



Kanagavel Murugesan

Research Scientist, Pathology Sponsored Projects #2

Bio

EDUCATION AND CERTIFICATIONS

- PhD, Bharathidasan University , Microbiology (2016)
- Diploma in Molecular Diagnosis, Alagappa University (2009)
- MS, Bharathidasan University , Microbiology (2008)
- BS, Bharathidasan University , Microbiology (2006)

Publications

PUBLICATIONS

- **Mycobacteriophage Functionalized Magnetic Nanocrystal Clusters for Highly Sensitive and Rapid Detection of Mycobacterium tuberculosis** *JACS AU*
Xiao, Z., Yen, C., Wang, T., Ibrahim, J., Fu, Q., Dai, S., Hajfathalian, M., Murugesan, K., Banaei, N., Bogyo, M., Rao, J.
2025
- **Accuracy of plasma cell-free DNA PCR for non-invasive diagnosis of mucormycosis.** *Journal of clinical microbiology*
Mah, J., Lieu, A., Nicholas, V., Moreno, A., Murugesan, K., Budvytiene, I., Banaei, N.
2025: e0079625
- **Red Blood Cell-Bound Cell-Free DNA Is an Insensitive Marker for Diagnosis of Bacterial Infections.** *Clinical chemistry*
Murugesan, K., Anderson, G. R., Banaei, N.
2025
- **Sequential Treatment Failure With Aztreonam-Ceftazidime-Avibactam Followed by Cefiderocol Due to Preexisting and Acquired Mechanisms in a New Delhi Metallo- β -lactamase-Producing Escherichia coli Causing Fatal Bloodstream Infection.** *Clinical infectious diseases : an official publication of the Infectious Diseases Society of America*
Senchyna, F., Murugesan, K., Rotunno, W., Nadimpalli, S. S., Deresinski, S., Banaei, N.
2024
- **Accuracy of QuantiFERON in active tuberculosis suspects with comorbidities and nontuberculous mycobacterial infection in Northern California.** *Journal of clinical microbiology*
Lu, J., Murugesan, K., Senchyna, F., Budvytiene, I., Banaei, N.
2023: e0077523
- **Superior accuracy of Aspergillus plasma cell-free DNA PCR over serum galactomannan for the diagnosis of invasive aspergillosis.** *Clinical infectious diseases : an official publication of the Infectious Diseases Society of America*
Mah, J., Nicholas, V., Tayyar, R., Moreno, A., Murugesan, K., Budvytiene, I., Banaei, N.
2023
- **Enkurin: A novel marker for myeloproliferative neoplasms from platelet, megakaryocyte, and whole blood specimens.** *Blood advances*
Mosale Seetharam, S., Liu, Y., Wu, J., Fechter, L., Murugesan, K., Maecker, H. T., Gotlib, J., Zehnder, J. L., Paulmurugan, R., Krishnan, A.

2023

- **Genome-wide tiled detection of circulating Mycobacterium tuberculosis cell-free DNA using Cas13.** *Nature communications*
Thakku, S. G., Lirette, J., Murugesan, K., Chen, J., Theron, G., Banaei, N., Blainey, P. C., Gomez, J., Wong, S. Y., Hung, D. T.
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- **Enkurin: A novel marker for myeloproliferative neoplasms from platelet, megakaryocyte, and whole blood specimens.** *bioRxiv : the preprint server for biology*
Seetharam, S. M., Liu, Y., Wu, J., Fechter, L., Murugesan, K., Maecker, H., Gotlib, J., Zehnder, J., Paulmurugan, R., Krishnan, A.
2023
- **Cellular and humoral immune response to SARS-CoV-2 vaccination and booster dose in immunosuppressed patients: An observational cohort study.** *Journal of clinical virology : the official publication of the Pan American Society for Clinical Virology*
Yang, L. M., Costales, C., Ramanathan, M., Bulterys, P. L., Murugesan, K., Schroers-Martin, J., Alizadeh, A. A., Boyd, S. D., Brown, J. M., Nadeau, K. C., Nadimpalli, S. S., Wang, A. X., Busque, et al
2022; 153: 105217
- **A modular and reconfigurable open-channel gated device for the electrokinetic extraction of cell-free DNA assays.** *Analytica chimica acta*
Futai, N., Fukazawa, Y., Kashiwagi, T., Tamaki, S., Sakai, R., Hogan, C. A., Murugesan, K., Ramachandran, A., Banaei, N., Santiago, J. G.
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- **Immunogenicity of a Third COVID-19 mRNA Vaccine Dose in PID Patients with Functional B-cell Defects.** *The journal of allergy and clinical immunology. In practice*
Gernez, Y., Murugesan, K., Cortales, C. R., Banaei, N., Hoyte, L., Pinsky, B. A., Lewis, D. B., Pham, M.
2022
- **Long Term Accuracy of SARS-CoV-2 Interferon-γ Release Assay and its Application in Household Investigation.** *Clinical infectious diseases : an official publication of the Infectious Diseases Society of America*
Murugesan, K., Jagannathan, P., Altamirano, J., Maldonado, Y. A., Bonilla, H. F., Jacobson, K. B., Parsonnet, J., Andrews, J. R., Shi, R. Z., Boyd, S., Pinsky, B. A., Singh, U., Banaei, et al
2022
- **Immunogenicity and Tolerability of COVID-19 mRNA Vaccines in PID patients with functional B-cell defects.** *The Journal of allergy and clinical immunology*
Pham, M. N., Murugesan, K., Banaei, N., Pinsky, B. A., Tang, M., Hoyte, E., Lewis, D. B., Gernez, Y.
1800
- **Clinical Accuracy and Impact of Plasma Cell-Free DNA Fungal PCR Panel for Non-Invasive Diagnosis of Fungal Infection.** *Clinical infectious diseases : an official publication of the Infectious Diseases Society of America*
Senchyna, F. n., Hogan, C. A., Murugesan, K. n., Moreno, A. n., Ho, D. Y., Subramanian, A. n., Schwenk, H. T., Budvytiene, I. n., Costa, H. A., Gombar, S. n., Banaei, N. n.
2021
- **Comparative genomics of Enterobacter cloacae complex before and after acquired clinical resistance to Ceftazidime-Avibactam.** *Diagnostic microbiology and infectious disease*
Senchyna, F., Tamburini, F. B., Murugesan, K., Watz, N., Bhatt, A. S., Banaei, N.
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- **Interferon-gamma release assay testing to assess COVID-19 vaccination response in a SARS-CoV-2 seronegative patient on rituximab: a case report.** *International journal of infectious diseases : IJID : official publication of the International Society for Infectious Diseases*
Ferguson, J., Murugesan, K., Banaei, N., Liu, A.
2021
- **SARS-CoV-2 infection and COVID-19 severity in individuals with prior seasonal coronavirus infection.** *Diagnostic microbiology and infectious disease*
Gombar, S. n., Bergquist, T. n., Pejaver, V. n., Hammarlund, N. E., Murugesan, K. n., Mooney, S. n., Shah, N. n., Pinsky, B. A., Banaei, N. n.
2021; 100 (2): 115338
- **High Frequency of SARS-CoV-2 RNAemia and Association With Severe Disease.** *Clinical infectious diseases : an official publication of the Infectious Diseases Society of America*
Hogan, C. A., Stevens, B. A., Sahoo, M. K., Huang, C., Garamani, N., Gombar, S., Yamamoto, F., Murugesan, K., Kurzer, J., Zehnder, J., Pinsky, B. A.

2020

- **Interferon-gamma release assay for accurate detection of SARS-CoV-2 T cell response.** *Clinical infectious diseases : an official publication of the Infectious Diseases Society of America*

Murugesan, K. n., Jagannathan, P. n., Pham, T. D., Pandey, S. n., Bonilla, H. F., Jacobson, K. n., Parsonnet, J. n., Andrews, J. R., Weiskopf, D. n., Sette, A. n., Pinsky, B. A., Singh, U. n., Banaei, et al

2020

- **Investigation of preanalytical variables impacting pathogen cell-free DNA in blood and urine.** *Journal of clinical microbiology*

Murugesan, K. n., Hogan, C. A., Palmer, Z. n., Reeve, B. n., Theron, G. n., Andama, A. n., Somoskovi, A. n., Steadman, A. n., Madan, D. n., Andrews, J. n., Croda, J. n., Sahoo, M. K., Cattamanchi, et al

2019

- **Lipopolysaccharide Specific Immunochromatography Based Lateral Flow Assay for Serogroup Specific Diagnosis of Leptospirosis in India** *PLOS ONE*

Vanithamani, S., Shanmughapriya, S., Narayanan, R., Raja, V., Kanagavel, M., Sivasankari, K., Natarajaseenivasan, K.

2015; 10 (9): e0137130