

TEXAS STATE VITA

I. Academic/Professional Background

A. Name: Sunethra Dharmasiri Title: Senior Lecturer

B. Educational Background

Degree	Year	University	Major	Thesis/Dissertation
Ph.D.	1995	Univ. of Hawaii Honolulu, USA	Plant Molecular Biology	Molecular cloning and characterization of Nucleoside Diphosphate Kinase in cultured sugarcane cells
MS	1990	Univ. of Hawaii Honolulu, USA	Plant Molecular Biology	Effect of salt on protein synthesis in cultured tobacco cells
B.Sc.	1982	Univ. of Peradeniya, Sri Lanka	Botany (Hons)	

C. University Experience

Position	University	Dates
Senior Lecturer	Texas State University- San Marcos	08/2006 to date
Lecturer		08/2005 - 08/2006
Postdoctoral Research Associate	Indiana University, Bloomington	06/2002 - 08/2005
Research Scientist/Postdoctoral Research Associate	University of Texas, Austin	08/1999 - 08/2002
Postdoctoral Research Associate	Indiana University, Bloomington	01/1999 -08/1999
Senior Lecturer	University of Peradeniya, Sri Lanka	01/1995 - 12/1998

D. Relevant Professional Experience

Position	Entity	Dates
Graduate Research Assistant/Graduate Research Fellow/Graduate Scholar	University of Hawaii, Honolulu	08/1987 - 12/1994
Assistant Lecturer	University of Peradeniya, Sri Lanka	09/1982 - 07/1983 12/1983 -08/1987
Research Officer	Department of Agriculture, Sri Lanka	09/1983 -12/1983

II. TEACHING

- A. Teaching Honors and Awards: none
 B. Courses Taught:

(I) Lecture courses:

At Texas State University (2005-2006):

- BIO 1430 - Functional Biology
- BIO 1421 - Modern Biology II
- BIO 2410 - General botany
- BIO 3465 - Plant Physiology

At University of Peradeniya, Sri Lanka (1995 - 1998):

Undergraduate Courses:

- Introductory Molecular Biology (1000 level)
- Biochemical Techniques (3000 level)
- Stress Physiology (3000 level)
- Recombinant DNA Technology (4000 level)

Graduate Courses:

- Molecular Biology Techniques

(II) Laboratory courses:

Undergraduate Research 1995-1998 University of Peradeniya, Sri Lanka

Trained 4 undergraduates in my laboratory in Molecular Biology research.

Biochemical techniques Laboratory 1997-1998 University of Peradeniya, Sri Lanka

C. Graduate Theses/Dissertations or Exit Committees (if supervisor, please indicate):**Committee member**

Chamindika Siriwardana (MS) - Characterization of two picloram resistant mutants from *Arabidopsis thaliana*

D. Courses Prepared and Curriculum Development:

At University of Peradeniya, Sri Lanka:

- Core courses for a newly established Department of Molecular Biology and Biotechnology
- Environmental Science
- Biology course for non-science majors

- E. Funded External Teaching Grants and Contracts: none
 F. Submitted, but not Funded, External Teaching Grants and Contracts: none
 G. Funded Internal Teaching Grants and Contracts: none
 H. Submitted, but not Funded, Internal Teaching Grants and Contracts: none
 I. Other

III. SCHOLARLY/CREATIVE

A. Works In Print

1. Books (if not refereed, please indicate)

- a. Scholarly Monographs: none
- b. Textbooks: none
- c. Edited Books: none
- d. Chapters in Books:
Dharmasiri S and Estelle M (2002) The role of regulated protein degradation in auxin response. In *Auxin Molecular Biology* (Perrot-Reschenmann C and Hagen G, eds.) Agritech Publications, Shrub Oak, NY
- e. Creative Books: none

2. Articles

a. Refereed Journal Articles:

Torres CA, Bucio JL, Ramirez AC, Laclette EI, **Dharmasiri S**, Estelle M, Estrella LH (2008) Phosphate availability alters lateral root development in Arabidopsis by modulating auxin sensitivity via a mechanism involving the TIR1 auxin receptor. *Plant Cell* 20:3258-3272

Dharmasiri N., **Dharmasiri S.**, Weijers D., Karunarathne N*., Jurgen G. and Estelle M. (2007) AXL1 and AXR1 have redundant functions in RUB conjugation and growth and development in Arabidopsis. *Plant J.* 52:114-123.
 (* indicates Texas State University Student)

Dharmasiri S*, Swarup R*, Mockaitis K*, Dharmasiri N, Singh SK, Kowalchyk M, Marchant A, Sandberg G, Bennett M, Estelle M. (2006) AXR4 is required for asymmetric localization of the auxin influx facilitator AUX1. *Science* 312: 1218-1220. (*Editor's choice. Paper was cited among top 10 papers in biology by Faculty of 1000*)

* Co-first authors

Parry G, Ward S, Cernac A, **Dharmasiri S**, Estelle M (2006) The Arabidopsis SUPPRESSOR OF AUXIN RESISTANCE proteins are nucleoporins with an important role in hormone signaling and development. *Plant Cell.* 2006 18:1590-1603.

Dharmasiri N*, **Dharmasiri S***, Weijers D*, Lechner E, Yamada M, Hobbie L, Ehrismann JS, Jurgens G, Estelle M. (2005) Plant Development Is Regulated by a Family of Auxin Receptor F Box Proteins. *Dev. Cell.* 9:109-119. (*This paper was cited among most viewed top ten papers by Faculty of 1000*).

* Co-first authors

Dharmasiri N., **Dharmasiri S.** and Estelle M. (2005) The F-box protein TIR1 is an auxin receptor. *Nature* 435: 441-445. (*Editor's choice. This paper was ranked number 1 of the top ten biology papers in June 2005 by Faculty of 1000*)

Xiaoqing Yang X., Lee S., Soo J-H, **Dharmasiri S.**, Dharmasiri N., Lei G., Jensen C., Hangarter R., Hobbie L. and Estelle M. (2004) The IAA1 protein is encoded by AXR5 and is a substrate of SCF^{TIR1}. *Plant J.* 40:772-782.

Dharmasiri N, **Dharmasiri S**, Jones AM, Estelle M. (2003) Auxin action in a cell-free system. *Curr Biol.* 13(16): 1418-22. (*This paper was cited among top ten papers in biology by Faculty of 1000*).

Hellmann H, Hobbie L, Chapman A, **Dharmasiri S**, Dharmasiri N, del Pozo C, Reinhardt D, Estelle M. (2003) Arabidopsis AXR6 encodes CUL1 implicating SCF E3 ligases in auxin regulation of embryogenesis. *EMBO J.* 22(13): 3314-25.

Dharmasiri S, Dharmasiri N, Hellmann H, Estelle M. (2003) The RUB/Nedd8 conjugation pathway is required for early development in Arabidopsis. *EMBO J.* 22(8): 1762-70.

Dharmasiri S & Estelle M (2002) The role of regulated protein degradation in auxin response. *Plant Mol. Biol.* 49: 401-409

*del Pozo JC, **Dharmasiri S***, Hellmann H, Walker L, Gray WM & Estelle M (2002) AXR1-ECR1 dependent conjugation of RUB1 to the Arabidopsis cullin AtCul1 is required for auxin response. *Plant Cell* 14: 421-433

*co-first authors

Gray WM, Hellmann H, **Dharmasiri S** & Estelle M (2002) Role of the Arabidopsis RING-H2 protein RBX1 in RUB modification and SCF function. *Plant Cell* 14:2137-44

Leyser HMO, Pickett FB, **Dharmasiri S** & Estelle M (1996) Mutations in the AXR3 gene of Arabidopsis result in altered auxin response including ectopic expression from the SAUR AC1 promoter. *Plant J.* 10: 403 413

Moisyadi S, **Dharmasiri S**, Harrington HM & Lukas TJ (1994) Characterization of a low molecular mass autophosphorylating protein in cultured sugarcane cells and its identification as a nucleoside diphosphate kinase. *Plant Physiol.* 104: 1401 1409.

Harrington H.M., Dash S., Dharmasiri N. and **Dharmasiri S** (1994) Heat-shock proteins: Search for functions. *Australian J. Plant Physiol.* 21: 843-855.

Jordan BR, **Dharmasiri S**, Hopley J & LeFay J (1989) Changes in psaA and psbA transcript levels during wheat leaf development under different irradiances. *Plant Physiol. Biochem.* 27(5):769 776.

b. Non-refereed Articles: none

3. Abstracts:

Dharmasiri S, Garcia S, Karunarathna N, Collier C, Devolled B, Dharmasiri N (2008) Characterization of the Arabidopsis mutant pic30, that is specifically resistant to auxinic herbicide picloram. *19th International Conference on Arabidopsis Research, Montreal, Canada*

Dharmasiri S, Mockaitis K, Swarup R, Dharmasiri N, Bennett M, Estelle M (2005) Molecular and genetic characterization of the Arabidopsis AXR4 protein suggest an involvement in auxin influx and AUX1 function. *ASPB Annual Conference, Seattle, Washington.*

Dharmasiri N, **Dharmasiri S**, Ge L, Lechner E, Mokaitis K, Moon J, Mooney S, Parry G, Ren H, Yamada M. and Estelle M. (2004) Auxin response is mediated by a family of ubiquitin protein ligases. *FASEB summer Research Conferences. Saxtons River, VT.*

Mockaitis K, **Dharmasiri S**, Dharmasiri N and Estelle M (2004) Profiling Primary Auxin Responses and Transcriptional Regulation Mediated by AXR1 and SCF^{TIR1} Functions. *15th International conference on Arabidopsis Research., Berlin. 120.*

Dharmasiri S, Dharmasiri N, Mooney S and Estelle M (2004) Regulated degradation of AUX/IAA proteins through a family of SCF F-box proteins. *15th International conference on Arabidopsis Research. Berlin. 81.*

Dharmasiri S, Dharmasiri N, and Estelle M (2004) Characterization of a family of SCF E3 ligases involved in auxin response in *Arabidopsis*. *ASPB conference, Orlando, FL.*

Dharmasiri N, **Dharmasiri S** and Estelle M (2003) Auxin promotes AUX/IAA-SCF interaction through a soluble receptor. *14th International conference on Arabidopsis Research. Madison, WI. 64.*

Dharmasiri S, Dharmasiri N, Mooney S, and Estelle M. (2003) Auxin response in *Arabidopsis* is mediated by family of SCF complexes. *14th International conference on Arabidopsis Research. Madison, WI. 324.*

Moon J, **Dharmasiri S**, Dharmasiri N, Mooney S, Hellmann H & Estelle M (2003) Function and regulation of SCFTIR1 in *Arabidopsis*: an E3 required for plant hormone action. 7th International Congress on Plant Molecular Biology, Barcelona, Spain

Hellmann H, Hobbie L, **Dharmasiri S**, Dharmasiri N, and Estelle M. (2003) The CUL1 protein is required for auxin signaling in *Arabidopsis*. *14th International conference on Arabidopsis Research. Madison, WI. 337.*

Dharmasiri S, del Pozo JC & Estelle M (2001) The ubiquitin related protein RUB1 is required for auxin response in *Arabidopsis*. 12th International Conference on Arabidopsis Research, Madison, Wisconsin

Muthuranwela D, **Dharmasiri S**, Adikaram NKB, Wickramasinghe P (1998) A comparative morphological study and isozyme analysis of different isolates of *Colletotrichum* species. Proceedings of Sri Lanka Association for the Advancement of Science. 54:213

Weerahewa D, **Dharmasiri S**, Adikaram NKB (1998) Study of internal browning and some associated physico-chemical and biochemical parameters in two pineapple cultivars during cold storage. Ann. Res. Symposium. University of Peradeniya, Sri Lanka

Dharmasiri S, Dharmasiri M.A.N., and Harrington HM (1997) Nucleoside diphosphate kinases and calmodulin binding proteins in plants. *Multi-institutional Plant protein Phosphorylation Group meeting. Jackson Hole, WY.*

Dash S, **Dharmasiri S**, Dharmasiri M.A.N. and Harrington HM (1995) Modulation of calmodulin binding proteins and nucleoside diphosphate kinase by heat shock. ***Multi-institutional Plant Protein Phosphorylation Group meeting. Breckenridge, CO.***

Dash S, **Dharmasiri S**, Dharmasiri N, Harrington H.M. (1994) Protein phosphorylation and signal transduction during heat shock. ***Multi-institutional Plant Protein Phosphorylation Group meeting. Portland, OR.***

***Dharmasiri S** & Harrington HM (1994) Purification of a low molecular weight protein from heat-shocked sugarcane cells and its functional characterization as nucleoside diphosphate kinase. CTAHR Research Symposium, University of Hawaii, USA

* Award for best research presentation

Dash S, **Dharmasiri S**, Dharmasiri N & Harrington HM (1994) Protein phosphorylation and signal transduction during heat shock. Proceedings of the Multi-disciplinary protein phosphorylation group. Oregon, USA

Dharmasiri S & Harrington HM (1993) Purification and characterization of autophosphorylating nucleoside diphosphate kinase from heat-shocked sugarcane cells. 12th Annual Missouri Plant Biochemistry, Molecular Biology and Physiology Symposium, University of Missouri, USA

4. Reports: none

5. Book Reviews: none

6. Other

B. Works not in Print

1. Papers Presented at Professional Meetings:

Albers S, Karunarathna N, **Dharmasiri S** and Dharmasiri N (2009) Arabidopsis *adal* mutant exhibits severe defects in tropic responses and growth and development. ***ASPB (Southern section) annual meeting, Austin, Texas.***

Padgett C, Jaster C, **Dharmasiri S** and Dharmasiri N (2009) Isolation and characterization of enhancers and suppressors of Arabidopsis *afb5*. ***ASPB (Southern section) annual meeting, Austin, Texas.***

Siriwardana C, Karunarathna N, **Dharmasiri S**, Gunathilake A and Dharmasiri N (2009) Characterization of *pic59*, a novel Arabidopsis mutant associated with auxin signaling pathway. ***ASPB (Southern section) annual meeting, Austin, Texas.***

Karunarathna N, **Dharmasiri S**, Siriwardana C and Dharmasiri N (2009) Auxin resistant mutant *pic11* encodes IAA28 that regulates growth and development of *Arabidopsis thaliana*. ***ASPB (Southern section) annual meeting, Austin, Texas.***

Gunathilake A, Karunarathna N, Devolld B, **Dharmasiri S** and Dharmasiri N (2009) Arabidopsis *pic64* mutation defines a novel gene involved in Auxin response. *ASPB (Southern section) annual meeting, Austin, Texas.*

Dharmasiri N, **Dharmasiri S**, Gunathilake A, Karunarathna N, Siriwardana C and Collier C. (2008) Characterization of new auxin response mutants in Arabidopsis. *105th Annual meeting of SAAS (Biochemistry & Biotechnology), Dallas, TX.*

Dharmasiri S, Devolld B, Shayegani R, Monks Cory, Dharmasiri N (2006) What is an auxin: Structural requirements necessary for auxin activity. *FASEB summer research Conferences, Saxton River, VT.*

Gunathilake A, **Dharmasiri S** and Dharmasiri N (2008) Characterization of *pic64*, an Arabidopsis mutant that is resistant to auxinic herbicide 2,4-D. *105th Annual meeting of SAAS (Biochemistry & Biotechnology), Dallas, TX.*

Karunarathna N, **Dharmasiri S** and Dharmasiri N. (2008) *pic11*, a mutant that is resistant to the auxinic herbicide picloram, causes growth and development defects in Arabidopsis. *105th Annual meeting of SAAS (Biochemistry & Biotechnology), Dallas, TX.*

Dharmasiri N, **Dharmasiri S**, Gunathilake A, Karunarathne N, Siriwardana C and Collier C. (2008) Characterization of new auxin response mutants in Arabidopsis. *105th Annual meeting of SAAS (Biochemistry & Biotechnology), Dallas, TX.*

Dharmasiri N, **Dharmasiri S**, and Estelle M (2005) TIR1 and related F-box proteins function as auxin receptors in plants. *Gordon Research Conferences (Mechanotransduction & Gravity Signaling In Biological Systems). University of New England, Biddeford, ME.*

Estelle M, **Dharmasiri S**, Dharmasiri N, Lechner L, Mooney S (2004) Auxin response requires SCF-dependent degradation of the AUX/IAA proteins. *18th International Conference on Plant growth Substances. Canberra, Australia.*

Dharmasiri N, **Dharmasiri S**, Ge L, Lechner E, Mokaitis K, Moon J, Mooney S, Parry G, Ren H, Yamada M. and Estelle M. (2004) Auxin response is mediated by a family of ubiquitin protein ligases. *FASEB summer Research Conferences. Saxtons River, VT.*

Dharmasiri N, **Dharmasiri S** and Estelle M (2004). Auxin signaling in plants: Where is the auxin receptor? *Gordon Research Conferences (Plant Molecular Biology), Plymouth, NH.*

Mockaitis K, **Dharmasiri S**, Dharmasiri N and Estelle M (2004) Profiling Primary Auxin Responses and Transcriptional Regulation Mediated by AXR1 and SCF^{TIR1} Functions. *15th International conference on Arabidopsis Research., Berlin. 120.*

Dharmasiri S, Dharmasiri N, Mooney S and Estelle M (2004) Regulated degradation of AUX/IAA proteins through a family of SCF F-box proteins. *15th International conference on Arabidopsis Research. Berlin. 81.*

Dharmasiri N, **Dharmasiri S** and Estelle M (2003) Auxin promotes AUX/IAA-SCF interaction through a soluble receptor. *14th International conference on Arabidopsis Research. Madison, WI. 64.*

Dharmasiri S, Dharmasiri N, Mooney S, and Estelle M (2003) Auxin response in Arabidopsis is mediated by family of SCF complexes. *14th International conference on Arabidopsis Research. Madison, WI. 324.*

Hellmann H, Hobbie L, **Dharmasiri S**, Dharmasiri N, and Estelle M (2003) The CUL1 protein is required for auxin signaling in Arabidopsis. *14th International conference on Arabidopsis Research. Madison, WI. 337.*

2. Invited Talks, Lectures, and Presentations:

Dharmasiri S, Dharmasiri N, Mooney S & Estelle M (2003) Auxin response is mediated by a family of related SCF complexes. 14th International Conference on Arabidopsis Research, Madison, Wisconsin

3. Consultancies: none

4. Workshops:

5. Other:

C. Grants and Contracts

1. Funded External Grants and Contracts:

Principal Investigator:

Development of molecular diagnostic tests for quiescent Colletotrichum infections in fruits and vegetables. (1996-1998)

Co-Investigator: Prof. N.K.B. Adikaram

Grant value: Rs. 7,46,000.00 Granting Agency: National Science Foundation of Sri Lanka

Co Investigator:

Forest Die back in Horton Plains National Park: Investigations into disease, Environmental stress, soil, nutrient factors and plant animal interactions

Principal Investigator: Prof. NKB Adikaram, University of Peradeniya

Grant value: Rs. 23,16,765.00 Granting Agency: Wildlife Department of Sri Lanka

The testing of specific pre- and post harvest treatments for reducing the incidence of chilling injury in pineapples.

Principal Investigator: Prof. NKB Adikaram, University of Peradeniya

Grant value: Rs. 13,22,000.00 Granting Agency: National Science Foundation of Sri Lanka

2. Submitted, but not Funded, External Grants and Contracts: none

3. Funded Internal Grants and Contracts:

2006: Functions of SAUR genes in auxin response. Research Enhancement Grant, Texas State University. (Co-PI Dr. Nihal Dharmasiri \$14,500.00)

A study of biochemical changes associated with internal browning in two local pineapple cultivars. (1996-1998)

Grant value: Rs. 47,000.00 Granting Agency: University of Peradeniya, Sri Lanka

4. Submitted, but not Funded, Internal Grants and Contracts: none.

5. Fellowships, Awards, Honors:

2006 - Dharmasiri S et al *This paper was cited among top ten papers in biology by Faculty of 1000*

2005 - *Science* citation. Runner-up # 2 Breakthrough Research in Science 2005.

2005 - Dharmasiri N et al. *Nature. This paper was cited as number 1 of the top ten papers in Biology by the Faculty of 1000.*

2005 - Dharmasiri N et al *Dev. Cell. This paper was cited among the most viewed top ten papers in Biology by the Faculty of 1000.*

2003 - Dharmasiri N. et al. *Curr. Biol. This paper was cited among top ten papers in biology by Faculty of 1000*

1994 - Best PhD research presentation, CTAHR Research Symposium, University of Hawaii, Honolulu, Hawaii

1994 - Best research presentation in Plant Molecular Physiology, CTAHR Research Symposium, University of Hawaii, Honolulu, Hawaii

1992 - 1993 RCUH post graduate research fellowship, University of Hawaii, Honolulu, Hawaii

1990 Visiting Studentship (post graduate), Department of Biology, Indiana University, Bloomington, Indiana

1987 - 1992 Post graduate scholarship, East West Center, Honolulu, Hawaii

1971 - 1982 Government Scholarship for intermediary and secondary education, Ministry of Education, Sri Lanka

IV. SERVICE**A. University:**

At the University of Peradeniya, Sri Lanka (1995-1998):

Convener/Secretary of the academic committee to develop the curriculum of Environmental Science as a major subject at the Faculty of Science., University of peradeniya, Sri Lanka

Member of the Board of Study of Molecular Biology and Biochemistry, Postgraduate Institute of Science, Peradeniya, Sri Lanka

Member of the academic committee to establish and commence functioning of a new Department of Molecular Biology and Biotechnology at the University of Peradeniya.

Convener/Secretary of the Committee for transition from term school system to course unit system at the Faculty of Science, University of Peradeniya, Sri Lanka

Member of the academic committee for designing a Biology course for non-biology majoring students, Faculty of Science, University of Peradeniya, Sri Lanka

B. Departmental:

At the Department of Botany, University of Peradeniya, Sri Lanka (1995-1998):

Curriculum development Committee in Cell and Molecular Biology
Departmental Faculty Committee
Botanical Society

C. Community:

Helped mentor the following students from San Marcos High School (SMHS) on auxin related research projects.

2008 Weston Hearne

2007 Jessica Villareal

Benjamin Williamson

D. Professional:

Reviewed journal articles for following journals

Tree Physiology

Plant Molecular Biology

D. Organizations

1. **Honorary:** Sigma Delta Society, University of Hawaii

2. **Professional:**

Member: American Society of Plant Biologists