2010 Mexico Workshop

29th Current Course on Immunogenetics: Didactic and Laboratory Parts
Meeting Dates: July 26 – July 30, 2010

25th Current Course on Molecular Genetics. Didactic and Laboratory Parts
Meeting Dates: August 2 – 6, 2010

The workshop will be presented part in Spanish and part in English. The invited speakers from abroad will present their lectures in English. Continuing Education Credits will be provided by the American Board of Histocompatibility and Immunogenetics (ABHI) for attendance at this workshop, with the Academic accreditation of The Faculty of Medicine, UNAM (Universidad Nacional Autonoma de Mexico).

It is accepted as an optional subject for PhD programs in Mexican and Latinamerican Universities.

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Organized by: Department of Immunology and Immunogenetics of Instituto de Diagnostico y Referencia Epidemiologicos, Secretary of Health (InDRE), Mexico City

Under the Auspices of:
The American Society for Histocompatibility and Immunogenetics (ASHI)
The American Board of Histocompatibility and Immunogenetics (ABHI)
Fundacion Comparte Vida, A.C.

Registration Information:
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Registration fees:

Didactic part only	$800.00 each course
Didactic and laboratory parts	$1000.00 each course

*Please note that currency is listed in US dollar amounts.

DIDACTIC PART • Week #1

Genomic Medicine for Complex Diseases. Introduction to Immunogenetics. The Human MHC (HLA) Complex: Class I and Class II Regions. Molecular Diagnosis and Prediction of Mendelian Diseases and Diagnosis of Congenital Malformations. The MHC in Cellular Interactions: Antigen Presentation and Biosynthesis of MHC Molecules. The MHC and Disease Associations: Molecular Mechanisms of MHC Associations in Autoimmune Diseases. Relevance of Inflammation in the Pathogenesis of Neurocysticercosis. Molecular Mechanisms of HLA Associated Diseases. Cellular techniques and Their Use to Monitor Solid Organ Transplants. Methods for Isolation of Cell-Subpopulations: HLA Typing by Microlymphocytotoxicity. Overview on the Aspects of Accreditation of a Laboratory of Immunogenetics in Latin America. Methods for Molecular Typing of Class I and Class II Genes. Immunological Mechanisms of Solid Organ Transplant Rejection. Current Methodology and Clinical Significance of Cross Matching for Solid Organ Transplants. Mechanisms of Injury of HLA Antibodies on the Transplanted Organ after Immunization. Identification of the Antibody in Transplanted Patients. Monitoring Tests Used after Transplantation for Assessing the Immunological Status of the Patient. Clinical significance of HLA antibodies in renal patients post-transplantation and in chronic rejection. Cellular Monitoring of Solid Organ Transplants. Impact of The Different Clinical Protocols in Laboratory Testing. Killer-cell Immunoglobulin-like receptors. Genetic diversity of KIR-HLA combinations and relevance in human disease. Typing methods for NK cell receptors and HLA ligands. Origin and evolution of NK cell receptors. Antibodies Vs. HLA ad TRALI in Transfusion Refractory States. Clinical Assessment of The patients After Transplanting Mismatched Kidneys, Ethical and legal aspects of solid organ transplantation. Cell Therapy and Heart Transplantation. Immunology of Allogeneic Bone Marrow Transplants. Worldwide Impact of Unrelated Bone Marrow Donor Registries: Current Status of The Mexican Bone Marrow Registry (DONORMO). Biological Impact of Genetic Diversity in Populations. Molecular Anthropology: Lessons of Mexican and Other American Indians. Search Strategies to get an Unrelated Bone Marrow donor. Characteristics Of An Umbilical Cord Blood Bank. Genetic Diversity in the Minorities of The USA and Its Impact in Transplantation.

LABORATORY PART • Week #1

Mixed Lymphocyte Culture. Methods of Isolating of Lymphocyte Subtypes: Nylon, Monoclonal, Magnetic-Beads, HLA Typing Using Fluorescence. HLA Typing by Microlymphocytotoxicity. Cross-Matching with & without DTT and Anti-IgG. Antibody Detection using ELISA. Antibody Screening Using Luminex. Antibody Identification using PRA and One Antigen bead by Luminex.

DIDACTIC PART • Week #2

From Genetics to Pharmacogenomics in Medicine. Replication, Transplantation and Protein Biosynthesis. Molecular Epidemiology: A Tool of Great Impact in Medicine. Molecular Basis of Alzheimer Disease. Some Important Tools for Genetic Analysis. Genetic Organization of the MHC, Structure, Expression and Function. Polymorphism and Evolution of MHC Genes. Immunobiology of Minor Histocompatibility Antigens. Introduction to KIR Genes. Immune Response Against Pathogens. Technology Used for Human Identification. Real-Time PCR. Application in Immunogenetics. Immunologic Evasion Mechanisms Used by Viruses. Population Genetics and Infections. SIV as a Model of Investigation of a Vaccine Against AIDS. Importance of KIR Genes in Transplantation, in Autoimmune and Viral Diseases. Contribution of Different MHC Genes to the Outcome of Bone Marrow Transplantation Survival Rates among Unrelated Individuals. Molecular Mechanisms of HLA Association in Psoriasis: MHC and KIR Genes. Non-MHC Factors Affecting Bone Marrow Transplantation. MHC criteria for MHC selection for bone marrow transplantation. HLA Peptide Binding Prediction as an Important Tool to Design a Vaccine Against AIDS. Genetics and Functional Genomics in Cancer. New Immunotherapeutic Procedures for the Treatment Using HSCT. The Future of Umbilical Cord Stem Cells Transplantation; an Alternative for Transplantation. Ethical Aspects, Myths and Reality of its Use. HLA Epitopes. NK Cells and KIR receptors. Genetics and polymorphism of KIR genes. Their role in disease and in Transplantation. Immunotherapy. Minor Antigens. Structure and function of mHA. The role of mHA in bone marrow transplantation. Molecular Mechanisms of HLA Associated Infectious Diseases: Tuberculosis and Leprosy. Theory and Practical Basis of PCR Typing of PCR Products; Sequence Specific-Amplification; Dot Blot; Reverse Dot-Blot; PCR-RFLP; Molecular Methods of Class I Typing. Sequence Based Typing of HLA Genes. Microsatellites, STRs and Minisatellites; Gene-Scan: Uses and Approaches: Gene Identity and Paternity Testing. Basic Concepts of Sequencing. Real-Time PCR. Its use in Immunogenetics.

LABORATORY PART • Week #2

Extraction and Purifying of DNA. Class II Generic PCR . PCR for DRB1. Sequence Based Typing (SBT). PCR-SSOP (Chemiluminescence, Demonstration only); Allele Specific Amplification for Class I and Class II Genes (PCR-SSP). Reverse-Dot Blot Using Strips (Demonstration only). Reverse Dot-Blot using Luminex. Real Time PCR. Gene-Scan (STRs).

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