

## BIO-DATA



Name (in Block Letters)	A.RAMESH SUNDAR
2. Designation & Department	Senior Scientist Plant Pathology Section
3. Official Address for Correspondence with Pin Code	Sugarcane Breeding Institute (ICAR) Coimbatore-641007; TamilNadu State, INDIA. Phone: 91-422-2472621-211 Fax: 91-422-2472923 Telegram : <b>GANNAPRAJANAN</b> <b>Email:</b> rameshsundarsbi@gmail.com
4. Date of Birth	18-12-1966
5 E-mail	<a href="mailto:rameshsundar_sbi@yahoo.co">rameshsundar_sbi@yahoo.co</a>

### 6. Qualification

Sl No.	Institution Place	Degree Awarded	Year	Field of Study
1.	Faculty of Agriculture, Annamalai University, Annamalai Nagar – 608002, TamilNadu.	MSc (Ag)	1990	Plant Pathology
2.	Department of Plant Pathology, TamilNadu Agricultural University, Coimbatore – 641 003, TamilNadu.	PhD	1999	Molecular Plant Pathology
3.	CSIRO Plant Industry, Australia (sponsored by the Department of Biotechnology, Govt. of India)	Post doctoral fellow	From Feb-2007 To Jan 2008	Functional genomics of plant defense

### 6. Position held (In chronological order)

Name of Employer	Post held	From	To	Experience Type
Sugarcane Breeding Institute	Scientist	1993	1999	Research
Sugarcane Breeding Institute	Scientist (Sr. scale)	1999	2002	Research
Sugarcane Breeding Institute	Senior Scientist	2002	Till date	Research

#### 7. Membership & Fellowship in Professional Societies:

Sl. No.	Professional Society	Category	From	To
1	Indian Phytopathological Society, New Delhi, India	Life Membership	2000	
2	Indian Society of Mycology & Plant Pathology, Udaipur, India	Life Membership	2003	
3	Society for Sugar Research and Promotion, New Delhi	Member	2002	Till date
4	Indian Science Congress Association, Kolkata	Life Membership	2008	

#### 9. Number of Research Projects handling at the present

##### **Institute funded**

##### **A. As project Leader**

1. “Identification of new inducer molecules / novel genes regulating defense mechanism in sugarcane against *Colletotrichum falcatum*”.
2. “Mapping pathogenic and molecular variability of sugarcane smut in India”

##### **B. As Project Associate**

1. Identification and characterization of PR-proteins and phytoalexins for red rot resistance in sugarcane
2. Breeding sugarcane varieties for tropical region
3. Maintenance of world collection of sugarcane germplasm at SBI-RC, Kannur

4. Farmers participatory action research program (FPARP)
5. Developing user centered website – Cane info

**Externally funded projects:**

**A. As Project Leader:**

**1. (KCP Sugars sponsored research project)**

“Possible use of oxygenators as a module for inducing red rot resistance in sugarcane”

**Period:** September 2001 – August 2004; Budget: 3.0 lakhs.

**2. (ICAR – AP cess funded project)**

“Induction of systemic acquired resistance (SAR) in sugarcane by biotic and synthetic signal molecules for the management of red rot disease caused by *Colletotrichum falcatum*”.

**Period:** April 2005 – June 2008; Budget: Rs 14,75,500/-lakhs.

**3. (DST, SERC Division, New Delhi)**

“Molecular elucidation of biotic elicitor-mediated defense- responsive genes/proteins in sugarcane x *Colletotrichum falcatum* interaction” (Sanction Dt. 09/08/10).

**Period:** January 2011 – December 2013; Budget: Rs 52,29,500/-

**B. As Project Associate:**

**1. (ICAR funded network project)**

“Wilt of crops with special reference to cultural, morphological, molecular characterization and pathogenic variability of isolates in India”-3 Years from 8/11/2004 with an outlay of 8.5 lakhs

**2. (DBT funded project):**

“Identification and characterization of differentially expressed genes/ proteins involved in sugarcane – red rot pathogen interaction”- 3 Years from 7/3/2005 with an outlay of 44.8 lakhs

**3. (ICAR funded Outreach program)**

Outreach Program on diagnosis and management of leaf spot diseases: Field and Horticultural crops – Sugarcane red rot; Period: 2007 – 2012. Budget: Rs. 43.20 lakhs

10. Research Guidance (No. of Students guided):

(a) Master’s M.Phil. Thesis : M. Sc: Ten

(b) Ph.D. Thesis : Presently guiding three students (PhD in Biosciences – Anna University, Coimbatore & Bharathiar University, Coimbatore).

11. List of Publications :

(a) Number of papers in Referred Journals : 24

(i) National Journals : 7

(ii) International Journals	:	17
(b) Conference Proceedings		
National	:	30
International	:	

**Selected peer-reviewed publications (Ten best publications in chronological order)**

1. **Ramesh Sundar, A.**, R. Viswanathan, D. Mohanraj and P.Padmanaban. Role of oxidative enzymes in sugarcane and *Colletotrichum falcatum* interaction. Acta Phytopathologica et Entomologica Hungarica. 33 (3-4): 297-304 (1998).
2. **Ramesh Sundar, A.**, R.Viswanathan, D. Mohanraj and P.Padmanaban. Studies on the possible use of pathogen toxin as a marker molecular marker for red rot resistance in sugarcane Acta Phytopathologica et Entomologia Hungarica. 34(3), pp 211-217 (1999).
3. **Ramesh Sundar,A.**, R. Velazhahan, R. Viswanathan, P.Padmanaban and P. Vidhyasekaran. Induction of systemic resistance against red rot in sugarcane by a synthetic signal inducer S-methyl acibenzolar. Phytoparasitica, 2001, Vol.29 (3): 231-242. (2001).
4. **Ramesh Sundar, A.** and P. Vidhyasekaran. Induction of active oxygen species (AOS), lipoxygenase and lipid peroxidation in suspension-cultured sugarcane cells by a glycoprotein elicitor isolated from *Colletotrichum falcatum*. Journal of Plant diseases and Protection, 109(5), 441-451. (2002).
5. **Ramesh Sundar, A.**, R. Velazhahan and P.Vidhyasekaran. A glycoprotein elicitor isolated from *Colletotrichum falcatum* induces defense mechanisms in sugarcane leaves and suspension-cultured cells. Journal of Plant diseases and Protection , 109(6), 601-611, (2002).
6. **Ramesh Sundar, A.** and P.Vidhyasekaran. Differential induction of phenyl-propanoid metabolites in suspension-cultured cells of sugarcane by fungal elicitors. Acta Phytopathologica et Entomologia Hungarica.38 (1-2)29-42, (2003).
7. **Ramesh Sundar, A.**, R. Viswanathan, P. Malathi, P. Padmanaban. Mechanism of resistance induced by plant activators against *Colletotrichum falcatum* in sugarcane. Archives of Phytopathology and Plant Protection, 39 (4): 259-272. (2006).
8. **Ramesh Sundar, R.** Velazhahan, S. Nagarathinam and P. Vidhyasekaran. Induction of pathogenesis-related proteins in sugarcane leaves and cell-cultures by a glycoprotein elicitor isolated from *Colletotrichum falcatum*. Biologia Plantarum 52 (2): 321-328, (2008).
9. **Ramesh Sundar A,** Viswanathan R, and Nagarathinam S. Induction of systemic acquired resistance (SAR) using synthetic signal molecules against *Colletotrichum falcatum* in *Saccharum officinarum*. Sugar Tech Vol.11 (3): 274-281, (2009).
10. **Ramesh Sundar, A.** S. Nagarathinam, V. GaneshKumar, R. Rahul, M. Raveendran, P. Malathi, A. Ganesh, R. Rakwal and R. Viswanthan. Sugarcane proteomics: Establishment of a protein extraction method for 2-DE in stalk tissues

and initiation of sugarcane proteome reference map, *Electrophoresis* (2010); 31, 1959- 1974.

### *Honors/Awards/Trainings*

- Selected for the Agricultural Research service under the Indian Council of Agricultural research (III Rank holder – 1991 ARS exams).
  - Passed National Eligibility Test (NET) conducted by Agricultural Scientist Recruitment Board, New Delhi during 2000.
  - Senior Research Fellowship under The Council of Science and Industrial research, India, for pursuing Ph.D programme in sugarcane pathology (1996-1999)
  - First class in B.Sc (Ag), M.Sc (Ag) and Ph.D programme
  - Noel Deerr gold medal for the best paper presentation in the Agricultural session by the Sugar Technologists association of India (STAI), New Delhi.
  - Best Theme presentation award for the oral paper presentation at the Symposium on Biotechnology of plant protection by the Banaras Hindu University, Varanasi.
  - Postdoctoral experience on Molecular Plant Pathology at CSIRO, Brisbane, Australia (Feb 2007 to Jan 2008).
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- Undergone three weeks training on Construction of cDNA library and its screening, IARI, NewDelhi (Jan 5 to Jan 25, 2006).
  - Undergone three weeks training on Biotechnology and Bio-informatics: Applications in Agricultural research, IISR, Calicut (Oct 19 to Nov 8, 2005).
  - Undergone three months training at the MSSRF, Chennai Biotechnology lab for three months (May-July, 2002).
  - Editorial member – Indian Journal of Mycology and Plant Pathology
  - Invited reviewer for research papers on Journals: Sugar Tech, Mycopathologia, Journal of Phytopathology, Journal of Plant interaction, Journal of Biological control, Plant Pathology etc. and as a Guest Co-editor in Global Science Books in the forthcoming special issue on Sugarcane Pathology in the Functional Plant Science and Biotechnology.
  - Recognized for guiding PhD (Biotechnology) students from Anna University & Bharathiar University, Coimbatore.