**Teacher's Profile**

**Professor V.A. Bapat**

NASI Honorary Scientist
Dept. of Biotechnology,
Shivaji University, Vidyanagar,
Kolhapur- 416 004 Maharashtra,
India
email: vabapat@gmail.com

## 1. PERSONAL DETAILS:

| | |
|---|---|
| **Name** | : Vishwas Anant Bapat |
| **Date of Birth** | : May 25, 1947 |
| **Sex** | : Male |
| **Marital Status** | : Married |
| **Languages known** | : English, Marathi, Hindi |
| **Postal Address** | : A-1, Professors' Quarters,<br>Shivaji University, Vidyanagar,<br>Kolhapur- 416 004 |

**Title of the Ph.D thesis:**
Morphogenetic and Radiobiological Investigations in Tissue and Organ Cultures of some Flowering Plants

**Field of research expertise:**

**Plant Tissue Culture:** General plant tissue culture techniques, callus cultures, micropropagation, organogenesis, cell suspension cultures, hairy root cultures, transformation, secondary metabolite analysis, histology techniques, microscopy techniques.

**Rescue of endangered plants from Western Ghats** : Micropropagation and establishment of rare plants from western Ghats

**Molecular biology -**PCR, RT-PCR, Gene cloning, Western Blotting, $5^1$ and $3^1$ RACE, Recombinant Protein expression and purification, Construction of genomic liabrary, EST liabrary, 16S rDNA liabrary, tRFLP, Sequencing. Establishment of molecular markers like RAPD, RFLP, SSR, ISSR for DNA fingerprinting.

**Transgenic plants technology –** Transfer of stress tolerance and disease resistance genes to useful plants, development of plants for molecular farming for edible vaccines

**In vitro mutagenesis-** Screening of cells for possible mutations, isolation and regeneration of plants

**Biochemistry and phytochemistry:** Analysis of plants for identification of useful drugs. Use of various phytochemical techniques like extraction, purification, column chromatography, TLC, Prep TLC, HPTLC, HPLC, Preparative HPLC, GC, and spectrophotometry.

**Reviewers:**

- Reviewer for several national and international journals in the field of life sciences.

**Software and bioinformatics skills:**
MS office, Data analysis using Graph Pad, ACD chemsketch software. mallard, Clustal X/W, DAMBE, PHYLIP, DOTUR and MEGA.

## 2. ACADEMIC DETAILS:

| Certificate Degree | Subjects | Name of Institution | Year | Class |
|---|---|---|---|---|
| Ph. D | Botany | Bhabha Atomic Research Centre | 1981 | By thesis |
| M. Sc. | Botany | Shivaji University, Kolhapur | 1969 | First Class |
| B. Sc | Botany | Shivaji University, Kolhapur | 1967 | First Class |

## 3. RESEARCH SPECIALIZATION

- Plant Biotechnology
- Plant Molecular Biology.
- Plant Tissue Culture
- Phytochemistry

## 4. TEACHING EXPERIENCE:

**June 2017 to till date** : Working as NASI Honorary Scientist at Dept. of Biotechnology, Shivaji University, Kolhapur

**June 2012 to May 2017** : Working as INSA Senior Scientist at Dept. of Biotechnology, Shivaji University, Kolhapur

**July 2007 to May 2012:** Working as CSIR Emeritus Scientist at Dept. of Biotechnology, Shivaji University, Kolhapur 416 004

**June 1971 to June 2007**: Worked as a scientist and teacher at Bhabha Atomic Research Centre, Mumbai

## 5. RESEARCH GUIDANCE:

Ph. D. projects: 7
M.Sc. projects : 25

## 6. MEMBERSHIP AND OTHER CHARGES

- Member, Plant Tissue Culture Association of India
- Member, Bio Safety Committee, MAHYCO Seeds, Mumbai
- Member, Bio Safety Committee, Nimbkar Seeds, Phaltan
- Member, DST Inspire Programme

## 7. HONORS AND REWARDS

- CSIR, Emeritus Scientist (2007 to 2012)
- INSA, Senior Scientist (2012 -2017)
- NASI, Honorary Scientist (2017-till date)

## 8. FELLOWSHIPS AND POSTDOCTORAL

- Fellow, Maharashtra Academy of Sciences, Pune (2002)
- Fellow, National Academy of Sciences, Allahabad (2003)
- Fellow, Indian National Science Academy. New Delhi (2011)

## 9. RESEARCH PUBLICATIONS (PUBLISHED/ ACCEPTED) IN INTERNATIONAL JOURNALS

1 **BAPAT V. A.** and RAO P. S. (1976).Differential radioactivity of seeds, seedlings and callus cultures of *Petunia inflata*. L. Plant Sci. Lett. 6,291-298.

2 **BAPAT V. A.** and NARAYANASWAMY S. (1976).Growth and organogenesis in explanted tissues of *Amaryllis* in culture. Bull. Torrey Bot. Club. 103, 53 - 56.

3 RAO P. S. and **BAPAT V. A.** and HARADA H. (1976). Gamma radiation and hormonal factors controlling morphogenesis in organ cultures of *Antirrhinum majus* L. Cv. Red Majestic. Z. Pflanzenphysiol. 80, 144 - 152.

4 RAO P. S., HARADA H. and **BAPAT V. A.** (1976). A comparative study of the differential radiosensetivity of seeds, seedlings and tissue cultures of the Japanese morning glory ( *Pharbitis nil* L.). Plant and Cell Physiol. 17, 119 - 125.

5 **BAPAT V. A.** and NARAYANSWAMY S. (1977).Mesocarp and endosperm culture of *Achras sapota* Linn. *in vitro* Indian J. Expt. Biol. 15, 294 - 296.

6 **BAPAT V. A.** and NARAYANSWAMY S. (1977). Rhizogenesis in tissue cultures of the orchid *Spathoglottis* Bull. Torrey Bot. Club.104, 2 - 4.

7 **BAPAT V. A.** and RAO P. S. (1977 ) . Shoot apical meristem culture of *Pharbitis nil* L. Plant Sci. Lett. 10, 327 - 334.

8 **BAPAT V. A.** and RAO P .S. (1977).Experimental control of growth and differentiation in organ cultures of *Physalis minima* L.Z. Pflanzenphysiol. 85, 403 - 416.

9 RAO P. S. and **BAPAT V. A.** (1978).Vegetative propagation of sandalwood plants through tissue cultures. Can. J. Bot. 56, 1153 - 1156.

10 **BAPAT V. A.** and RAO P. S. (1979).Somatic embryogenesis and plantlet formation in tissue cultures of sandalwood (*Santalum album* L.). Ann. Bot. 44, 629 - 630.

11 SIPHAIMALANI A. T., **BAPAT V. A.**RAO P.S. and CHADHA M. S. (1981). Biosynthetic potential of cultured tissues and regenerated plants of *Physalis minima* L. J. Nat. Products. 44, 114 - 118.

12 **BAPAT V. A.** and WENZEL G. (1982). *In vitro* haploid plantlet induction in *Physalis minima*. Plant Cell Rep. 1, 154 - 156.

13 **BAPAT V. A.** and SCHIEDER O. (1982).Protoplast culture of several members of the genus *Physalis*. Plant Cell Rep. 1, 69 - 70.

14 OELCK M.M., **BAPAT V. A.** and SCHIEDER O. ( 1982 ). Protoplasts culture of three legumes: *Arachis hypogaea, Melilotus officinalis, Trifolium resupinatum*. Z. Pflanzenphysiol. 106, 173 - 177.

15 PATEL G., BAPAT **V. A**. and RAO P .S. (1983). In vitro culture of organ explants of *Morus indica* L. Plant regeneration and fruit formation in axillary bud culture. Z. Pflanzenphysiol. 11, 465 - 468.

16 **BAPAT V. A.** and RAO P. S. (1984). Regulatory factors for in vitro multiplication of sandalwood tree *Santalum album* L. I. Shoot bud regeneration and somatic embryogenesis in hypocotyl. Proc. Indian. Acad. Sci. (Plant Sci.). 93, 19 - 27.

17 RAO P. S., **BAPAT V. A.** and MHATRE M. (1984). Regulatory factors for *in vitro* multiplication of sandalwood tree *Santalum album* L. II. Plant regeneration in nodal and internodal in explants and occurrence of somaclonal variations in tissue culture raised plants. Proc. Natn. Sci. Acad. B 50, 196 - 202.

18 MHATRE M., **BAPAT V. A.**and RAO P. S. (1984).Plant regeneration in protoplasts cultures of *Tylophora indica* L. J. Plant Physiol.115, 231–235.

19 **BAPAT V. A.,** GILL R. and RAO P .S. (1985).Regeneration of somatic embryos and plantlets from stem callus protoplasts of sandalwood tree (*Santalum album* L.). Curr. Sci. 54, 978 - 982.

20 MHATRE M., **BAPAT V. A.**and RAO P .S. (1985). Regeneration of plants from the culture of leaves and axillary buds in mulberry (*Morus indica* L.). Plant Cell Rep. 4, 78 - 79.

21 MHATRE M., **BAPAT V. A.**and RAO P.S. (1985). Micropropagation and protoplasts culture of *Arachis hypogaea* L. Curr. Sci.54,1052 - 1056.

22 **BAPAT V. A.**, MHATRE M. and RAO P. S. (1986).Regeneration of plants from protoplasts cultures of *Pergularia pallid*. J. Plant Physiol. 124, 413 - 417.

23 **BAPAT V. A.,** RAO P. S. and HEBLE M. R. (1986).Immobilization of cells and protoplasts of *Catharanthus roseus* L. Proc. Indian Acad. Sci. (Plant sci.) 96,413 - 418.

24 **BAPAT V. A.**, MHATRE M. and RAO P. S. (1987). Propagation of *Morus indica* L. (Mulberry) by encapsulated shoot buds. Plant Cell Rep. 6, 393 - 395.

25 GEORGE L., **BAPAT V. A.** and RAO P. S. (1987).*In vitro* multiplication of sesame (*Sesamum indicum* L.) through tissue culture. Ann. Bot. 60, 17 - 21.

26 **BAPAT V. A.** and RAO P. S. (1988 ).Sandalwood plantlets from "synthetic seeds ". Plant Cell Rep. 7, 434 - 436.

27 **BAPAT V. A.**, GEORGE L. And RAO P. S. (1989). Isolation, culture and callus formation of sesame (*Sesamum indicum* L. cv. PT.) Protoplasts. Ind. J. Exptl. Biol. 27, 182 - 184.

28 GEORGE L., **BAPAT V. A.** and RAO P. S. (1989).Plant regeneration in different cultures of sesame (*Sesamum indicum* L.). Proc. Indian Acad. Sci. (Plant Sci.). 99, 35 - 137.

29 **BAPAT V. A.** and RAO P. S. (1990). *In vivo* growth of encapsulated axillary buds of mulberry (*Morus indica* L.). Plant Cell, Tissue and Organ Culture.20, 69 - 70.

30 **BAPAT V. A.**, FULZELE D.P., RAO P.S. and HEBLE M.R. (1990).Production of sandalwood somatic embryos in bioreactors. Curr. Sci. 59,746 -748.

31 **BAPAT V. A.**, SIPAHIMALANI A. T., RAO P.S. and HEBLE M.R. (1990).Growth and alkaloid synthesis of cell lines of *Catharanthus roseus* L. obtained through immobilization of cells and protoplasts. Proc. Indian Acad. Sci. (Plant Sci.).100, 211 - 214.

32 MHATRE M., **BAPAT V. A.**and RAO P. S. (1991). Electrophoretic analysis of sandalwood (*Santalum album* L.) proteins during morphogenesis. Ind. J. Exptl. Biol. 29, 1150 - 1151.

33 FERNANDES P., **BAPAT V. A.** and RAO P. S. (1992). In vivo germination of encapsulated somatic embryos of sandalwood (*Santalum album* L.). Ind. J. Expt. Biol. 30, 831- 841.

34 GANAPATHI T.R, SUPRASANNA P., **BAPAT V. A.** and RAO P.S. (1992).Propagation of Banana through encapsulated shoot tips. Plant Cell Rep. 11, 571 575.

35 **BAPAT V. A.** and RAO P. S. (1992). Plantlet regeneration from encapsulated and non encapsulated desiccated somatic embryos of a forest tree: sandalwood (*Santalum album* L.). J. Plant Biochem and Biotech. 1, 109 – 113.

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40 GANAPATHI T.R, MOHAN J.S.S., SUPRASSANA P., **BAPAT V. A.** and RAO. P. S. (1995). A low cost strategy for *in vitro* propagation of banana. Curr. Sci. 68 (6), 646 - 649.

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45 KULKARNI V.M., GANAPATHI T. R., SUPRASANNA P., **BAPAT V. A.**and RAO P. S. (1996).*In vitro* propagation in *Ensette superbum* Roxb Cheesman , a species closely related to Musa. Ind. J. Exptl. Biol. 26 (3), 168 - 174.

46 GANAPATHI T. R., KULKARNI V. M., SUPRASANNA P., **BAPAT V. A.** RAO P. S. (1998).Studies on *in vitro* multiplication and encapsulation in an elite variety of banana Lal Kela (AAA).Proc. Ind. Acad. Sci. 68 (B), 45 – 51.

47 THAKUR R., RAO P. S. and **BAPAT V. A.** (1998).*In Vitro* micropropagation of *Melia azardarach* L. Plant Cell Rep. 18, 127 – 131.

48 KULKARNI V. M., GANAPATHI T. R., SUPRASANNA P., **BAPAT V. A.** RAO P. S. (1998). Effect of gamma irradiation on *in vitro* multiple shoots cultures of banana (Musa) J. Nuclear Agric. Biol. 26 (4), 232 – 240.

49 GANAPATHI T. R., SUPRASANNA P., **BAPAT V. A.**, KULKARNI V. M. RAO P. S. (1999).Somatic embryogenesis and plant regeneration in male flower buds of banana. Curr. Sci. 9, 1228 – 1231.

50 KULKARNI V.M., RANADE S.A., GANAPATHI T.R., SUPRASANNA P., **BAPAT V.A.,** USSUF K.K. and RAO P.S. (1999).RAPD profile variation amongst cultivated wild and irradiation derived variants of banana. Asia Pacific J. Mol .Bio. & Biotech. 7(2), 159 –166.

51 **BAPAT V. A.,** SUPRASANNA P., GANAPATHI T. R. and RAO P. S. (2000).Detection of L- Dopa in tissue cultures of banana. Pharmaceutical Biology 38, 271 – 273.

52 KELKAR S. M., KAKLIJ G. S. and **BAPAT V. A.** (2001).Determination of anti diabetic activity in *Allium cepa* L. (onion) tissue cultures. Ind. J. Biochemistry & Biophysics, 38, 27 – 279.

53 **BAPAT V. A.,** NIRALE A. S., KULKARNI V. M., SUPRASANNA P. and RAO P. S. (2001).Studies on mineral uptake using tissue cultured plants of banana (*Musa* sp). J. Plant Biochemistry and Biotechnology. 10, 79 – 81.

54 KARMARKAR, V. M., KULKARNI V. M., SUPRSANNA P., GANAPATHI T.R., **BAPAT V. A.** and RAO P.S. (2001).Radio sensitivity of in vivo and *in vitro* cultures of banana cv. basrai. Fruits 56, 67 – 74.

55 GANAPATHI T. R., SRINIVAS L., SUPRASANNA P. and **BAPAT V. A.** (2001). Plant regeneration from encapsulated somatic embryos of banana.In vitro Cell Dev. Biol. (Plant), 37, 178 – 181.

56 SUPRASANNA P., ANUPAMA S., GANAPATHI T. R. and **BAPAT V. A**. (2001).*In vitro* growth and development of encapsulated shoot tips of different banana cultivars. Journal New Seeds. 3(1), 19 – 25.

57 GHOSH S. B., NAGI L. H.S., GANAPATHI T.R., PAUL KHURANA S.M. and **BAPAT V. A.** (2001).Cloning and sequencing of Potato Virus "Y" coat protein gene from Indian isolate and development of transgenic tobacco for PV "Y" resistance. Curr. Sci. 82, 101-105.

58 ABU ASSAR A.H., JOSEPH D., SUPRASANNA P., CHOUDHURY R.K., SAXENA A. and **BAPAT V. A.** (2002).Study of trace element correlations with drought tolerance in different Sorghum genotypes using energy dispersive X-rays fluorescence technique. Biological Trace Elements Res. 85, 255 – 267.

59 SRINIVAS L., GANAPATHI T.R., SUPRASANNA P. IYER R.K. and **BAPAT V. A.** (2002).Amelioration of somatic embryogenesis of banana using cyano bacterial extract. J. New Seeds 4(3), 37-46.

60 KULKARNI V. M., SRINIVAS L., SATDIVE R.K., **BAPAT V. A**. and RAO P.S. (2002).Dissection of the genetic variability in elite Indian banana genotypes.Plant Genetic Resources Newsletter. 132, 1-5.

61 KULKARNI V.M., VARSHNEY L.R., **BAPAT V. A**. and RAO P.S. (2002).Somatic embryogenesis and plantlet regeneration in a wild banana (*Ensete superbum*,Roxb) Chesmam). Curr. Sci. 83, 939-941.

62 CHAKRABARTY A., GANAPATHI T.R., MUKHERJEE P. and **BAPAT V. A.** (2003).MSI –99, a magainin analogue, imparts enhanced disease resistance in transgenic tobacco and banana. Planta. 216, 4, 587-596.

63 CHINTALWAR G.J., GUPTA S., ROJA G. and **BAPAT V. A**. (2003).Protoberberine alkaloids from callus and cell suspension cultures of *Tinospora cordifolia*. Pharmaceutical Biol. 41/2, 81-87.

64 SUPRASANNA P., BHARATI G., GANAPATHI T.R. and **BAPAT V.A.** (2003).*In vitro* development of encapsulated somatic embryos of rice. Tropical Agric. Res. Extension. 5 (1 & 2), 76-78.

65 SUPRASANNA P., BHARATI G., GANAPAHTI T.R. and **BAPAT V.A.** (2003).Aroma in rice: effects of proline supplementation and immobilization of callus cultures. Rice Genetics News Letter's 19, 9-11.

66 DESAI N. S., SUPRASANNA P. and **BAPAT V. A.** (2003). Conservation status and in vitro multiplication of *Frerea indica* Dalz. an endemic and endangered plants from Western Ghats of Maharashtra, India. Physiol. Mol. Biol. Plants. 9 (2), 265-268.

67 SUNILKUMAR G.B., GANAPATHI T.R., REVATHI C. J., PRASAD K. S.N. and **BAPAT V. A.** (2003).Expression of hepatitis B surface antigen in tobacco cell suspension cultures. Protein expression and Purification. 32, 10 – 17.

68 KULKARNI V. M., SUPRASANNA P., GANAPATHI T. R., **BAPAT V. A.** and RAO P. S. (2004).Differential effects of genome and cytokinins on shoot – tip cultures of Indian Banana cultivars (*Musa* spp). Physiol. Mol. Biol. Plants 10, 75 - 81.

69 KULKARNI V. M., GANAPATHI T.R., **BAPAT V. A.** and RAO P. S. (2004).Establishment of cell suspension cultures in Banana cv. grandnaine and evaluation of its sensitivity to gamma irradiation. Curr. Sci. 86 (7), 1-2.

70 DESAI N. S., SUPRASANNA P. and **BAPAT V. A.** (2004). Simple and reproducible protocol for direct somatic embryogenesis from cultured immature inflorescence segments of sugarcane (*Saccharum* sp). Curr. Sci. 87, 764- 768.

71 DESAI N. S., SUPRASANNA P. and **BAPAT V.A.** (2004).Partial desiccation of embryogenic callus improves plant regeneration frequency in Sugarcane (*Saccharum* spp). J. Plant Biotechnol. 6, 229-233.

72 SUPRASANNA P., DESAI N.S., NISHANTH G., GHOSH S.B. LAXMI N. and **BAPAT V. A.** (2004).Differential gene expression in embryogenic, non embryogenenic and desiccation induced cultures of sugarcane. Sugar Tech. 6(4) 305-309.

73 DHKULKAR S., GANAPATHI T. R., BHARGAVA S. and **BAPAT V.A**.(2005).Induction of hairy roots in *Gmelina arborea* Roxb. and production of verbascoside in hairy roots. Plant Sci. 169, 812-818.

74 SUNILKUMAR G.B., GANAPATHI T.R., REVATHI C.J., SRINIVAS L. and **BAPAT V. A.** (2005).Expression of Hepatitis B surface antigen in transgenic banana plants. Planta, 222, 484-493.

75 SUNILKUMAR G.B., GANAPATHI T.R., REVATHI C.J., SRINIVAS L. and **BAPAT V. A.** (2005).Secretion of hepatitis B surface antigen in transformed tobacco cell suspension cultures. Biotechnology Letters 27, 927-932.

76 SUNILKUMAR G.B., GANAPATHI T.R., SRINIVAS L. and **BAPAT V. A**. (2005).Hepatitis B surface antigen expression in transgenic tobacco (*Nicotiana tabacum* L.) plants using four different expression cassettes". Plant Cell, Tissue & Org. Cul, 84, 315-323.

77 KULKARNI V.M., **BAPAT V.A.** and RAO P.S. (2005).Correlation and path coefficient analysis in Banana. J. Maharashtra Agricultural Universities. 31, 291-295.

78 KARMARKAR, V. M., KULKARNI V. M., SUPRSANNA P., **BAPAT V. A**. and RAO P.S. (2005).Study of radio sensitivity to Gamma irradiation at different moisture levels in multiple shoot cultures of banana cv. Basrai (AAA). Physiology and Mol Biol. Plants 11(1), 149-152.

79 SUNIL KUMAR, G.B., T.R. GANAPATHI, L. SRINIVAS, C.J.REVATHI and **BAPAT V. A.**(2006).Expression Hepatitis B surface antigen in potato hairy roots. Plant Sci. 170, 918-925.

80 SUPRASANNA P., C. RUPALI, N.S. DESAI and **BAPAT V.A**. (2005).Regulation of somatic embryogenesis by using different plant growth regulators in sugarcane (*Saccharum officinalis* L). Sugar Tech, 7(4), 123-128.

81 GHOSH S.B., L.H. LAXMI., GANAPATHI T.R., PAUL KHURANA S.M. and **BAPAT V. A.**(2006).Development of coat protein gene mediated resistance against potato virus 'Y' (PVY) in potato cultivar Kufri Jyoti Physiol. and Mol. Biol. (Plants) 12(2), 133-138.

82 GANAPATHI T.R., S.B. GHOSH., L.H. LAXMI and **BAPAT V. A.** (2007).Expression of an antimicrobial peptide MSI 99 confers enhanced resistance to *Aspergillus niger* in transgenic potato. Indian Journal of Biotechnology, 6, 63-67.

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84 KULKARNI V.M., SUPRASANNA P. and **BAPAT V.A.** (2006).Regeneration through multiple shoots and somatic embryogenesis of a commercially important and endangered Indian Banana Rajeli. Curr. Sci. 90. 842-846.

85 SRINIVAS L, GANAPATHI T.R., SUPRASANNA P. and **BAPAT V.A.**(2006).Effect of abscisic acid and desiccation on conversion of somatic embryos of banana (*Musa* spp. cv. Rasthali.).Indian Journal of Biotechnology, 5, 521-526.

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87 SUPRASANNA P., DESAI N.S., SAPANA G. and **BAPAT V.A**. (2006).Monitoring genetic fidelity in plants derived through direct somatic embryogenesis in sugarcane by RAPD analysis. Journal of New Seeds, 8 (3) 1-9,

88 PATADE V Y, SUPRASANNA P, KULKARNI UG and **BAPAT V.A.** (2006). Molecular profiling using RAPD technique of abiotic stress (salt and drought) tolerant regenerants of Sugarcane Cv.Coc-671 Sugar Tech 8(1) 63-68.

89 SUNIL KUMAR, G.B., T.R. GANAPATHI, L. SRINIVAS and **BAPAT V.A**.(2007).Hepatitis B. surface antigen expression in NT-1 cells of tobacco using different expression cassettes. *Biologia Plantarum* 51, 467-471.

90 MANJAYA J.G.,SUSEELAN K.N., GOPALAKRISHNA, PAWAR S.E. and **BAPAT V.A.** (2007).Radiation induced variability of seed storage proteins in Soybean (*Glycine max* L, Merrill). Food Chemistry, 100, 1324-1327.

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92 MISHRA P., GANAPATHI T.R., SUPRASANNA P. and **BAPAT V.A.** (2007).Effect of Single and recurrent gamma irradiation on in vitro shoot cultures of Banana. International J. Fruit Sci. 7(1), 45-57.

93 MANJAYA J.G., GOPALKRISHNA T., PAWAR S.E. and **BAPAT V.A**.(2007).Genetic variability for trypsin inhibitor content in soybean *Glycine max* (L) Merrill) and its correlation with oil and protein. Indian J. Genetics 7(1), 51-55.

94 SHEKHAWAT U.K.S,GANAPATHI T.R., SRINIVAS L., **BAPAT V.A.** and RATHORE T.S. (2007).*Agrobacterium* mediated genetic transformation of embryogenic cell suspension cultures of *Santalum album* L. Plant Cell, Tissue & Org, Cult. 92, 261-271.

95 KADAM U.S., GHOSH S.B., SUPRASANNA P., DEVASAGAYAM T.P. and **BAPAT V.A**. (2008).Antioxidant activity in sugarcane juice and its protective role against radiation induced DNA damage. Food Chemistry.106, 1154-1160.

96 SUPRASANNA P., RUPALI C., DESAI N.S. and **BAPAT V.A.** (2008).Partial desiccation augments plant regeneration from irradiated embryogenic cultures of sugarcane. Plant Cell, Tissue & Org. Cult. 92, 101- 105.

97 SUPRASANNA P., DESAI N.S., CHOUDHARY R.S. and **BAPAT V.A.** (2007).RAPD markers for assessing culture induced variation in somatic embryogenesis derived plants of sugarcane. Sugar Tech., 9 (4), 284-289.

98 SRINIVAS L, SUNIL KUMAR G.B, GANAPATHI T.R., REVATHI C.J. and **BAPAT V.A**. (2008).Expression of hepatitis B surface antigen in tomato: towards developing an edible vaccine for hepatitis B. Plant Biology. Rep, 2, 1-6.

99 PATADE V. Y, SUPRASANNA P. and **BAPAT V.A.** (2008).Effects of salt stress in relation to osmotic adjustment on sugarcane (*Saccharum officinarum* L.) callus cultures. Plant Growth Regulation, 55, 169-173.

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## 11. BOOK EDITOR

Currently editing the book entitled "Bioactive Compounds in Underutilized Fruits and Nuts, under the book series entitled "Book Series- Reference Series in Phytochemistry" by Springer Verlag Ltd.(In Press).

## 12. PATENT

Title: Method for extraction of L-Dopa from *Anethum graveolens* leaves. Inventors: S. A. Inamdar, **V. A. Bapat** and J. P. Jadhav
Patent No: 3486/MUM/2012
Date of Submission: CBR No: 16773, 10/12/2012

## 13. CONFERENCES ATTENDED (NATIONAL/INTERNATIONAL) Since 2007

**6**

## 14. RESEARCH PROJECT WORKS Since 2007

Biotechnological applications for fruit crop improvement.