

RAMAREDDY V. GUNTAKA, Ph.D
PROFESSOR

Department of Molecular Sciences
University of Tennessee Health Sciences Center
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EDUCATION:

S.S.L.C. 1959 Z.P. High School, Mudunuru, A.P. India
B.Sc. 1963 (April) **Chemistry and Biology**, A.N.R. College, Gudivada (Affiliated to the Andhra University, A.P., India)
M.Sc. 1965 (December) **Microbiology**, U.P. Agricultural University, Pantnagar, U.P., India (Thesis: Relationship between sporulation and antibiotic production in *Bacillus licheniformis*)
Ph.D. 1970 (January) **Microbiology**, Kansas State University, Manhattan, Kansas (Thesis: Mechanism of thymineless death in *Bacillus subtilis*)

HONORS/AWARDS:

Government of India Merit Scholarship, 1963-1965
American Cancer Society Senior Dernham Fellowship, 1973-1975
Research Career Development Award, National Institutes of Health 1979-1984
General Motors Cancer Research Professorship, Prague, Czechoslovakia, June 1989
Siromani Award, America Telugu Association, New York, July 1992
Scientist Award, Telugu Association of North America, July 1995
Sir C.V. Raman Professorship, University of Madras, India, January 1996
N. Narayana Endowment Lecture, Indian Institute of Science, Bangalore, India, 1996
Member, National Academy of Agricultural Sciences, India, Elected 1996
Jawaharlal Nehru Professorship, University of Hyderabad, India, August, 1998
BioAsia 2006, Genome Valley Excellence Award, Government of Andhra Pradesh, India. Feb. 2006

SOCIETY MEMBERSHIPS:

American Society for Microbiology, Member
American Association for the Advancement of Science
Federation of American Society of Biochemistry and Molecular Biology

UNIVERSITY APPOINTMENTS:

Professor (Tenured), Department of Molecular Sciences, College of Medicine, University of Tennessee Health Science Center, Memphis, 2/2001- present
Professor (Tenured), Department of Molecular Microbiology and Immunology, School of Medicine, University of Missouri-Columbia, 6/1987-3/2001
Associate Professor, Department of Microbiology, School of Medicine, University of Missouri, Columbia, 8/1983 - 5/1987

Assistant Professor, Department of Microbiology, College of Physicians and Surgeons, Columbia University, 10/1975-7/1983

Assistant Research Microbiologist, University of California, San Francisco. 1/1973-9/1975. Research in the laboratory of Drs. J.M. Bishop and H.E. Varmus

Postdoctoral Research Biochemist, University of California, San Diego, 7/1970-12/1972. Research in the laboratory of Dr. M. Goulian

Postgraduate Research Assistant, 12/69-6/70. Research in the laboratory of Dr. H. Reiter.

Research Assistant, 9/1966- 11/1969. Graduate work under the supervision of Dr. H. Reiter, Instructor in Chemistry, 2/1966-6/1966. Agricultural University, Tirupati, India

OTHER ACADEMIC APPOINTMENTS:

Professor of Medicine, Department of Medicine, University of Missouri School of Medicine, Columbia, MO 65212 8/1997-8/1999

Visiting Professor, Center for Plant Molecular Biology, Osmania University, Hyderabad, India, 4/1999-present

TEACHING EXPERIENCE:

Columbia University, College of Physicians and Surgeons, 1975-1983

Advanced Animal Virology (Syllabus is very similar to the course 405 given at the University of Missouri, Columbia.

Medical Microbiology; Engaged in teaching laboratory techniques to medical students.

Prokaryotic Gene Regulation (Graduate course); Team taught by the Faculty of the Departments of Microbiology, Cell Biology, Anatomy and Biochemistry; First part of a two semester course in Molecular and Cell Biology; Specific lectures (6) on bacteriophage replication and prokaryotic gene regulation; Offered every year.

University of Missouri-Columbia, 7/1983- 2/2001

Microbiology, 404 (Graduate Course); Microbial pathogenesis; Team taught by the Microbiology faculty; Specific lectures (7) on Virus-cell interactions and pathogenesis; Offered every Spring semester.

Molecular Biology II, 432 (Graduate Course); Team taught by the Microbiology faculty. Specific lectures on Eukaryotic gene regulation in normal and virus infected or transformed animal cells; Offered every fall semester. This has replaced 405 since 1989.

Advanced Virology; 405 (Graduate Course); Covered wide range of topics in animal virology focusing on the molecular biology of virus replication, gene regulation and molecular mechanisms of pathogenesis; Team taught with Dr. D. Pintel and Offered every alternate year.1983-1992

Microbiology; 301 (Medical students); Lectures (7) in animal virology are given every year to the second year medical students in the Microbiology course. 1983-1997

Medical Virology; 303 (Graduate and Senior Undergraduate Course); Course Director; Covered wide range of topics in animal virology with emphasis on the molecular biology of virus replication, gene regulation and molecular mechanisms of pathogenesis; Team taught; Offered every year.

Tutor for **Problem Based Learning** to M1 and M2 medical students. Eight -week blocks of about 45 contact hours (one block per year). 1997-2001

University of Tennessee, Memphis (2001- present)

Molecular Sciences 929: Techniques in Molecular Sciences; Team taught; Offered every year; 7 lectures - one and half hour each lecture 2002- current

Microbial Pathogenesis (MSCI 930): Virology & Advanced Virology; Graduate Course; Team taught; Offered every year; 14 lectures; 2005 - current

INVITED LECTURES AND SEMINARS:

Fundamental Aspects of Neoplasia, Symposium at Rutgers University, Piscataway, New Jersey, April 1974 (Supercoiled DNA intermediates in Retrovirus replication)

Cold Spring Harbor Symposium on Tumor Viruses, May 1974 (Supercoiled DNA Intermediate in Retrovirus Replication)

International Congress of Virology, Strasbourg, France, August 1981 (Viral promoter)

National Institutes of Health, Bethesda, April 1980 (Methylation of Proviral DNA)

Eli Lilly, Indianapolis, March 1981 (*E. coli* RNA Polymerase Promoter in Retrovirus LTR)

University of Wurtzburg, Germany, July 1981 (Promoter in Retrovirus LTR)

Max-Planck Institute, Munich, Germany, July 1981 (Methylation vs. gene expression)

Institute Pasteur, Lille, France, July 1981 (Mechanism of reverse transcription)

Regional Research Laboratory, Hyderabad, India, August 1981 (Promoter in Retrovirus LTR)

National Institutes of Health and Family Planning, New Delhi, India, September 1981 (Recombinant DNA technology)

Memorial Sloan-Kettering Institute, New York, March 1982 (Methylation vs. Gene Expression)

DNA Sequencing Workshop, Midwest Phytopathology Conference, University of Missouri-Columbia, June 1984 (DNA sequencing technique)

American Society for Microbiology, Missouri Branch, Springfield, Missouri, November 1984 (Retrovirus replication)

Annual Meeting, American Society for Microbiology, Missouri Branch, Columbia, Missouri, April 1985 (Cis-acting Enhancer sequences in RSV LTR)

International Crops Research for Semi Arid Tropics, Hyderabad, September 1985 (Application of Genetic Engineering techniques to plant systems)

International Congress of Microbiology, Manchester, England, September 1986 (Retrovirus vectors)

Chairman, Symposium on Viruses as Vectors, International Congress of Microbiology, Manchester, England, September 1986

Special Guest Speaker, Institute of Molecular Genetics, Czechoslovakia Academy of Sciences, Prague, Czechoslovakia, September 1986 (Mechanism of genesis of transforming Retroviruses)

Invited special seminar, Chonnam National University, Kwangju, South Korea, April 1987 (Oncogenes)

Invited seminar, MIWON Company, Seoul, South Korea, April 1987 (Recombinant DNA technology-industrial applications)

Medical College of Georgia, Augusta, GA, March 1988 (Trans-acting factors)

Kansas State University, Manhattan, KS, April 1988 (Cloning of Malaria genes)

Invited speaker, Centre for Cellular and Molecular Biology, Hyderabad, India July 1992
Invited Expert Scientist, TOKTEN Program, CSIR and United Nations Development Invited speaker, International Congress of Biochemistry, Prague, Czechoslovakia, July 1988 (Trans-acting Enhancer factors)
General Motors Cancer Research Foundation Visiting Professorship Lecture, Prague, Czechoslovakia, June 1989 (Transcription initiation and Termination in RSV infected cells)
Invited speaker and TOKTEN expert, CSIR, on a Government of India and United States Development Program, Hyderabad, India, September 7 to October 13, 1990.
UNDP Program, Indian Agricultural Research Institute, New Delhi, Centre for Cellular and Molecular Biology and Centre for Plant Molecular Biology, Hyderabad, India. December 1994
Invited Lectures (4), University of Madras, Madras, India. January 1996.
Invited Lecture, Indian Institute of Science, Bangalore, India. January 1996.
Invited Lectures (2), Chonnam National University, Kwangju, South Korea. November 1996
Invited Lectures (4), University of Hyderabad. August-September, 1998
Invited Lectures (6), Various Institutes in India. January-December, 1999
Invited Lectures (3), Hyderabad, India, July 2000 and December 2000
Invited Lectures (4), Hyderabad, India, July 2001 and December 2001/January 2002
Invited Speaker, National Symposium on Hepatitis B and C. December 20, 2003
Invited Speaker, International Symposium on Fibrosis Research, Memphis, TN, April 20, 2004
Invited Speaker, Controlled Release Society, Honolulu, HI, June 12, 2004
Invited Speaker, ISIS Biotech Company, Carlsbad, CA, December 2004
Invited Speaker, Center for DNA Fingerprinting & Diagnostics, January 2005
Invited Seminar, Pennsylvania State University, State College, PA, November 2005
Invited Lectures, University of Hyderabad and Osmania University, 2006
Invited Lectures, National University of Singapore, Singapore, August 2007

COMMITTEES:

1) National

Biomedical Study Section, NIH, May, 1983

Study Section Member, SBIR, NIH, March 1992

Reviewed manuscripts: for **Journal of Virology; Virology; Biochemica Biophysica Acta, Biochemistry, Proceedings of the National Academy of Sciences; Journal of Biological Chemistry; Biotechniques**

2) Editorial Board

Folia Biologica, Czech Republic, 1998- present

3) Columbia University

Search Committee Member, Dept. of Microbiology, Columbia University, New York, 1980

Medical School Faculty Council, Dept. of Microbiology, Columbia University, New York 1981-1983

4) University of Missouri-Columbia

Search Committee Member, Department of Biochemistry, University of Missouri-Columbia, 1985

Search Committee Member, Department of Microbiology, University of Missouri-Columbia, 1985

Search Committee Member, Department of Veterinary Medicine, University of Missouri, Columbia, 1986

Member, Roma Eisenstark Memorial Lectureship Committee, 1985-1987
Chairman, Roma Eisenstark Memorial Lectureship Committee, 1987-1996
Member, Department of Microbiology Promotion and Tenure Committee, June 1988-1998
Member, Department of Microbiology Curriculum Committee 1998-2001

OTHER PROFESSIONAL ACTIVITIES:

1991-1997 Scientific Advisor, Cancer Research Center, Columbia, MO
1990 TOKTEN Expert, United Nations Development Program/Government of India. 5 weeks at Osmania University, Hyderabad India.
1994 TOKTEN Expert, UNDP/Government of India. Spent 5 weeks at the Indian Agricultural Research Institute, New Delhi, Center for Cellular, Molecular Biology, Osmania University, Shantha Biotechnics, Pvt Ltd., Hyderabad.
1993-2000 Scientific Advisor, Shantha Biotechnics Pvt. Ltd., Hyderabad, India.
1999-present Scientific Advisor, Sudershan Biotech Ltd., Hyderabad, India.

FELLOWS/GRADUATE STUDENTS TRAINED:

Doctoral Candidates: Advisor

Mitsialis S.Alex 1979-1983. College of Physicians and Surgeons, Columbia University, New York. Thesis title: Studies on Transcription-Promoting Sequence within the Long Terminal Repeat of Avian Sarcoma Virus. Current affiliation: Department of Clinical Research and the Department of Medicine, Boston University of School of Medicine, Boston, MA

Katz, Richard A. 1976-1983. College of Physicians and Surgeons, Columbia University, New York. Thesis title: Studies on the methylation of avian sarcoma Proviral DNA and Ribosomal genes in eukaryotic cells. Current affiliation: Institute of Cancer Research, Fox Chase, Philadelphia, PA

Kenny, Sucheta. 1984-1990. Department of Molecular Microbiology and Immunology, University of Missouri, Columbia, MO. Thesis title: Transcriptional regulatory features of Rous sarcoma virus. Current affiliation: Housewife

Cleavinger, Peter 1990-1996. Department of Molecular Microbiology and Immunology, University of Missouri, Columbia, MO. Thesis title: Transcriptional regulation of Rous sarcoma virus LTR. Current Affiliation: Practicing Gastroenterologist, Columbia, MO

Ririe, Seth 1996-2000. Department of Molecular Microbiology and Immunology, University of Missouri, Columbia, MO. Thesis title: Type 1 Collagen gene regulation. Current Affiliation: Qiagen, Los Angeles, CA

Khandelwal, Payal 2002- Present. University of Tennessee Health Science Center, Memphis

Doctoral Committee Member:

U.Tantravahi. 1983. College of Physicians and Surgeons, Columbia University, New York. Thesis title: Cytogenetic, Immunochemical and Biochemical Studies of Amplified Ribosomal RNA Genes A.Taylor. 1985. Department of Microbiology, University of Missouri-Columbia, Columbia, Missouri. Thesis title: Organization and Expression of Mycoplasma Genes

Mary Nahlik. 1986. Department of Microbiology, University of Missouri-Columbia, Columbia, Missouri. Thesis title: Genetic Analysis of Ferric Enterobactin Transport.

- Young-Hwan Rhee. 1987. Department of Biochemistry, University of Missouri-Columbia, Columbia, Missouri. Thesis title: Regulation of C-myc Expression.
- Bradley Ozenberger. 1988. Department of Microbiology, University of Missouri-Columbia, Columbia, Missouri. Thesis title: Ferric Enterobactin Transport Genes in *E. coli*.
- Karen Clemens. 1988. Department of Microbiology, University of Missouri-Columbia. Columbia, Missouri. Thesis title: Studies of the Regulation of expression of the autonomous parvovirus, Minute Virus of Mice. (Deceased)
- Gregg Pettis. 1988. Department of Microbiology, University of Missouri-Columbia, Columbia, Missouri. Thesis title: Regulatory features of enterobactin gene expression in *E. coli*.
- Rebecca Ferrell. 1990. Department of Microbiology, University of Missouri-Columbia, Columbia, Missouri. Thesis title: Characterization of a repetitive DNA sequence in mycoplasma.
- Ramesh Ramanathan. 1989. Department of Biochemistry, University of Missouri-Columbia, Columbia, Missouri. Thesis title: Transcriptional pausing in *E. coli* rnpB gene.
- Stephen Notarnicola. 1990. Department of Molecular Microbiology & Immunology, University of Missouri-Columbia, Columbia, Missouri. Thesis title: Expression and functional examination of a cloned *Mycoplasma hyorhinis* gene in *E. coli*.
- Tim Brickman. 1991. Department of Molecular Microbiology & Immunology, University of Missouri-Columbia, Columbia, Missouri. Thesis title: Regulation of enterobactin gene expression from the bidirectional *fepB-entC* promoter-operator regions in *E. coli*.
- Rob Schoborg. 1991. Department of Molecular Microbiology & Immunology, University of Missouri-Columbia, Columbia, Missouri. Thesis title: Regulation of MVM nonstructural gene expression.
- Lisa Naeger. 1992. Department of Molecular Microbiology & Immunology, University of Missouri Columbia, Columbia, Missouri. Thesis title: The role of the small nonstructural protein (NS2) in infection by the autonomous parvovirus minute virus of mice.
- Greg Tullis. 1993. Department of Molecular Microbiology & Immunology, University of Missouri Columbia, Columbia, Missouri. Thesis title: Regulation of the autonomous parvovirus minutevirus of mice.
- Qihong, Zhao. 1994. Department of Molecular Microbiology & Immunology, University of Missouri-Columbia, Columbia, Missouri. Thesis title: An analysis of alternative splicing of parvovirus MVM pre-mRNA.
- Sanjay Kansra. 1995. Department of Pharmacology, University of Missouri-Columbia, Columbia, Missouri. Thesis title: MAP kinase in human platelets: regulation and function.
- Monique Kreutzer. 1996. Department of Molecular Microbiology & Immunology, University of Missouri-Columbia, Columbia, Missouri. Thesis title: The characterization of the *Caenorhabditis elegans* A- and B-type cyclin genes: Clues to their roles in development.
- Anand Gersappe. 1998. Department of Molecular Microbiology & Immunology, University of Missouri-Columbia, Columbia, Missouri. Thesis title: Exon definition of MVM pre- mRNAs.
- James Pearson. 1999. Department of Molecular Microbiology & Immunology, University of Missouri, Columbia, Missouri. Thesis title: Analysis of the transactivation of the capsid gene promoter MVM by NS2
- Don Haut. 1999. Department of Molecular Microbiology & Immunology, University of Missouri-Columbia, Columbia, Columbia, Missouri. Thesis title: Mechanism of excision of the small intron of MVM.
- Miller Kathy. 2001. Department of Molecular Microbiology & Immunology, University of Missouri-Columbia, Columbia, Missouri.
- Narang, Ajit. 2002 –current. Department of Pharmaceutical Sciences, University of Tennessee Health Science Center, Memphis, TN

Cheng, Kun. 2003 - current. Department of Pharmaceutical Sciences, University of Tennessee Health Science Center, Memphis, TN

Ze, Yang. 2003 – current. Department of Pharmaceutical Sciences, University of Tennessee Health Science Center, Memphis, TN

Master's Degree Committee Member:

Yousuf M. Al-roumi. 1990. Department of Chemistry, University of Missouri-Columbia, Columbia, Missouri. Thesis title: Specific tagging of cell, virus and bacteria with rare earth metal containing microspheres.

Postdoctoral Trainees and their Present Affiliation

Dr. Prasad Y. Rao (7/1980-6/1981), Georgetown University Medical School, Washington, D.C.

Dr. S. Gowda (7/1982-10/1985), University of Florida, Gainesville, FL

Dr. A. S. Rao (1/1984-10/1986), National Institutes of Health, Bethesda, MD

Dr. M. Heidari (1/1986-2/1987), University of Missouri-Columbia, Columbia, MO

Dr. John Ek. Mrema (4/1987-8/1989), Washington University School of Medicine, St. Louis, MO

Dr. R. Stefanova (6/1991-6/1992), Research Associate, University of Nebraska, Omaha, NE

Dr. Jagan C. Kandala (6/1987-8/1997), Director, City Crime Laboratory, Police Dept., Los Angeles, CA

Dr. A. Nambiar (11/1992-12/1997), Asst. Professor, UC San Francisco, San Francisco, CA

Dr. S.K.Swamynathan (7/1995-8/2000), Asst. Professor, University of Pittsburg, PA

Dr. S. Lamparter (5/1998-11/1998), University of Marburg, Marburg, Germany

Dr. A.Dhalla (7/1994-2/1998), Biotech Co., San Jose, CA

Dr. R.Chaganti (6/1998-9/1998), Scientist, Shantha Biotech. Pvt. Ltd., Hyderabad, India.

Dr. M. Nakanishi, (9/1996-9/1998), Research Scientist Hisamitsu Pharma, Tsukuba, Japan.

Dr. Kengo Uemura, (9/1998-11/2000), Research Scientist, Hisamitsu Pharma, Tsukuba, Japan

Dr. Balwant Kumar Varma, (1/2001- 12/2002); Jonaki Labs, Hyderabad, India

Dr. Sujoy Bhattacharya, (7/2001-4/2002), Research Associate, Univ. of Tennessee, Memphis

Dr. Mythili K. Padala, (6/2003-11/2004), Scientist, Sudershan Biotech. Ltd., Hyderabad, India

Dr. German Kamolov, Postdoctoral Fellow (10/2003- 6/2005), Resident, UTHSC, Memphis

Dr. Koilan Subramaniyan, Postdoctoral Fellow (6/2005-present)

Dr. Shalini Thakran, Postdoctoral Fellow (3/07-present)

Residents and Fellows and Their Present Affiliation:

Attila Kovacs, M.D. (9/1993-4/1995) Division of Cardiology, Washington University School of Medicine, St. Louis, MO

Gary F. Renshaw, D.O. (1/1995-8/1996) Department of Medicine, Ellis Fischel Cancer Research Center, University of Missouri, Columbia, MO

Joseph Jacob, M.D. (1/1996-12/1997) Division of Cardiology, University of Arkansas, Little Rock, AR

Pavan Reddy, M.D. 1/1998- 4/98) Division of Hematology-Oncology, University of Michigan, Ann Arbor, MI

Jack Cleutjens, Ph.D.(8/93-7/94)Department of Pathology, University of Maastricht, The Netherlands

Undergraduate / High School students and their current status:

Koneru, B. 1996(4 months); Completed M.D degree at the University of Missouri School of

Medicine, Columbia, MO
 Velagaleti, P. 1998 (6 months); Motorola, Chicago, IL
 Adusumilli, V. 2000 (3 months); Medical Student, UCLA, CA
 Jobarteh, S. 2001(2 months); Rust College, Holly Springs, MS

Visiting Scientists:

J.Svoboda, Professor, Institute of Molecular Genetics, Prague, Czechoslovakia (Columbia University, New York) (10/1982-12/1982)
 J.Svoboda, Professor, Institute of Molecular Genetics, Prague, Czech. Republic (University of Missouri-Columbia, Columbia, MO) (10/1984-2/1985)
 Y.Kim, Professor, Chonnam University, Kwangju, South Korea (5/1984-1/1986)
 J.Svoboda, Professor, Institute of Molecular Genetics, Prague, Czech Republic (University of Missouri Columbia, Columbia, MO) (6/1987-11/1987)
 T.Hwang, Dean, College of Medicine, Chonnam National University, Kwangju, Korea (12/198-8/1988)
 D.H. Ryong, Professor of Pathology, Medical School, Chonnam National University, Kwangju, Korea (8/1988-11/1988)
 U.Srinivasan, Scientist C, Centre for Cellular and Molecular Biology, Hyderabad, India. Sir C.V. Raman Visiting Fellowship, Government of India. (5/1989-11/1989)
 V.D.Reddy, Professor & Director, Centre for Plant Molecular Biology, Osmania University, Hyderabad, India. Visited on a Rockefeller Fellowship (2/1991-8/1992)
 B.A.Shin, Professor of Medicine, Chonnam National University, Kwangju, Korea (11/92-9/1994)
 J.Svoboda, Professor, Institute of Molecular Genetics, Prague, Czech Republic (University of Missouri-Columbia, Columbia, Missouri) (03/1993-03/1994)
 G.Sharma - Associate Professor, Department of Microbiology, Osmania University, Hyderabad, India (08/1993-11/1993)
 G.M. Reddy, Professor of Genetics and Director, Centre for Plant Molecular Biology, Osmania University, Hyderabad, India (5/1/94-8/31/94)

RESEARCH AND OTHER EXTERNAL SUPPORT:

A. Past Support

Years	Granting Agency	Title of the Project	Total Direct Costs
1. 6/30/76-6/29/79	National Cancer Institute, NIH	Structure and Function of Avian Sarcoma Viral DNA	\$ 258,820
2. 1/1/78-6/30/80	American Cancer Society	Structure and Organization of Avian Sarcoma Virus DNA	\$ 67,194
3. 9/15/77-9/14/80	National Cancer Institute, NIH	Physical and Biochemical Mapping of the Integration Sites of Avian Sarcoma Virus	\$ 234,055
4. 1/1/81-7/31/84	National Cancer Institute, NIH	Synthesis, Structure and Function of Avian Tumor Virus DNA	\$ 257,109
5. 8/1/79-31/84	NIH	Research Career Development Award	\$ 186,000
6. 1/1/84-6/30/86	ACS	Effect of Methylation on Provirus Gene Expression	\$ 117,727
7. 8/1/84-	NCI, NIH	Synthesis, Structure and Function	\$ 196,946

	7/31/87		of Avian Tumor Virus DNA	
8.	4/1/87- 6/30/90	EPA	Mechanism of Action of non-genotoxic carcinogens found in drinking water evaluation of oncogene expression	\$ 270,125
9.	8/1/91- 6/30/93	WHO	Characterization of a 16 kd gene from Organization <i>Plasmodium falciparum</i>	\$ 15,000
10.	4/1/90 3/31/93 (Guntaka, Co-P.I.)	NIH	A search for murine immunodeficiency lentiviruses	\$ 374,000
11.	3/25/91- 3/24/95	EPA	Mechanism of action of non-genotoxic carcinogens found in drinking water - evaluation of oncogene expression	\$ 240,680
12.	5/1/94- 2/29/99	NCI, NIH	Studies on the Regulatory Elements of Avian Sarcoma Virus LTRs	\$ 457,063
13.	6/3/96- 6/2/2001	Hisamitsu Pharm. Co., Japan	Use of Triplex-Forming Oligonucleotide for Control of Fibrosis	\$ 423,000
14.	9/1/2000- 11/30/04	NIH (RVG, Co-P.I.)	Myofibroblast and the Infarcted Heart	\$1,129,307

B. Current Support:

	Years	Granting Agency	Title and Description	Direct Costs
1.	1/4/2004- 12/31/08	NIDDK (NIH) (RVG, P.I)	A promoter-specific TFO prevents hepatic fibrosis	\$ 990,000
2.	7/1/05- 6/30/09	NIH (RVG, Co-PI) (R. Mahato, P.I)	Growth factor and Antiapoptotic Gene Delivery to Human Islets	\$ 800,000
3.	4/1/07 3/31/10)	NIH (RVG, Co-PI - (R. Mahato, P.I)	Targeted Deliver of TFOs for - treatment of Liver Fibrosis	\$ 875,000
4.	4/1/07 3/31/09	Sudershan Biotech. Ltd.	Cloning and Characterization of HCV And Therapeutic Proteins	\$ 325,000

PEER-REVIEWED PUBLICATIONS:

1. **Guntaka, Ramareddy V.**, and H. Reiter. 1969. Specific loss of newly replicated DNA in nalidixic acid-treated *B. subtilis* 168. *J. Bact.* **100**:724-729.
2. **Guntaka, Ramareddy V.**, and H. Reiter. 1970. Specific loss of loci in thymine-starved *B.subtilis* 168. *J. Mol. Biol.* **50**:525-532.
3. Reiter, H., and **Ramareddy V. Guntaka.** 1970. Loss of DNA behind the growing point of thymine-starved *B. subtilis* 168. *J. Mol. Biol.* **50**:533-548.
4. **Guntaka, Ramareddy V.** and H. Verma.1970. The relationship between antibiotic production and sporulation in *B. licheniformis*. *U.P Agricultural University Research Bulletin* **2**:274-277.
5. **Guntaka, Ramareddy V.**, M. Goulian, and S. S. Hendler. 1971. Inhibition of *E. coli* RNA polymerase II by ara-CTP. *Nature New Biol.* **234**:286-288.
6. Bishop, J. M., C. T. Deng, A. J. Faras, **Ramareddy V. Guntaka**, W. E. Levinson, B. Cordell-Stewart, J. M. Taylor, and H. E. Varmus. 1974. The provirus of Rous Sarcoma virus:

- synthesis, integration and transcription. International Symposium on Cancer, Monte Carlo, pp. 289-296.
7. Varmus, H. E., **Ramareddy V. Guntaka**, C. T. Deng, and J. M. Bishop. 1974. Synthesis, structure, and function of rous sarcoma virus specific DNA in permissive cells. Cold Spring Harbor Symposium Quant. Biol. **39**:987-996.
 8. Varmus, H. E., **Ramareddy V. Guntaka**, W. Fan, S. Heasley, and J. M. Bishop. 1974. Synthesis of viral DNA in the cytoplasm of duck embryo fibroblast cells and in enucleated cells after infection by avian sarcoma virus. Proc. Natl. Acad. Sci. USA **71**:3874-3878.
 9. Varmus, H. E., **Ramareddy V. Guntaka**, C. J. Deng, C. Domenik, and M. J. Bishop. 1974. Synthesis and function of avian sarcoma virus-specific DNA in permissive and non-permissive host cells. Proc. of the XI International Congress, Excerpta Medica, Amsterdam. **2**:272-276.
 10. **Guntaka, Ramareddy V.**, S. H. Goulian, and M. Goulian. 1975. DNA synthesis in lysates of *E.coli*. Biochim. Biophys. Acta. **402**:323-342.
 11. Bishop, J. M., C. T. Deng, A. J. Faras, **Ramareddy V. Guntaka**, W. E. Levinson, B. Cordell-Stewart, J. M. Taylor, and H. E. Varmus. 1975. Transcription of the Rous Sarcoma Virus Genome *in vivo* and *in vitro*. Comparative Leukemia Research, 1973. Leukemogenesis, **In** Y. Ito and M.B. Dutcher (eds.), University of Tokyo Press, Tokyo/KARGER Basel, pp. 517-523.
 12. Bishop, J.M., C. T. Deng, A. J. Farris, H. M. Goodman, **R. V. Guntaka**, W.E. Levinson, B. Cordell-Stewart, J. M. Taylor, and H. E. Varmus. 1975. The provirus of Rous sarcoma virus: synthesis, integration and transcription. *In* Tumor Virus-host Cell Interaction. A. R. Kolber, ed., Plenum Press, N.Y., pp. 255-265.
 13. Bishop, J. M., C. T. Deng, A. J. Faras, H. M. Goodman, **R. V. Guntaka**, W. E. Levinson, B. Cordell-Stewart, J. M. Taylor, and H. E. Varmus. 1975. Transcription of the Rous sarcoma virus genome *in vitro* and *in vivo*. Biblio Theca Hematologica **40**:517-523.
 14. **Guntaka, Ramareddy V.**, J. M. Bishop, and H. E. Varmus. 1975. Synthesis and integration of RSV proviral DNA in duck embryo fibroblast cells. **In** Fundamental Aspects of Neoplasia, (ed. A. Gottlieb), Springer-Verlag, New York, pp. 315-323.
 15. **Guntaka, Ramareddy V.**, B. W. Mahy, J. M. Bishop, and H. E. Varmus. 1975. Ethidium bromide inhibits the appearance of closed circular viral DNA and integration of virus-specific DNA in duck cells infected by avian sarcoma virus. Nature **253**:507-511.
 16. Stehelin, D., **Ramareddy V. Guntaka**, H. E. Varmus, and J. M. Bishop. 1976. Purification of DNA complementary to nucleotide sequences required for neoplastic transformation of fibroblasts by avian sarcoma viruses. J. Mol. Biol. **101**:349-365. **(This work resulted in the discovery of proto-oncogenes for which the 1989 NOBEL PRIZE was awarded to Bishop and Varmus)**
 17. **Guntaka, Ramareddy V.**, O. C. Richards, P. Shank, H.J. Kung, E. Fritsch, N. Davidson, J. M. Bishop, and H. E. Varmus. 1976. Covalently closed circular DNA of avian sarcoma virus: purification from nuclei of infected quail tumor cells and measurement by electron microscopy and gel electrophoresis. J. Mol. Biol. **106**:337-357.
 18. Varmus, H. E., P. R. Shank, H.J. Kung, **Ramareddy V. Guntaka**, O. C. Richards, and J. M. Bishop. 1977. Mechanism of synthesis and persistence of virus-specific DNA in cells infected by RNA tumor viruses. **In** American Society of Microbiology, Washington, D.C., pp. 470-472, Microbiology-1977 (ed. D. Schlesinger).
 19. **Guntaka, Ramareddy V.**, J.M. Bishop, and H.E. Varmus. 1977. Synthesis, integration of Rous sarcoma virus proviral DNA in duck embryo fibroblast cells. Yearbook of Cancer (R.L. Clark and R.W. Cumley, eds.), Yearbook Medical Publishers, Inc., Chicago. pp. 413-414.
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PATENTS

Assignee: Ramareddy V. Guntaka

Patent No. 5,780,611 Title: Oligomers which inhibit expression of Collagen genes

MAJOR DISCOVERIES OF GUNTAKA:

- 1. First group (with Bishop and Varmus) to show that retrovirus DNA replication occurs in the cytoplasm and then in the nucleus of infected cells.**
- 2. First group (with Bishop and Varmus) to show accumulation of supercoiled DNA in the nuclei of retrovirus-infected cells.**
- 3 First group (Shank, Bishop, Varmus; Taylor) to demonstrate the presence of Long Terminal Repeats (LTRs) at the ends of retroviral DNA.**
- 4. First group (with Stehelin, Bishop, Varmus) to discover proto-oncogenes**
- 5. First one to clone an infectious Rous sarcoma virus DNA (Walter Gilbert' group sequenced this clone)**
- 6. First to show methylation of provirus in nonpermissive cells**

- 7. Demonstrated formation of triplexes of Triplex-forming oligonucleotide with the collagen gene promoter (resulted in a patent assignment to Guntaka)**
- 8. First group to sequence the Indian strain of Hepatitis C Virus**