

VISHWA NATH: REMEMBRANCE OF GREAT SCIENTIST AND DOYEN OF ZOOLOGY AND ONE OF THE FOUNDERS OF PU CAMPUS AT CHANDIGARH

R C Sobti¹, Sanjeev Puri²

¹Department of Biotechnology, Panjab University, Chandigarh

² UIET, Panjab University, Chandigarh

Dr. Vishwa Nath one of the most prolific researcher and a hardcore teacher of Zoology was among the pioneers in setting up the department of Zoology at Panjab University, Chandigarh. The path to this success story was arduous specifically after the partition when the Main Zoology remained in Lahore where he worked as a zoologist. His exemplary journey is credited to his simplistic yet very progressive family background. Mr Vishwa Nath was the Youngest among the five Children born to Pt Baij Nath. A visionary father and pioneer in the field of education and set up a school Famously known as Pt Baij Nath School (PBN School) and later named as PBN senior secondary school one of the biggest school at that time. Pt Baij Nath though himself studied till 8th but made single handed efforts to provide both the education and sports activity to the children at that time around his area in Amritsar. While studying in his father's school his father noticed an extraordinary potential and exceptional combination of being a keen student and a sportsperson and mentored him personally. This mentorship from his father continued till 10 more years. His father's illness for three years culminated into his demise. The loss of his father together with the rituals being practiced at that time left an indelible mark on the sensitive mind of young Vishwa Nath. While

another jolt later due to the demise of his mother left him orphan affecting every sphere of his life.

Young Vishwa Nath after completing matriculation in his father's school then joined Govt College at Lahore (now in Pakistan) as a science student. His father's mentorship and training enabled Mr Vishwa Nath to blossom as a Science scholar while equally talented sportsperson and got selected a member of the Punjab University Cricket team. His talent was recognized the late Maharaja Bhupinder Singh of Patiala, who offered him a position of Professor at Mohindra college Patiala while Vishwa Nath was in his fifth year. At a very young age he devoted himself completely to set up a research laboratory in the college while also continue to bring laurels to the collegree in sports as well.

Mr Vshwa Nath joined Trinity Hall at Cambridge in 1923 and completed his thesis entitled "*Cytology of Reproductive Organs of Scorpions and Mosquitos*" under the direct supervision of Dr James Gray. This work was then approved for his PhD Degree by University of Cambridge in record two years of time span. While in abroad he was also got selected in the university Cricket team there and became *Cambridge Blue*. On his return Dr Vishwa Nath was selected as Lecturer at Govt College Lahore, where he dedicated his life to research and sports. While at Lahore he

organized Punjab University Cricket Association and remained as president for many years.

The tenacity and perseverance in any task that Dr. Vishwa Nath's undertook together with his unprejudiced, open mindedness coupled with simplicity made him a person with exceptional qualities. These virtues of him were liked by both his colleagues and students equally. Even the exceptional observation during his research and relating it with life made him a different person altogether. Observing microscopically dead cork during his research activity infused in him thought of the force that keep the cells living. These thoughts spurred in him the search for his answers which he derived from Gita and became an ardent reader to seek the answers whenever one is being required to be sorted out. Within two years he read and memorized Gita and started class of Gandhi prayer in Govt. College Hoshiarpur.

He was a visionary to the core who remained focused to what ever learning he Got from his father. While professor at Govt College Lahore, he initiated teaching and practical course on Protozoa to students of B.Sc. Zoology in every summer and open to all any and every student irrespective of college university and area. This visionary approach is something which is in line with the latest education policies in the current time. Besides Teaching Dr Vishwa Nath also showed keen interest in research and published excellent defining publications one in the *quarterly journal of Microscopical Science* in 1932 entitled "*The Spermatid and the sperm of crab Paratelphus spinigera*" and later another in the *Journal of Morphology* in 1937 entitled "*Spermatogenesis of Prawn Palaemon Lamarrei*". He produced evidence to demonstrate that spermatozoon explodes at the time of fertilization and also provided the mechanism for it. The

pioneer work of Dr Vishwa Nath was recognized and he was elected as Fellow of then National Institute of Science of India (Currently The Indian National Science Academy) in 1940. In 1942 he produced a monograph on *The Dcapod Sperm in the Transactions of the National Institute of Science in India*. Towards the end of this year he was elevated to the Chair of the Professor of Zoology in Govt College at Lahore. This position was vacated by Dr George Matthai who was also professor of zoology in the college simultaneously. Prof Vishwa Nath tremendously contributed to the development of Zoology and also presided over the section of Zoology of the Indian Science Congress held at Delhi and there he delivered his famous address on *The Golgi Apparatus*. In recognition of his contributions he was also awarded *ScD* degree of the University of Cambridge early in 1929. He also remained as Emeritus Scientist of the Council of Scientific and Industrial Research of the Govt of India. Later in 1968 Prof Vishwa Nath was awarded the Joy Gobinda Law Memorial Gold Medal by the Asiatic Society Calcutta for his outstanding work in the field of Zoolgy.

After the painful events of partition Dr Vishwa Nath also moved to India wherein he was first got an appointment for a short stint as Principal at Govt College Dharamshala (Now in Himachal Pradesh)but later joined a Principal of Govt College Hoshiarpur in 1948. Here in the verandahs of the college he started the department of Zoology. In the mean time Dewan Anand Kumar who was working as Reader in dept of Zoology and also Dean of University Instructions at Lahore was appointed Vice -Chancellor of East Panjab University (Now in Chandigarh). Prof Vishwa Nath who got retired from his Govt

Service in 1952 was given appointment as Professor of Zoology. His vision and focus helped in the growth of the department and more staff was hence inducted. This led to his visionary outcome of research in the field of Zoology which he continued to inculcate among his young faculty. In the furtherance of his efforts towards research Dr Vishwa Nath started the publication of *Research Bulletin (Science) of Panjab University*. In September 1959 Dr Vishwa Nath retired again from Panjab University but continued as *Chief Editor of the Research Bulletin (Science)* in an Honorary capacity. His commendable research focus was recognized enabling him to join as Head of Zoology department at Jodhpur University, where he set up a school for research in cytology. After Two years of active contribution at Jodhpur University, Panjab university on account of his exceptional contribution to the field of Zoology conferred upon Dr Vishwa Nath the title of *Prof Emeritus* in the department of Zoology at Panjab University. Besides his Academic contribution Dr Vishwa Nath also actively participated in facilitating and executing various policies at Panjab University as Fellow of Syndicate and Senate and also as *Dean of Faculty of Science and Mathematics* at the university.

Dr Vishwa Nath continued to delve on updating himself while also providing platforms for young faculty to embark on the journey of the animal world. He produced two text books, one in 1961 on *A Text Book of Zoology* and later in 1964 on Chordates for B.Sc. Students. Both these books were dedicated to the memory of his father who saw in him the zeal to reach to this level. Asia Publishing House in 1965 specifically brought out Dr Vishwa Nath's most important monograph on *Animal Gametes (Male)*. This work was

rightly dedicated to Pt Jawaharlal Nehru, then Prime Minister and an architect of science development in the country. The most salient aspect of this monograph was that the work presented in this was carried out by himself as well as his pupils and his colleagues while working in the department of Zoology first at Lahore then Hoshiarpur and finally at Panjab University. Using light microscope, he demonstrated in this monograph the morphological and cytochemical account of the spermatogenesis in large variety of animals both from invertebrates and vertebrates. He also went on to successfully correlate the findings as being observed using electron microscope. A similar Monograph on *Animal Gametes (Female)* was then published by him in 1968 dedicating it to his Professor Sir James Gary, Kt. F.R.S in commemoration of his 75th birthday and his distinguished years of service to the development of Zoology at University of Cambridge. Dr Vishwa Nath Never stopped working and in 1970 he produced another book dedicating to his Pupils and entitled it "*Cell Biology*" detailing about the cell inclusion bodies like Golgi bodies, Mitochondria, centrioles, nucleoli etc. dedicating it to his pupils. Through out his research endeavours Dr Vishwa Nath laid great emphasis on vesicular form of Golgi body. Accordingly each vesicle is provided with osmiophilic and argentophilic cortex and osmiophobic and argentophobic medulla. He further went on the explain and also validated through histochemical staining that to start with the Golgi is granular and soon gets differentiated to duplex and binary vesicles. He also figured few Crescent shaped Golgi elements which have chromophobic sphere attached to its concave side. His interest and thorough observations that fatty yolk in egg is directly formed from Golgi by gradual growth

process was later supported by histochemical studies both by his collaborators and himself. He also established presence of RNA in Mitochondria .

All the work of Dr Vishwa Nath provided his credential as one of the foremost cytologist of the country. He left a mark and a lineage which is continued till date in the form of his pupils who are taking on the baton handed over by him in the

furtherance of human life in general and zoology specifically.

This article has been written on the basis of information available in the biography of Dr Vishwan Nath written by Late Dr G.P Sharma Former Head Department of Zoology Panjab University for Indian National Science Academy for their compilation of great scientists of India and some personal knowledge of RCS.