

# SUMMARY OF CURRICULUM VITAE

**DR. MD. ABDUL LATIF**



1. **Qualifications** : BSc (Ag) (BAU), MS (BSMRAU), PhD (UPM)
2. **Specialization** : Plant Pathology and Molecular Biology
3. **Date of Birth** : 30 December 1965
4. **Nationality** : Bangladeshi
5. **Marital Status** : Married
6. **Address (Office)** : PSO and Head,  
Plant Pathology Division  
Bangladesh Rice Research Institute  
Gazipur-1701, Bangladesh

## 7. University Education:

Degree obtained	University	Year	Area of Specialization
Doctor of Philosophy	Universiti Putra Malaysia (UPM)	2001	Molecular Biology
Master of Science	BSMR Agricultural University (BSMRAU)	1992	Plant Pathology
Bachelor of Agricultural Science	Bangladesh Agricultural University (BAU)	1987	Agriculture

## 8. Scientific experiences and training in home and abroad:

- i. Received special training on marker assisted breeding in Bangladesh Rice Research Institute in collaboration with IRRI from 18-27 November, 2008
- ii. Received training on Introduction to new developments in GxE analysis and interpretation of results in Bangladesh Rice Research Institute in collaboration with IRRI from 17-29 August, 1996.
- iii. Participation of workshop on Participatory Variety Selection (PVS) and Participatory Plant Breeding (PPB) from 11-12 October, 2001.
- iv. Participation of workshop towards establishing property rights of BRRI released varieties from 17-18 March, 2003.
- v. Participation and paper presented on "Evidence of sibling species in brown planthopper, *Nilaparvata lugens* complex" presented in 5<sup>th</sup> International genetics symposium and 3<sup>rd</sup> International rice functional genomics symposium, 19-23 November, 2005, Manila, Philippine

- vi. Participation and paper presented on “Development of a biological species in *Nilaparvata lugens* complex: An evolution” presented in 2<sup>nd</sup> International Rice Congress, 9-13 October, 2006, New Delhi, India.
- vii. Participation and paper presented on “Inheritance and association of malathion resistance in brown planthopper, *Nilaparvata lugens*.” Presented in Fifth International Conference on Plant Protection in the tropics, 15-18 March 1999, Kuala Lumpur, Malaysia
- viii. Participation and paper presented on “Verification of components of the system of rice intensification (SRI) and comparison with best conventional management practices in Bangladesh.” Presented in World Rice Research Conference, 5-7<sup>th</sup> November, 2004, Tsukuba, Japan.
- ix. Participation and paper presented on “Screening of rice genotypes and management of ufra disease of rice”. Presented in “International Conference on Emerging Issues on Research and Development, April 4-6, 2007, Kathmandu, Nepal.

#### 9. Employment experiences:

Employer	Designation and grade	Duration	Major areas of research
BRR, Gazipur, Bangladesh	Principal Scientific Officer and Head	Till to date	Plant Pathology and Molecular Biology
UPM, Malaysia	Senior Research Fellow	June 2012 August 2014	Molecular Plant Pathology, and marker assisted selection for varietal improvement of rice
UPM, Malaysia	Principal Post-doctoral Researcher	Feb. 2010- January, 2012	Molecular Plant Pathology, and marker assisted selection for varietal improvement
BRR, Gazipur, Bangladesh	Principal Scientific Officer	2006 to 2014	Plant Pathology and Molecular biology
BRR, Gazipur, Bangladesh	Senior Scientific Officer	1999 to 2006	Plant Pathology and Molecular biology
BRR Gazipur, Bangladesh	Scientific Officer (Lecturer grade)	1993 to 1993	Plant Pathology
IPSA, Gazipur, Bangladesh	National Science and Technology fellow	1991 to 1992	Plant Pathology

#### 10. Expertise/interst on subjects to teach:

From 2000 to date, I am capable of development of courses and teaching of undergraduate and post-graduate students on basic and applied areas of agricultural sciences: Introduction to plant Plant Pathology, Molecular Plant Pathology, Molecular Biology, Genetics of Microbes/Pathogens and Disease Resistance, Molecular Markers and Genetic Polymorphism, Gene Expression, Basic Plant Biotechnology, Research Methodology.

## **11. Interest on areas to conduct basic and advanced research**

- a. Varietal improvement of rice against major diseases through marker assisted selection.
- b. Linkage and QTL mapping of biotic stresses and fragrance of plants.
- c. Gene pyramiding of rice disease resistance
- d. Studies on gene expression in plants, pathogens and insects
- e. Studies on population genetics and inheritance pattern of plant, pathogens and insects
- f. Identification of biotypes, pathotypes or physiological races of insect and pathogens using differential systems and molecular approaches
- g. Studies on genetic diversity of plants, pathogens and insects based on phenotypes and molecular markers.
- h. Studies on cryptic and sibling species based on molecular and host-plant Relationship
- i. Integrated pest management
- j. Studies on host-plant interaction with pathogens

**Above all areas are relevant to my scientific articles published in high impact factor journals**

## **12. Supervision of post-graduate students:**

**Completed: 10**

MS = 09 (8 as chairman and 1 as member)

**PhD=01 (as member)**

**On-going: 16**

PhD = 9 (1 as chairman and 8 as member) and MS = 7 (1 as Chairman and 6 as member)

## **13. Mentoring of post-doctoral fellows:**

Completed: 04

## **14. Research/project activities & grants received:**

Thirteen (13) national and international research projects (6 completed and 7 on-going), Project leader of 4 projects, Principal investigators/Co-researchers of 9 projects

## **15. Publications:**

**Journal publication: 131**

Citation Index journal (Impact factor journal): 102 (Published **97**; In-press **5**)

Non Index journal: **29**

**National and International project reports: 05**

**Booklet and Book Chapter: 05**

**Proceedings/Abstracts of National and International conference/seminars: 54**

International Conferences/Seminars: 50

National Conferences/Seminars: 04

**Bulletin and Folder for technology dissemination: 08**

**16. Award received (national/International): 10**

Academic award: 2

MPOB best publication award: 2

Research and innovation award: 6

**17. Research leadership and contribution to nation, Institute and society:**

Leading in the research field of Plant Pathology to increase rice productivity, as committee members of the professional society, expert reference, invited speaker, book editor, referee and member of different organizing committees.

**18. Professional affiliation:**

- I. Life member of the Bangladesh association of Biotechnology and Genetic Engineering (BABGE),
- II. Member of the Genetics Society of Malaysia
- III. Life Member of the Phytopathological Society of Bangladesh
- IV. Member of the Botanical Society of Bangladesh
- V. Member of the Crop Science Society of Bangladesh
- VI. Member of the Bangladesh Association of Advancement of Science, Bangladesh

## DETAILED CURRICULUM VITAE

### I. PERSONAL DETAILS

Full Name: MD. ABDUL LATIF  
Position: Principal Scientific Officer and Head  
Department/Divison: Plant Pathology Division  
Bangladesh Rice Research Institute  
Current Address: Plant Pathology Division  
Bangladesh Rice Research Institute  
Gazipur-1701, Bangladesh  
Email: alatif1965@yahoo.com  
Fax: +88-029261110  
Handphone: +88-01715034095  
Nationality: Bangladeshi  
Date of Birth: 30<sup>th</sup> December 1965

**Field of Specialization:** Plant Pathology and Molecular Biology (H-Index=10)

**Web sites for publication informations:** Scopus Author ID: 22980446000  
<http://orcid.org/0000-0002-4289-575X>  
[http://scholar.google.com.my/citations?user=Md3jEa\\_oAAAAJ&hl=en](http://scholar.google.com.my/citations?user=Md3jEa_oAAAAJ&hl=en)

**Interest on areas to conduct research :**

- a. Varietal improvement of plants against rice diseases through conventional breeding and marker assisted selection.
- b. Gene pyramiding of disease resistance
- c. Linkage and QTL mapping of biotic stresses
- d. Integrated pest management
- e. Studies on gene expression in plants, pathogens and insects
- f. Studies on population genetics and inheritance pattern of plant, pathogens and insects
- g. Identification of biotypes, pathotypes or physiological races of insect and pathogens using differential systems and molecular approaches
- h. Studies on genetic diversity of plants, pathogens and insects based on phenotypes and molecular markers.
- i. Studies on cryptic and sibling species based on molecular and host-plant relationship
- j. Studies on host-plant interaction with pathogens and insects

**Above all areas are relevant to my scientific articles published in high impact factor journals**

**Language:**

Bangla, English, Bahasa Malaysia, Urdu, Arabic (Poor)

**II. ACADEMIC QUALIFICATIONS**

<b>Qualification obtained</b>	<b>Institution</b>	<b>Year obtained</b>	<b>Area of Specialization</b>
Doctor of Philosophy (PhD)	Universiti Putra Malaysia (UPM)	2001	Molecular Plant Pathology and Molecular Biology
Master of Science	Bangladesh Agricultural University (BAU)	1992	Plant Pathology
Bachelor of Agricultural Science	Bangladesh Agricultural University (BAU)	1987	Agriculture (Plant Pathology, Plant Breeding and Genetics and Entomology)

### III. EMPLOYMENT EXPERIENCES

Employer	Designation and grade	Duration	Major areas of research
BIRRI, Gazipur, Bangladesh	Principal Scientific Officer and Head	Till to date	Plant Pathology and Molecular Biology
UPM, Malaysia	Senior Research Fellow	June 2012 August 2014	Molecular Plant Pathology, and marker assisted selection for varietal improvement of rice
UPM, Malaysia	Principal Post-doctoral Researcher	Feb. 2010- January, 2012	Molecular Plant Pathology, and marker assisted selection for varietal improvement
BIRRI, Gazipur, Bangladesh	Principal Scientific Officer	2006 to 2014	Plant Pathology and Molecular biology
BIRRI, Gazipur, Bangladesh	Senior Scientific Officer	1999 to 2006	Plant Pathology and Molecular biology
BIRRI Gazipur, Bangladesh	Scientific Officer (Lecturer grade)	1993 to 1993	Plant Pathology
IPSA, Gazipur, Bangladesh	National Science and Technology fellow	1991 to 1992	Plant Pathology

### IV. SCIENTIFIC EXPERIENCE AND TRAINING

Place of training/organization	Name of training/certificates	Duration	Grade
Universiti Putra Malaysia, 43400UPM, Serdang, Selangor, Malaysia	Development of blast resistant rice varieties through molecular marker assisted selection	May, 2012 to August, 2014	Satisfactory
Universiti Putra Malaysia, 43400UPM, Serdang, Selangor, Malaysia	Gene pyramiding of rice brown planthopper and bacterial blight resistance through marker assisted selection	3 <sup>rd</sup> March 2010 to 2 <sup>nd</sup> March, 2012	Satisfactory
Bangladesh Rice Research Institute (BIRRI) Gazipur-1701, Bangladesh (In collaboration with IRRI)	Marker assisted Breeding for Bangladesh	18-11-2008 to 27-11-2008	Satisfactory
Bangladesh Rice Research Institute, Gazipur-1701, Bangladesh	Rice production, Applied Research, Communication and Administration	03-12-1994 to 31-1-1995	A
BIRRI, Gazipur-1701, Bangladesh	Participatory workshop towards establishing property rights of BIRRI released varieties.	17-03-2003 to 18-03-2003	Satisfactory
Bangladesh Rice Research Institute, Gazipur-1701, Bangladesh	Introduction to new developments in GXE analysis and interpretation of results.	17-8-1996 to 29-8-1996	Satisfactory

BRRRI Regional Station, Comilla, Bangladesh	Participation of workshop on Participatory Variety Selection and Participatory Plant Breeding	11-10-2001	Satisfactory
Bangladesh Rice Research Institute, Gazipur-1701, Bangladesh	Identification, sampling and data collection of rice sheath blight disease complex	13-10-01 to 15-10-01	Satisfactory
Directorate of Agricultural Extension, Comilla, Bangladesh	Development Communication in Agriculture	12-5-02 to 13-5-02	Satisfactory
Rural Development Academy, Bogra, Bangladesh	Project Cycle Management	9-9-02 to 11-9-02	Satisfactory
BRRRI Gazipur and Regional Station, Comilla, Bangladesh	Success Case Replication	29-06-03 to 06-07-03	Satisfactory
Bangladesh Agricultural Research Council, Dhaka, Bangladesh	Technical Report Writing and Editing	10-12-2007 to 13-12-2007	Satisfactory
Bangladesh Academy for Rural Development	Administrative and Financial Management	8-03-2008 to 21-03-2008	Satisfactory
BARC, Dhaka, Bangladesh	Monitoring & Inspection of Confined Field Trial of Transgenic Crops, Bangladesh	03-06-2008 to 04-06-2008	Satisfactory

## V. PARTICIPATION IN INTERNATIONAL SEMINARS AND SYMPOSIA

1. Paper presented on “Evidence of sibling species in brown planthopper, <i>Nilaparvata lugens</i> complex.” In 5 <sup>th</sup> International genetics symposium and 3 <sup>rd</sup> International rice functional genomics symposium, 19-23 November, 2005, Manila, Philippine.
2. Paper presented as an invited speaker on “Development of durable blast, bacterial blight and Brown planthopper resistant varieties through marker assisted selection: Concept of differential systems and physiological races or biotypes.” In first Plant Breeding Seminar, 3-5 July, ABI Serdang, Selangor, Malaysia.
3. Paper presented on “Development of a biological species in <i>Nilaparvata lugens</i> complex: An evolution.” In 2 <sup>nd</sup> International Rice Congress, 9-13 October, 2006, New Delhi, India.
4. Paper presented on “Verification of components of the system of rice intensification (SRI) and comparison with best conventional management practices in Bangladesh.” In world Rice Research Conference, 5-7 <sup>th</sup> November, 2004, Tsukuba, Japan.
5. Paper presented on “Inheritance and association of malathion resistance in brown planthopper, <i>Nilaparvata lugens</i> .” In fifth International Conference on Plant Protection in the tropics, 15-18 March 1999, Kuala Lumpur, Malaysia.
6. Paper presented on “Biodiversity of ufra and blast resistant genotypes using VNTR-PCR and SSR-PCR DNA fingerprints” In international Conference on Biotechnology” June 7-8, 2008, BARC, Dhaka, Bangladesh.
7. Paper presented on “Screening of rice genotypes and management of ufra disease of rice”. In international Conference on Emerging Issues on Research and Development, April 4-6, 2007, Kathmandu, Nepal.



## VI. EXPARTISE/INTERST ON SUBJECTS TO TEACH AND AFFILIATION WITH UNIVERSITY

From 2000 to date, I am capable of development of courses and teaching of undergraduate and post-graduate students on basic and applied areas of agricultural sciences: Introduction to plant Plant Pathology, Molecular Plant Pathology, Molecular Biology, Genetics of Microbes/Pathogens and Disease Resistance, Molecular Markers and Genetic Polymorphism, Gene Expression, Basic Plant Biotechnology, Research Methodology.

Names of Institute/University	Research and teaching activities	Joining date	Ending date
Universiti Putra Malaysia, Malaysia	External research supervisor	February, 2010	Till to date
Sher-E-Bangla Agricultural University, Bangladesh	Research supervisor	February, 2005	Till to date
Bangladesh Agricultural University	Research supervisor of MS students	November, 2003	Till to date
BSMR Agricultural University, Bangladesh	Research supervisor	January, 2009	Till to date
BRRI, Gazipur, Bangladesh	Trainer for the agriculturist and graduate of different private sectors: Courses name: Rice production technologies, Marker assisted selection, Genetic of plant plant pathogen and disease resistance	November, 1993	Till to date
International Angel Association funded by Japan, Gazipur, Bangladesh	Course Instructor, Courses: Rice production technologies, Rice diseases and its management	Decemver, 1995	November, 1996
UPM, Malaysia	Teaching of bachelor students for six hour per week as a Graduate assistant: Course name, Genetic polymorphism and practical classes	December, 1996	August, 2000

## VII. SUPERVISION OF POST- GRADUATE STUDENTS (GRADUATED)

No.	Name of the MS student supervised & University	Title of the thesis	Remarks
1	M. M. Rahman, Reg. No. 26226/00781, SAU, Dhaka, Bangladesh	Morphological and molecular characterization of Tungro resistant genotypes.	Completed (June, 2007)

2	M. R. B. Talukder, Reg. No. 27550/00716, SAU, Dhaka, Bangladesh	Screening of F <sub>2</sub> populations and molecular characterization of ufra resistant genotypes.	Completed (June, 2007)
3	M. M. Rahman, Reg. No.00923, SAU, Dhaka, Bangladesh	Morphological and molecular characterization of rice blast resistant genotypes.	Completed (Sept. 2008)
4	M. W. Ullah, Reg. No. 25144/00289, SAU, Dhaka, Bangladesh	Varietal screening and management of rice ufra disease	Completed (June, 2006)
5	M. A. Rahman, Reg. No. 25287/00392, SAU, Dhaka, Bangladesh	Studies on interaction among <i>Rhizoctonia solani</i> , <i>R. oryzae</i> and <i>R. oryzae-sativae</i> causing sheath diseases of rice	Completed (June, 2006)
6	M. B. Uddin, Roll no. 2004 Ag. P. Path. JJ-17M, Dept. of Plant Pathology, BAU, Mymensingh, Bangladesh	Yield loss due to bakanae disease of rice and it's management	Completed (June, 2005)
7	M. Z. Islam, Roll no. 2004 Ag P. Path. JJ-38M, Dept. of Plant Pathology BAU, Mymensingh, Bangladesh	Some epidemiological aspects and integrated management of sheath blight disease of rice.	Completed (June, 2005)
8	M. M. Haque, Roll no. JJ17/2003, Dept. of Agril. Extension Education, BAU, Mymensingh, Bangladesh (Co-supervisor)	Farmers innovation-decision pattern and constraints faced in adopting System of Rice Intensification (SRI)	Completed (June, 2004)
9	M. Gazi Salah Uddin, Reg. No. 26241/00795, SAU, Dhaka, Bangladesh	Management of Bakanae disease through seed treating fungicides	Completed (June, 2010)

#### VIII. SUPERVISION OF POST-GRADUATE STUDENTS (ON-GOING)

No.	Position in Committee	Name of Student	Level	Thesis Title	Status
1	Member	Wendy Lau Chui Phing, UPM, Malaysia	PhD	Marker Assisted Backcross Breeding for Improvement of Fragrance Characteristic in Local Rice Variety MR269	Data Collection
2.	Member	Fahim Ahmed, UPM, Malaysia	PhD	Development of submergence tolerant rice variety through marker assisted backcross breeding	Thesis writing
3.	Member	Mahmood Reza Shabanimofrad, UPM, Malaysia	PhD	Detection and mapping of Brown Planthopper resistance QTLs in rice	Thesis writing

4.	Member	Gous Miah, UPM, Malaysia	PhD	Development of Blast Resistant rice variety through marker assisted selection of MR219 x Pongsu Seribu 2	Data collection
5.	Member	Farahnaz Sadat-Golestan-Hashemi, UPM, Malaysia	PhD	Molecular dissection and QTL mapping of aroma trait in aromatic rice using microsatellite markers	Data Collection
6.	Member	Muhammad Mahmudul Hasan, UPM, Malaysia	PhD	Development of blast resistant rice variety through makers assisted backcross breeding between MR263 x Pongsu Seribu 2	Data Collection
7.	Member	Parisa Azizi, UPM, Malaysia	PhD	Development of Rice Variety Resistant to Blast Disease Through Transferring <i>Pi-k<sup>h</sup></i> Gene	Data Collection
8.	Member	Ibrahim Wasiu Arolu, UPM, Malaysia	PhD	Markers assisted selection for high yielding and dwarfness in oil palm	Data Collection
9.	Member	Tanweer Fatah, UPM, Malaysia	PhD	Cloning of QTL and development of blast resistant rice variety through Marker Assisted Backcrossing	Data Collection
10	Chairman	Mohammad Yadegari Khouzani, UPM, Malaysia	Master with thesis	Development of high yielding hybrid watermelon variety through marker assisted selection	Data collection
11.	Member	Welland Cosmas Mojulat, UPM, Malaysia	Master with thesis	Analysis of simple sequence repeat markers linked with MR263 x Submergence tolerance rice Swarna-Sub1	Thesis writing
12.	Member	Iffah Haifaa binti Mat Deris, UPM, Malaysia	Master with thesis	Molecular Characterization and Identification of Brown Planthopper (BPH) Biotypes in Peninsular Malaysia	Thesis writing
13.	Member	Maya Izhar Khaidizar, UPM, Malaysia	Master with thesis	Genetic Diversity of <i>Citrus</i> species in Peninsular Malaysia.	Thesis writing
14.	Member	Usman Magaji, UPM, Malaysia	Master with thesis	Identification of heat tolerant genotypes of chilli pepper based on cell membrane thermostability and expression of Heat Shock Protein (HSP) genes	Data Collection

15.	Member	Saba Jasim, UPM, Malaysia	Master with thesis	Genetic Diversity of Aromatic Rice using Quantitative Traits and Simple Sequence Repeats (SSR) Markers	Data Collection
16.	Member	Zakiah Binti Mohd Zuki, UPM, Malaysia	Master with thesis	Marker assisted selection for bacterial leaf blight in rice ( <i>Oryza sativa</i> cv. MR219)	Data Collection
17	Member	Shyful Azizi Bin Abdul Rahman, UPM, Malaysia	Master with thesis	Ecophysiological effect of water input strategies in different growth phases of rice ( <i>Oryza sativa</i> ) using isotopic technique	Data Collection

#### IX. MENTORING OF POST- DOCTORAL FELLOW (COMPLETED)

No	Name of post-doctoral fellows	Vanue and Duration	Title of research projects
1	Dr. Md. Jahangir Alam	ITA, UPM, Malaysia, October 8, 2013 to March 27, 2014	Identification of Rice Brown Planthopper Biotypes, <i>Nilaparvata lugens</i> Through Molecular Markers and Differential varieties in Malaysia
2	Dr. Md. Abul Kashem	ITA, UPM, Malaysia, September 28, 2013 to March 27, 2014	Identification of Major Diseases of Rice Using Nuclear and Molecular Techniques
3	Dr. Md. Shahidul Islam	ITA, UPM, Malaysia, September 28, 2013 to March 27, 2014	Seed Technology, Agronomic Management and Molecular Techniques
4	Dr. Mohammad Ibrahim Khalil	ITA, UPM, Malaysia, September 28, 2013 to March 27, 2014	Expression of blast resistant gene in F <sub>3</sub> families of rice derived from Pongsu Seribu1 x MR 263

#### X. RESEARCH GRANTS AND ACHIEVEMENTS

##### a) Research Grants

No.	Project No.	Project Title	Role	Year	Source/type of fund	Status
1.	GP-IPS/2013/93 91400	Marker assisted backcross breeding for the improvement of fragrance characteristic and amylose content in local rice variety MR269	Project Leader	11/2013-10/2015	Universiti Putra Malaysia/GP-IPS	Completed
3.	01-02-12-2033RU	Identification of	Project Leader	9/2012-8/2013	Universiti Putra	Completed

		biotypes of rice brown planthopper, <i>Nilaparvata lugens</i> through molecular markers and differential systems in Malaysia			Malaysia/ RUGS Public fund	
4.	SP3602	Extension of the system of rice intensification through verification.	Co-ordinator and Principal investigator	(2001-2004)	PETARRA/ DFID /UK	Completed
5.	FRGS/1/2012/STWNO3/UPM/02/2	Identifaction and characterization of heat shock proteiens (HSPs) in chili paper ( <i>Capsicum annum</i> L.) and their utilization for hybrid variety development	Researcher	5/2013-4/2014	Ministry of Higher Education, Malaysia/ Public fund	Completed
6.	IAEA CRP/17526	Evaluation and selection of rice mutants/varieties for utilization to increase Yield and production, and for quality fodder	Researcher*	9/2012 - 8/2014	International Atomic Energy Agency (IAEA)/ International fund	Completed
7.	UMB/6379700	Development of high yielding and dwarf oil palm planting material through conventional and markers assisted selection (MAS)	Researcher	1/2012-12/2014	United Malacca Berhad, Malaysia/ private fund	Completed
8.	UPM/700-2/1/LRGS/01-11-P5	Development of submergence tolerant rice varieties through marker assisted selection (MAS)	Researcher*	7/2011-6/2014	Ministry of Higher Education, Malaysia/ Public fund	Completed
9.	FRGS/1/11/STWN/UPM/02/24	Linkage and QTL mapping of brown planthopper resistance in rice	Researcher*	8/2011-7/2013	Ministry of Higher Education, Malaysia/ Public fund	Completed
10.	01-01-11-1334RU	Gene Pyramiding of Rice Brown Planthopper (Bph) and Bacterial leaf Blight (BLB) resistance through markers assisted selection (MAS)	Researcher*	4/2011-4/2013	Universiti Putra Malaysia/ RUGS Public fund	Completed

13	UPM/700-2/1/LRGS/01-11-P1	Development of Blast resistant rice varieties through marker assisted backcross breeding	Researcher*	7/2011-6/2014	Ministry of Higher Education, Malaysia/ Public fund	Completed
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\*Projects were written by me (a foreigner cannot be a leader of such project)

## b). Research Achievements

1. QTL mapping of partial blast resistance in local Malaysian cultivar, Pongsu Seribu in 2001-2012
2. Ultrastructure and morphometries of *Ditylenchus angustus* (Butler, 1913) in 1993.
3. Evidence sibling species complex in rice brown planthopper using allozymes, molecular markers and host-plant interaction studies in 1996-2000.
4. Successful of inter-population crosses, inheritance study and genetic variability in brown planthopper, *Nilaparvata lugens* (Homoptera: Delphacidae) complex in 1998-1999
5. Successful of genetic dissection of two sympatric populations of brown planthopper, *Nilaparvata lugens* (Stål) using DALP-PCR molecular markers
6. Validation of system of rice intensification in 2002-2004.
7. Microsatellite and minisatellite markers based DNA fingerprinting and identification of blast and ufra resistant genotypes in 2005-2006.
8. Inheritance studies of SSR and ISSR molecular markers and phylogenetic relationship of rice genotypes resistant to tungro virus in 2007-2008.
9. Successful use of SSRs for marker assisted selection for blast resistance in rice
10. *Jatropha curcas* germplasm in Malaysia was collected for selection of elite genotypes in 2011-2012
11. QTL and linkage mapping of rice brown planthopper resistance and fragrant characteristics in 2012-2013
12. Development of high yielding and quality, and tolerance to biotic and abiotic stresses rice varieties are in progress

## XI. PUBLICATIONS

### Journal publication: 131

Citation Index journal (Impact factor journal): 102 (Published **97** and accepted/in-press 5)

Non Index journal: **29**

### a). Journal (Citation indexed with impact factors)

## i). Published

1. P Azizi, MY Rafii, M Maziah, SNA Abdullah, MM Hanafi, **MA Latif**, 2015. Understanding the shoot apical meristem regulation: A study of the phytohormones, auxin and cytokinin, in rice. *Mechanisms of development* 135, 1-15
2. Panhwar, Q.A., Naher, U.A., Shamshuddin, J., Othman, R., **Latif, M.A.** 2015. Biochemical and molecular characterization of potential phosphate-solubilizing bacteria in acid sulfate soils and their beneficial effects on rice growth. *PLoS ONE*, Volume 9, Issue 12, Article number e116035.
3. S Ashkani, MY Rafii, M Shabanimofrad, A Ghasemzadeh, SA Ravanfar, **M.A. Latif**. 2015. Molecular progress on the mapping and cloning of functional genes for blast disease in rice (*Oryza sativa* L.): current status and future considerations. *Critical reviews in biotechnology*, 1-15
4. P Azizi, MY Rafii, SNA Abdullah, N Nejat, M Maziah, MM Hanafi, **MA Latif**, 2015. Toward understanding of rice innate immunity against *Magnaporthe oryzae*. *Critical reviews in biotechnology*, 1-10
5. Magaji G. Usman, Mohd Y. Rafii1 and Mohd Razi Ismail, Mohammad Abdul Malek, **M. A. Latif**. 2015. Expression of Target Gene Hsp70 and Membrane Stability Determine Heat Tolerance in Chili Pepper, *J. American Soc. Hort. Sci.* 140(2):144–150.
6. Ashkani, S., Yusop, M. R., Shabanimofrad, M., Harun, A. R., Sahebi, M., & **Latif, M. A.** (2015). Genetic analysis of resistance to rice blast: A study on the inheritance of resistance to the blast disease pathogen in an F3 population of rice. *Journal of Phytopathology*, 163(4), 300-309.
7. Asad-Uz-Zaman, M., Bhuiyan, M. R., Khan, M. A. I., Bhuiyan, M. K. A., & **Latif, M. A.** (2015). Integrated options for the management of black root rot of strawberry caused by *rhizoctonia solani kuhn*. *Comptes Rendus - Biologies*, 338(2), 112-120.
8. Azizi, P., Rafii, M. Y., Maziah, M., Abdullah, S. N. A., Hanafi, M. M., **Latif, M. A.**, Sahebi, M. (2015). Understanding the shoot apical meristem regulation: A study of the phytohormones, auxin and cytokinin, in rice. *Mechanisms of Development*, 135, 1-15.
9. Golestan Hashemi, F. S., Rafii, M. Y., Ismail, M. R., Mohamed, M. T. M., Rahim, H. A., **Latif, M. A.**, & Aslani, F. (2014). Comparative mapping and discovery of segregation distortion and linkage disequilibrium across the known fragrance chromosomal regions in a rice F2 population. *Euphytica*,
10. Golestan Hashemi, F. S., Rafii, M. Y., Ismail, M. R., Mohamed, M. T. M., Rahim, H. A., **Latif, M. A.**, & Aslani, F. (2015). The genetic and molecular origin of natural variation for the fragrance trait in an elite Malaysian aromatic rice through quantitative trait loci mapping using SSR and gene-based markers. *Gene*, 555(2), 101-107.
11. Hasan, M. M., Rafii, M. Y., Ismail, M. R., Mahmood, M., Rahim, H. A., Alam, M. A., **Latif, M. A.** (2015). Marker-assisted backcrossing: A useful method for rice improvement. *Biotechnology and Biotechnological Equipment*, 29(2), 237-254.
12. Miah, G., Rafii, M. Y., Ismail, M. R., Puteh, A. B., Rahim, H. A., & **Latif, M. A.** (2015). Recurrent parent genome recovery analysis in a marker-assisted backcrossing program of rice (*Oryza sativa* L.). *Comptes Rendus - Biologies*, 338(2), 83-94.
13. Lau W.C.P., **Latif M.A.**, Rafii M.Y., Razi M.I., Adam P. (2014). Advances to improve the eating and cooking qualities of rice by marker-assisted breeding. *Critical Review in Biotechnology*. DOI: 10.3109/07388551.2014.923987 (IF=7.18, Q1).
14. **Latif M.A.**, Rahman M.M., Ali M.E., Ashkani S., Rafii M.Y. (2013). Inheritance studies of

SSR and ISSR molecular markers and phylogenetic relationship of rice genotypes resistant to tungro virus. *Comptes Rendus Biologies* 336:125-133 (IF=1.804, Q2)

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Philippine, P. 139.

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**f). Bulletins and folders for technology dissemination**

1. **Latif, M. A** and M. R. Islam (2003). Rice stripe: A newly recorded viral disease in Bangladesh. *SAIC Newsletter*, Vol. 13 (4), p. 9.
2. **Latif, M. A**, K. M., Iftekharuddaula and M. Y. Ali (2003). Rice field crab, *Somanniathelphusa sexpunctata*: a treat to rice production in Bangladesh. *SAIC Newsletter*, Vol. 13 (3), p. 5.
3. **Latif, M. A.**, M. A. Kader, M. A. Hossain and P. K. S. Ray (2004). Rice blast disease and its control measures (Dhaner blast rog o tar protikar -in Bengali). BIRRI Regional Station, Comilla. Funded by PETRRA/DFID.
4. **Latif, M. A.**, M. A. Kader, M. A. Hossain and P. K. S. Ray (2004). Bakanae: A harmful and major disease of rice (Bakanae: dhaner ekti khotikarok abong prodhan rog-in Bengali). BIRRI Regional Station, Comilla. Funded by PETRRA/DFID.
5. **Latif, M. A.**, M. Y. Ali and M. H. Rashid (2004). An improved rice cultivation package for low lying areas in boro season (Unnata Paddhatite nimno plabon bhumite boro dhan chas- in Bengali). BIRRI Regional Station, Comilla. Funded by PETRRA/DFID.
6. Sarker, ABS and **M. A. Latif** (2003). Rice production in System of Rice Intensification (SRI) practices- a new technology for resource poor farmers (Bangladedeshe SRI paddhatite dhan chas- daridra krishoker dhan utpadan briddir ek natun sambhabona- in Bangla). Published and funded by PETRRA, IRRI, Bangladesh.
7. Ahmed, GJU, K. A. Bhuiyan, M. A. Badsha, **M. A. Latif**, C. Riches, and M. Mortimer. (2002). Weed management in rice cultivation (Dhan khate Agacha Daman-in Bangla). Published by Director General, BIRRI Gazipur-1701 with the collaboration of BIRRI, NRI (UK) and IRRI.
8. Ahmed, GJU, K. A. Bhuiyan, M. A. Badsha, **M. A. Latif**, C. Riches, and M. Mortimer. (2002). Cost-effective weed management in intensive rice cultivation. (Nibir Dhan Chase karjakori bhabe Agacha Daman-in Bangla). Published by Director General, BIRRI Gazipur-1701 with the collaboration of BIRRI, NRI (UK) and IRRI.



## XII. AWARDS

### b) Academic Awards

1. National Science and Technology Fellowship award from Ministry of Science and Technology, Peoples Republic of Bangladesh for MS program in March, 1991
2. Graduate Assistantship award from University Putra Malaysia for PhD program in December, 1996

### c) MPOB Best Publication Awards

#### 3. MPOB Best Publication 2012

Noh A, Rafii, M.Y., Saleh, G.B., Kushairi, A., **Latif, M.A.** (2012). Genetic performance and general combining ability of oil palm Deli *dura* × AVROS *pisifera* tested on inland soils. *The Scientific World Journal* Volume 2012, Article ID 792601, 8 pages

#### 4. MOPB Best Publication 2011

Norzihah, A., Rafii, M.Y., Maizura, I., Saleh, G., **Latif, M.A.** (2011). Genetic variability of oil palm parental genotypes and performance of its progenies as revealed by molecular markers and quantitative traits. *Comptes Rendus Biologies* 334: 290-299

### d) Research Exhibition and Innovation Awards

5. Rafii, M.Y., Noh, A., Kushairi, A., Saleh, G., **Latif, M.A.** Elite Pisifera pollen for commercial D × P oil palm seed production Pameran Reka Cipta, Penyelidikan dan Inovasi Malaysia 2012. Silver Medal
6. Rafii, M.Y., Bahari M.M., Saleh, G., **Latif, M.A.** BL-4 ×6372-4: A new potential F<sub>1</sub> Watermelon hybrids. Pameran Reka Cipta, Penyelidikan dan Inovasi Malaysia 2012. Silver Medal
7. Rafii, M.Y., Sohrabi, M., Hanafi, M.M., Siti Nor Akmar, A. **Latif, M.A.** Genetic diversity of Malaysian Upland Rice revealed by quantitative traits and microsatellite polymorphism. Pameran Reka Cipta, Penyelidikan dan Inovasi Malaysia 2012. Bronze Medal
8. Rafii, M.Y., Mahmoodreza Shabanimofrad, Puteri Edorawati Megat Wahab and **Latif, M. A.** A comparative analysis of genetic diversity among 48 *Jatropha curcas* accessions in Peninsular Malaysia based on morphological and RAPD markers. Pameran Reka Cipta, Penyelidikan dan Inovasi Malaysia 2011. Bronze Medal
9. Rafii, M.Y., Mahmoodreza Shabanimofrad, Puteri Edorawati Megat Wahab and **Latif, M. A.** Diversity of physic nut (*Jatropha curcas*) in Peninsular Malaysia: Application of DIVA-Geographic information system and cluster analysis. Pameran Reka Cipta, Penyelidikan dan Inovasi Malaysia 2011. Bronze Medal
10. **Latif, M.A.** Certified by BRRI-IRRI-DFID for outstanding contribution to innovation in rice research for resource-poor farmers of Bangladesh in 2004. Medal for outstanding contribution.

### XIII. RESEARCH LEADERSHIP AND CONTRIBUTION TO NATION, INSTITUTE AND SOCIETY

Leading in the research field of Plant Pathology to increase rice productivity, as committee members of the professional society, expert reference, invited speaker, book editor, referee and member of different organizing committees.

#### a). Profesional Services

1.	Editor	Scientific committee of first LRGS workshop, 29 November, 2012.	International	21-29 November, 2014
2.	Editor	Program and abstract book committee of UPM-Shizuoka University International Colloquium	International	30 January- 3rd March 2014
3.	Invited speaker	UPM-Shizuoka University International Colloquium	International	3rd March, 2014
4.	Invited speaker	First Plant Breeding Seminar, Advances in Plant Improvement	International	3-5 July 2012
5.	Treasurer	Bangladesh Phytopathological Society, Bangladesh	National	2009-2010

### XIV. PROFESIONAL AFFILIATION

1. Life member of the Bangladesh association of Biotechnology and Genetic Engineering (BABGE),
2. Member of the Genetics Society of Malaysia
3. Life Member of the Phytopathological Society of Bangladesh
4. Member of the Botanical Society of Bangladesh
5. Member of the Crop Science Society of Bangladesh
6. Member of the Bangladesh Association of Advancement of Science, Bangladesh

## XV. ACADEMIC REFEREES

1. **Prof. Dr. Mohd Rafii Yusop,**

Professor of Plant Breeding and Genetics

Head, Laboratory of Food Crops, Institute of Tropical Agriculture,

Universiti Putra Malaysia, 43400 UPM Serdang, Selangor, Malaysia,

Email: mrafii@upm.edu.my; Tel: +60193096876

2. **Prof. Mahmud Tengku Muda Mohamed,**

Professor of Plant Physiology

Department of Crop Science, Universiti Putra Malaysia,

43400 UPM Serdang, Selangor, Malaysia,

Email: mtmm@upm.edu.my, Tel: +603-8946 6925

3. **Prof. Dr. Tan Soon Guan**

Professor of Genetics.

Chief Editor, Pertanika Journal of Tropical Agricultural Science.

Dept. of Cell and Molecular Biology,

Faculty of Biotechnology and Biomolecular Sciences,

Universiti Putra Malaysia, 43400 UPM Serdang, Malaysia.

Email: sgtan\_98@yahoo.com; Fax: 603 89467510; Tel: 603 89468098/7301