

Global Congress on Integrated Healthcare

A joint Conference in Collaboration with United Research Forum, UK and Mutah University, Jordan

Under The Patronage of his Excellency Dr Yousef Goussous

May 15 - 16, 2022 | Hotel Crowne Plaza Dead Sea, Jordan



Six month cellular and humoral immune responses after second shot mRNA vaccination or SarS Cov- 2 infection: a pilot study in Attica, Greece

Lina Marki^{*1}, Chatzantonaki Kalliopi¹, Zorbas O¹, Asonitis K³, Charvalos Ekatherina^{1,2}, Anastasia Barbouni⁴**

¹IN VITRO LABS, Greece

²IASO Medical Research and Innovation dpt, Greece

³CHUV Lausanne, Switzerland

⁴UNIWA, University of West Attica

Abstract

The purpose of this study was to evaluate cellular and humoral immunity after six month second shot mRNA vaccination or SARS-CoV-2 infection using the SARS COV 2 Interferon gamma release assay (Euroimmun) and IgG(ab) quantitative to spike protein using the Architect platform (Abbott). A total of 52 subjects and 11 individuals respectively after vaccination (BNT162b2- Cominraty or Moderna-Spikevax), or mild illness and 12 healthy non vaccinated control group were included in the study. IgG spike levels were higher in high interferon gamma positive test concentrations individuals. Subjects after COVID 19 infection also have shown high levels of IgG when IGRA test was highly positive and with longer history of illness. mRNA vaccines demonstrate moderate to high levels of immunological responses in most of the individuals that correlate with IgG antibody levels. Although it is believed that IGRA-based tests should be performed within a few weeks following vaccination. We demonstrated levels of T -cell response exhibiting ≥ 2000 mIU/ml correlated to ab levels ≥ 1000 AU/ml at 6 months after vaccination. Moreover, 7 out of 11 convalescent individuals showed high T -cell responses correlating with high levels of antibodies. No significant difference was shown in levels of interferon IGRA test between men and women. The developed tools to test immuno-triggering of mRNA vaccines and infection are of high importance in public health and they represent a useful tool in monitoring of immunity in non- communicable chronic diseased patients.

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Panel I Correlation of IGRA to Sars COV2 IgG in six month interval after 2nd shot mRNA vaccine		
IGRA TEST, [mIU/mL] (Euroimmun)	IgG (Abbot platform)	Number of subjects
IGRA 0-500	a. 500 – more than 10000	11
	b. 0-500	1
	Total	12
IGRA 501-2000	a. <1000	13
	b. 1000-10000	1
	c. < 10000	11
	d. <400	5
Total	30	
IGRA > 2000	a. <1000	3
	b. 1000 - 10000	8
	c. <600	4
Total	15	
Total number of individuals participating		52
Panel II Range of Ab abd IGRA test six month after mild illness		
11 patients	56,1-2462,4 mIU/ML (Ab)	431.0-3481,6 AU/ml (IGRA)

Biography

Prof. Ekatherina Charvalos is a medical doctor, specialist in laboratory medicine, clinical and molecular microbiology. She is the Head of Medical Research and Innovation department at IASO, one of the biggest private women's hospitals in Europe (www.iaso.gr). She is medical advisor and head of molecular biology Dpt of InvitroLabs in Athens. She is the author of about 50 scientific articles in peer-reviewed journals, more than 200 congress presentations and six manuscript. Dr Charvalos clinical experience encompasses senior hospital and academic positions in US, Europe and the Gulf area. She is interested in European Research, Gender health and International Cooperation policies.