







































Keynote addresses (KNA) of 35 min each followed by 5 min discussion





Day	Time	Activity	Topic	Name, Country
6	15:30	OC	Welcome	F Osier, KN  O Pérez, ALACI 
	17:30	KNA1	SARS-CoV-2, epidemiology and control guidelines	G Guzman, CU 
	18:15	KNA2	Inflammation, senescence and chronic diseases: implications for post reproductive health	A Lage, CU 
	19:00	KNA3	Innate immunity and inflammation: from cancer to COVID-19	A Mantovani, IT 
10	9:00	KNA4	Design and evaluation of SOBERANAs vaccines: RBD-multiepitopic presentation as alternative for improving immune response	D García, CU 
	9:35	KNA5	Clinical development of Abdala, the first Latin American Covid-19 vaccine	V Muzio, CU 
	10:05	KNA6	Hepatitis B nucleosid particle as immunopotentiator of innate and adaptive immunity for nasal vaccines CIGB 20220 and Mabisa against COVID-19	G Guillen, CU 

Lectures Sessions of 20 min each presentation followed by a general discussion

Day	Time	Topics	Name, Country
7	1. ImmunoDynamic, International I. Chairs:		
	9:00	Getting T-cells to the right place at the right time	A Ager, UK 
	9:20	Ultrasensitive imaging of immunoreceptors for personalized immunotherapy	H Stockinger, AT 
	9:40	TTC7A/PI4Kiii/actin: a story of confinement, stress and death	F Sepúlveda, CL/FR 
	10:00	Innate lymphoid cells and cytokines: from mouse to zebrafish and from immunity to development	P Hernández, CL/FR
	10:20	RAMP3 unexplored relevance for innate-T cell immunity	G Ascoli, US
	10:40	General discussion	
	2. Tissue Immunology, International II. Chairs		
	9:00	Lymphocytes in the frontline: CD4+ tissue resident T cells in health and disease	RAW van Lier, NL 
	9:20	Immunity vs. Tolerance: the two faces of the same coin	M Roseblatt, CL 
	9:40	A nose for better vaccines	V Schijns, NL 
	10:00	Tumor microbiome diversity and composition determine cancer outcomes	E Riquelme, CL 
	10:20	Impact of the microbiota and its metabolites on solid organ transplant outcome	ML Alegre ES/US
	10:40	General discussion	
	3. ImmunoRegulation, International III. Chairs:		
	9:00	Update on healthy versus pathological immune aging: can we measure it? can we fix it?	H Slaets, BE 
	9:20	Metabolic checkpoints controlling T cell differentiation and function	T Sparwasser, DE 
	9:40	Mechanisms of Treg accumulation in tumors: a single cell RNAseq approach	E Piaggio, AR 
	10:00	Trained Immunity in Organ Transplantation and Cancer	J Ochando, ES 

8	10:20	Differentiation of memory CD8 T cells unravel gene expression pattern common to effector and memory precursors	J Viola, BR	
	10:40	General discussion		
	4. Viral Immunology, International I. Chairs:			
	9:00	Viral immune escape mechanisms	A Angulo, ES	
	9:20	A novel peptide-bases drug candidate to inhibit viral infections	C Fernandez, CU	
	9:40	Viral triggers for autoimmune diseases: can vaccines provide solutions?	N Hellings, BE	
	10:00	Infant immunity in the context of HIV	C Gray, ZA	
	10:20	OMICs analysis in dengue: Impact of immune response and metabolic genes in clinical outcome	B Sierra, CU	
	10:40	General discussion		
	5. Tumor Immunology International II. Chairs:			
	9:00	Manipulating inflammation to raise cancer immunogenicity and immunotherapy response	S Zelenay, UK	
	9:20	Dendritic cell subsets in the context of cancer	P Michea, CL/FR	
	Y9:40	Dual role of $\gamma\delta$ T cells during intestinal cancer	B Reis, BR	
	10:00	Role of adenosine produced by CD73 in the establishment of exhausted and precursor of exhausted CD8 ⁺ T cells in the tumor niche	D Sauma, CL	
	10:20	Associations among cytokines, epidermal growth factor and lymphocyte subpopulations in patients diagnosed with advanced lung cancer	GM Suárez, CU	
	10:30	Clinical and immunological relevance of MICA allelic variants in Gastric Cancer	C Toledo, CL	
	10:40	General discussion		
	6. Bacterial & Parasite Immunology, International III. Chairs:			
	9:00	Parasites Immunology and Disease. CRUZIVAX project. Preclinical and clinical validation of a vaccine against Chagas disease	E Malchiodi, AR	

	9:20	From helminth therapy to new immunomodulators of inflammation	M Caprón, FR 
	9:40	STING regulates metabolic reprogramming in macrophages via HIF-1a pathway leading to inflammasome activation during bacterial infection	S Costa Oliveira, BR 
	10:00	Fc-dependent IgG parasite clearance as a guide for a vaccine development against <i>P. falciparum</i> malaria	F Osier, KN 
	10:20	Immune effects of a translocated endoplasmic reticulum-resident <i>Trypanosoma cruzi</i> chaperone	A Ferreira, CL 
	10:40	General discussion	
9	7. ImmunoAllergy, International I Chairs: A Labrada, CU &		
	9:00	Novel insights on the production of IgE in the gut in allergy patients	G Docena, AR 
	9:20	Current challenges in allergy immunotherapy	A Labrada, CU 
	9:40	Identifying, characterizing and naming allergenic proteins followed by food allergy risk assessment	R Goodman, US 
	10:00	Genetic-environmental contribution to the appearance of asthma in Pinar del Río	O Orraca, CU 
	10:10	A <i>Blomia tropicalis</i> adjuvanted vaccine attains a preventative and therapeutic effect in a murine model of allergen-induced asthma	W Ramirez, CU 
	10:20	Effect of the symbiotic (Bagovital Immune) in the control and quality of life of children with allergic rhinitis in a private allergy center in Lima - Peru	C Galván, PE
	10:30	Clinical characteristics of cow milk protein allergy in infants less than 2 years old in an allergy, asthma and immunology center in Lima Peru	C Díaz, PE
	10:45	General discussion	
	8. Vaccines & Adjuvants, International II. Chairs:		
	9:00	Prediction of immune response to vaccine against the influenza A virus or <i>Mycoplasma hyopneumoniae</i> in pigs based on data from fecal microbiota and blood collected before vaccination	C Rogel-Gaillard, FR 

	9:20	Development of new oral adjuvants for vaccines	J Cassataro, AR 
	9:40	Long non-coding RNAs controls immunological pathways during vaccination	H Nakaya, BR 
	10:00	Clinical and Immunological aspects of cellular vaccines against malignant Melanoma	F Salazar, CL 
	10:20	New routes of strengthening the immune system by probiotic spores of <i>Bacillus subtilis</i>	RR Grau, AR 
	10:40	Vaccines for emerging viral infections: lessons learned from Ebola vaccine	A Harandi, IR/SE 
	11:00	General discussion	
9. Immunosenescence, International III. Chairs: D Saavedra, CU &			
	9:00	Recent development in the treatment of autoinflammatory syndromes	J van Der Hilst, BE 
	9:20	Type I IFNs in con-infectious contexts: from cancer to trisomy 21	M Maccioni, AR 
	9:40	Immunosenescence, sex differences and immune restoration: insights from Cuban studies	D Saavedra, CU 
	10:00	BIOMODULINA T® modulates lymphocyte compartments in institutionalized Cuban geriatric patients	Casado I, CU
	10:10	Biomarkers of COVID-19 severity in the elderly population	LJ Araujo, BR
	10:20	Can senescent CD4+ T lymphocytes be responsible for alveolar bone loss during periodontitis?	L González, CL
	10:30	General discussion	

Symposia of 15 min each followed by a general discussion

Day	Time	Symposia, Place Topics	Name, Country
7	1.	Innate Response, International I. Chairs:	

11:00	Regulation of dendritic cell function by the unfolded protein response	F Osorio, CL
11:15	Targeting TMEM176B to control inflammasome activation in cancer and coronavirus disease	M Hill, UY
11:30	Evolution of B lymphocyte development	M Ratcliffe, CA
11:45	Myeloid-derived suppressor cells reduces Th1/Th17 immunity and promotes a more severe pulmonary Paracoccidioidomycosis	F Viera, BR
11:55	Intake of sugar-sweetened beverage alters metabolism and immune response in mice	SC Barbosa, BR
12:05	Th17 immune response and costimulatory molecules modulation against hypervirulent BI/NAP1/027 <i>C. difficile</i> strain infection	R Hernandez, BR
12:15	Cortactin regulates the activation and effector functions of T cells	R Castellanos, MX
12:25	Extracellular ATP promotes antigen extraction and presentation in B lymphocytes by signaling through the P2X4 receptor recruited towards the immune synapse	M Alamo, CL
12:35	Role of CD73 in the function and maturation of Natural Killer Cells	B Parra, CL
12:45	General Discussion	
2. Mucosal Immunology, International II. Chairs: F Chirido, AR & M Schnoor, LAMIG Symposium		
11:00	Lymphocytes modulate cell-cell interactions during mucosal healing	E Villablanca, CL/SW
11:15	The Arp2/3 inhibitor arpin regulates intestinal epithelial barrier integrity and Myosin1e deficiency causes abnormal neutrophil rolling behavior and reduces neutrophil recruitment	M Schnoor, DE/MX
11:30	Mucosal adjuvants advantages of its use against proteins and polysaccharides and implication in cross-reactivity and polyreactivity in <i>Neisseria</i> genus	LM Reyes, CU
11:45	Nasalferon, the new nasal formulation of IFN α 2b, modulates elements associated with direct antiviral and immune activation responses	D Vázquez, CU
12:00	Commensals, pathogens and immunity from the perspective of oropharyngeal mucosae	E Arana, AR
12:10	Enzymatically active CD73-bearing RATreg-derived extracellular vesicles modulate immune response and prevent alveolar bone loss during periodontitis	CI Rojas, CL
12:20	Colonoscopic findings and histological changes in patients with Spondyloarthritis without inflammatory bowel disease are associated with high levels of fecal Calprotectin	JA Quiroga, CO
12:30	Cholecystokinin (CCK) increases Th2 lymphocytes and intestinal IgA of mice	J Mora, MX
12:40	General Discussion	
3. COVID Immunology, International III. Chairs: & L Reyes, CU		

11:00	Platelets and COVID-19: Contributions to hypercoagulability, inflammation and disease severity	PT Bozza, BR
11:15	Immunometabolism and COVID-19	P Moraes, BR
11:30	Inflammation indexes as predictors of lung damage in recovered COVID-19 patients	L Reyes, CU
11:45	Isolation of SARS-CoV-2 variants from Cuban COVID-19 patients	A Fraga, CU
11:55	The hematological landscape in the progression of COVID-19 disease in Mexican patients	RE Romo, MX
12:05	Anti-SARS-CoV-2 IgG antibodies in sera obtained before and during the COVID-19 pandemic from Mexican asymptomatic subjects	M Aguirre, MX
12:15	Antibody response to COVID 19 vaccines and its relationship with vitamin D levels	P Rodriguez, BO
12:25	Characterization of B cells subsets and neutralizing responses in COVID-19 patients up to 1 month	YA Mendez, CO
12:35	Immunoinformatic assessment of phylogenetic and immune response features of SARS-CoV-2 origin, infection, and vaccination	O Serrano, CU
12:45	General Discussion	
4. ImmunoReproduction, Guama. Chairs: L Santos, MX & L Rodríguez, CU		
11:00	The association of colostrum IgA with microbiota contributes to the gut colonization in the newborn child	L Santos, MX
11:15	Anti-tetanus toxoid IgA in raw and pasteurized human breast milk	L Rodríguez, CU
11:30	Obstetric and vascular antiphospholipid syndrome. Two sides of the same coin?	AP Cadavid, CO
11:45	Conditioning of maternal monocytes to myeloid regulatory cells by endometrial stromal cells: role of endoplasmic reticulum stress	G Soledad, AR
12:00	Generation and characterization of monoclonal antibodies for neonatal screening of inborn errors of metabolism	I García, CU
12:15	Urogenital tract inflammation and male fertility: from human disease to animal models and viceversa	R Motrich, AR
12:30	Role of NETosis in reproduction and infertility	C Hermosilla, CL
12:45	Chronic inflammation of the male genital tract impairs male fertility. Results from an animal model	MS Martinez, AR
12:55	Association of commensal bacteria and immunoglobulins with regulatory T lymphocytes in human colostrum	YM Bermejo, MX
	Conditioning of maternal monocytes to myeloid regulatory cells by endometrial stromal cells: role of endoplasmic reticulum stress	MS Gori, AR
13:05	General Discussion	
5. COVID Immunopathogenesis A, International III. Chairs:		
14:30	Proteomics and cytokine analysis of host factors associated with COVID-19 disease severity in Puerto Rico	L Melendez; PR

14:45	Cytokines and COVID-19 outcome. Some findings from Cuban epidemic	AB Perez, CU
15:00	Inflammasomes are activated in response to SARS-CoV-2 infection and are associated with COVID-19 severity in patients	D Zamboni, BR
15:15	Emergency hematopoiesis in the pathophysiology of COVID-19	R Pelayo, MX
15:30	Blocking EGFR with nimotuzumab: a novel strategy for COVID-19 treatment	T Crombet, CU
15:45	Longitudinal study of the immune response generated against SARS-CoV-2 infection in Cuban COVID-19 recovered patients.	I Orora, CU
16:00	Treatment of lung lesions with autologous stem cells in patients recovered from COVID-19	C Macias, CU
16:15	General Discussion	
6. Immunology & Art, International II. Chairs: K Pino-Lagos, CL & L Graca, PT		
14:30	The Research Lab as Art Studio	L Graca, PT
15:00	Self and non-self: a lifetime relationship in art and science	M de Menezes, PT
15:30	Biographic exploration of mental creatures: science, mural, and education	A Montoya, CL
16:00	General Discussion	
7. Immunotechnology, International III. Chairs>:		
14:30	Detection of immunological markers of SARS-CoV-2 in Cuban population using the SUMA Technology	A Delahanty, CU
14:40	Cystic fibrosis newborn screening in Cuba using the ultramicroanalytical system	EM Castells, CU
14:50	Standardization analytical characterization of the real-time RT-PCR assay for the detection of the SARS-COV-2 Envelope gene.	Y Gonzalez, CU
15:00	SUMA technology. Its impact on the Cuban national health system. 34 years of experience	A Sánchez, CU
15:10	Validation of subrogated ELISA for neutralization of receptor-binding domain (RBD) binding to the ACE2 receptor with human serum or plasma samples	D Ávila, CU
15:20	Elevated antibody titers in Abdala vaccinees evaluated by Elecsys® anti-SARS-CoV-2 S highly correlate with UMELISA SARS-CoV-2 ANTI RBD, ACE-2 binding inhibition and viral neutralization assays	G Lemus, CU
15:30	A cell-based ELISA as surrogate of virus neutralization assay for RBD SARS-CoV-2 specific antibodies	PI Franciscary, CU
15:40	Validation of serological test, ELISA in guinea pigs, to evaluate the immunogenic activity of anti-diphtheria and anti-tetanus vaccines	O Valle, CU
15:50	Design and standardization of a method of identity by Dot Blot for SOBERANA 02 vaccine	Y Rodriguez, CU

8	16:00	Organization of technology transfer of the Soberana 01 Vaccine candidate to BioCen	M Alvarez, CU
	16:10	Report on Inborn Errors of immunity in Latin America for LASID registry	G Seminari, AR
	16:20	General Discussion	
	8. Autoimmunity, Guama. Chairs:		
	14:30	Autoimmunity and $\gamma\delta$ T cells	L Graca, PT
	14:45	Non-canonical function of metabolic enzymes during T cell differentiation and autoimmune inflammation	JC Alves, BR
	15:00	Tolerance-induction with autologous tolerogenic dendritic cells treated with VITamin D3 and loaded with myelin peptides in Multiple Sclerosis (Tolervit-MS). From bench to bedside	E Martínez-Caceres, ES
	15:15	IL-17, IL-23, and IL-33 in systemic lupus erythematosus	A Vaillant, TT
	15:30	Biomarcadores en nefritis Lúpica	G Vásquez, CO
	15:45	Fatty acid desaturases: a novel therapeutic target in multiple sclerosis	J Bogie, BE
	16:00	T-cell epitopes in rheumatoid arthritis: potential targets for a tolerizing antigen-specific dendritic cell-based therapy	J Aguillo, CL
	16:15	Immunogenicity profile in African green monkeys of a vaccine candidate based on a mutated form of human Interleukin-15	Y Rodríguez, CU
	16:25	An exploratory study of Itolizumab on the preservation of beta cell function in adults with recent-onset type 1 Diabetes	I Cubas, CU
	16:35	General Discussion	
	9. Viral Immunology, International I Chairs:		
	11:00	New Cuban contributions to the Global Polio Eradication Progra	S Resik, CU
	11:15	Response of B cells and anti-Flavivirus NS1 antibodies in a pediatric population with wide-ranging clinical severity	CF Narváez, CO
	11:30	IFN γ , TGF- β 1 and RANTES expression in upper airway samples from SARS-CoV-2 infected patients	MC Montalvo, CU
	11:45	Immunity to respiratory syncytial virus	APD Souza, BR
	12:00	Short-chain fatty acid acetate reduces viral load increasing antiviral response in cells from infants with Respiratory Syncytial Virus bronchiolitis	A Duarte, BR
	12:15	Preclinical immune/safety evidences of CIGB/210, A novel anti/HIV drug candidate	AC Ramírez, CU
	12:25	HPV infection and KIR gene polymorphism in Cuban women with normal cytology	N González, CU
	12:35	Effectiveness-safety studies in Cuban HIV/AIDS patients treated with different combinations of national generic antiretrovirals	L Gil, CU
	12:45	Determination of NK cells subpopulations and the natural cytotoxic receptor NKp30 in coinfectd patients with HIV/HCV	C Giniguez, MX

12:55	General Discussion	
10. Tumor Immunotherapy, International II. Chairs:		
11:00	Immune system activation by natural products and complex fractions: a network pharmacology approach in cancer treatment	S Fiorentino, CO
11:15	Restoring TIL function and enhancing tumor/neo-antigen recognition while countering T cell exhaustion	E Davila, CO
11:30	Clinical development of HEBERSaVax, a VEGF-based active immunotherapy for cancer	Y Morera, CU
11:45	Novel treatment strategies for human lymphoid neoplasms using superantigen-induced apoptosis	M Vergara, AR
12:00	Personalized bone marrow avatars for chemotherapy sensibility high throughput screening in pediatric acute lymphoblastic leukemia	J Amador, MX
12:15	Correlation of the lymphocytary immunophenotype in blood, ascites and tumoral tissue in patients with ovarian cancer	CA Villegas, CU
12:30	Where VEGF should be measured? An experience obtained from phase I clinical trials cancer patients treated with a VEGF vaccine	J Sánchez, CU
12:45	General Discussion	
11. Bacterial & Parasite Immunology, International III. Chairs:		
11:00	Double/negative T/cells as potential targets for immunotherapy in human Chagas cardiomyopathy	WO Dutra, BR
11:15	Levels of protection against <i>Haemophilus influenzae</i> type b in Cuban children, adolescents and adults	C Rodríguez, CU
11:30	Human neutrophils secrete the proinflammatory cytokine Interleukin-1 β upon challenge with Shiga toxin-producing <i>Escherichia coli</i>	A Trevani, AR
11:45	Dectin-1 deficiency limits the expansion of myeloid-derived suppressor cells resulting in defective suppression of T cells in a pulmonary model of <i>Paracoccidioides brasiliensis</i> infection	VL Kaminski, BR
11:55	Regulation of the immune microenvironment by the CD43 sialomucin during <i>Mycobacterium tuberculosis</i> infection	E Aleman, MX
12:05	Oral vaccine directed to microfold (M) cells against <i>Trypanosoma cruzi</i>	AA Ramos, MX
12:15	Immune response to sand fly salivary protein, LinB-13, is associated with severity of tegumentary leishmaniasis	AM Carvalho, BR
12:25	Association of <i>Mycobacterium tuberculosis</i> genetic variants, with disease severity and the treatment response, in a cohort of pulmonary tuberculosis patients (PTB) from Medellin-Colombia	JC Ocampo, CO
12:35	Signaling through PPAR-gamma receptor decreases inflammatory response in patients with cutaneous leishmaniasis	LP Carvalho, BR
12:45	General Discussion	

12. COVID Immunopathogenesis B, Granma. Chairs:		
11:00	Biomarkers of sequela in adult patients convalescing from COVID	V Marza, CU
11:15	Clinic, Immunologic, Hematologic and Imagenologic evaluation in Cuban COVID-19 convalescent patients	Y Jerez, CU
11:30	Neutralizing antibody response to five variants of SARS CoV 2 in a group of individuals vaccinated with Cuban vaccines and convalescents.	M Alvarez, CU
11:45	Changes in immune response according to clinical severity in COVID-19 convalescent individuals and uninfected exposed relatives	B Torres, CU
12:00	Severity and mortality risk factors and specific antibody response among cases from the first COVID-19 outbreak in Cuba	B Marcheco, CU
12:15	Jusvinza, a peptide derived from human heat-shock protein 60, for treatment of hyperinflammation in COVID-19 patients	MC Dominguez, CU
12:30	Transcriptome analysis shows uncontrolled inflammation and mechanisms of airway remodelling in severe asthma	S Archila, GT
12:45	General Discussion	
13. COVID Immunoprophylaxis A, Int I. Chairs:		
14:30	Use of a humanized anti-CD6 monoclonal antibody (itolizumab) in elderly patients with moderate COVID-19	M Ramos, CU
14:45	Development of an anti-COVID-19 Vaccine	K Kalil, BR
15:00	Human immune responses to SARS-2 infection and vaccination	MC Nussenzweig, BR/US
15:15	A phase II clinical trial of the FINLAY-FR-1A vaccine confirmed its safety and immunogenicity in COVID-19 convalescents	R Ochoa, CU
15:30	Pilot study of immunogenicity and preclinical safety of vaccine candidates for SARS-CoV-2	R Oliva, CU
15:45	Lithium salts as treatment for COVID-19: pre-clinical outcomes	O Soriano, CU
16:00	A novel bacterial protease inhibitor adjuvant in RBD-based COVID-19 vaccine formulations containing Alum increases neutralizing antibodies, specific germinal center B cells and confers protection against SARS-CoV-2 infection	LM Coria, AR
16:15	General Discussion	
14. Immunoregulation & Transplantation Tolerance, Guama Chairs: K Pino, CL &		
14:30	The role of Neuropilin-1 in T regulatory cells-mediated transplantation tolerance	K Pino, CL
14:45	Generation and expression of functionally stable allospecific Treg cells for immunotherapy in kidney trasplantation	G Soldevila, MX

15:00	Engeneering human regulatory T cells to protect human pancreatic islets from immune attack in type 1 diabetes	LMR Ferreira,
15:15	Engeneering Tres to induce immunological tolerance	D Boardman, CA
15:30	Histocompatibility and transplantation: chimeras and realities in Honduras	V Guzmeli, HO
15:45	Characterization of anti-HLA antibodies in Cuban kidney transplant recipients	L Marcell, CU
16:00	IgG subclasses characterization in HIV exposed uninfected infants	RT Camacho, CU
16:10	Differential gene expression associated to acute allograft rejection in kidney transplanted patients	CA Carmona, CO
16:20	General Discussion	
15. Primary & Secondary Immunodeficiencies, International I. Chairs:		
14:30	Spinocerebellar Ataxia Type 2. Biomarkers and preclinical stage	LC Velazquez, CU
14:45	A global view of dysregulatory deficiencies	L Bezrodnik, AR
15:00	Chronic granulomatous disease (CGD) therapy and management of infections in review	A Williams-Persad, TT
15:15	Mice lacking DNA repair factor XLF and MRI show leaky severe combined immunodeficiency (SCID)	SMC Zegarra, NO
15:30	Multimedia to facilitate the teaching-learning process of immunological syndromes	V Conception, CU
15:40	Effect of non-invasive brain stimulation on behavior and serum brain-derived neurotrophic factor and insulin-like growth factor-1 levels in autistic patients.	MA Robinson, CU
15:50	Cytokine profile of immunocompetent and chemically immunosuppressed BALB/c mice infected with seven pathogenic species of the <i>Sporothrix</i> genus	D Corrêa, BR
16:00	Frequency of HLA-B27 subtypes in a Colombian population and patients with Spondyloarthritis typed in high-resolution technique	MC Romero, CO
16:15	General Discussion	
16. Tumor Immunotherapy B, Guama. Chairs:		
14:30	Immunogenicity and some safety features of an immune checkpoint molecule-based cancer therapeutic vaccine in mice	C Canaán, CU
14:45	Impact of HER1 and HER2 downregulation induced by polyclonal antibodies on tumor cells hallmarks	G Bergrado, CU
15:00	Induction of apoptosis by polyclonal antibodies generated through immunization with vaccine candidates specific for HER3	E Bermúdez, CU
15:15	Macrophage functional programming by immunomodulatory very small size particles	R Alvarez, CU

15:30	Moving towards better anti-CD20 therapies through the use of optimized IL-2 based immunocytokines	T Hernandez, CU
15:45	Alterations of lymphocyte subpopulations involved in the defence against new viral infections in cancer patients	MC Arango, CU
16:00	Survival in patients with advanced non-small cell lung cancer, on maintenance with CIMAvax-EGF or Nimotuzumab	D Carballo, CU
16:15	General Discussion	
17. COVID Immunoprophylaxis B, International I. Chairs:		
11:00	Evaluation of IgG antibody titer in individuals immunized with 5 different Covid-19 vaccines	A Palenzuela, CU
11:15	Assessment of immunological response in nasal lining, saliva and serum samples in COVID's convalescent individuals immunized with a single dose of Mambisa oral candidate vaccine and Abdala vaccine	Y Chacon, CU
11:30	Report on the use of the Abdala vaccine as a booster of natural infection and the primary vaccination schedule with different vaccines against SARS-CoV-2	C Crespo, CU
11:45	One dose of Mambisa vaccine candidate is able to boost the immune response to SarsCoV-2	E Suzarte, CU
12:00	A novel bacterial protease inhibitor adjuvant in RBD-based COVID-19 vaccine formulations containing Alum increases neutralizing antibodies, specific germinal center B cells and confers protection against SARS-CoV-2 infection	L Coria, AR
12:15	BIOMODULINA T® from a preventive scenario to fight COVID-19 in Cuba	MC Reyes, CU
12:30	A single dose of SARS-CoV-2 FINLAY-FR-1A vaccine enhances neutralization response in COVID-19 convalescents, with a very good safety profile: An open-label phase 1 clinical trial	A Chang, CU
12:45	General Discussion	
18. Vaccines & Adjuvant, International II. Chairs:		
11:00	Development a vaccine candidate against zika infection based on the recombinant protein ZEC	I Valdes, CU
11:15	Humoral response of the Abdala vaccine against SARS-CoV-2 in rats and cynomolgus monkeys	I Rodriguez, CU
11:30	Enhanced immunogenicity and reduced viremia in DENV2-challenged mice conferred by a vaccine formulation based on DIII-C and NS3 proteins	R Ramirez, CU
11:45	FINLAY-FR-02 conjugated vaccine candidate provides immunity and protection against SARS-CoV-2 challenge in Golden Syrian Hamster	N Gonzalez, CU
12:00	Sera from convalescent animals immunized with vaccine candidates from the Finlay Vaccine Institute inhibit the colonization of SARS-CoV-2 in Golden Syrian Hamsters	B Madeline, CU

12:15	Recombinant SARS-CoV-2 receptor-binding domain expressed in an engineered fungal strain of <i>Thermothelomyces heterothallica</i> induces a functional immune response in mice.	L Lazo, CU
12:30	Immunological evaluation in mice of new vaccine candidates against DENV-3 based on dom	Y Perez, CU
12:40	A disordered region holds the full protease inhibitor and vaccine adjuvant activities of U-Omp19	K Pasquevich, AR
12:50	Evaluation of the immunogenic profile of a <i>Tobacco Mosaic Virus</i> -associated vaccine expressing immunogenic epitopes of <i>Canine Parvovirus</i> in <i>Nicotiana benthamiana</i>	A Veliz, CL
13:00	Combined subcutaneous-intranasal immunization with an epitope-based antigen elicits serum and mucosal binding and neutralizing antibodies against porcine reproductive and respiratory syndrome virus-2	M Fragoso, CO
13:10	General discussion	
19. Inflammation, International III. Chairs:		
11:00	Role of inflammasome in the small intestinal damage	F Chirido, AR
11:15	Annexin A1: pro-resolving actions in health and disease	M Sugimoto, AR
11:30	Atheroprotective effect of chP3R99 mAb in female low-density lipoprotein receptor knockout mice	R Sarduy, CU
11:45	The heteromeric complex formed by dopamine receptor D5 and CCR9 leads the gut-homing of CD4+ T-cells upon inflammation	R Pacheco, CL
12:00	Depression and memory loss in infections: far beyond neuroinflammation in experimental Chagas disease	J Annes, BR
12:15	Can senescent CD4+ T lymphocytes be responsible for alveolar bone loss during periodontitis?	L González, CL
12:25	Clinical course and response to treatment of Cuban patients with primary biliary cholangitis	D La Rosa
12:35	Cortactin translocation and degradation in endothelial cells during inflammation: potential implications for neutrophil trans-endothelial migration	IM Guerrero, MX
12:45	General Discussion	

Short Oral Presentation (SOP)		
Day: 7		
Place: International I		
Time	Title	Name
Chairs:		
COVID Immunology		
16:30	Clinical-epidemiological aspects of COVID-19 in patients from Pinar del Río	D Barreras, CU
16:35	C reactive protein as biomarker for severe disease in patients with COVID-19	Y Reyes, CU
16:40	Severe COVID-19 Pneumonia. Post-acute phase follow-up. Case Series	L Rodríguez, CU
16:45	Antigens of the ABO system and clinical manifestations of COVID-19 in a health area of the Bayamo municipality	EF Cruz, CU
16:50	Evaluation of the anti-inflammatory, antiviral effect and safety of hyperimmune gamma globulin anti SARS-CoV-2 in seriously ill patients with COVID-19	B Amat, CU
16:55	General Discussion	
17:00	History of infections and chronic diseases in COVID-19 patients in Pinar del Río, Cuba	L Valdés, CU
17:05	Association of TNF- α and MIP-1 α in early nasopharyngeal samples with COVID-19 Clinical Outcome	C Bracho, CU
17:10	Anti-SARS-CoV-2 Omicron Antibodies Isolated from a SARS-CoV-2 Delta Semi-Immune Phage Display Library	I Mendoza, CO
17:15	Intervention study with SOBERANA® in the workers of the Centro Nacional de Biopreparados	S Rodríguez, CU
17:20	Immunogenicity of the vaccine formulations RBDd/OMV/Al(OH) ₃ and RBDd/ Al(OH) ₃ against SARS-CoV-2	W Rocmira, CU
17:25	General Discussion	
Tumor Immunotherapy		
17:30	Therapy mediated by fragments of mesenchymal stromal cells in silicosis murine model	L Lins, BR
17:35	Case report Hypogammaglobulinemia after administration of Rituximab	MP Allasi, PE
17:40	Use of immunomodulatory drugs in patients with ophthalmological diseases, referred to Immunology specialists	BC Addine, CU
17:45	Inhibition of B cell function by tumor-specific Neu5GcGM3 ganglioside	N Rodríguez, CU
17:50	Immunogenicity of the idiotypic antibody chP3R99 specific for anti-sulfated glycosaminoglycan	A Hernández, CU
17:55	Antiatherogenicity of anti-chondroitin sulfate antibodies induced by the immunization with an anti-glycosaminoglycans idiotypic antibody	Y Soto, CU
18:00	General Discussion	
Place: International II		
Chairs:		
Vaccines and Adjuvants		
16:30	Single time vaccination strategy against <i>Dermatophagoides siboney</i> in murine	Y Pérez, CU
16:35	Combined subcutaneous-intranasal immunization with an epitope-based antigen elicits serum and mucosal binding and neutralizing antibodies against porcine reproductive and respiratory syndrome virus-2	M Frago, MX
16:40	Mucosal adjuvant effect of <i>B. subtilis</i> spores over Thymus independent antigen	Y Borrego, CU

16:45	SARS-CoV 2 RBD-Tetanus Toxoid Conjugate Vaccine Induces a Strong Neutralizing Immunity: preclinical results of a vaccine candidate SOBERANA 02	L Rodríguez, CU
16:50	Immunogenicity of the vaccine formulations RBDd/OMV/Al(OH) ₃ and RBDd/Al(OH) ₃ against SARS-CoV-2	C Labrada, CU
16:55	Characterization of <i>Plasmodium vivax</i> Ribosomal proteins as malaria vaccine candidates	LB Lacerda, BR
17:00	General Discussion	
Immunotechnology		
17:05	Development and evaluation of two lateral flow immunochromatographic assays for the diagnosis of <i>Brucella</i> spp	Y Cruz, CU
17:10	A flow cytometry gating strategy for profiling CD4 ⁺ CD25 ^{+/high} CD127 ^{-/low} regulatory T cells	RU Martínez, CU
17:15	Generation of stable clones expressing the anti-glycosaminoglycan antibody chP3R99-LALA in CHO-K1 and HEK293 cell lines	LM Valencia, CU
17:20	Establishment of t-lymphocytes quantification with triple-labeled antibodies by flow cytometry in samples from patients of ARGOS phase I clinical trial	A Vázquez, CU
17:25	Development of a sandwich ELISA using polyclonal antibodies for <i>Blomia tropicalis</i> house dust mite vaccines standardization	<u>A Renté</u> , CU
17:30	Analytical assessments for tracking the molecular modifications at the intermediates and the conjugated antigen of Soberana 02 vaccine	R Garrido, CU
17:35	General Discussion	
Immunology in Medical education		
17:40	An integrative mathematical model of T cell activation, metabolism, and function	L Huerta, MX
17:45	Postgraduate training in Immunology. Master's Degree on Basic Immunology	VE González, CU
17:50	Multimedia to facilitate the teaching-learning process of immunological syndromes	V Concepcion, CU
17:55	Interdisciplinary conception of General Medicine as the Integrating Discipline of the Medical career	J Rodríguez, CU
18:00	Improvement of the pedagogical professional performance of the teachers of the faculty of medical sciences	M Lago, CU
18:05	Theoretical - methodological conception of the integrative discipline for the methodological work of the stomatology career	M Alea, CU
18:10	General Discussion	
Place: International III		
Chairs:		
AutoImmunity		
16:30	Clinic and serological characteristics of Cuban patients with Systemic Lupus Erythematosus	E Noris, CU
16:35	Clinical course and response to treatment of Cuban patients with primary biliary cholangitis	D La Rosa, CU
16:40	Pediatric Multi-system Inflammatory Syndrome and self-reactivity. A case report	M Velázquez, CU

16:45	Juvenile dermatomyositis with universal calcinosis and panniculitis. Topic review and case report	T Cristobo, CU
16:50	Endothelial dysfunction in refractory obstetric antiphospholipid syndrome: could conventional therapy with heparin and aspirin modulate this dysfunction?	D Alvarez, CO
16:55	Antiplatelet antibodies in autoimmunity and alloimmunization	Y Adams, CU
17:00	General Discussion	
Miscellaneous		
17:05	Toxic epidermal necrolysis induced by antihistamines. Case report and review of literature	PA Giraldo, CO
17:10	Peptides presented by HLA-DR molecules identifies rheumatoid arthritis-associated T-cell epitopes	J Maggi, CL
17:15	Peripheral inflammatory markers contributing to comorbidities in Autism	M Inga, EC
17:20	Adverse drug reactions, pharmacological antigens, their relationship with immunotoxicology	Y González, CU
17:25	Genetic Polymorphism of CCR5 co-receptor in sanitary personal and patients hospitalized in the Institute "Pedro Kourí", January–April 2019	JM Junco, CU
17:30	Allele frequencies of the interferon related gene rs1990760 variants and genomic ancestry in the Cuban population	Y Zuñiga, CU
17:35	Characterization of the immunometabolic status of patients with diagnosis of diabetic foot	RJ Alvarez, CU
17:40	General Discussion	
Place: Guama		
Chairs:		
ImmunoRegulation		
16:30	Modulation of the lymphocyte axis Th1/Th17/Treg by narrowband ultraviolet B light: possible role of TRPV1 and TRPV4 channels	C Merino, CO
16:35	Galectin 1 enhances the immunosuppressive activity of myeloid-derived suppressor cell exosomes	CA Bach, AR
16:40	Cocaine-levamisole neutrophils cell death could be mediated by reactive oxygen species	M Osorio, CO
16:45	Proposition of an anti-IL-6 receptor alpha antibody as a Tocilizumab biosimilar	G García, CU
16:50	Impact of Slan+ monocyte subpopulation from healthy controls on mononuclear cell responses exposed to inflammatory stimulations	C Anacona, CO
16:55	General Discussion	
17:00	Immunomodulatory effect of rifampicin on a macrophagic human cell line in presence of DHEA and/or cortisol	A Díaz, AR
17:05	Extracellular vesicles from lymphocytes and monocytes treated with janus kinases inhibitors induced platelet aggregation and reduced T cell proliferation	AM Daza, CO
17:10	Alkamides and sesquiterpenes present in the leaves and stems of Acmella ciliata, induce the proliferation of human mononuclear cells	LA Contrera, CO
17:15	Evaluation of the immunomodulatory activity of extracts and fractions of Bidens pilosa L. on the proliferation of human mononuclear cells	XM Rodríguez, CO
17:20	Determination of the expression of the immunoactivators and immunoregulatory isoforms of the NKP30 receptor in patients coinfecting with HIV / HCV	AX Caret, MX
17:25	General Discussion	

Mucosal immunology		
17:30	Molecular and Immunological Characterization of the Inflammatory Bowel Disease in the Canine Model	D Siel, CL
17:35	High salivary IgA-coating levels of the oral microbiota in patients with systemic lupus erythematosus	S Romero, MX
17:40	Colonoscopic Findings and Histological Changes in Patients with Spondyloarthritis without Inflammatory bowel disease are associated with high levels of Fecal Calprotectin.	J Avila, CO
17:45	Effect of the intranasal dose of HeberNasvac (CIGB2020) on the oropharyngeal expression of TLRs and other genes of the innate immune system: dose-escalating pilot study I. (Part I)	J Aguiar, CU
17:50	The application of the clinical method to a case of chronic mucocutaneous candidiasis	M García, CU
17:55	General Discussion	
Day: 8		
Place: International I		
Chairs:		
COVID Immunoprophylaxis		
16:30	Challenges and opportunities improving COVID-19 vaccination	R, CU
16:35	Physicochemical characterization for the antigen of Soberana 01 vaccine candidate	B Baró, CU
16:40	A single dose of SARS-CoV-2 FINLAY-FR-1A vaccine enhances neutralization response in COVID-19 convalescents, with a very good safety profile: An open-label phase 1 clinical trial	A Chang, CU
16:45	Neutralizing activity of serum from individuals immunized with the Soberana Pediatrics vaccination schedule against SARS-CoV-2 variants	JM Enriquez, CU
16:50	Evaluation of cellular response in individuals vaccinated with Abdala using the ELISPOT technique	S Chávez, CU
16:55	Antiviral and innate immune responses elicited by Nasalferon administration: dose-escalating pilot study I. (Part III)	Y Mendoza, CU
17:00	Evaluation of drop and spray devices through intranasal administration of HeberNasvac (CIGB2020) and innate immunity effects on oro-nasopharyngeal tonsils of healthy volunteers compared to Nasalferon: a pilot study (Part II)	D Quintana, CU
17:05	Establishment of t-lymphocytes quantification with triple-labeled antibodies by flow cytometry in samples from patients of ARGOS phase I clinical trial	A Vázquez, CU
17:10	General Discussion	
Immunoallergy		
17:15	Chronobiology of immunity in allergies	MA Ramos, CU
17:20	Stability study of two new vaccines for sublingual allergy immunotherapy	Y Martínez, CU
17:25	Pharmaceutical development of a second-generation allergy vaccine Prolinem-BT	M Mateo, CU
17:30	Influence of phosphate salts and aluminium hydroxide on <i>Blomia tropicalis</i> and <i>Dermatophagoides pteronyssinus</i> allergen's adsorption for the formulation of two new antiallergic vaccines	A García, CU
17:35	Evaluation of pulmonary histology in a murine biomodel used for the study of antiallergic vaccines	A Morejón, CU

17:40	Effects of vitamin E and selenium on allergic rhinitis and asthma pathophysiology	SS Athari, IR
17:45	Clinical-immunological evaluation of patients with acne treated with therapeutic Staphylococcus aureus vaccine	TM Cardoso, CU
17:50	General Discussion	
Place: International II		
Chairs:		
Immunodeficiencies		
16:30	X-linked lymphoproliferative syndrome-1: one case in a million	HE Guido's, SV
16:35	Job syndrome. Report of one case	VJ Hernandez, CU
16:40	The first reported Peruvian patient with X-linked severe combined immunodeficiency treated by gene therapy	A Alvites, PE
16:45	Hemophagocytic lymphohistiocytosis as a debut event in a APDS1 patient. Report of a case	A Hernandez, PE
16:50	The first reported Peruvian patient with A20 Haploinsufficiency	C García, PE
16:55	Clinical and immunological characterization of symptomatic patients with immunoglobulin A deficiency	J Diaz, CU
17:00	Primary immunodeficiencies due to IgA deficiency diagnosed in Granma. 2013-2021	R Marrón, CU
17:05	Decreased immunoglobulin A and CD19 in children with thymic hypoplasia	OM de la Guardia, CU
17:10	General Discussion	
17:15	Common variable immunodeficiency. Diverse phenotypic expression in a series of cases. Granma. 2012-2021	BC Addine, CU
17:20	Increased STAT3 phosphorylation on B cells of patients with Common Variable Immunodeficiency (CVID)	G Vocarm, MX
17:25	Clinical and immunological characterization of Primary Immunodeficiencies assisted at William Soler Pediatric Hospital.	C Insua, CU
17:30	Primary immune deficiencies in Granma province. An 8 years' experience	LC Pérez CU
17:35	Vaccination in patients with primary immunodeficiencies from Granma province. 2012-2021	M González, CU
17:40	Infections in patients with primary immunodeficiencies in Pinar del Río	A Lugo, CU
17:45	Clinical evaluation, imaging and response to treatment with Biomodulin T in patients with Thymic Hypoplasia	JS Burón, CU
17:50	Therapeutic response to Biomodulin T in thymus hypoplasia disorder	L Madrigal, CU
17:55	Recurrent tubaric abscess as an expression of combined primary immunodeficiency	A Ruiz, CU
18:00	General Discussion	
Place: International III		
Chairs:		
Tumoral immunity		
16:30	Frequency of known risk factors of cancer, socio-demographics, and lifestyle among a population of the Caribbean	D Gopaul, TT

16:35	Clinical and laboratory characterization of patients with malignant monoclonal gammopathy in Camagüey	L Yero, CU
16:40	A rationally-engineered IL-2 improves the antitumor effect of anti-CD20 therapy	AV Casadesús, CU
16:45	Evaluation of the in vitro antitumor activity of the antimicrobial peptide Cm-p5	EM Martell, CU
16:50	Colorectal Cancer screening in patients with positive SUMASOHF	YJ Ortíz, CU
16:55	Where VEGF should be measured? An experience obtained from phase I clinical trials cancer patients treated with a VEGF vaccine	J Sánchez, CU
17:00	The breast cancer immune microenvironment is modified by neoadjuvant chemotherapy	C Ureaña, CO
17:05	Antitumor prophylactic effect of chimeric VLPs as delivery system with tumor-associated antigen in a murine triple-negative breast cancer scheme	BK Nava, MX
17:10	General Discussion	
17:15	Myeloid-derived suppressor cells and reticulum stress modulation by natural extracts in murine melanoma model	A Barreto, CO
17:20	Antitumor effects of the ethanolic extract from <i>Tillandsia usneoides</i> and <i>Piper nigrum</i> in the breast cancer and melanoma murine models	P Lasso, CO
17:25	Chitosan nanospheres in anti-tumor immunotherapy of melanoma	A Ramírez, MX
17:30	Immunogenic signals induced by natural extracts in murine breast cancer model is independent from cancer cells metabolism	C Carlosama, CO
17:35	Personalized bone marrow avatars for chemotherapy sensibility high throughput screening in pediatric acute lymphoblastic leukemia	J Amador, MX
17:40	The miRNA-TLR8-ROS axis, a new route to inflammation in childhood acute lymphoblastic leukemia	A, Vilchis, MX
17:45	Immunohistological analysis of the small intestine in mice chronically administered sucralose	AA Reséndiz, MX
17:50	General Discussion	
Place: Guama		
Chairs:		
Immunosenescence		
16:30	Biological effects and clinical relevance of immunosenescence	<u>A Areces</u> , CU
16:35	Immunophenotypic characterization of double positive T lymphocytes in Cuban older adults	Y Triana, CU
16:40	T-cell Exhaustion and Senescence in Visceral Leishmaniasis-HIV Co-infected Patients at University of Gondar Hospital, North West Ethiopia	W Hailemichael, ET
16:45	Characterization by flow cytometry of activated T lymphocytes in older Cuban adults Institute of Hematology and Immunology “José Manuel Ballester Santovenia”	Y Duarte, CU
16:50	Effect of Biomodulina-T® and VA-MENGOC-BC® on lymphocyte subpopulations in older adults	E Hernández, CU
16:55	General Discussion	
Immunity against microbes		
17:00	Interaction between hematopoietic stem cells and mesenchymal stromal cells and the dimorphic fungal pathogen <i>Histoplasma capsulatum</i> : new immunological insights	Á Gonzalez, CO

17:05	Regulation of the immune microenvironment by the CD43 sialomucin during <i>Mycobacterium tuberculosis</i> infection	E Alemán, MX
17:10	Effect of Curcumin in Experimental Pulmonary Tuberculosis: Antibacterial Activity in the Lungs and Anti-Inflammatory Effect in the Brain	JV Lara, MX
17:15	Th17 immune response and costimulatory molecules modulation against hypervirulent BI/NAP1/027 <i>C. difficile</i> strain infection	R Hernandez, BR
17:20	Viral clearance capacity of the obtaining process of the culture medium for house dust mite breeding	D Torralba, CU
17:25	Prevalence of hepatitis E virus and associated risk factors in Cuban blood donors, 2018	L Núñez, CU
17:30	General Discussion	
17:35	Evaluation of the specific toxicity of IFAs from <i>Bordetella pertussis</i> and its correlation with the expression of immunogenicity in mice	JF Núñez, CU
17:40	High values of resistance to Non-Nucleoside Reverse Transcriptase Inhibitors detected by HIV-1 pre-treatment resistance surveillance in Cuban patients during 2009-2017	LY Machado, CU
17:45	CCR5 correceptor genetic polymorphism in Cuban elderly HIV/AIDS patient	D Hernández, CU
17:50	Signaling through PPAR-gamma receptor decreases inflammatory response in patients with cutaneous leishmaniasis	LP Carvalho,
17:55	Circadian cycle and metabolic reprogramming induced by arboviruses	M Rodríguez, MX
18:00	General Discussion	