



## VETERINARY & ANIMAL SCIENCE RESEARCH FOUNDATION (VASREF)

Registration ID: 81509289/ D.S.R.O. (K), BBSR, India

### VASREF AWARD

#### PERUMAL PONRAJ



0120. Veterinary and Animal Science Research Foundation (VASREF) is delighted to confer the award of Fellow of Veterinary and Animal Science (FVASc) to Dr Perumal Ponraj, MVSc, PhD, MBA, Scientist-SS, Division of Animal Science, ICAR - Central Inland Agricultural Research Institute, Port Blair, Andaman & Nicobar Islands, India in recognition of his momentous contribution to veterinary and animal science in the year 2020.

**Antecedent:** Dr Perumal was born to illustrious parents (Mother: *Shrimati Ramuthai* and Father: *Shri T. Ponraj*) on 11-July-1982 in Viruveedu village in a lush green landscape in Dindigul district in Tamil Nadu, India, famous for its ornamental Thadikombu Perumal Temple, thronged by devotees all-round the year, and Silver Cascade falls, a superb delight splotch for nature lovers. It is also rich in livestock genetic resources being the extended habitat of Kangayam cattle locally known as Perungoottu Maadu (பெருங்கூட்டு), used for draft and Jallikkatu (ஏறுதழுவல்) sports and Mecheri mutton sheep.



**Academic credentials:** Dr Perumal was graduated (BVSc) from Madras Veterinary College (TANUVAS), Chennai in the year 2005 with 7.3/10 GPA, receiving merit scholarship for his graduate studies. He did his post-graduation (MVSc) in Veterinary Gynaecology from College of Veterinary Science & Animal Husbandry (OUAT), Bhubaneswar, Odisha in the year 2008 with 8.76/10 GPA, receiving merit scholarship for his post-graduate studies. He received 'Diploma in Computer application' from Sonata Software & Hardware Technologies, Bhubaneswar (Regd. No. 282/03, Govt. of Orissa), in the year 2007 on successful completion of the course, securing A+ Grade with 82% marks. He qualified in the National Eligibility Test (For Lecturer ship / Assistant Professorship) of Agricultural Scientists Recruitment Board of ICAR, held in April 2009 (Recognized by University Grant Commission / Council of Scientific and Industrial Research) in Animal Reproduction. He was conferred the degree of Doctor of Philosophy (PhD) in Animal Reproduction by ICAR – Indian Veterinary Research Institute (IVRI), Izatnagar (UP) in the year 2014 with 8.68/10 GPA, receiving ICAR-IVRI Senior Research Fellowship for his doctoral program. He was conferred Master of Business Administration (MBA) in Project Management from Manipal University, Gangtok (Sikkim) in the year 2013 and was placed in First Division with 60.28% marks.

**Service Particulars:** Dr Perumal started his career as Veterinary Doctor (2005-2006) in National Agro Foundation, Chennai (Tamil Nadu) and was in-charge of veterinary care, extension and education program of the organization. He joined as Trainee Scientist in ICAR – National Academy of Agricultural Research and Management (NAARM), Hyderabad (April-August 2011). He joined ICAR – National Research Centre (NRC) on Mithun, Medziphema, Nagaland as Scientist (2011-2017) and was engaged in research, extension and education. He joined as Scientist – SS (Senior Scale) at ICAR – Central Inland Agricultural Research Institute (CIARI), Andaman & Nicobar in June 2017 and is engaged since then in agricultural research, extension and education.

**Research curriculum:** Dr Perumal was the Principal Investigator of six research projects: (1) Studies on biochemical profile of mithun (*Bos frontalis*) semen for enhancing fertility (2012-14), (2) Studies on endocrinological profile of mithun (*Bos frontalis*) semen for enhancing fertility (2014-16), (3) Studies on Catsper genes for evaluation of reproductive traits of mithun (*Bos frontalis*) for enhancing fertility (2014-17), (4) Evaluation of melatonin as a fertility marker in mithun (*Bos frontalis*) bulls: effect of circadian rhythm and seasonal variation in semen quality parameters (2014-17), (5) Studies on endocrinological and biochemical profiles of bovine species for enhancing fertility in Bay Islands (2017-20) and (6) Biochemical and molecular mining of hormonal profiles of buck under abiotic stressors and managerial intervention for its mitigation (2018-21). He was Co-Principal Investigator of fifteen research projects during this period. Out of 20 research projects, 3 projects were financed by Department of Biotechnology (DBT) with a budgetary provision of ₹189.5 lakhs, 1 project was financed by Department of Science & Technology (DST) with a budgetary provision of ₹126.6 lakhs, and rest were in-house projects of Indian Council of Agricultural Research (ICAR) with a budgetary allocation of ₹437.45lakhs.

**Scientific achievements:** The eulogizing researches carried out by Dr Perumal during his relatively short service career (2012 - 19) has immensely enriched the scientific literature and massively contributed to animal productivity and social and economic upliftment of livestock farmers in general and Mithun breeders of Himalayas in particular. A few outstanding research projects undertaken by Dr Perumal are: (1) Standardization of semen collection protocol through massage method in Mithun bulls, (2) Standardization of composition of semen extender, semen freezing protocol and artificial insemination for Mithun semen, (3) Standardization of heterogenous seminal plasma, heterogenous follicular fluid, and *Punica granatum* on preservation of Mithun semen, (4) Standardization of dose of *Tinospora cordifolia* supplementation on semen, hormone production and sexual behavior in sheep, (5) Studies on chemical composition of seminal plasma in Mithun, (6) Standardization of replacement dose of egg yolk by low density lipoprotein for cryopreservation of Mithun semen, (7) Standardization of *in-vitro* semen evaluation protocol in Mithun, (8) Studies on seasonal variation of semen production, hormone profile, blood profile, biochemical profile, scrotal circumference and calving rate in Mithun, (9) Standardization of selection method for breeding Mithun, Tho tho cattle and Nagaland Swamp buffaloes based on pelvic parameters, (10) Evaluation of effect of foot & mouth disease vaccination on semen production, and standardization of interval between vaccination and semen collection for impregnation in Mithun, (11) Studies on the effect of commercial semen extenders on semen quality parameters in Mithun, (12) Studies on the effect of feeding unsaturated fatty acids on semen quality parameters in Mithun, (13) Studies on the effect of walking stress on hormonal, biochemical and blood profiles in Mithun, (14) Standardization of PDC-protein quantum during cryopreservation of bull semen, (15) Studies on seasonal variation on the level of intracellular enzymes & antioxidants, and expression of HSP – 70 & 90 in Tharparkar bull semen, (16) Studies on the roles of matrix metallo proteinases on reproductive performance of cattle & buffaloes –males & females, (17) Studies on the effect of hormones on semen production and its quality in Mithun, (18) Studies on the effect of different concentration of glycerol on apoptosis of fresh and cryopreserved Mithun spermatozoa, (19) Studies on seasonal variation in semen

quality parameters, biochemical profile, intracellular enzymes and antioxidant level in Mithun bull semen, (20) Seasonal variation of scrotal & testicular parameters, physiological, biochemical, endocrinological profiles, intracellular enzymes and antioxidant levels in mithun bulls from birth to 6 years of age, (21) Effect of melatonin on semen quality parameters, biochemical profiles, intracellular enzymes and antioxidant levels in Mithun bull semen in different seasons, (22) Studies on the effect of melatonin transpalant on scrotal & testicular parameters, physiological, biochemical, endocrinological profiles, intracellular enzymes and antioxidant levels in mithun bulls from birth to 6 years of age, (23) Standardization of replacement of egg yolk powder in lieu of 20% egg yolk for semen cryopreservation in Mithun, (24) Effect of scrotal insulation on semen production and its freezability in Mithun and (25) Standardization of suitable method of biostimulation on endocrinological profiles and semen production & its quality in Mithun semen.

**Publications:** (1) Publication of Research papers in National and International Journals: 181. (2) Presentation of Lead papers in National and International Conferences: 4. (3) Publication of Abstracts in the proceedings of National and International conferences: 120. (5) Book and manual chapters: 115. (4) Scientific Monographs / Manuals / Brochures: 47. (5) Popular articles: 13. (6) Gene sequences for Gene Bank: 115. (7) e-Books: 95. (8) Research folders/pamphlets: 6.

**Research Guidance & Peer Reviews:** (1) Guided 1 BSc, 1 MSc, 1 MBA, 1 MVSc and 1 PhD scholar. (2) Reviewer of 22 National / International Journals.

**Patent right:** Applied for patent right for the innovation 'Method of determining the sex of non-ratite birds'.

**Professional Assignments:** Life Member of 10 professional societies. (1) Indian Society for Study of Animal Reproduction, (2) Indian Society for Study of Reproduction and Fertility, (3) Society of Animal Physiologists of India, (4) Society for Advancement of Human and Nature, (5) Society for Applied Biotechnology, (6) Bose Science Society, (7) Academy of Science for Animal Welfare (8) Tamil Nadu State Veterinary Council, (9) Livestock Emission and Abatement Research Network and (10) International Society of Biometeorology.

**Professional Honours/ Awards:** (●) Received 'Best Presentation by Young Scientist' award at the National Symposium of Indian Society for Study of Animal Reproduction at Bhubaneswar (9-Dec-2007). (●) Received Dr G.B. Singh Memorial award – 2010, conferred by Animal Reproduction Society on 7-Oct-2011. (●) Received Dr G.B. Singh Memorial award – 2012, conferred by Animal Reproduction Society on 21-Nov-2012. (●) Received 'Certificate of Excellence in Reviewing' from International Journal of Livestock Research (ISSN 2230-7613) for 2013, 2014, & 2016-17. (●) Received Young Achiever Award – 2015 of Society for Advancement of Human and Nature (SAHNA) in recognition to the outstanding contribution made by him to the society especially in the field of farming/agriculture. (●) Received 'Young Scientist Award' of Ratikanta Maiti Foundation, Kolkata at the 2<sup>nd</sup> International Conference on Bio-resource and Stress Management held in Hyderabad (7-10 January 2015). (●) Admitted as Fellow of Society for Applied Biotechnology - 2016 (●) Presented with 'Best Oral Presentation Award' in the National Seminar 'Smart farming for enhancing input use efficiency, income and Environmental security' organized by Indian Association of Hill Farming at ICAR – Research Complex for NEH region at Umiam, Meghalaya (19-21 September 2017). (●) Awarded Innovative Scientist Award in 3<sup>rd</sup> International Conference (Bioresource & Stress Management) held at Jaipur (Raj) during 8-11 Nov 2017. (●) Received 6<sup>th</sup> Science & Technology Awards-17 (Certificate of Excellence) by 'Research Wing for Excellence in Professional Education & Industry (FET CRS) in the year 2017. (●) Conferred second position for oral presentation of the paper entitled 'Walking and summer stress on physiological, hematological and antioxidant profiles in Andaman local goat under island tropical ecosystem' in Asian Regional

Conference on goats' held at Amity University, Jaipur (22-26 October 2018). (●) Conferred second position for oral presentation of the paper entitled 'Hot humid climate negatively affects the poultry production system' in XXXV Annual Conference of Indian Poultry Science Association on rural poultry production: Challenges for sustainable entrepreneurship development (15-17 November 2018). (●) Awarded Faculty Research Awards by Careers 360 as one of the top 10 knowledge producers in India and adjudged as an Outstanding Research Faculty of ICAR- National Research Centre on Mithun for the academic year 2017-18. (●) Awarded 6<sup>th</sup> Academic Brilliance Awards – 18 by EET CRS (Research wing for Excellence in Professional Education & Industry, Noida (Delhi NCR) in the year 2018. (●) Received 'Certificate of Excellence in Reviewing' from Annual Research & Review in Biology (Journal) for 2018. (●) Received 'Certificate of Excellence in Reviewing' from the journal 'Annual Research & Review in Biology' for 2018. (●) Received 'Certificate of Excellence in Reviewing' from Journal of Pharmaceutical Research International Asian Journal of Research for 2018. (●) Awarded 7<sup>th</sup> Faculty Branding Awards-19 by EET CRS (Research wing for Excellence in Professional Education & Industry, Noida (Delhi NCR) in the year 2019. (●) Conferred Fellowship of Bose Science Society (FBSS), Tamil Nadu (India) in recognition of his outstanding contribution and invaluable service for promotion of scientific research in the field of Veterinary Gynaecology in the year 2019. (●) Admitted as Associate Member by Academy of Sciences for Animal Welfare in recognition of his outstanding contribution for advancement of Science and Welfare and as Fellow of the academy in the year 2018. (●) Admitted as Fellow by Academy of Sciences for Animal Welfare in recognition of his outstanding contribution for advancement of Science and Welfare and as Fellow of the academy in the year 2018. (●) Conferred 'Surajben Jethalal Thaker Prakruti Mandir Gold Medal Award' by the 'Academy of Sciences for Animal Welfare' in recognition of his significant contribution for prevention of cruelty to animals and enhancement of animal welfare for the year 2019. (●) Received 4<sup>th</sup> South Asian Education Awards-19 (Certificate of Excellence) by 'Research Wing for Excellence in Professional Education & Industry (FET CRS) in the year 2019.

***We pray for a hearty, healthy and prosperous career for Dr Perumal with the following Vedic hymn.***

***अयम में हस्तो भगवान अयम में भगवतरम***

***अयम में विश्व भेषजो अयम शिवाभिमर्षन्ह***

***Ayam Me Hasto Bhagwan Ayam Me Bhagavattara***

***Ayam Me Viswa Bheshajo Ayam Shivaabhimarshana***

***My hands are the Lord.***

***It is boundlessly blissful. It can bring great prosperity.***

***Hands have the power to heal everything.***

***These hands are the ones that touch (God) Shiva.***



By reciting this mantra, one will get a feeling that he is confident of doing great things in life. He / She will be able to solve every problem comes in the journey of life. Continuous practice will help one instill a strong feeling of confidence in himself / herself. The fulfillment of one's own potential ... is the very purpose of this Vedic mantra (***Rig Veda 10.60.12***)

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