

Muhammad Ali Siddiquee

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CURRICULUM VITAE

Mailing Address

CSO & Head,
Grain Quality and Nutrition Division
Bangladesh Rice Research Institute
Gazipur-1701, Gazipur,
Bangladesh

Citizenship: Bangladeshi

Date of Birth: July 11, 1964

Sex: Male

Field of Specialization: Grain Quality and Nutrition

EDUCATION

Degree	Institute	Year	Subject Studied
PhD (Biochemistry and Molecular Biology)	University of Dhaka	2010	Title: Nutritional Properties of Some Traditional and High Yielding Varieties (HYV) Rice of Bangladesh Subject Studied: Advanced Nutrition and Biochemistry of Drug
M Sc (Biochemistry)	University of Dhaka	1985	Chemistry of Natural Products, Industrial Biochemistry, Molecular Biology and Genetic Engineering, Plant Biochemistry and Plant Biotechnology. Basic Immunology and Human Nutrition
B Sc (Biochemistry)	University of Dhaka	1984	Biophysical Chemistry, Bioorganic Chemistry, Introductory Biochemistry, Enzymology, Metabolism, Bioenergetics,

			Endocrinology, Clinical Biochemistry, Cell Biology, Oncology and Virology, Neurochemistry, Human Physiology. Human Nutrition.
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Service Record at BRRl

Job Title/Designation	Joining date	Ending date	Division
Scientific Officer (SO)	1 st December 1996	1 st February 2000	Grain Quality and Nutrition Division
Senior Scientific Officer(SSO)	2 nd February 2000	9 th October 2001	Plant Physiology Division
Senior Scientific Officer(SSO)	10 th October 2001	17 th May 2009	Grain Quality and Nutrition Division
Principal Scientific Officer (PSO) and Head	17 th May 2009	24 th August 2013	Grain Quality and Nutrition Division
Chief Scientific Officer (CSO) and Head	25 th August 2013	Till to day	Grain Quality and Nutrition Division

TRAINING COURSES COMPLETED

Organization	Year	Name of Program
IRRI	2014	Workshop on Rice Breeders Expert Elicitation
Indonesia	2013	Carotenoid Analysis Training
Bangladesh Rice Research Institute, Gazipur	2011	Breeder Seed Production
Bangladesh Academy of Rural Development, Comilla	2011	Administrative and Financial Management
Bangladesh Rice Research Institute, Gazipur	2008	Rice Production Training
University of Dhaka, Dhaka	2008	33 rd Training Program of NITUB on the use and maintainans of Atomic Absorption Spectrophotometer
Institute of Food and Radiation Biology, Atomic Energy Commission, Dhaka	2000	National Workshop and Nuclear Techniques for pesticide and Residue Studies in Food and Environment
Bangladesh Rice Research Institute, Gazipur	1998	Hybrid Rice Production Training course
Bangladesh Rice Research Institute, Gazipur	1997	Rice Production Training course
Bangladesh Rice Research Institute, Gazipur	1997	Food and Nutrition Security in Bangladesh

PROFESSIONAL/RESEARCH EXPERIENCES

I am well to operate independently Atomic Absorption Spectrophotometer, High Performance Liquid Chromatography, Micro wave digester, Grain Auto Analyzer and few numbers of instruments are available to do the same.

I was served as an Analytical/Quality Control Officer (More than one) renowned chemical laboratory (including **Pesticide** and **Pharmaceutical Industries**) from the **12th January 1991 to 29th November 1996**.

Technology Developed

No.	Technology Developed	How country/ Farmer/User will be benefited
1	Pre-soaking milled rice for 30 minutes in water shortens cooking time and elongates more in length upon cooking to give a good look	The method would help to save energy and cooking time
2	Micronutrients content of parboiled milled rice is higher than that of non-parboiled rice.	Vulnerable population will be benefited
3	Glycemic Index (GI) decreases with increased parboiling	Beneficiaries who are those suffer from different types of life style diseases.

Research Program Developed Supervised and Executed

- (xii) Determination of physicochemical and cooking properties of rice grain
- (ii) Study on elongation ratio of common premium quality of rice grain
- (iii) Study on protein digestibility of rice and rice products
- (iv) *In vitro* digestibility of rice starch
- (v) Study on fatty acid content in rice fat
- (vi) G×E effect on zinc and iron content of BRRI varieties
- (vii) Study on preparation methods of puffed and popped rice

Member of the Professional Associations

(i)	Nutritional Society of Bangladesh (NSB) (LM-390).
(ii)	Society for Pharmaceutical Chemists (SPC) (LM-0019)
(iii)	Graduate Biochemists Association (BBS) Life Member (Web-Page)*
(iv)	Bangladesh Society for Biochemistry and Molecular Biology (BSBMB) Life Member (Web-Page)
(v)	Bangladesh Association of Scientists & Scientific Professions (BASSP) LM
(vi)	Registered Graduate (DU) LM 6677
(vii)	Agriculturists Form of Bangladesh (LM)
(viii)	Asiatic Society of Bangladesh (LM1771)
(ix)	Bangladesh Association for the Advancement of Science (BAAS) M-2069 (i)
(x)	Bangladesh Biggani Samiti M-108
(xi)	Bangladesh Rice Research Institute Scientists Association (BRRISA)
(xii)	Bangladesh Botanical Society MA-404
(xiii)	Global Network of Bangladeshi Biotechnologists LM00019

Co-Supervisor

(A) The following researches for MS thesis at the Institute of Nutrition and Food Science, University of Dhaka during the period of 2008-2013

- 1) Mineral content of most commonly consumed cereals, pulses and potatoes, 2009.
- 2) Proximate nutrient content of cereals, pulses and potatoes, 2009.
- 3) Determination of proximate composition of pulses and isolation of protease 2009.
- 4) A comparative study on the nutritional quality of live varieties of Jujube (*Bitter plum*) 2009.
- 5) Estimation of mineral content in some selected fish of Bangladesh, 2010.
- 6) Analysis of proximate nutrient content in some selected fish of Bangladesh, 2010.
- 7) Effect of climate and environment on proximate and mineral contents of cereals food, 2010.
- 8) Nutrient profile of orange-fleshed sweet potatoes grown in Bangladesh, 2013
- 9) Nutrient profile of some selected leafy vegetables consumed ethnic community of Bangladesh, 2013.
- 10) Nutrient profile of some selected traditional leafy vegetables consumed by the garo community of Bangladesh, 2013
- 11) Nutrient profile of some selected leafy vegetables consumed by ethnic and indigenous people of Bangladesh, 2013

(B) The following researches for MS thesis at the Department of Applied Chemistry and Chemical Engineering, University of Dhaka during the period of 2008-2010.

- 1) Physicochemical and minerals profile of high yield aromatic rice varieties of Bangladesh by atomic absorption spectroscopy

(C) The following researches for PhD thesis at the Department of Agronomy (Seed Science and Technology Unit), University of Bangabandhu Sheikh Mujibur Rahman Agricultural University during the period of 2008-2010.

- (1) Growth yield and Seed Quality of Short Duration Rice varieties as Influenced by Population Density and Nitrogen Rates.

(D) The following researches for MS thesis at the Department of Food and Nutrition, Home Economics College during the period of 2009-2010.

- (1) Glycemic status and nutritive values of common Bangladeshi rice.

(E) The following researches for MS thesis at the Department of Genetics and Plant Breeding, Sher-e-Bagla Agricultural University, during the period of 2009-2010.

- (1) Yield and quality analysis of some advanced lines of Basmati rice.

(F) The following researches for MS thesis at the Department of Life Sciences, North South University during the period of 2008-2010.

- (1) Determination of physicochemical properties of Balam accessions.

TEACHING EXPERIENCES

Adjunct Faculty, CBT-541: **Plant Biochemistry**,

University of Bangabandhu Sheikh Mujibur Rahman
Agricultural University.

Full Papers (National): Principal Author-1

- 1 **Siddiquee MA**, Biswas SK, Mahbub AA, Khatun M. Studies on morphological and physicochemical Properties of local improved aus rice of Bangladesh. Bangladesh J. Biochem. 2002;**8**:23-30.

Full Papers (National): Co-Author-13

1. Husain MM, Salam MA, **Siddiquee MA**. The influences of seedling methods of rice in upland saline soils environment. Bangladesh J Environ Sci 1997;**3**:77-85.
2. Husain MM, Rashid MM, Haque MA, Salam MA, Kabir H, **Siddiquee MA**. Effects of variety and sowing method on the growth and yield of upland aus rice in coastal saline soils. Bangladesh J Environ Sci. 2000;**6**:136-40.
3. Biswas JK, Pervin S, **Siddiquee MA**, Hossain ST, Mahbub AA, Islam MR. Genotype response of rice (*Oryza Sativa* L.) seedling growth as affected by volatile fatty acids. Bangladesh J Environ Sci. 2000;**6**:396-400.
4. Mahbub AA, Gomosta AR, Hossain ST, **MA Siddiquee**. Effect of nitrogen levels on the growth dynamics and yield of indigenous and exotic rice varieties. Bangladesh J Environ Sci. 2000;**6**:401-8.

5. Khatun M, Shamsuddin AKM, Fakir MSA, **Siddiquee MA**, Mahbub AA, Prasad B. Genetic diversity among some wheat varieties/lines. Bangladesh J Environ Sci 2000;**6**:497-500.
6. Mahbub AA, Gomosta AR, **Siddiquee MA**, Hossain ST. Effect of different nitrogen levels and water depths on lodging of BRRIdhan32. Bangladesh J Environ Sci. 2000;**6**:532-42.
7. Biswas SK, Kabir KA, **Siddiquee M A**, Banu B, Choudhury NH. Physicochemical properties of local aromatic and balam rice varieties of Bangladesh. Ann Bangladesh Agric. 2000;**10**:93-104.
8. Biswas SK, **Siddiquee MA**, Kabir KA, Banu B, Choudhury NH. Grain quality of some binni rice varieties of Bangladesh. Bangladesh J Life Sci. 2001;**13**:181-8.
9. Rahman MA, Abedin MZ, Rahman MN, **Siddiquee MA**. Available potassium balance sheet for rainfed wheat based forage-cropping system on the old Brahmaputra floodplain soil. Bangladesh J Sci Ind Res. 2002;**37**:145-50.
10. Muttaleb MA, Hossain MS, **Siddiquee MA**, Afrad MSI. Problems and gender involvements in rice production in selected flood prone low land area of northeast Bangladesh. J Socio Res Dev .2005;**2**:75-80.
11. Mahmood SF, Sultana T, Miah MA, **Siddiquee MA**, Islam MR. Trace elements profile of high yielding varieties of foxtail millets (*Setaria Italia L.*) grown in Bagladesh.Dhaka Uni J Sci 2010; 58:101-4
12. Das KC, Rahman MS, **Siddiquee MA**, Seraj ZI. Analysis of anther derived rice (*Oryza Sativa L.*) genotypes for their tolerance to salinity. Eco-friendly Agril J. 2010;**3**:254-60.
13. Islam SN, Khan MNI, Akhtaruzzaman M, **Siddiquee MA** et al. Food Composition Tables and Database for Bangladesh with Special Reference to Selected Ethnic Foods. First Published 2012. Institute of Nutrition and Food Science, University of Dhaka, Dhaka-1000, Bangladesh
14. Islam MZ, Banik S, Haque MA, Siddiquee MA,

Full Papers (International): Principal Author-3

1. **Siddiquee MA**, Biswas SK, Kabir KA. Physicochemical properties of rice grains of boro cultivars of Bangladesh. Bangladesh J Bot. 2002;**31**:117-21.
2. **Siddiquee MA**, Biswas SK, Kabir KA, Mahbub AA, Dipti SS, Ferdous N, Biswas JK, Banu B. A comparative study between hybrid and inbred rice in relation to their yield and quality. Pakistan J Bio Sci. 2002;**5**:550-52.
3. **Siddiquee MA**, Biswas SK, Ferdous N. Changes of Dry matter content and nutrients in developing Rice Grain of BR3 and Hbj IV. Pakistan J Bio Sci. 2003;**6**:774-6.

Full Papers (International): Co-Author-9

1. Biswas JK, Ando H, Kakuda K, **Siddiquee MA**, Hossain ST Biswas SK. Comparative toxicity of aliphatic and aromatic acids of seedling attributes of anoxia-tolerant rice (*Oryza Sativa* L.) genotypes growth in hypoxia. Pakistan J Bio Sci. 2001;**4**:1341-4.
2. Biswas JK, Ando H, Yasmeen R, Hossain ST, **Siddiquee MA**, Mirda AJ. Seedling establishment of an anoxia-tolerant rice genotype as affected by soil source and days after submergence. Pakistan J Bio Sci. 2001;**4**:1495-7.
3. Biswas JK, Ando H, **Siddiquee MA**, Yasmeen R, Hossain ST, Mahbub AA. Organic acids toxicity on seedling attributes of anoxia tolerant rice genotypes growth in hypoxia. Pakistan J Bio Sci 2002;**5**:36-9.
4. Dutta AK, Gope PS, Banik S, Makhnoon S, **Siddiquee MA**, Kabir Y. Antioxidant properties of ten high yielding rice varieties of Bangladesh. Asian Pacific J of Tropical Biomedicine. 2012;**S99-S103**.
5. Dutta AK, Gope PS, Makhnoon S, Rahman MS, **Siddiquee MA**, Kabir Y. Effect of solvent extraction on phenolic content, antioxidant and alfa amylase inhibition activities of *Swertia chirata*. Int J Drug Dev & Res. 2012;**4**:317-25.
6. Banik S, Paul PLC, **Siddiquee MA**, Dutta AK, Hosen S. Effect of AWD irrigation methods on physiological and cooking properties of BRRI dhan28. Int J Sustain Agril Tech. 2012;**8**:12-6

7. Dutta AK, **Siddiquee MA**, Shahadat H, Kabir Y. Finlay green tea possesses the highest in vitro antioxidant activity among the twenty commercially available tea brands of Bangladesh. *Malaysian J Phar Sci*. 2013;**11(2)**:11-20.
- 8.. Akhtaruzzaman M, Rahman S, Kawser M, **Siddiquee MA**, Islam SN. Carotene, Mineral and Proximate Nutrients Content of Palmyra Palm Fruit-a Monsoon Fruit of Rural Bangladesh. *Euro J Agril Sci* 2013;11:57-60.
9. Gope PS, Dutta AK, Makhnoon S, Banik S, **Siddiquee MA**, Kabir Y. Effect of solvent and extraction time on the properties of citrus macroptera. *Int J Drug Dev & Res*.2014;**6**:280-285.
10. Dutta AK, Gope PS, Banik S, Rahman MS, Makhnoon S, **Siddiquee MA**, Kabir Y. Physicochemical, cooking and antioxidant properties of nine aromatic rice cultivars of Bangladesh. *Acta Alnt J Drug Dev & Res*.2014;**6**:280-285.

Abstract (National): Co-Author-1

1. Makhnoon S, **Siddiquee MA**. Antioxidant and physical properties of aromatic and high yielding variety rice of Bangladesh. Conference of the BSBMB, 2012;P-S4-68.
2. **Siddiquee MA**, Shozib HB, Jhan S. Pre-Germinated brown rice generate elevated level of bio-activencomponent, gamma-aminobutyric acid (GABA). National Conference on Biochemistry, industry sustainable economy, the BSBMB Conference-2015;05,P-29.
3. Shozib HB, Jhan S, **Siddiquee MA**. Comparative study on apprent amylase cointent and protein in Bangladeshi rice cultivars. National Conference on Biochemistry, industry sustainable economy, the BSBMB Conference-2015; 20,P-101.
4. Hosen S, **Siddiquee MA**, Jhan S, Ferdous N, Shozib HB. Physicochemical properties of some aman cultivars in Bangladesh. National Conference on Biochemistry, industry sustainable economy, the BSBMB Conference-2015;49,P-138.

Abstract (International): Co-Author-3

1. Makhnoon S, Dutta AK, **Siddiquee MA**. Physicochemical properties of ten high yielding rice varieties of Bangladesh. Abstracts of the Fifth Int Bot Conference2011

2. Bari MN, Rahman MS, **Siddiquee MA**, Ahmed N, Rabbi, MF, Shah MAL. Pollutants in Rice: Probable sources. Int Sci Pro (ISP), Uppsala University, Sweden, 2012;p-5
3. Shozib HB, Jahan S, **Siddiquee MA**, Nakayama S. Ileal pacemaker activity analysis by microelectrode array (MEA) in mice lacking interleukin-10. Abstract of the 2nd Int Conference of Biotechnology in Health and Agriculture (ICBHA) 2015.

Abstracts (International): Principal Author-1

1. **Siddiquee MA**, Shozib HB, Hosen S Kabir Y. Comparative study on phytic acid content of traditional and HYV rice in Bangladesh. Abstract of the Sixth Int Bot Conference 2014.

Proceedings of seminar (Oral/Poster)/Workshop

(National): Principal Author-4

Seminar

1. **Siddiquee MA**. Nutrient content of rice grown at different regions of Bangladesh. Dept Biochem Mol Bio. Kamaluddin Ahmed Gallery, DU.2009.
2. **Siddiquee MA**. Nutritional properties of some traditional and high yielding varieties of rice in Bangladesh. BRRI Auditorium. 2009.
3. **Siddiquee MA**. Nutritional properties of some traditional and high yielding varieties of rice in Bangladesh. Dept Biochem Mol Bio. Kamaluddin Ahmed Gallery, DU.2010.
4. **Siddiquee MA**. Diabetes management with rice/food supplement. BRRI Auditorium

Seminar

1. Islam SN, Khan MNI, Akhtaruzzaman M, Huque S, Jalil MA, **Siddiquee MA**, Roy AK, Shajib MTI, Ahsan M, Barua S. Preparation of food composition database with special reference to indigenous and ethnic foods. 2009; S6-P-2, 154.

Supported by FAO-NPFCSP, Funded by EC& USAIDS
Under the Programme Research Fund

2. Quasem MA, **Siddiquee MA**. Reduction of post-harvest losses in rice. Paper presented at CIRDAP Workshop, CIRDAP, Dhaka. 2009
3. Sattar SA, **Siddiquee MA**, Nahar Qumrun. Nutritional qualities of Bangladesh rice varieties. Paper presented (18th April' 2012) at the Seminar on Agriculture-Nutrition linkages within the Bangladesh Country Investment Plan (CIP): A Road Map towards Investment in Agriculture, Food Security and Nutrition, held at Hotel Sarina, Banani,
4. Nahar Q, Choudhury S, Faruque MO, Sultana SSS, **Siddiquee MA**. Desirable Dietary Pattern for Bangladesh. **Presented the above mentioned paper at stakeholder meeting** (16th April' 2013).
National Food Policy Capacity Strengthening Program .
With the support of the **European Union** and **USAID**
5. **Siddiquee MA**, Shozib HB, Jhan S. **Pre-Germinated brown rice generate elevated level of bio-active component, gamma-aminobutyric acid (GABA)**. National Conference on Biochemistry, industry sustainable economy, the BSBMB Conference-2015; Oral-05, P-29.

International): Co-Author-2

Proceedings

1. Islam SN, Khan MNI, Akhtaruzzaman M, Huque S, Ahsan M, Shajib MTI, Mondal MAJ, **Siddiquee MA**, Barua S. Preparation of food composition database with special reference to indigenous and ethnic foods. **NFPCSP**. 2010; PR 11/08, p 108.
National Food Policy Capacity Strengthening Program.
With the support of the **European Union** and **USAID**
2. Nahar Q, Choudhury S, Faruque MO, Sultana SSS, **Siddiquee MA**. Desirable Dietary Pattern for Bangladesh. **NFPCSP**. 2012;3:261-82.
National Food Policy Capacity Strengthening Program ().
With the support of the **European Union** and **USAID**

International): Co-Author-5

Poster/Folder

1. Akhtaruzzaman M, Rahman S, Fatema SK, Shamim AA, **Siddiquee MA**, Roy AK, Yusuf HKM, Bhattacharjee L, Barua S, Islam SN. Carotenoids and selected nutrient content of palmyra palm fruit a monsoon fruit rural Bangladesh.2009;**Poster Code S6-P-2, 129.**

8th International Food Data Conference, October,1-3,2009, Bangkok Thailand.
2. Islam SN, Akhtaruzzaman M, Khan MNI, Huque S, Ahsan M, Shajib MTI, Mondal MAJ, **Siddiquee MA**, Roy AK, Yusuf HKM, Bhattacharjee L, Barua S. Preparation of food composition database with special reference to indigenous and ethnic foods. 2009; **Poster CodeS6-P-1, 80.**

8th International Food Data Conference, October,1-3,2009, Bangkok Thailand.
3. Islam SN, Khan MNI, Akhtaruzzaman M, Huque S, Jalil MA, **Siddiquee MA**, Roy AK, Shajib MTI, Ahsan M, Barua S. Preparation of food composition database with special reference to indigenous and ethnic foods. 2009; **S6-P-2, 154.**

Supported by FAO-NPFCSP,Funded by EC& USAIDS
Under the Programme Research Fund
4. Nahar Q, Choudhury S, Faruque MO, Sultana SSS, **Siddiquee MA**. Dietary Guide Line for Bangladesh 2013 BIRDEM ,Dhaka.

5. Shozib HB, Jahan S, **Siddiquee MA**, Nakayama S. Ileal pacemaker activity analysis by microelectrode array (MEA) in mice lacking interleukin-10. Abstract of the 2nd Int Conference of Biotechnology in Health and Agriculture (ICBHA) 2015. **P-57, ID-145**.
6. Shozib HB, Jhan S, **Siddiquee MA**. Comparative study on apparent amylase content and protein in Bangladeshi rice cultivars. National Conference on Biochemistry, industry sustainable economy, the BSBMB Conference-2015; Poster-20,P-101.
7. Hosen S, **Siddiquee MA**, Jhan S, Ferdous N, Shozib HB. Physicochemical properties of some aman cultivars in Bangladesh. National Conference on Biochemistry, industry sustainable economy, the BSBMB Conference-2015; Poster-49,P-138.

International): Principal -Author-1
Poster/Folder

1. **Siddiquee MA**, Shozib HB, Hosen S Kabir Y. Comparative study on phytic acid content of traditional and HYV rice in Bangladesh. Abstract of the Sixth Int Bot Conference 2014. **ID-2, P61**.

Books

1. Mottaleb A, Islam A, **Siddiquee MA**, Ullah S, Begum B, Reza T. Poverty Elimination Through Rice Research Assistance 2000, Publication Division, BRRI, Gazipur.
2. Nahar Q, Choudhury S, Faruque MO, Sultana SSS, **Siddiquee MA**. Desirable Dietary Pattern for Bangladesh 2013, BIRDEM ,Dhaka.
3. Nahar Q, Choudhury S, Faruque MO, Sultana SSS, **Siddiquee MA**. Dietary Guide Line for Bangladesh 2013, BIRDEM ,Dhaka.

REVIEWER

1. Bangladesh Rice Journal
2. Eco-Friendly Agriculture Journal