extracts for Anticancer Activity against Ehrlich Ascites Carcinoma (EAC) Cells in Swiss Albino Mice. Farhadul Islam, HasinaKhatun, Soby Ghosh, M.M. Ali and J. A. Khanam	Asian Pacific Journal of Tropical Biomedicin2 (5): 394-398.	2011
34.	Preventive effect of Ethanol Extract of AlpiniacalcarataRosc on Ehrlich's ascitic carcinoma cell induced malignant ascites in mice. RasidaPerveen. Farhadul Islam, JahanAraKhanamand TanzimaYeasmin.	Asian Pacific Journal of Tropical Medicine; 5(2):121-125	2011
35.	Synthesis and antimicrobial screening of three triazole derivatives. M. H. Morshed, M. F. Islam, M. A. Yousuf, G.M.G. Hossain, J. A. Khanam and M.A. Salam	Dhaka Univ. J. Pharm. Sci. 10 (1): 43-47	2011
36.	Screening of Cervical Cancer by VIA among women in Rajshahi Medical College Hospital. N Yusuf, M Ahmed Ali, M F Islam and J.A.Khanam	Asian Pacific Journal of Tropical Diseases 2(1): 70-72	2012
37	Growth inhibition and apoptosis of Ehrlich ascites carcinoma cells by methanol extract of <i>Eucalyptus</i> <i>camaldulensis</i> . Farhadul Islam, Hasinakhatun, Mahbubakhatun, Shaikh MohummadMohsin Ali and JahanAraKhanam .	Pharmaceutical biology, 2013 ; 1-10.	2013
38	HepatoprotectiveEffect of Acetone Semicarbazone (ASC) on Ehrlich Ascites Carcinoma (EAC) induced carcinogenesis in experimental mice. Farhadul Islam, M. M. Ali and J.A.Khanam.	Asian Pacific Journal of Tropical Biomedicin ,2013;3(2): 105-110.	2013
39	Antiproliferative and hepatoprotectiveactivityof metabolites from Corynebacteriumxerosis against Ehrlich Ascites Carcinomacells. Islam F, Ghosh S, Khanam JA .	Asian Pacific Journal Tropical Biomedicine 2014;4:S284-92.	2014

40	Ap-Menth-1-ene-4,7-diol(EC-1)fromEucalyptuscamaldulensisDhnh.TriggersApoptosis and Cell Cycle Changes in EhrlichAscites Carcinoma Cells. Islam F, Khanam JA,Khatun M, Zuberi N, KhatunL, Kabir SR, RezaMA, Ali M,Rabbi MA, Gopalan V, LamAK.	PhytotherapyResearch; 29 (4), 573-581	2015
41	Investigation of phytochemicals and antioxidant activities in the leaves methanolic extract from Moringaoleifera plants grown in Bangladesh. Plabon Kumar Das, Mst Ayesha Siddika, SahariaYeasmin Asha, SuraiyaAktar, Farhadul Islam, JahanAraKhanam, MdAbdurRakib.	Journal of Pharmacognosy and Phytochemistry 8 (4), 2502-2508	2019
42	2', 4'-dihydroxy-3, 4-methylenedioxychalcone Activate Mitochondrial Apoptosis of Ehrlich Ascites Carcinoma Cells.Alfred King-Yin Lam MahbubaKhatun, Farhadul Islam*, VinodGopalan, Md. Motiar Rahman, Natasha Zuberi, LaboniKhatun, Md. AbdurRakiba, Md. Azizul Islam, JahanAraKhanam .	Current Drug Therapy; 15 (4), 337-350	2019
43	In vitro antioxidant and antidiabetic assessment of extracts from the bark of micheliachampaca, a medicinal plant in bangladesh. RuksanaYesmin, Plabon Kumar Das, HazratBelal, SuraiyaAktar, Mst Ayesha, MdAbdurRakib, Farhadul Islam, JahanAraKhanam.	Pharmaceutical Research; 8 (9): 1505-1526.	2019
44	Natural compounds targeting cancer stem cells: a promising resource for chemotherapy. Plabon K Das, TasnimZahan, AbdurRakib, Jahan A Khanam , Suja Pillai, Farhadul Islam.	Medicinal Chemistry;19 (15):	2019
45	Novel therapeutics against breast cancer stem cells by targeting surface markers and signaling pathways. Plabon K Das, Md A Rakib, Jahan A Khanam , Suja Pillai, Farhadul Islam.	Current stem cell research & therapy; 14 (8): 669-682	2019
46		Molecular diagnosis & therapy; 24 (1): 69-83	2020

	JahanAraKhanam, Suja Pillai, Farhadul Islam.		
47	Moringaoleifera leaves methanolic extract inhibits angiotensin converting enzyme activity in vitro	J AdvBiotechnolExpTher.; 2(2): 73-77	2020
	which ameliorates hypertension. SuraiyaAktar,		
	Plabon Kumar Das, SahariaYeasmin Asha, Mst		
	Ayesha Siddika, Farhadul Islam, JahanAraKhanam,		
	MdAbdurRakib		
48	Antiproliferative Activity and Apoptotic	Anti-cancer agents in medicinal chemistry;	2020
	Efficiency of Syzygiumcumini Bark Methanolic		
	Extract against EAC Cells In Vivo. Mst Ayesha		
	Siddika, Plabon K Das, Saharia Y Asha, SuraiyaAktar,		
	Abu Rahyan M Tareq, Ayesha Siddika, MdAbdurRakib,		
	Farhadul Islam, JahanAraKhanam .		
49	Plasticity of cancer stem cell: origin and role in	Stem cell reviews and reports; 1-16	2021
	disease progression and therapy resistance. Plabon		
	Kumar Das, Suja Pillai, MdAbdurRakib,		
	JahanAraKhanam,VinodGopalan, Alfred KY		
	Lam, Farhadul Islam		