Employee No. **12400**

1. Name: (first name) **RAJIVA**; (middle name)……; (surname) **RAMAN**

2. Designation: Professor Emeritus, BHU

3. Academic Qualifications:

Sr.	Degree	Institution	Year
1.	B.Sc. (Hons.)	Department of Zoology, Banaras Hindu University, Varanasi, India	1966
2.	M.Sc.	Department of Zoology, Banaras Hindu University, Varanasi, India	1967
3.	Ph.D.	Department of Zoology, Banaras Hindu University, Varanasi, India	1972

4. Field of specialization: Molecular Cytogenetics and Genetics

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6. **Research Projects:** Extramural funding through 20 research projects from various funding agencies like DBT, DST, CSIR, UGC etc.

7. **Distinctions/Prize/Medal/Award/Honours**

- Editor-in- Chief, J. Genetics (2015-2017)
- CSIR Scientist Emeritus (2014-2017)
- Fellow, Indian Academy of Science, Bangalore (Elected 1996)
- Fellow, Indian National Science Academy, New Delhi (Elected 1998)
- Fellow, Indian National Academy of Sciences, Allahabad (Elected 2005)
- INSA SL Hora Medal (2005) for contribution to research in Animal Science
- President, Indian Society of Cell Biology (2005-2007)
- Indian Science Congress Association Platinum Jubilee Award lecture (2007)
- Associate Editor, J. Genetics (since 2009-2014)
- Alexander von Humbolt Foundation Fellowship, Germany (1980)
- International Genetics Conference Travel Bursary, Canada (1988)
- Prof. S.P. Ray-Chaudhuri 75th Birthday Endowment Lecture, Indian Society of Cell Biology (2004)

Membership of National level Scientific Bodies:

- Member, INSA National Committee of the International Union of Biological Sciences (2000-02)
- Member Editorial Board, Proceedings Indian National Science Academy B, New Delhi
- Member, Biology Research Panel, C.S.I.R., New Delhi (2001-03)
- Member, Project Advisory Review Committee for Central Forensic Science Laboratory, Kolkata (2003-07)
- Member, ICMR Task force on Genetics of Infertility (2006)
- Member, SAC PM-Planning Commission advisory for Basic Sciences in XI plan (2007)
- Member, DBT Task Force for Animal Biotechnology (2008 – 2012)
- Member, DST PAC on Animal Sciences (2008- 2012)
- Member, INSA Executive Council (2007-2009)

Various Administrative Capacities held in Banaras Hindu University:

Founder Coordinator, Centre for Genetic Disorders from (2006-2013)
Coordinator. DBT-supported Interdisciplinary School of Life Sciences (2010-2013).
Dy Coordinator, UGC-University Potential for Excellence (2011-2013)
Chairman Central Purchase Committee, BHU (2012-2013)

8. Research Publications of Prof. R. Raman

I. Chapter in Books :

1. Neitzel H, *Raman R*, Deleaner A, Sperling K : Cytological evaluation of activity of nucleolar organizer regions in prematurely condensed chromosomes. In "**Premature Chromosome Condensation : Applications in basic and clinical research"** (Eds : PN Rao, RT Johnson, K Sperling). Academic Press, New York, pp 159-172 (1982).

2. *Raman R*, Lakhotia SC : Comparative aspects of chromosome replication in *Drosophila* and mammals. In "**Trends in Chromosome Research**" (Ed T Sharma). Springer-Narosa, Delhi pp 69-89 (1990).

3. *Raman R:* Down Syndrome in India. In "**Genetic disorders of the Indian subcontinent**" (Ed. D. Kumar) pp 167-180. Kluwer, The Netherlands (2004).

4. *Raman R*: Training programmes: Genetics and Genomics**.** In **"Gains of Genomic Research in Biology and Medicine"** (Ed R. K. Jalali and N. K. Mehra) pp. 205-213. Ranbaxy Science Foundation, N. Delhi (2014)

5. Singh K, *Raman R:* Genomics of male infertility. In **"Endocrinology of Male Reproductive Biology"** (Ed. S. K. Singh). CRC Press, New Delhi (2016) pp. 299-318

II. Full Papers :

1. Sharma T, *Raman R* : An XO female in the Indian mole rat. **J Heredity 62**, 381-387 (1971).

2. *Raman R*, Sharma T : Karyotype and late S labelling of DNA in X and Y of male lowcrested porcupine, *Hystrix indica* Kerr. **Ind Biol 3**, 61-64 (1971).

3. Sharma T, *Raman R* : Chromosomes of a few rodents of Indian subcontinent. **Mamm Chrom Newsl 12**, 112-115 (1971).

4. Sharma T, *Raman R* : Odd diploid number in both sexes and unique multiple sex chromosome system of a rodent, *Vandeleuria o. oleracea* (Bennett). **Cytogenetics 11**, 247-258 (1972).

5. *Raman R*, Sharma T : Similarity of karyotypes of *Rattus rattus* with 38 chromosomes from India and other parts of the world. **Experientia 28**, 1375-1377 (1972).

6. Sharma T, *Raman R* : A Rattus with all acrocentric chromosomes. **Mamm Chrom Newsl 13**, 122-123 (1973).

7. Sharma T, *Raman R* : Variation in constitutive heterochromatin in sex chromosomes of the rodent, *Bandicota bengalensis* (Gray). **Chromosoma 41**, 75-84 (1973).

8. *Raman R*, Sharma T : DNA replication, G- and C-bands and meiosis of supernumerary chromosomes in *R. rattus* (Linn). **Chromosoma 45**, 111-119 (1974).

9. *Raman R*, Sharma T : Unique multiple sex chromosomes of the tree mouse *Vandelcuria o. oleracea*. Identification of X_1 and X_2. **Heredity 37**, 435-439 (1976).

10. *Raman R*, Sharma T : Karyotype evolution and speciation in genus Rattus. **Jour Sci Ind Res 36**, 385-404 (1977).

11. Sharma T, *Raman R* : Preferential late replication of one of the two morphologically distinguishable sex chromosomes in a female muntjac. **Experientia 33**, 1141-1142 (1977).

12. *Raman R*, Jacob M, Sharma T: Heterogeneity in distribution of constitutive heterochromatin in four species of birds. **Genetics 48**, 61-65 (1978).

13. Das BC, *Raman R*, Sharma T: Chromosome condensation and Hoechst 33258 fluorescence in meiotic chromosomes of the grasshopper, *Spathosternum prasiniferum* (Walker). **Chromosoma 70**, 251-258 (1979).

14. Jacob M, *Raman R*, Sharma T: Cell cycle kinetics of PHA-stimulated muntjac lymphocytes in vitro. Part I. BrdU harlequin assay system and demonstration of rapid proliferation of lymphocytes. **Ind J Exp Biol 17**, 328-331 (1979).

15. Jacob M, *Raman R*, Sharma T: Cell cycle kinetics of PHA-stimulated muntjac lymphocytes in vitro. II. Effect of different concentration of BrdU on cell cycle progression. **Mut Res 70**, 127-130 (1980).

16. *Raman R*: Asynchrony in proliferation of sister nuclei in colcemid induced polykaryons of muntjac lymphocytes. **Ind J Exp Biol 18**, 115-119 (1980).

17. Sharma T, Gadi TK, *Raman R*: Similarity in the G-band patterns of constitutive heterochromatin of the composite X and Y-chromosomes of certain rodents. **Genetica 54**, 281-284.

18. Nanda I, *Raman R* : Cytological similarity between the heterochromatin of the large X and Y chromosomes of the soft-furred field rat, *Millardia meltada* (Family: Muridae). **Cytogenet Cell Genet 30**, 77-82 (1981).

19. *Raman R*, Sperling K: Patterns of silver staining on NORs of prematurely condensed muntjac chromosomes following RNA inhibition. **Exp Cell Res 135**, 373-378 (1981).

20. Gadi IK, Sharma T, *Raman R*: Supernumerary chromosomes in *Bandicota indica nemorivaga* and a female individual with XX/XO mosaic. **Genetica 58**, 103-108 (1982).

21. *Raman R*, Nanda I: Identification and patterns of synapsis of the autosomally translocated, indistinguishable Y-chromosome with X-chromosome in the Indian mongoose, *Herpestes auropunctatus* (Hodgson). **Chromosoma 87**, 477-489 (1982).

22. Nanda I, *Raman R* : A simple method for staining synaptonemal complex with coomassie brilliant blue for light microscopy. **Stain Technology 58**, 177-181 (1983).

23. Dubey DD, *Raman R* : Effects of Hoechst 33258 on different cell cycle events in bone marrow cells of the mole rat, *Bandicota bengalensis*. I. Inhibition of synthetic activities. **Exp Cell Res 149**, 419-432 (1983).

24. Tandon P, Nanda I, *Raman R*: Cytological analysis of constitutive heterochromatin in two species of birds. **Genetica 64**, 229-234 (1984).

25. *Raman R*: Maintenance of late replication of X-chromosomes in heteroploid cells of *Muntiacus muntjak*. **Ind J Exp Biol 22**, 229-232 (1984).

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27. Dubey DD, *Raman R* : Do sister forks of bidirectionally growing replicons proceed at unequal rates ? **Exp Cell Res 168**, 555-560 (1987).

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29. Dubey DD, *Raman R*: Factors influencing replicon organization in tissues having different S-phase duration in the mole rat, *Bandicota bengalensis*. **Chromosoma 95**, 285-289 (1987).

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33. Dubey DD, *Raman R*: Mammalian sex chromosomes. IV. Replication heterogeneity in the late replicating facultative- and constitutive heterochromatic regions in the X-chromosomes of the mole rats, *Bandicota bengalensis* and *Nesokia indica*. **Hereditas 115,** 275-382 (1993).

34. Singh AP, *Raman R*: Mammalian sex chromosomes. VI. Synapsis in the heterochromatin rich X-chromosomes of four rodent species, *Mus dunni*, *Bandicota bengalensis*, *Mesocricetus auratus* and *Nesokia indica*. **Genome 36**, 195-198 (1993).

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51. Ambasudhan R, Singh K, Agarwal JK, Singh SK, Khanna A, Sah R, Singh I, *Raman R*: Idiopathic cases of male infertility from a region in India show low incidence of Y-chromosome microdeletion. **J. Biosci. 28**, 605-612 (2003).

52. Narayan G, *Raman R*: Analysis of topological organisation of chromatin during spermatogenesis in mouse testis. **Genetics & Mol Biol**. 27, 33-38 (2004).

53. Sinha S, Kumar A, Gupta V, Kumar S, Singh VP, *Raman R*: Haemoglobinopathies – thalassemias and abnormal hemoglobins – in eastern Uttar Pradesh and adjoining districts of neighbouring states. **Current Science** 87, 775-780 (2004).

54. Singh K, Singh SK, Sah R, Singh I, *Raman R*: Mutation C677T in the methylenetetrahydrofolate reductase gene is associated with male infertility in an Indian population. **Int J Androl**. 28, 115-119 (2005).

55. Singh K, *Raman R***:** Male Infertility: Y-chromosome deletions and testicular aetiology in cases of azoo-/oligospermia. **Ind J. Exp. Biol**. 43, 1088-1092 (2005).

56. Rai A, Singh S, Mehta S, Kumar A, Pandey LK, *Raman R*: MTHFR C677T and A1298C polymorphisms are risk factors for Down's syndrome in Indian mothers. **J. Hum. Genet**. 51, 278-283 (2006).

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59. Tilak V, Rai M, Singh VP, Rai AK, *Raman R*: Hepatocellular carcinoma presenting as neutrophilic leukemoid reaction- A rare entity. **J. Ind. Med Assoc.** 105, 462-451 (2007).

60. Sachan M, *Raman R*: Developmental methylation of the coding region of *c-fos* occurs perinatally, stepwise and sequentially in the laboratory mouse. **Gene** 416, 22-29 (2008).

61. Chakraborty A, Sreenivasulu K, *Raman R*: Involvement of androgen receptor gene in male gonad differentiation in Indian garden lizard, Calotes versicolor. **Mol. Cell. Endocrinology** 303, 100-106 (2009).

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72. Kumari P, Ali A, Sukla KK , Singh SK, Raman R : Lower incidence of nonsyndromic cleft lip with or without palate cleft palate in females: Is homocysteine a factor?. **J. Biosci.** 38, 21-26 (2013).

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74. Tiwari PK, Sethi AP, Basu S, *Raman R,* Kumar A: Heme-oxygenase-1 gene variants and hyperbilirubinemia risk in north Indian newborns. **Eur J Ped** 172, 1627-32 (2013).

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76. Sukla KK, Nagar R, *Raman R*: Vitamin B12 and folic acid deficiency in anemia: A population study. e-SPEN Journal 9, e45-e48 (2014)

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81. Kumari P, Ali A. Singh SK, Chaurasia A, *Raman R*: Genetic heterogeneity in Van der Woude Syndrome: Identification of *NOL4* and *IRF6* haplotype from the noncoding regions as candidates in two families. J. Genet. (under revision).

82. Kumari P, Singh SK, *Raman R*: *TGFβ3*, *MSX1*, *MMP3* as candidates for NSCL±P in an Indian population: A functional evaluation. Metagene (Submitted).