

MATHEUS BEZERRA



Summary

Biomedical scientist with strong background in laboratorial vigilance of infectious diseases, molecular biology and oncohematology. During the master and doctorate, investigated the clinical repercussions of clonal mutations in leukemia patients. Has experience in conducting research projects in the development of new *in vitro* diagnostic tests as well in epidemiologic/genomic surveillance of infectious diseases, such as plague, COVID-19 and tuberculosis.

Skill Highlights

- Biomedical research, including cloning, cell culture, sequencing, flow cytometry, bacteriology, biosafety level-3 laboratory.
- Clinical laboratory: hematology, microbiology, immunology, lab management, quality control.
- Scientific writing and data analysis.

Experience

Biomedical Scientist - 05/2019 - current

Oswaldo Cruz Foundation (Fiocruz), Recife, BR

- Development of new diagnostic tests for infectious diseases epidemiological surveillance and laboratorial diagnosis of plague (National Plague Reference Service).
- Research in molecular biology applied to microbiology.
- Sars CoV-2 genomic surveillance.

Clinical Laboratory Specialist - 02/2015 – 04/2019

Municipal Laboratory, Jaboatão dos Guararapes, BR

- Laboratorial diagnosis of tuberculosis and leprosy.
- Epidemiologic surveillance and healthcare teams training.

Guest Scientist - 05/2017 – 07/2018

University of Basel, Basel, CH

- PhD exchange program in the Childhood Leukemia research group (Prof. Jurg Schwaller).
- Use of *in vivo* and *in vitro* models to investigate the molecular mechanism involved in leukemogenesis.

Clinical Laboratory Specialist - 0/2017 – 07/2018

Hospital Esperança D'or, Recife, BR

- In charge of blood exams form the hospital routine, including hematology, biochemistry, immunology, urinalysis and quality control.

Professor - 01/2013 – 12/2016

Faculdade Integrada de Patos, Patos, BR

- Professor at the specialization course in hematology

Additional Information

- Reviewed manuscripts at: *Frontiers in Microbiology*, *Immunobiology and Integrative Zoology*.
- Participation in graduation / master / PhD examination committees.
- Participation in local and international conferences

Contact

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Languages

Portuguese (native)

English (fluent)

Spanish – A2

German – A1

Academic productions

1. Bezerra, Matheus Filgueira; Machado, Lais, Carvalho, Viviane; Brandão-Filho, Sinval ; Ayres, Constância; Paiva, Marcelo; Wallau, Gabriel Luz. A Sanger-based approach for scaling up screening of SARS-CoV-2 variants of interest and concern. *INFECTION GENETICS AND EVOLUTION*, v. 92, p. 104910, 2021.

2. Fernandes, Diego Leandro Reis Da Silva ; Gomes, Elaine Christine De Souza ; **Bezerra, Matheus Filgueira** ; E Guimarães, Ricardo José De Paula Souza ; De Almeida, Alzira Maria Paiva. Spatiotemporal analysis of bubonic plague in Pernambuco, northeast of Brazil: Case study in the municipality of Exu. *PLoS One*, v. 16, p. e0249464, 2021.

3. Bezerra, Matheus F.; Larrazábal, Bruna R. ; Lima, Aleide S. ; Mello, Mariana R. ; Pimentel, Raphael F. ; Weinhäuser, Isabel ; Costa, Fernando F. ; Fertrin, Kleber Y. ; Araújo, Aderson S. ; Machado, Cíntia G. ; Bezerra, Marcos A. ; Lucena-Araujo, Antonio R. Screening for myeloid mutations in patients with myelodysplastic syndromes and AML with myelodysplasia-related changes. *Hematology, Transfusion and Cell Therapy*. v. in pre, p. xx, 2021.

4. Fernandes, Diego Reis, **Bezerra, Matheus Filgueira** ; Duarte, Bruna; De França, Mayara; De Almeida, Hadassa ; Gomes, Elaine; De Almeida, Alzira Paiva. Spatial and Temporal Distribution of Rodents during the Epizootic and Enzootic Periods of Plague, with a Focus on Exu, Northeastern Brazil. *Tropical Medicine And Infectious Disease*, v. 6, p. 195, 2021.

5. Alves, Pedro A. ; De Oliveira, Ellen G. ; Franco-Luiz, Ana Paula M. ; Almeida, Letícia T. ; Gonçalves, Amanda B. ; Borges, Iara A. ; Rocha, Flávia De S. ; Rocha, Raissa P. ; **Bezerra, Matheus F.** ; Miranda, Pâmella ; Do Monte-Neto, Rubens L. ; et al. Optimization and Clinical Validation of Colorimetric Reverse Transcription Loop-Mediated Isothermal Amplification, a Fast, Highly Sensitive and Specific COVID-19 Molecular Diagnostic Tool That Is Robust to Detect SARS-CoV-2 Variants of Concern. *Frontiers in Microbiology*, v. 12, p. 1, 2021.

6. Bezerra, Matheus F; Lima, Aleide; Piqué-Borràs, Maria-Riera ; Silveira, Douglas Ra ; Coelho-Silva, Juan Luiz ; Pereira-Martins, Diego A ; Weinhäuser, Isabel ; Lucena-Araujo, Antonio R ; et al. Co-occurrence of DNMT3A, NPM1, FLT3 mutations identifies a subset of acute myeloid leukemia with adverse prognosis. *BLOOD*. v. 135, p. 870-875, 2020.

7. Tavares, Diego H.C. ; **Bezerra, Matheus F.** ; Magalhães, F.B. ; Cavalcanti, T.Y.V.L. ; Xavier, Camila C. ; Leal, N.C. ; Almeida, A.M.P. ; Reis, Christian R.S. A new recombinant F1 antigen as a cost and time-effective tool for plague diagnosis. *JOURNAL OF MICROBIOLOGICAL METHODS*. v. 1, p. 105903, 2020.

8. Leonards, Katharina ; Almosailekh, Marwa ; Tauchmann, Samantha ; Bagger, Frederik Otzen ; Thirant, Cécile ; Juge, Sabine ; Bock, Thomas ; Méreau, Hélène ; **Bezerra, Matheus F.** ; Tzankov, Alexandar ; Schwaller, Juerg, et al. Nuclear interacting SET domain protein 1 inactivation impairs GATA1-regulated erythroid differentiation and causes erythroleukemia. *Nature Communications*. v. 11, p. 2807, 2020.

9. Fernandes, Diego Reis Souza ; **Bezerra, Matheus Filgueira** ; Da Silva, Marise Sobreira Bezerra ; Leal, Nilma Cintra ; Reis, Christian Robson De Souza ; Almeida, Alzira Maria Paiva. Rodent Hosts and Flea Vectors in Brazilian Plague Foci: A Review. *Integrative Zoology*, v. 1, p. 1-10, 2020.

10. Paiva, Marcelo; Guedes, Duschinka; Docena, Cássia; **Bezerra, Matheus Filgueira;** Dezordi, Filipe Zimmer; Machado, Laís Krokovsky, Larissa; Helvecio Elisama; Rezende, Antonio; Severino Sales, et al. Multiple Introductions Followed by Ongoing Community Spread of SARS-CoV-2 at One of the Largest Metropolitan Areas of Northeast Brazil. *Viruses-Basel*. v. 12, p. 1414, 2020.

11. Filgueira, Norma Arteiro ; Saraiva, Camilla Alencar ; Jucá, Norma Thomé ; **Bezerra, Matheus Filgueira** ; Lacerda, Claudio Moura. Schistosomal liver fibrosis and hepatocellular carcinoma - case series of patients submitted to liver transplantation. Brazilian Journal of Infectious Diseases. v. 22, p. 352-354, 2018.

12. **Bezerra, Matheus F.**; Coelho-Silva, Juan L ; Nascimento, Jessica C. ; Benicio, Mariana T. ; Rocha, Cintia R. ; Machado, Cintia G. ; Rego, Eduardo M. ; Bezerra, Marcos A. ; Lucena-Araujo, Antonio R. ; Beltrão, Eduardo I. Association between the TP53 Arg72Pro polymorphism and clinical outcomes in acute myeloid leukemia. HAEMATOLOGICA v. 102, p. e43-e46, 2017.

13. Coelho-Silva, Juan L ; Carvalho, Luany E ; Oliveira, Mayara M ; Franca-Neto, Pedro L ; Andrade, Adryanna T ; Lima, Aleide S ; **Bezerra, Matheus F** ; Lima, Marinus M ; Neves, Maria A ; Fonseca, Julia M, Lucena-Araujo, Antonio R, et al. Prognostic importance of CD56 expression in intermediate risk acute myeloid leukaemia. British Journal of Haematology (Print) v. 1, p. n/a-n/a, 2016.

14. Lima, A. S. ; De Mello, M. R. ; Fernandes, E. ; **Bezerra, M. F.** ; Oliveira, M. M. ; Duarte, B. K. ; De Assis, R. A.; Souto, F. R. ; Bezerra, M. A; et al. Clinical outcomes of patients with acute myeloid leukemia: evaluation of genetic and molecular findings in a real-life setting. Blood (Philadelphia, PA) v. 126, p. 1863-1865, 2015.

15. Nascimento, Jessica; Ferreira, Steffany; Vasconcelos, Juliana; Silva-Filho, João; Barbosa, Bruno; **Bezerra, Matheus Filgueira** ; Rocha, Cíntia Costa ; Beltrão, Eduardo Carneiro. Fut3 role in breast invasive ductal carcinoma: Investigating its gene promoter and protein expression. Experimental and Molecular Pathology (Print), v. 99, p. 409-415, 2015.

16. Lima, L. R. A; **Bezerra, M. F.**; Almeida, S. M. V. ; Silva, L. P. B. G. ; Beltrao, E. I. C. ; Carvalho Junior, L. B. Glycophenotype Evaluation in Cutaneous Tumors Using Lectins Labeled with Acridinium Ester. Disease Markers. (Print) v. 35, p. 149-154, 2013.

Manuscript Accepted for publication:

17. Filipe Zimmer Dezordi, Paola Resende, Felipe Naveca, Valdinete Nascimento, Victor Souza , Anna Carolina Paixão, Luciana Appolinario, Renata Lopes, Alice Sampaio da Rocha, Taina Martins Venas, Elisa Pereira, Marcelo Paiva, Cássia Docena, **Matheus Filgueira Bezerra**, Laís Machado, Gabriel Luz Wallau et al, on behalf of Fiocruz COVID-19 Genomic Surveillance Network. Unusual SARS-CoV-2 intra-host diversity reveals lineages superinfection. Microbial Genomics , 2022.