

STALIN RAJ V.

Virology Scientific Research Laboratory

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WORK EXPERIENCE

2017 to present	Associate professor <i>IISER- Thiruvananthapuram, India</i>
2010 - 2017	Scientist <i>Erasmus Medical Centre, Netherlands</i>
2007 - 2010	Post-doctoral Fellow <i>University of Liege, Belgium</i>
2006 - 2006	Secondment <i>CSIRO Australian Animal Health Laboratory (AAHL), Geelong</i>
2005 - 2007	Research Associate <i>Australian Centre for International Agricultural Research and CIBA, ICAR, India</i>

AWARDS & PROFESSIONAL RECOGNITION

2025	BIOSANTEXC research mobility fellowship <i>Franco-Indian Campus in Life Sciences and Health</i>
2018	Croucher Foundation award (\$2000) <i>The University of Hong Kong, China.</i>
2008 - 2010	Post-doctoral fellowship <i>University of Liege, Belgium</i>
2001 - 2007	Research associate <i>CIBA, ICAR, Chennai, Tamil Nadu</i>
2006	Senior Research Fellow (Indo Australian collaborative project) <i>CSIRO Australian Animal Health Laboratory (AAHL), Geelong, Australia</i>
2007	Travel Grant (funded by Department of Science & Technology, Govt. of India) Interactive meet of Indian research scholars with European & Indian science Icons.

CURRENT SPONSORED PROJECTS as PI

2024 - 2027	ICMR intermediate grant (INR 3.43Cr) • Development of adenoviral vector for Vaccine delivery
2024 - 2027	DST SERB (INR 81.7L) • Understanding the entry mechanism of coronaviruses
2020 - 2025	EU-DBT, India (INR 1.75Cr) ENDFLU • Development of Cellular assays to measure T and B cells responses in mice and ferret
2020 - 2023	DST SERB (INR 1.84Cr) Development and Evaluation of diagnostics and Candidate Vaccines for emerging SARS-Coronavirus-2 • Development of small animal model & nanoparticle vaccine for SARS-CoV-2.

2021 - 2023

DBT (INR 31.9L)

Unrevealing the entry mechanism of Tick-borne Kyasanur Forest diseases Virus

- Understand the host cell receptor

COMPLETED SPONSORED PROJECTS

2015	01/03/2015 – 01/03/2016 IMI – Innovative Medicines Initiative (€ 12,90,200.00) Zoonoses Anticipation and Preparedness Initiative • Developed Vaccine, serological assays, monoclonal antibodies, single chain antibodies against MERS.
2010	01/10/2010 – 01/10/2010 Roche (\$ 2,00,000.00) HCV drug- resistance • Identified many naturally occurring resistant mutants.
2009	01/10/2009 – 01/10/2009 University of Liege, Belgium (€ 24,000.00) Identification of KHV structural proteins and determination of the genes encoding these proteins • Identified the entry route of KHV
2008	01/10/2008 – 01/10/2008 University of Liege, Belgium (€ 23,000.00) Resolution of fundamental & applied questions related to cyprinid herpes virus 3 pathogenesis • Identified the structural proteins of KHV by mass spectrophotometry
2007	01/10/2007 – 01/10/2007 University of Liege, Belgium (€ 22,973.76) Cloning and Sequencing of Koi herpesvirus • Cloned the complete genome (298kb) of KHV in an infectious Bac-plasmid
2006	01/08/2006 – 01/08/2006 CSIRO Australian Animal Health Laboratory (AAHL), Geelong Application of PCR for improved shrimp Health management in the Asian Region • Studied the Epidemiology of White spot syndrome virus in farmed shrimp

TECHNOLOGY DEVELOPED

2025	Developed a Versatile, Simple, and Rapid (VSR) gene cloning method <i>IISER Thiruvananthapuram, India</i> • A Versatile, Simple, and Rapid (VSR) method for generating gene clones, diverse mutants, and short gene fragments for molecular biology applications.
2025	Developed Versatile Platform for multivalent Coronavirus Vaccines  <i>IISER Thiruvananthapuram, India</i> • Lumazine Synthase Nanoparticles as a Versatile Platform for Multivalent Antigen Presentation and Cross-Protective Coronavirus Vaccines
2018	Identified of single chain antibodies against MERS-CoV  <i>Erasmus Medical centre, Netherlands</i> • High affinity single chain antibodies identified from camel. Human/camel chimeric antibodies protect MERS-CoV infection in mice

- 2016** **Developed Vaccine for MERS- CoV**
Erasmus Medical centre, Netherlands
- Developed MVA-based vaccine for MERS-CoV and validated in camels.
- 2013** **Discovered dipeptidyl peptidase 4 is the entry receptor for MERS-CoV.**
Erasmus Medical centre, Netherlands
- Identified the receptor for the recently emerged Middle East Respiratory Syndrome coronavirus
- 2013** **Discovered dromedary camel is the reservoir host for MERS-CoV**
Erasmus Medical centre, Netherlands
- Identified the source of MERS-CoV
- 2012** **Identified a novel coronavirus “Middle East respiratory Syndrome coronavirus (MERS-CoV)” and characterized its genome.**
Erasmus Medical centre, Netherlands
- Characterized the MERS-CoV genome and classified the virus species
- 2009** **Understood the entry mechanism of KHV**
University of Liege, Belgium
- Identified the major Portal of Entry of Koi Herpesvirus in *Cyprinus carpio* is the Skin
- 2008** **Cloning of KHV genome**
University of Liege, Belgium
- For the first time cloned the complete genome (295kb) of Koi herpesvirus (KHV) in an infectious Bac plasmid.

PATENTS

Human beta-coronavirus lineage c and identification of n-terminal dipeptidyl peptidase as its virus receptor (Approved).

B L.Haagmans, T.M.Bestebroer, B.Sander VAN, R.A.M. Fouchier, A.D.M.E.Osterhaus, A.M. Zaki, V. S. Raj, et.al

- US 14/430,010 – Oct 1, 2015
- EP20130801769 – July 29, 2015
- PCT/IB2013/058772 – Mar 27, 2014

TOP PUBLICATIONS [*-First/ Corresponding author]

Van Der Eijk, A. A. *et al. New England Journal of Medicine* 375, 1002–1004 (2016) [IF: 78.5]

■ *media coverages*

Raj, V. S. *et al. Nature* 495, 251–254 (2013) [IF: 48.5] *

- *with cover page illustration: Nature 495*
- *News & Views: Nature 495: 179-177.*
- *News in Focus: Nature 495:149-150.*
- *media coverages* including THE HINDU

Haagmans, B. L. *et al. Science* 351, 77–81 (2016) [IF: 45.8]

■ *media coverages*

Bosch, B. J. *et al. Cell Research* 23, 1069–1070 (2013) [IF: 39.3]

Haagmans, B. L. *et al. The Lancet Infectious Diseases* 14, 140–145 (2014) [IF: 31] *

■ *media coverage* including THE HINDU

- **Comment:** Identification of MERS-CoV in dromedary camels *The Lancet Infectious Diseases* 14:93-94) [🔗](#)

Reusken, C. B. *et al. The Lancet Infectious Diseases* 13, 859–866 (2013) [IF: 31]

- **more than 50 media coverages**
- **Comment:** MERS-CoV: the intermediate host identified (*The Lancet Infectious Diseases* 13:827-828) [🔗](#)

Joseph, J. *et al. ACS Nano* (2025) [IF: 16] *

Stalin Raj, V. *et al. Science Advances* 4, eaas9667 (2018) [IF: 12.5] *

- **media coverage Hindustan Times**

Kim, E. *et al. eBioMedicine* 55, 102743 (2020) [IF: 10.8]

Li, W. *et al. PNAS* 114, (2017) [IF: 9.1]

Ramakrishnaiah, V. *et al. PNAS* 110, 13109–13113 (2013) [IF: 9.1]

Lamers, M. M. *et al. Emerging Infectious Diseases* 22, 716–719 (2016) [IF: 7.2] *

Raj, V. S. *et al. Emerging Infectious Diseases* 20, (2014) [IF: 7.2] *

Raj, V. S. *et al. Emerging Infectious Diseases* 18, 1369–1370 (2012) [IF: 7.2] *

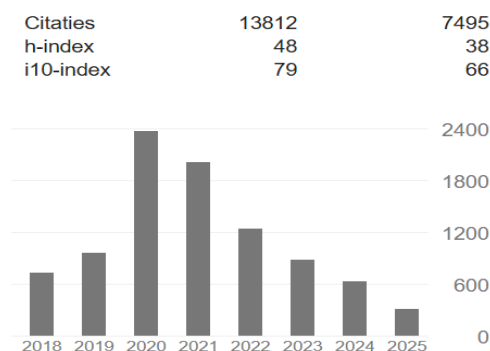
Karthika, T. *et al. Cells* 10, 1814 (2021) [IF: 5.2] *

Costes, B. *et al. Journal of Virology* 83, 2819–2830 (2009) [IF: 3.8] *

- **with cover page illustration**

Raj, V. S. *et al. Journal of Virology* 88, 1834–1838 (2014) [IF: 3.8] *

- **spotlight: MERS Coronavirus Entry Blocked** (*Journal of Virology* 88:1403).



PUBLICATIONS [*-First/ Corresponding author]

	Impact factor	Citations
1. Joseph, J., Modenkattil Sethumadhavan, K., Ahlawat, P., Prakash, M., Kandpal, G., Raj, G., Srivastava, H., Charulekha, P., K Dev, A., Radhakrishnan, A., Singh, V., Yadav, R., Chandramohanan, P., Varghese, R., Rizvi, Z. A., Awasthi, A., & Raj, V. S. (2025). Lumazine Synthase Nanoparticles as a Versatile Platform for Multivalent Antigen Presentation and Cross-Protective Coronavirus Vaccines. <i>ACS Nano</i> , 19(31), 28295–28314.*	16	0



2. Joseph, D. J., Sethumadhavan, M. K., Prakash, M. M., Raj, M. G., Packirisamy, M. C., Varghese, D. R., & Raj, V. S. (2025). Self-assembled Protein Nanoparticles Decorated with SARS-CoV-1 and MERS-CoV Spikes Trigger Potent Neutralizing Responses against Both Viruses. <i>International Journal of Infectious Diseases</i> , 152, 107719.*	4.3	0	Link
3. Sundari, M. M. M. A., Niveditha, D. L., Murugan, M. S., Sethumadhavan, M. K., Reji, M. S. S., Hatekar, M. A., Rajendran, M. A. R., Krishna, M. D., Balasubramanian, M. S., Rajan, M. A. D. V., Srivastava, M. H., Van Riel, D. D., De Vries, D. R., & Raj, V. S. (2025). Development of Cellular Assays and Monoclonal Antibodies for Detecting Ferret Cytokine Responses. <i>International Journal of Infectious Diseases</i> , 152, 107548. *	4.3	0	Link
4. Sethumadhavan, M. K., Sajimon, M. J., Mohapatra, D. P., & Raj, V. S. (2025). A rapid and efficient reverse genetics method for generating RNA viruses. <i>International Journal of Infectious Diseases</i> , 152, 107475.*	4.3	0	Link
5. Sethumadhavan, K. M., Kandpal, G., Sajimon, J., Das, V. R. A., Basu, N., Simla, A. P., & Raj, V. S. (2025). A Versatile, Simple, and Rapid (VSR) method for generating gene clones, diverse mutants, and short gene fragments for molecular biology applications. <i>Cold Spring Harbor Laboratory</i> .*		0	Link
6. Thankamani, K., Shubham, D., Kandpal, G., Isaac, A. M., Kavitha, M. S., & Raj, V. S. (2024). Middle East respiratory syndrome coronavirus (MERS-CoV) internalization does not rely on DPP4 cytoplasmic tail signaling. <i>Npj Viruses</i> , 2(1), (2024)*	6.5	3	Link
7. Joseph, J., Darpe, S., Kulkarni, G., & Raj, V. S. (2023). SARS-CoV-2 neutralizing antibody epitopes are overlapping and highly mutated which raises the chances of escape variants and requires development of broadly reactive vaccines. <i>Proteins: Structure, Function, and Bioinformatics</i> , 91(8), 1021–1031. *	2.8	3	Link
8. Joseph, J., Karthika, T., Das, V. R. A., & Raj, V. S. (2022). The use of Pseudotyped Coronaviruses for the Screening of Entry Inhibitors: Green Tea Extract Inhibits the Entry of SARS-CoV-1, MERSCoV, and SARS-CoV-2 by Blocking Receptor-spike Interaction. <i>Current Pharmaceutical Biotechnology</i> , 23(8), 1118–1129. *	2.6	15	Link
9. Arps, K., Harrington, J., Carnicelli, A. P., Wu, A., Chiswell, K., Chamberlain, A. M., Chrischilles, E., Jones, W. S., Raj, V. , Steinberg, B. A., Mundl, H., Viethen, T., Granger, C. B., Piccini, J. P., & Patel, M. R. (2022). Incidence and risk factors for major bleeding events in atrial fibrillation patients on direct oral anticoagulant therapy: data from the National Patient-Centered Clinical Research Network. <i>European Heart Journal</i> , 43(Supplement_2).	35.86	1	Link
10. Joseph, J., Karthika, T., Das, V. R. A., & Raj, V. S. (2021). Epigallocatechin-3-gallate (EGCG): a potential molecule for the development of therapeutics against emerging SARS-CoV-1, MERS-CoV and SARS-CoV-2 coronaviruses. <i>Journal of Global Antimicrobial Resistance</i> , 26, 26–28.*	3.2	4	Link
11. Karthika, T., Joseph, J., Das, V. R. A., Nair, N., Charulekha, P., Roji, M. D., & Raj, V. S. (2021). SARS-CoV-2 Cellular Entry Is Independent of the ACE2 Cytoplasmic Domain Signaling. <i>Cells</i> , 10(7), 1814.*	5.2	47	Link
12. Alif, T. (2021). Constraints and Challenges of Financial Institutions in Bangladesh: A Possible Way Out. <i>Journal of Management, Economics, and Industrial Organization</i> , 01–30.	1.3	3	Link

13. Malladi, S. K., Singh, R., Pandey, S., Gayathri, S., Kanjo, K., Ahmed, S., Khan, M. S., Kalita, P., Girish, N., Upadhyaya, A., Reddy, P., Pramanick, I., Bhasin, M., Mani, S., Bhattacharyya, S., Joseph, J., Thankamani, K., [Raj, V. S.](#), Dutta, S., Varadarajan, R. (2021). Design of a highly thermotolerant, immunogenic SARS-CoV-2 spike fragment. *Journal of Biological Chemistry*, 296, 100025. * 3.9 59 
14. Kim, E., Erdos, G., Huang, S., Kenniston, T. W., Balmert, S. C., Carey, C. D., [Raj, V. S.](#), Epperly, M. W., Klimstra, W. B., Haagmans, B. L., Korkmaz, E., Falo, L. D., Jr., & Gambotto, A. (2020). Microneedle array delivered recombinant coronavirus vaccines: Immunogenicity and rapid translational development. *eBioMedicine*, 55, 102743. 10.8 463 
15. Okba, N. M. A., [Raj, V. S.](#), Widjaja, I., GeurtsvanKessel, C. H., de Bruin, E., Chandler, F. D., Park, W. B., Kim, N.-J., Farag, E. A. B. A., Al-Hajri, M., Bosch, B.-J., Oh, M., Koopmans, M. P. G., Reusken, C. B. E. M., & Haagmans, B. L. (2019). Sensitive and Specific Detection of Low-Level Antibody Responses in Mild Middle East Respiratory Syndrome Coronavirus Infections. *Emerging Infectious Diseases*, 25(10), 1868–1877. 7.2 97 
16. Widjaja, I., Wang, C., van Haperen, R., Gutiérrez-Álvarez, J., van Dieren, B., Okba, N. M. A., [Raj, V. S.](#), Li, W., Fernandez-Delgado, R., Grosveld, F., van Kuppeveld, F. J. M., Haagmans, B. L., Enjuanes, L., Drabek, D., & Bosch, B.-J. (2019). Towards a solution to MERS: protective human monoclonal antibodies targeting different domains and functions of the MERS-coronavirus spike glycoprotein. *Emerging Microbes & Infections*, 8(1), 516–530. 7.2 140 
17. David, D., Rotenberg, D., Khinich, E., Erster, O., Bardenstein, S., van Straten, M., Okba, N. M. A., [Raj, S. V.](#), Haagmans, B. L., Miculitzki, M., & Davidson, I. (2018). Middle East respiratory syndrome coronavirus specific antibodies in naturally exposed Israeli llamas, alpacas and camels. *One Health*, 5, 65–68. 4.5 45 
18. Lehmbecker, A., Uhde, A.-K., Spitzbarth, I., Wohlsein, P., van den Brand, J., [Raj, V.](#), Smits, S. L., Schippers, D., Bestebroer, T. M., Okba, N., Kuiken, T., Bensaid, A., Foz, D. S., Segales, J., Volz, A., Sutter, G., Osterhaus, A. D. M. E., Haagmans, B. L., & Baumgärtner, W. (2018). Cell Tropism of Middle East Respiratory Syndrome Coronavirus in Experimentally Infected Dromedaries. *Journal of Comparative Pathology*, 158, 99. 0.9 0 
19. [Stalin Raj, V.](#), Okba, N. M. A., Gutierrez-Alvarez, J., Drabek, D., van Dieren, B., Widagdo, W., Lamers, M. M., Widjaja, I., Fernandez-Delgado, R., Sola, I., Bensaid, A., Koopmans, M. P., Segalés, J., Osterhaus, A. D. M. E., Bosch, B. J., Enjuanes, L., & Haagmans, B. L. (2018). Chimeric camel/human heavy-chain antibodies protect against MERS-CoV infection. *Science Advances*, 4(8).* 12.5 86 
20. Anfasa, F., Siegers, J. Y., van der Kroeg, M., Mumtaz, N., [Stalin Raj, V.](#), de Vrij, F. M. S., Widagdo, W., Gabriel, G., Salinas, S., Simonin, Y., Reusken, C., Kushner, S. A., Koopmans, M. P. G., Haagmans, B., Martina, B. E. E., & van Riel, D. (2017). Phenotypic Differences between Asian and African Lineage Zika Viruses in Human Neural Progenitor Cells. *mSphere*, 2(4). 3.1 108 
21. Hundie, G. B., [Raj, V. S.](#), GebreMichael, D., & Haagmans, B. L. (2017). Seroepidemiology of hepatitis B and C virus infections among blood donors in Ethiopia. *Journal of Medical Virology*, 89(7), 1300–1303. 4.6 23 
22. Hundie, G. B., [Stalin Raj, V.](#), Gebre Michael, D., Pas, S. D., Koopmans, M. P., Osterhaus, A. D. M. E., Smits, S. L., & Haagmans, B. L. (2016). 2.3 37 

- A novel hepatitis B virus subgenotype D10 circulating in Ethiopia. *Journal of Viral Hepatitis*, 24(2), 163–173.
23. Hundie, G. B., [Raj, V. S.](#), GebreMichael, D., Pas, S. D., & Haagmans, B. L. (2017). Genetic diversity of hepatitis C virus in Ethiopia. *PLOS ONE*, 12(6), e0179064. 2.6 30 [link](#)
 24. Li, W., Hulswit, R. J. G., Widjaja, I., [Raj, V. S.](#), McBride, R., Peng, W., Widagdo, W., Tortorici, M. A., van Dieren, B., Lang, Y., van Lent, J. W. M., Paulson, J. C., de Haan, C. A. M., de Groot, R. J., van Kuppeveld, F. J. M., Haagmans, B. L., & Bosch, B.-J. (2017). Identification of sialic acid-binding function for the Middle East respiratory syndrome coronavirus spike glycoprotein. *Proceedings of the National Academy of Sciences*, 114(40). 9.1 380 [link](#)
 25. Okba, N. M., [Raj, V. S.](#), & Haagmans, B. L. (2017). Middle East respiratory syndrome coronavirus vaccines: current status and novel approaches. *Current Opinion in Virology*, 23, 49–58. 5.1 77 [link](#)
 26. [Raj, V. S.](#), Hundie, G. B., Schürch, A. C., Smits, S. L., Pas, S. D., Le Pogam, S., Janssen, H. L. A., de Knecht, R. J., Osterhaus, A. D. M. E., Najera, I., Boucher, C. A., & Haagmans, B. L. (2017). Identification of HCV Resistant Variants against Direct Acting Antivirals in Plasma and Liver of Treatment Naïve Patients. *Scientific Reports*, 7(1). * 3.9 28 [link](#)
 27. Vancsok, C., Peñaranda, M. M. D., [Raj, V. S.](#), Leroy, B., Jazowiecka-Rakus, J., Boutier, M., Gao, Y., Wilkie, G. S., Suárez, N. M., Wattiez, R., Gillet, L., Davison, A. J., & Vanderplasschen, A. F. C. (2017). Proteomic and Functional Analysis of the Virion Transmembrane Proteome of Cyprinid Herpesvirus 3. *Journal of Virology*, 91(21). 3.8 35 [link](#)
 28. Vergara-Alert, J., van den Brand, J. M. A., Widagdo, W., Muñoz, M., V., [Raj, V. S.](#), Schipper, D., Solanes, D., Córdón, I., Bensaid, A., Haagmans, B. L., & Segalés, J. (2017). Livestock Susceptibility to Infection with Middle East Respiratory Syndrome Coronavirus. *Emerging Infectious Diseases*, 23(2), 232–240. 7.2 124 [link](#)
 29. Vergara-Alert, J., [Raj, V. S.](#), Muñoz, M., Abad, F. X., Córdón, I., Haagmans, B. L., Bensaid, A., & Segalés, J. (2017). Middle East respiratory syndrome coronavirus experimental transmission using a pig model. *Transboundary and Emerging Diseases*, 64(5), 1342–1345. 3 22 [link](#)
 30. Widagdo, W., Okba, N. M. A., [Stalin Raj, V.](#), & Haagmans, B. L. (2017). MERS-coronavirus: From discovery to intervention. *One Health*, 3, 11–16. 4.5 84 [link](#)
 31. Haagmans, B. L., van den Brand, J. M. A., [Raj, V. S.](#), Volz, A., Wohlsein, P., Smits, S. L., Schipper, D., Bestebroer, T. M., Okba, N., Fux, R., Bensaid, A., Solanes Foz, D., Kuiken, T., Baumgärtner, W., Segalés, J., Sutter, G., & Osterhaus, A. D. M. E. (2016). An orthopoxvirus-based vaccine reduces virus excretion after MERS-CoV infection in dromedary camels. *Science*, 351(6268), 77–81. 45.8 320 [link](#)
 33. Reusken, C. B. E. M., Farag, E. A. B. A., Haagmans, B. L., Mohran, K. A., Godeke, G.-J., V., [Raj, S.](#), Alhajri, F., Al-Marri, S. A., Al-Romaihi, H. E., Al-Thani, M., Bosch, B.-J., van der Eijk, A. A., El-Sayed, A. M., Ibrahim, A. K., Al-Molawi, N., Müller, M. A., Pasha, S. K., Drosten, C., AlHajri, M. M., & Koopmans, M. P. G. (2015). Occupational Exposure to Dromedaries and Risk for MERS-CoV Infection, Qatar, 2013–2014. *Emerging Infectious Diseases*, 21(8), 1422–1425. 7.2 88 [link](#)
 32. Hundie, G. B., [Raj, V. S.](#), Michael, D. G., Pas, S. D., Osterhaus, A. D. M. E., Koopmans, M. P., Smits, S. L., & Haagmans, B. L. (2015). Molecular epidemiology and genetic diversity of hepatitis B virus in Ethiopia. *Journal of Medical Virology*, 88(6), 1035–1043. 4.6 36 [link](#)

33. Lamers, M. M., Raj, V. S. , Shafei, M., Ali, S. S., Abdallh, S. M., Gazo, M., Nofal, S., Lu, X., Erdman, D. D., Koopmans, M. P., Abdallat, M., Haddadin, A., & Haagmans, B. L. (2016). Deletion Variants of Middle East Respiratory Syndrome Coronavirus from Humans, Jordan, 2015. <i>Emerging Infectious Diseases</i> , 22(4), 716–719.	7.2	50	Link
34. Lamers, M. M., Smits, S. L., Hundie, G. B., Provacia, L. B., Koopmans, M., Osterhaus, A. D. M. E., Haagmans, B. L., & Raj, V. S. (2016). Naturally occurring recombination in ferret coronaviruses revealed by complete genome characterization. <i>Journal of General Virology</i> , 97(9), 2180–2186. *	5.1	22	Link
35. Reusken, C. B., Raj, V. S. , Koopmans, M. P., & Haagmans, B. L. (2016). Cross host transmission in the emergence of MERS coronavirus. <i>Current Opinion in Virology</i> , 16, 55–62.	5.1	110	Link
36. Reusken, C. B. E. M., Schilp, C., Raj, V. S. , De Bruin, E., Kohl, R. H. G., Farag, E. A. B. A., Haagmans, B. L., Al-Romaihi, H., Le Grange, F., Bosch, B.-J., & Koopmans, M. P. G. (2016). MERS-CoV Infection of Alpaca in a Region Where MERS-CoV is Endemic. <i>Emerging Infectious Diseases</i> , 22(6), 1129–1131.	7.2	96	Link
37. Stalin Raj, V. , van den Brand, J. M. A., Volz, A., Wohlsein, P., Smits, S. L., Okba, N., Fux, R., Moise Bensaid, A., Solanes Foz, D., Kuiken, T., Baumgärtner, W., Segalés, J., Sutter, G., Osterhaus, A. D. M. E., & L Haagmans, B. (2016). A poxvirus-based vaccine reduces virus excretion after MERS coronavirus infection in dromedary camels. <i>International Journal of Infectious Diseases</i> , 45, 421–422. *	4.3	1	Link
38. van den Brand, J. M. A., Wohlsein, P., Stalin Raj, V. , Smits, S. L., Schippers, D., Segalés, J., Bensaid, A., Solanes, D., Volz, A., Kuiken, T., Baumgärtner, W., Osterhaus, A. D. M. E., Sutter, G., & Haagmans, B. L. (2016). Mers Coronavirus Infection in Dromedary Camels. <i>Journal of Comparative Pathology</i> , 154(1), 64.	0.9	0	Link
39. van der Eijk, A. A., van Genderen, P. J., Verdijk, R. M., Reusken, C. B., Mögling, R., van Kampen, J. J. A., Widagdo, W., Aron, G. I., GeurtsvanKessel, C. H., Pas, S. D., Raj, V. S. , Haagmans, B. L., & Koopmans, M. P. G. (2016). Miscarriage Associated with Zika Virus Infection. <i>New England Journal of Medicine</i> , 375(10), 1002–1004.	78.5	185	Link
40. Widagdo, W., Raj, V. S. , Schipper, D., Kolijn, K., van Leenders, G. J. L. H., Bosch, B. J., Bensaid, A., Segalés, J., Baumgärtner, W., Osterhaus, A. D. M. E., Koopmans, M. P., van den Brand, J. M. A., & Haagmans, B. L. (2016). Differential Expression of the Middle East Respiratory Syndrome Coronavirus Receptor in the Upper Respiratory Tracts of Humans and Dromedary Camels. <i>Journal of Virology</i> , 90(9), 4838–4842	3.8	164	Link
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BOOK CHAPTER

1. Raj V. S. *et al.* ***Methods in Molecular Biology*** 1282:165-182 (2015)
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INVITED TALKS

- 2025**
- “Insights from the Coronavirus Outbreaks: Strengthening Pandemic Preparedness” EMBO satellite meeting, *IISER Tirupati*. 14-15/02/2025
- Deciphering Coronavirus Entry Pathways and Cellular Trafficking for Novel Therapeutic Strategies. 6th International Conference on Genome Biology (ICGB-6) & 56th Aqua-Terr Annual Day *MKU, Madurai, Tamil Nadu*. 28/02/2025.
- Emerging and re-emerging viral pathogens: Vaccine development: Department of Zoology, *Jamal Mohamed College, Trichy*. 04/04/2025.
- MERS-Coronavirus: From Discovery to Intervention. PU-IQAC & department of zoology jointly organize a faculty development program (FDP) on innovation in zoology towards biomedical sciences, *Periyar University, Salem*. 06/03/2025
- 2024**
- Understanding the entry mechanisms of RNA viruses and vaccine development. *Duke University, USA*. 22/11/24.
- Development of Novel Adeno Viral Vector Platform for Vaccine Delivery. *ICMR, Delhi*. 29/10/24.
- Emerging and re-emerging infectious disease: Discovery to intervention. *Alagappa University, Tamil Nadu*. 22/03/24.
- The discovery and characterization of emerging and (re-)emerging viral pathogens. 29/02/24.
- Emergence of Zoonotic Viruses: Discovery, Characterization, and Prevention Using Multidisciplinary Approaches, *University of Hyderabad, Hyderabad*. 19/01/24.

- 2023** Emerging and re-emerging infectious disease: Discovery to intervention, (Winter Course) *IISER, Thiruvananthapuram*.11/12/23.
- Emerging and re-emerging infectious disease: Discovery to intervention. *University of Calicut, Kerala*.07/12/23.
- Mapping SARS-CoV-2 variant epitopes enhances knowledge of virus entry and vaccine development. (*ETGB conference2023 IU-CGGT*) Kerala. *University, Kerala*.17/11/23.
- The continuing human viral conflict - need for strengthening one health approach. *Ayush*.10/11/23.
- The 2023 Nobel Prize in Physiology or Medicine was awarded jointly to Katalin Karikó and Drew Weissman” for their discoveries concerning base modifications that enabled the development of effective mRNA vaccines against COVID-19”. *Noble Talk IISER Thiruvananthapuram*.06/11/23.
- Understanding the Coronavirus Spike and Host Cell Receptor Interactions are Critical for Development of Therapeutics and Vaccine. *MS University, Tamil Nadu*.09/03/23.
- Lessons learned from SARS coronavirus outbreak. *CCMB, Hyderabad*.06/03/23
- Lessons learned from SARS coronavirus outbreak. *University College, Thiruvananthapuram*.23/02/23.
- Development and Evaluation of diagnostics and Candidate Vaccines for emerging SARS-Coronavirus-2 (DEC-VAC SARS). *SERB (2nd Meeting)*.16/02/23.
- The discovery and characterization of emerging and (re-)emerging viral pathogens. 06/02/23
- 2022** Characterizations of SARS-CoV 2 Spike Variants to Understand Viral Entry and Development of Vaccine Candidate. (*IUBMB focused meeting on Biochemistry & Molecular Biology of RNA viruses*) *Madurai Kamaraj University, Tamil Nadu*. 17/11/22
- Characterizations of Emerging Viruses: Coronavirus. (Winter Course) *IISER, Thiruvananthapuram*. 12/12/22.
- 2021** What we know and don't know about coronaviruses. *Inter-University Centre for Evolutionary and Integrative Biology, University of Kerala, Kariavattom, Thiruvananthapuram*.
- Conference with Experts. *Vaccine Production Centre, Kerala*.
- COVID-19 Virus - mutation, spread, vaccine. Doordarshan National live phone-in program *Samoothyapatam*.
- Development of Diagnostics, Therapeutics, and Vaccines for Emerging Coronaviruses. *Pushpagiri Medical College, Kerala*. 26/04/21.
- 2020** Viruses, Virus Discovery, Vaccine, and Emerging Coronaviruses. Doordarshan National live phone-in programme *Samoothyapatam*. 09/11/20.
- Novel coronavirus: Lessons learned from SARS and MERS coronavirus outbreaks. *MKU (Biotechnology), Tamil Nadu*. 25/02/20.

Meeting of Virology Experts with Chief Minister - Government of Kerala
Chief Minister's Conference Hall, Secretariat, Thiruvananthapuram. 17/03/20.

Coronaviruses Knowns and Unknowns Online Lecture. *National Institute of Science Communication, an autonomous organization under the Department of Science and Technology.* 02/07/20.

DST-PURSE sponsored webinar on Frontiers in Biotechnology- FBT 2020
“Emergence of Novel Coronaviruses and their Biology and Therapeutic Options”

Department of Biotechnology, Bharathiyar University, Coimbatore, Tamil Nadu, India. 05/10/20.

Webinar on Advanced Techniques in Biotechnology “Development of Vaccine for Coronaviruses” *Kerala Agricultural University- Department of Plant Biotechnology College of Agriculture.* 15/10/20.

Nanotechnology for Coronavirus” in the Refresher course on Nanoscience and Nanobiotechnology. *University of Madras, Tamil Nadu.* 12/10/20.

“Nanotechnology for Coronaviruses: Therapeutics and Vaccines” Workshop on Biomedical Nanotechnology. *Nanoscience Centre, University of Madras.* 06/09/20.

International Webinar BIOGEN-2020 “Surviving the pandemic: A disease tolerance perspective”; "Discovery and Functional Characterization of Novel Coronaviruses". *Departments of Biosciences, Sree Sankara College, Kalady.* 22/09/20.

Emergence of Novel Coronaviruses: From Discovery to Intervention Online International e-Conference on “COVID-19 Pandemic: Challenges and Ongoing Approaches for Better Health”. 29/06/20-30/06/20.

Nobel Prize for Physiology or Medicine 2020: Discovery of Hepatitis C virus: Nobel Price Talk series. *IISER Thiruvananthapuram, Kerala.* 20/10/20.

“COVID-19 Pandemic: Strategies for prevention and control of the disease” ‘Webinar Series on Genomics of COVID -19 - hurdles in developing Vaccines and Drugs *Inter University Centre for Genomics and Gene Technology (IU-CGGT) Department of Biotechnology, University of Kerala.* 23/06/20.

COVID-19: Lessons learned from SARS and MERS outbreak” webinar series on "Emerging and Re-emerging Viruses". *The Kerala State Council for Science, Technology and Environment (KSCSTE).* 11/05/20.

“COVID-19 Pandemic: Strategies for prevention and control of the disease” ‘Webinar Series on Genomics of COVID-19 - hurdles in developing Vaccines and Drugs. *Inter University Centre for Genomics and Gene Technology (IU-CGGT), Department of Biotechnology, University of Kerala.* 23/06/20.

Half-day symposium: The discovery and characterization of emerging and re-emerging viral pathogens. *IISER Thiruvananthapuram, India.* 15/02/20.

Novel Coronavirus: Lessons learned from SARS and MERS coronavirus outbreaks. *School of Physics, Madurai Kamaraj University.* 25/02/20

The Discovery and Characterization of Coronaviruses. *Department of Biotechnology, Madurai Kamaraj University.* 25/02/20.

2019

Indo-UK conference on 'Emerging and Re-emerging infectious diseases'. 6th molecular virology meeting. *IIT Kharagpur, Kolkata.* 25/02/19-26/02/19.

Discovery and characterization of Emerging Viral Pathogens from Humans and Animals, One Day National Seminar on 'Epidemiology of Viral Diseases'. *Inter University Centre for Genomics and Gene Technology*.18/12/19.

- 2018** Keystone Symposia on Framing the Response to Emerging Virus Infections “Chimeric camel-human heavy chain antibodies protect mice from MERS-CoV infection”. *The University of Hong Kong, Hong Kong*.14/10/18-18/10/18.
- National Conference on Recent Advances in Virology and Bacteriology “MERS Coronavirus: From discovery to intervention”. *CUSAT, Cochin, Kerala*.25/10/18-26/10/18.
- 2017** The discovery and characterization of emerging and re-emerging viral pathogens. *Aravind Medical Research Foundation, Madurai, Tamil Nadu, India. AMRF, Madurai*.30/11/17.
- “Pathogen Discovery and Characterization”. *Bharat Biotech, Hyderabad*.22/12/17.
- Identification of MERS-CoV neutralizing nanobodies by direct cloning from a bone marrow cDNA library - XII Nidovirus meeting *Kansas city, USA*.01/06/17-09/06/17.
- Novel viruses: Discovery to Intervention” Replication, virus-host interactions, and protection in coronavirus. *The National Centre for Biotechnology, Madrid, Spain*. 02/02/17-03/02/17.
- 2016** Modified vaccinia virus-based vaccine protection against MERS-CoV infection in dromedary camels, 6th European Congress of Virology. *Hamburg, Germany*. 19/10/16-22/10/16
- A poxvirus-based vaccine reduces virus excretion after MERS coronavirus infection in dromedary camels. 17th International Congress on Infectious Diseases. *Hyderabad, India*. 02/03/16-05/03/16.
- 2015** Production of antibodies against “MERS-CoV” *Hannover, Germany*.28/09/15.
- 2014** Characterization of DPP4 as the Functional Receptor for Middle East  Respiratory Syndrome Coronavirus. Pathogenesis of Respiratory Viruses. *Keystone Resort, Keystone, Colorado, USA*.19/01/14-24/01/14.
- Identification and characterization of MERS CoV in dromedary camels. *XIIIth International Nidovirus Symposium. Salamanga, Spain*. 01/06/14-06/06/14.
- 2013** Dipeptidyl Peptidase 4 Is A Functional Receptor for The Emerging Human Coronavirus-Emc. 17th Molecular Medicine Day. *Engels, Rotterdam, The Netherlands*.
- 2012** Deep sequencing analysis of liver and plasma HCV quasi-species of treatment naïve patients. 7th International Workshop on Hepatitis C - Resistance & New Compounds. *Cambridge, MA, USA*.28/06/12-29/06/12

2010	Production of Recombinant koi herpesvirus (KHV) mutants and its applications. <i>Institut national de la santé et de la recherche médicale (INSERM), Lyon, France.</i> 02/06/10.
2009	Removal of epidermal mucus enhances Cyprinid herpesvirus 3 entry through the skin of <i>Cyprinus carpio</i> . <i>Belgian Society for Microbiology, Brussels, Belgium.</i> 11/12/09.
2006	Australian Centre for International Agricultural Research Project FIS 2002-075, “Application of PCR for Improved Shrimp Health Management in the Asian Region”. <i>Management Co-ordination Meeting, Bangkok, Thailand.2006</i> Need of novel diagnostics in the health management of <i>Macrobrachium rosenbergii</i> , with special reference to an emerging epizootic in India, the white muscle syndrome (WMS). International Symposium on Freshwater Prawns. <i>College of Fisheries, Agricultural University, Cochin, India.</i>

WORKSHOPS

2021	Workshop to prepare a roadmap on facilitating health research in Kerala, with Health Minister, GOK and Principal Secretary, Health and Family Welfare, GOK <i>Conference Hall, RGCB</i>
2012	17th International Bio-Informatics Workshop on Virus Evolution and Molecular Epidemiology <i>University of Belgrade, Faculty of Medicine, Belgrade, Serbia.</i>
----	Human Genome analysis workshop <i>Erasmus MC</i>
2010	Fish Immunology workshop <i>Cell Biology and Immunology, Wageningen University, The Netherlands.</i>
2006	Biosafety Level 3 (BSL3) laboratory Training <i>CSIRO Australian Animal Health Laboratory (AAHL), Geelong</i>
2006	2nd International PCR Workshop on “Application of PCR for Improved Shrimp Health Management in the Asian Region” (Planning, co-ordination and Senior Demonstrator) <i>Central Institute of Brackishwater Aquaculture (ICAR), India</i>
2005	International PCR Training Workshop on “Application of PCR for Improved Shrimp Health Management in the Asian Region” (Senior Demonstrator) <i>Central Institute of Brackishwater Aquaculture (ICAR), India</i>
2000	Basic Techniques in Modern Biology. Department of Biotechnology <i>Ayya Nadar Janaki Ammal College, Madurai Kamaraj University</i>
1999	Plant Tissue Culture. <i>Centre for Biodiversity and Biotechnology, St Xavier’s College, Palayamcottai, India.</i>
1997	Recent Trends in Microbiology. <i>VHNSN College, Virudhunagar.</i>

IISER RESPONSIBILITIES

2024 - present	Scientist in charge of animal house facility
2023 - present	Establishment of BSL-3 facility at IISER- TVM

2023 - 2023	Resource Person in the UGC-sponsored 20th Refresher Course in Life Science conducted by the UGC - MMTTC in Hybrid (online /offline) mode.
2022 - 2024	Establishment of rabbit housing facility at IISER-TVM
2022 - 2024	School committee on postgraduate program (SC-PP)-convenor
2021 - 2024	Medical response team
2021 - 2024	Library committee
2020 - 2024	In charge- Genome sequencing facility, SOB
2020 - 2024	Members of Board of Studies: M.Sc. Medical Biotechnology, Bharathiyar University, Coimbatore, Tamil Nadu
2020 - 2020	JAC Chair 2020, Admission
2019 - 2024	Committee for preparing the guidebooks for BS-MS, IPHD, and PhD programmes for the academic year 2019-2020
2019 - 2024	Faculty adviser for Batch 17-62 students
2018 - 2024	Biological Safety and Bio-waste segregation committee
2018 - 2020	Committee member: Arrangement of Lecture halls, Academic Calendar, and through MoU and IPR
2018 - 2020	Coordinator: Stress counselling and Guidance
2018 - 2018	IISER BS-MS exam invigilator 2018
2017 - 2024	Animal Ethical committee
2017 - 2024	Committee member: Infrastructure set-up for the animal house

TEACHING RESPONSIBILITIES

Introduction to Cell biology and microbiology	BIO221
Microbiome & Vaccinology	BIO4118, I2B412
Principles of Life IV: Microbiology	BIO212
Advanced Virology	BIO4223, BIO6223
Advanced Microbiology	BIO311/MSB311
Advanced Biology Lab II	BIO412/MSB413
Advanced Biology Lab-III	BIO412
Cell Biology and Signalling	BIO221
Microbiology	BIO311

THESIS EVALUATION RESPONSIBILITIES

2023 - 2023	PhD thesis evaluation: Identification of Novel Host factors in RNA virus infections of Ms. Divya Guptha (Ref no: DRIS/RE-1/E-51410 / PhD. / CCMB / TT - 12182 / 688-R) E38:E59 Jawaharlal Nehru University
2022 - 2022	PhD thesis evaluation and Viva examiner: Development and characterization of oncolytic Rhabdoviral vectors.". Ms. Reshma K.M. (Reg No: 79000031), Manipal Academy of Higher Education, MANIPAL-576 104, Karnataka, India
2021 - 2024	PhD thesis evaluation and Viva examiner: Investigating the Role of Epithelial Mesenchymal Transition (EMT), in Human Viral Infections, Ms. V. Diviya, (ACSIR Registration No: 10BB14A03005:10BB14A03005 CSIR-Centre for Cellular and Molecular Biology, Hyderabad.
2021 - 2024	PhD thesis evaluation and Viva examiner: Identification and recombinant EGFRvIII receptor for targeting and therapy of EGFRvIII expressing cancer. Ms Sunitha K (V(KH.NS. D*MLM13002) Amrita Vishwa Vidyapeetham, Kochi, Kerala
2021	PhD thesis evaluation and Viva examiner: Identification and recombinant expression of peptides binding to EGFRvIII receptor for targeting and therapy of EGFRvIII expressing cancer. Ms Sunitha K V(KH.NS. D*MLM13002) Amrita Vishwa Vidyapeetham, Kochi

2021 - 2024

External Examiner: MSc thesis evaluation and viva examination: MSc Final Semester Dissertation, RGCB Thiruvananthapuram:10 Thesis

PMRF COMMITTEE RESPONSIBILITIES

2023 - 2024	Expert committee member: The Prime Minister's Research Fellows (PMRF) Cycle
2022 - 2024	Expert member PMRF Annual progress review
2021 - 2024	Expert committee member for the screening Prime Minister's Research Fellows (PMRF) Life sciences 2021 batch
2021 - 2024	Expert member PMRF Annual progress review committee, Life sciences

PROFESSIONAL RESPONSIBILITIES

2025-2028	DBT Nominee for the Institutional Biosafety Committee (IBSC) at the Inter University Centre for Biomedical Research & Super Specialty Hospital (IUCBR & SSH), MG University, Kottayam, Kerala.
2025-2028	DBT Nominee for the Institutional Biosafety Committee (IBSC) at CSIR-NIIST, Thiruvananthapuram, Kerala.
2025	Technical Expert Committee member: Indian Council of Medical Research (ICMR) has nominated to serve as a member of the Technical Expert Committee, responsible for reviewing and recommending technical proposals submitted by various industries under the Expression of Interest (EoI) initiative.
2025	Subject Expert Committee for Life Sciences - 1, Animal Sciences, Pharmacology, Nanobiotechnology, and Microbiology, under the Prime Minister Early Career Research Grant (PMECRG) program of Anusandhan National Research Foundation (ANRF).
2024	ICMR Project Screening Committee: ICMR proposals submitted under the Investigator-Initiated Research Proposals for Small Extramural Grants (Infectious Diseases).
2022 - 2025	DBT Representative in the IBSC of Institute of Advanced Virology
2022 - 2024	DBT representative in the IBSC of Institute of Advance Virology, Government of Kerala
2021 - 2024	Member of the screening committee to post of Scientist C and E2 at Institute of Advance Virology (IAV), Thiruvananthapuram.
2021 - 2024	Expert committee member for forming MOU, AOU, Bye-laws and rules of Institute of Advance Virology, Thiruvananthapuram
2020 - 2024	Institute of Advance Virology, Government of Kerala - Technical and Expert committee member
2020 - 2020	Meeting with Hon'ble Chief Minister of Kerala Shri Pinarayi Vijayan to discuss the establishment of Institute of Advance Virology (IAV), Thiruvananthapuram

OTHER RESPONSIBILITIES

2023 - 2026	Search-Cum selection committee for SERB-POWER Grant
2023 - 2024	Taskforce Chairperson: ICMR PM-ABHIM Scheme
2023 - 2023	35th Kerala Science Congress, chair and lead speaker/judge for the technical sessions (subject: Health science)
2023 - 2023	External Member for the conduct of skill test for the post of Technical Assistant, Senior Technician and Technician, NIT Calicut

2023 - 2023	External Member for the conduct of skill test for the post of Technical Assistant, Senior Technician and Technician to be held on 14-16th September, 2023. NIT Calicut
2022 - 2024	Associate Editor for Frontiers in virology
2022 - 2024	Kerala Biotechnology commission- Programme Advisory Committee (PAC)
2022 - 2024	Expert Member of the Programme Advisory Committee (PAC) of the BIRD Program. Kerala Biotechnology commission
2021 - 2024	Kerala Chief Minister's Round Table on COVID19. A Discussion Paper, titled, 'WORKING AROUND COVID: Setting the future agenda for Kerala.
2021 - 2024	Expert member to prepare a roadmap on facilitating Health Research in Kerala, by Health Minister, GoK and Principal Secretary, Health and Family Welfare, GoK
2021 - 2024	Science and Technology Department, Government of Kerala - Establishment of Park, Thiruvananthapuram, Kerala - Technical and Expert committee member
2021 - 2024	Members of Board of Studies: Biotechnology, Manonmanium Sundaranar University, Tirunelveli, Tamil Nadu
2021 - 2024	Co-opted Member of the Expert Committee-Life Sciences on Start-up Research Grant (SRG) and National Post- doctoral Fellowship (NPDF) Schemes under the Science and Engineering Research Board (SERB), Department of Science and Technology (DST)
2020 - 2024	Nodal officer: COVID19 diagnostics, ICMR
2020 - 2024	DST-SERB Taskforce member: IPHA, CRG, NPDF
2020 - 2024	Member of the DBT Special Scientific and Technical Appraisal and Advisory Groups (STAG)
2019 - 2024	committee members of annual Frontier Symposium series
2018 - 2020	Committee member: International collaboration, All external collaboration through MoU and IPR
2018 - 2018	KVPY interview panel member
2017 - 2018	Member Selection committee DBT/DST/INSPIRE sponsored fellows - Academic year 2017-2018
2017 - 2017	JGEEBILLS exam invigilator 2017
2017 - 2017	KVPY exam invigilator 2017