europass

Michele Bissoli

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WORK EXPERIENCE

01/10/2022 – CURRENT Verona, Italy

PHD. STUDENT IN APPLIED LIFE AND HEALTH SCIENCES

My master degree thesis was based on the virus-host interaction, in particular the interaction between HIV-1 and a human thio-esterase called ACOT8. In particular, the work was conducted using a pseudotyped virus system to monitor the impact of ACOT8 on HIV-1 infectivity. My PhD project is based on the study of CD8 and NK crosstalk, during chronic HBV infection via flow cytometry analysis. During my lab experience, I had the occasion to broader my area of expertise to the anti-viral immune response, as well as the application of CRISPR/Cas9 technology. In particular, anti-SARS-CoV-2 cellular (peripheral blood mononuclear cells (PBMC)) and humoral (virus-neutralization assay) immune response following vaccination, as well as the generation of stable knock-out cell line.

Business or Sector Professional, scientific and technical activities |

Department Neurociences, Biomedicine and Movement Sciences - University of Verona |

Website https://www.dnbm.univr.it/?lang=en

EDUCATION AND TRAINING

01/10/2022 – CURRENT Verona, Italy

DR University of Verona

Website https://www.dnbm.univr.it/?lang=en

LANGUAGE SKILLS

Mother tongue(s): **ITALIAN**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B1	B2	B1	B2	B2

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

Microsoft Word | Zoom | Skype | Outlook | Microsoft Office | HTML, JavaScript, MySQL, NGINX | Microsoft Excel | GraphPad Prisim | DIVASoftware and FlowJo | Imagej | Adobe Photoshop (basic elements) | LaTeX (very good) | R, R Studio, R Markdown

ADDITIONAL INFORMATION

PUBLICATIONS

HIV and SARS-CoV-2 Co-Infection: From Population Study Evidence to In Vitro Studies – 2022

Human immunodeficiency virus type 1 (HIV-1) and severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) have caused two major viral outbreaks during the last century. Two major aspects of HIV-1 and SARS-CoV-2 co-infection have been extensively investigated and deserve attention. First, the impact of the co-infection on the progression of disease caused by HIV-1 or SARS-CoV-2. Second, the impact of the HIV-1 anti-retroviral treatment on SARS-CoV-2 infection. In

this review, we aim to summarize and discuss the works produced since the beginning of the SARS-CoV-2 pandemic ranging from clinical studies to in vitro experiments in the context of co-infection and drug development.

Stefani, C., Fantoni, T., Bissoli, M., Thomas, J., & Ruggiero, A. Life (Basel, Switzerland) 2022

Link https://doi.org/10.3390/life12122089

Pseudotyped Viruses As a Molecular Tool to Monitor Humoral Immune Responses Against SARS-CoV-2 Via Neutralization Assay

– 2023

Pseudotyped viruses (PVs) are molecular tools that can be used to study host-virus interactions and to test the neutralizing ability of serum samples, in addition to their better-known use in gene therapy for the delivery of a gene of interest. PVs are replication defective because the viral genome is divided into different plasmids that are not incorporated into the PVs. This safe and versatile system allows the use of PVs in biosafety level 2 laboratories. Here, we present a general methodology to produce lentiviral PVs based on three plasmids as mentioned here: (1) the backbone plasmid carrying the reporter gene needed to monitor the infection; (2) the packaging plasmid carrying the genes for all the structural proteins needed to generate the PVs; (3) the envelope surface glycoprotein expression plasmid that determines virus tropism and mediates viral entry into the host cell. In this work, SARS-CoV-2 Spike is the envelope glycoprotein used for the production of non-replicative SARS-CoV-2 pseudotyped lentiviruses.

Fantoni T., Bissoli M., Zipeto D., Ruggiero A. (JoVE) 2023

Link https://www.jove.com/it/t/65658/pseudotyped-viruses-as-molecular-tool-to-monitor-humoral-immune