CURRICULUM VITAE

Name : Dr. Mastan Mannarapu

Date of Birth : 04-16-1971

Nationality : Indian

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EDUCATIONAL QUALIFICATION

Examination passed	Name of the University	Year of passing	Division	%of marks	Subjects
B.Sc.	S.V. University	1993	First	72	Botany, Zoology and Chemistry
M.Sc.	S.V. University	1996	First	65	Bio-Chemistry
Ph.D.	S.V. University	2006			Bio-Chemistry

Details of Teaching & Research Experience

College	Designation	From	To
Biotechnology Research Centre, A.P. Forest Department, Tirupati	Research Scholar	1996	2000
Sri Vidyanikethan Degree and PG College, Tirupati	Assistant Professor	2000	2009
Dravidian University, Kuppam	Associate Professor	2009	Till Date

Academic Teaching Experience in U.G and P.G. Courses

- Under Graduate course B.Pharm 25-06-2000 to 2009
- Under Graduate course B.Sc. Bio-chemistry, Micro-Biology and Biotechnology 2000-Till date.
- Post Graduate course MSc. Bio-Chemistry & M.Sc. Micro-Biology of Srividyanikethan PG College, S.V. University, Tirupati. 2000-2009.
- Post Graduate course M.Sc. Biotechnology of Dravidian University, Kuppam. 2009 to Till Date.

Administrative experience

- Worked as Deputy Director In School of Distance and Continuing Education (SDCE), Dravidian University, Kuppam from August, 2009 to November, 2011.

Seminar conducted

- National Seminar on "Influence of medicinal plants on human life" during the year 2011.
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Research Project

- UGC Major Research Project entitled "Protective effect of Andrographis paniculata on cyclophasphomide induced oxidative damage in chick embryo" Sanctioned an amount of Rs. 12,10,800/- for period of three years from 2013-2016

AREAS OF RESEARCH

- Clinical Biochemistry, Immunology, Animal Cell culture, Molecular Biology. Medicinal plants

TECHNIQUES KNOWN

- Immunoelectrophoresis, blotting techniques, Iso electric focusing, ELISA, DNA and RNA isolations, Protein Purification, Electrophoretic techniques, Restriction Digestion, Cloning techniques. PCR , Cell culture techniques, Transfection and Transformation.

M.Phil. Awarded

- M. Radhika (2010), Analysis of water samples by spectrophotometry (Determination of Carbamates in Environmetnal Samples). Dissertation submitted to the Madhurai Kamaraj University, Tamil Nadu.

Workshops and Seminars Attended / Paper Presented

a) International Conference

1) M. Mastan (2013) International symposium on Environmental Pollution, Nutrition & Genetics held at Department of Chemistry, Vikrama Simhapuri University, Nellore during 27-29 December, 2013.

- International conference on Vocational Education and Training: Professionalism as an inclusive Policy – Status and Challenges held at during 20th to 21st February, 2013 at S.V. University, Tirupati.

- International symposium on Environmental impacts health implications and therapeautic approaches ISEHT-2012, during July, 15th – 17th, 2012 held at Department of Biotechnology, Vikrama Simhapuri University, Nellore.

- Presented paper in the International Conference on Eco-Technology and Sustainability Science, Biodiversity and Sustainable Development organized by Indian Science Congress Association (ISCA) during February 29th to March 2nd 2012 at S.V. Vedic University, Tirupati.

- Presented paper in the International Seminar on Medicinal Plants and Herbal products held at Department of Botany, Sri Venkateswara University. Tirupati, Andhra Pradesh during 9Th March to 11 March 2008
- Presented poster in the International Symposium on Medicinal and Nutraceutical plants at Macon, Georgia, USA during 19-23 March 2007
- Presented a paper in the International symposium on science in new mellenium held at Department of Biochemistry, University of Madras, Tamilnadu during 12th June to 13th June 2006

b) National Conferences

1) M. Mastan (2013) National Workshop on Litopenaeus vannamei culture in India problems & prospects held at Department of Marine Biology, Vikrama Simhapuri University, Nellore during 20-22 July, 2013.

2) M. Mastan (2013) National Workshop on Molecular diagnostics for identification of Microorganisms in Aquaculture:"MIMA-2013" organized by Department of Marine Biology, Vikrama Simhapuri University, Nellore during 27-29 November, 2013.

3) M. Mastan and K. Shirisha (2013) National Seminar on "Present Status and Future Prospects of Modern Biotechnology and Their Applications" held at Department of Biotechnology, Dravidian University, Kuppam during 27-29 March, 2014.

4) M. Mastan and B. Salma Begum (2013) National Seminar on "Present Status and Future Prospects of Modern Biotechnology and Their Applications" held at Department of Biotechnology, Dravidian University, Kuppam during 27-29 March, 2014.

5) M. Mastan and S. Prabhudas (2013) National Seminar on "Present Status and Future Prospects of Modern Biotechnology and Their Applications" held at Department of Biotechnology, Dravidian University, Kuppam during 27-29 March, 2014.

- Presented paper in National Seminar on Prespectives of phytomedicine and Medicinal plants conservation held at Department of Botany, S.V. University, Tiruapti during 22nd – 23rd March, 2013.
- Presented paper in the National Seminar on Emerging Trends in Biotechnology: Challenges and Opportunities held at Department of Biotechnology, Dravidian University, Kuppam during 13th – 15th March, 2012.
- Presented paper in the National Seminar on Influence of Medicinal Plants on Human Life held at Department of Biotechnology, Dravidian University, Kuppam during 19th – 20th August, 2011.
- Presented paper in the National Seminar on emerging trends in marine and coastal studies held at Department of Marine Biology, Vikrama Simhapuri University, Nellore during 30th – 31st January, 2011.
- Presented paper in the National Conference on Trends in Biological Chemistry held at department of Biochemistry S.V.University, Tirupati Andhra Pradesh 26-28 Dec 2003
- Presented paper in the National symposium on physiological Approaches to Conserve Biodiversity and to tackle Environmental health hazards held at department of zoology S.V.University, Tirupati Andhra Pradesh 26-28 Feb 2003

- Presented paper in the National Symposium on Recent trends in Biological Sciences held at Department of Botany, S.V.University, Tirupati Andhra Pradesh 16-18 Oct 1998
- Presented paper in the National Symposium on *Tamarindus indica* held at Biotechnology Research centre, Tirupati, Andhra Pradesh during 27-28 June 1997

c) Work Shops

- A National Work Shop on Dravidian Herbal Heritage and Modern Clinical systems. Held at Department of Biotechnology school of Harbal Studies and Naturo Sciences, Dravidian University. Andhra Pradesh, India. During 1st – 4th August, 2006.

- Participated U.G.C. National seminar Role of Chemistry in Drug Development Strategies held at S.V.Arts College for men(T.T.D),Department of chemistry, Tirupati during 13-14-2005

- Work shop on Rapid Assessment survey on medicinal plants of Rayalaseema region held by T.T.D Tirupati. A.P. 10-11 Feb 2000.

- Work shop on Biodiversity at A.P. Forest Department, Tirupati in 26-27 June 1996

- Work shop on Recent trends in Bio-chemistry held at Department of Bio-chemistry S.V.University, Tirupati. During 16-18 Feb 1996

Short term training courses attended

Molecular biology techniques, Protein purification studies, Cell culture techniques and cloning techniques

Title of Ph.D thesis

"Protective effect of *Bacopa monniera* on cytarabine induced oxidative damage in chick embryo".

- PAPERS PUBLISHED

- International

1. Shirisha. K, and Mastan. M , (2013) Effect of Antioxidant status onliver following Atrazine exposure and its protection by Andrographis paniculata. IOSR Jounral of Pharmacy and Biological Scieces (e)-ISSN:2278-3008, (p)-ISSN:2319-7676. Vo.7(1) Pp 36-41.

2. Shirisha. K, B. Salma Begum and Mastan. M , (2013) Protective effecft of *Andrographis paniculata* Against atrazine induced renotaxivity in albino rats. IOSR Jounral of Pharmacy (e)-ISSN:2250-3013, (p)-ISSN:2319-4219. Pp 17-21.

3. Shirisha. K, and Mastan. M , (2013) *Andrographis paniculata* and its bioactive phytochemical constituents for oxidative damage: A systemic review. Pharmacophore, Vol 4(6), 212-229 ISSN 2229-5402.

4. Dilli Varaprasad. E, Mastan.M, Sobha Rani.T and Venkat. G, (2012) Synthesis and biological evaluation of (E)-3-(2-(4-substitied phenyl) –IH–Indole–3 YL)–(4 substituted phenyl) prop–2 EN-1-one –As Anti-inflammatory Agents. IRIP 3(12).

5. Dilli Varaprasad. E, Mastan.M and Shobha Rani.T (2012) Synthesis and biological evaluation of 2-aryl-3-isoxazolinyl-indole derivatives as anti-inflammatory agents. IOSR Journal of Applied Chemistry (IOSR-JAC) Vol.2 Issue 3, PP 44-49.

6. Dilli Varaprasad. E, Mastan.M and Sobha Rani.T (2012) Synthesis and evaluation of analgesic activity of novel series of Indole derivaties linked to isoxazole moiety. International Journal of Scholars Research Library, Der Pharmacia Letter, 4 (5):1431-1437.

7. Naidu, C.V, A.R.Reddy, Mastan,M.,P.S.Anand,S.H.Reddy and K.V.Saritha, B., (2007). A Survey on Anti diabetic Medicinal plants in Rayalaseema Region of Andhra Pradesh, India. Acta Horti.756:245-249.

- National

1. Shirisha. K, and Mastan. M , (2013) Phytochemical screeening and Antimicrobial activity of *Andrographis paniculata.* Ideal Sciecne Review ISSN: 2320-1819 Vol.-II, No.-I. Pp 19-23

2. S. Prabhudas, A. Rizwan Ali and Mastan. M. (2012) Production of Single Cell Protein from fruit wastes. Ideal Research Review Vol.36, 42-46. No.I, ISSN No.09-73-0583 Delhi.

3. K. Vasundara and Mastan. M. (2012) Insilico analysis and indentification of Ricin protein. Ideal Research Review Vol. 34, 1-12, No.II, ISSN No. 09-73-0583 Delhi.

4. S. Prabhudas, A. Rizwan Ali and Mastan. M (2012) Production of single cell protein from vegetable wastes. Ideal Research Review Vol. 34, 59-63, No.II, ISSN No. 09-73-0583 Delhi.

5. Mastan, M. and Parthasarathy, P.R. (2011) Effect of cytarabine on lipid peroxidation in Chick embryo. Ideal Research Review Vol. 32, 1-8. No.II, ISSN No. 09-73-0583 Delhi.

6. Mastan, M. and Parthasarathy, P.R. (2007). Protective effect of Bacopa monniera L. on cytarabine induced biochemical changes in chick embryo. Indian J. of Clin. Biochem .,22 : 122-127.

7. Mastan, M. Naidu, C.V (2007). Comparative study of growth and fruit pulp physiological characteristics of high yielding varieties of *Tamarindus indica* in Andhra Pradesh. J.Indian.bot. Soc.86(3&4):105-108.

8. Raja sekhar Reddy, A., Mastan, M. and Naidu, C.V. (2007). Rooting response of Stem cuttings of Celastrus Paniculata and Clerodenron serratum as influenced by rooting Hormones. Vol. 86(3 & 4) 2007.

9. Mastan, M. and Partharasathy, P.R. (2005). Effect of Cytarabine on Biochemical Changes in chick amniotic fluid and hepatic tissues. Indian. J. of Comp. Animal. Physiol., 23: 56-61.

10. Rajiv Dixit, Mastan, M. and Parthasarathy, P.R. (2005). Effect of Cyclophosphamide in chick embryos. Indian. J. of Comp. Animal. Physiol., 23: 7-12.

11. Mastan,M.Vijaya,T and parthasarathy,P.R.(2002) Evaluation of nutritional status of vermicompost and growth response of some forest tree species to its application in nursery. Indian J. of Comp. Animal. Physiol., 21: 51-55.

12. Naidu, C.V. and Mastan, M. (2001). Seed pretreatment methods to improve germination in *pterocarpus santalinus* Linn. F. Indian J. of Forestry, 24 (3): 342-343.

13. Rajasekhar Reddy, A., Mastan, M., Naidu, C.V. and Rao, P.S. (2001). Seasonal variation in rooting response of stem cuttings of *Givotia rottleriformis* Griff. Indian. J. of Forestry, 24(4): 475-477.

14. Naidu, C.V., Mastan, M., Nagaraju, B., Sivaram Prasad, N.V.,Prasad Reddy, B.V. and Rao, P.S. (2000). Impact of potting media on some forest tree species in book type of root trainers. Journal of tropical forestry, 16, 51:55.

15. M. Mastan, Prasada Reddy, B.V., Sivaram Prasad, N.V. and Rao, P.S. (1997). Genetic variability and fruit characteristics of *Tamarindus indica*. In Proceedings of National Symposium on *Tamarindus indica*. Pages: 26-34.

16. Raja sekhar Reddy, A., Mastan, M. and Naidu, C.V. (2006). Survey of important Medicinal Plants in Nallamalai Forests of India. International Journal of academy scences Proc.A.P. Akademi of Sciences. Vol. 10 (2) 121 – 127.

Membership

1. Life member in the Indian Science Congress Association – No. L16288.

2. Member in Ideal Research Review Editorial Board.

Ph.D Synopsis

The main objective of the research study was to determine the activity of the alcoholic extract of *Bacopa monniera* protection on cytarabine induced oxidative damage in chick embryo.

Cytosine arabinoside (CA) or cytarabine is one of the most effective anticancer drugs used in the treatment of cancer. CA shown wide spread activity in lymphohematopoietic malignancies and is used in various neoplastic disorder. This drug destroys not only the cancerous cells but also cause damage to the adjacent normal cells. The course of damage can be brought either by the attack of toxic metabolites of CA or DNA or by the formation of reactive oxygen species. The agents that are capable of accelerating the recovery (or) protect drug induced oxidative damage are considered as chemoprotective. The embryo model was used to evaluate the effects of CA induced oxidative damage to the developing chick embryo.

The lethal dose (LD_{50}) values were determined at different stages. The biochemical constituents of amniotic fluid and tissues (liver, brain and heart) were determined. The results indicate that the SOD, CAT, GST, GPx and GST levels play a role in lipid peroxidation during pregnancy.

The effective dose of herbal extract (6.0 mg / 15 day-old embryo) was arrived from the maximum protective effect elicited against the CA

induced damages by measuring the activities of AST and ALT in AF and tissues.

CA administration cause significant increase induction of GST in liver. By using Isoelectric focusing four isoenzymes were discovered. α-GST isoenzyme was purified which is a molecular weight of 25.2±2 kDa as determined by PAGE, SDSPAGE and western blotting analysis.

The noxious effects of lipid peroxidation induced by the toxic radicals of CA were observed from an increased production of TBARS and conjugated diens with a subsequent decrease in the non-enzymatic and enzymic antioxidant defenses. The indication of oxidative stress to the embryonic system. The decrease in herbal extract exhibited a powerful and potent antioxidant role by modulating the antioxicant armoury by enhancing the levels of GSH, scavenging free radicals and influencing the primary antioxidant enzymes.

REFERENCES

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