HLA

Immune Response Genetics

Contents

June 2017 Volume 89 Number 6

Abstracts for the 31st European Immunogenetics and Histocompatibility Conference and the 25th Annual Meeting of the German Society for Immunogenetics (Joint Meeting)

Mannheim/Heidelberg, Germany, May 30 – June 2, 2017

Abstracts for Oral Presentation		**338**
Best Abstracts	O1 to O8	338
Immunotherapy, Gene Therapy and Cellular Therapy	O9 to O16	342
Solid Organ Transplantation	O17 to O24	346
NK and Non-MHC	O25 to O32	350
New Technologies and Antigen Presentation	O33 to O40	354
Reproduction, Autoimmunity, Infection and Cancer	O41 to O48	357
Haematopoietic Stem Cell Transplantation	O49 to O56	361
MHC Evolution, Anthropology and Population Genetics	O57 to O64	365
Bioinformatics and Miscellaneous	O65 to O72	369
Abstracts for Mini Oral Presentation		**373**
Solid Organ Transplantation	MO1 to MO6	373
Haematopoietic Stem Cell Transplantation	MO7 to MO12	376
New Technologies	MO13 to MO18	378
Miscellaneous	MO19 to MO24	381

Abstracts for Poster Presentation 384

Solid Organ Transplantation P1 to P62 384

Haematopoietic Stem Cell Transplantation P63 to P93 410

Immunotherapy, Gene Therapy and Cellular Therapy P94 to P96 425

Bioinformatics P97 to P104 426

New Technologies P105 to P130 430

MHC Evolution, Anthropology and Population Genetics P131 to P156 440

NK and Non-MHC P157 to P171 451

Reproduction, Autoimmunity, Infection and Cancer P172 to P196 458

Miscellaneous P197 to P224 469

Author Index 482

Author Index 482

DOI: 10.1111/tan.13032

WILEY HLA
Immune Response Genetics

ABSTRACT BOOK

31st European Immunogenetics and Histocompatibility Conference (EFI)

25th Annual Meeting of the German Society for Immunogenetics (DGI)

May 30 - June 2, 2017

Mannheim/Heidelberg, Germany

www.efi2017.org

Guest editors
Hien Tran, Volker Daniel, Michael Müller-Steinhardt, Sabine Scherer and Caner Süsal (Germany)

EFI Scientific Committee and reviewers
Katharina Fleischhauer (Germany) *Chair*
Rainer Blasczyk (Germany)
Silvia Gregori (Italy)
Sebastian Heidt (The Netherlands)
James Robinson (United Kingdom)
Ludvig M. Sollid (Norway)
Jean-Marie Tiercy (Switzerland)
John Trowsdale (United Kingdom)
Luca Vago (Italy)
Lotte Wieten (The Netherlands)
Hien Tran (Germany) *Ex-officio member*

Local Organising Committee
Caner Süsal (Heidelberg)
Volker Daniel (Heidelberg)
Sabine Scherer (Heidelberg)
Michael Müller-Steinhardt (Mannheim)
Hien Tran (Heidelberg)

EFI Executive Committee
Elissaveta Naumova (Bulgaria) *President*
Mats Bengtsson (Sweden) *Secretary*
Dave Roelen (The Netherlands) *Deputy Secretary*
Gwendaline Guidicelli (France) *Treasurer*
Katia Gagne (France) *Deputy Treasurer*
Paul Costeas (Cyprus)
Teresa Kauke (Germany)
Jaume Martorell (Spain)
Valeria Miotti (Italy)
Fatma Oguz (Turkey)
Kay Poulton (United Kingdom)

P59

DETECTION OF ANTI-HLA ANTIBODIES IN PRE-KIDNEY TRANSPLANTATION CANDIDATES IN THE KURDISTAN REGION OF IRAQ

Rawand Al-Qadi[1], Saadallah F. Salih[1], Yaqo Rafil[2], Najeeb Sirwan[1]

[1]Duhok Specialized Laboratory Center, Duhok, Iraq, [2]School of Medicine, University of Duhok, Duhok, Iraq

Correspondence: raqrawi@yahoo.com

The presence of anti-HLA antibodies in the sera of patients waiting for kidney transplantation is a well-known risk factor for development of antibody-mediated rejection (AMR), which eventually might lead to graft loss. The Luminex based bead detection of anti-HLA antibodies has facilitated the task of determining the sensitization status of these patients. In this study, we aim to determine the presence or absence of anti-HLA antibodies in candidates of kidney transplantation in the Kurdistan region of Iraq. Also, to determine the correlation between the Luminex data and the CDC crossmatches that we routinely perform for such patients. From the period between September 2014 and December 2016 we tested 462 sera for the presence of anti-HLA antibodies using Immucor's Deluxe Life-Screen, Class I and Class II ID (PRA), and LIFECODES LSA class I and II Single Antigens. Out of 462 sera, 170 (37%) were either sensitized for class I or class II anti-HLA antibodies or both. Of the sensitized sera, 30/170 (18%) had only class I anti-HLA antibodies, 61/170 (36%) had only class II anti-HLA antibodies, and 79/170 (47%) had both class I and class II anti-HLA antibodies. In the same period of time there were 16 positive CDC crossmatches between potential recipients and donors, of which 3 of them (19%) had only class I anti-HLA antibodies, 13 (81%) had both class I and class II anti-HLA antibodies and none had class II anti-HLA antibodies alone. The mean fluorescence intensity (MFI) values for the positive CDC crossmatch were all greater than 8000. This study is the first study to be done in the Kurdistan region of Iraq for the determination of the anti-HLA antibodies by using Luminex bead technology. Further studies in the region are required for better understanding the immunological patterns of the patients of the region.

P60

FEASIBLE EXTENDED HLA TYPING OF DECEASED DONORS IN SOLID ORGAN TRANSPLANTATION

Giuseppina Ozzella[1,2], Elvira Poggi[1,2], Silvia Sinopoli[2], Damiano Colasante[2], Maria Rosaria Fazio[2], Annarita Manfreda[2], Lucia Spano[2], Antonio Giuseppe Bianculli[2], Antonina Piazza[1,2]

[1]National Council of Researches, IFT Unit of Rome S. Camillo Hospital, Rome, Italy, [2]Regional Transplant Center of Lazio, Rome, Italy

Correspondence: giuseppina.ozzella@cnr.it

In solid organ transplantation the HLA-A,-B,-DR,-DQ donor-recipient matching results are insufficient for highly sensitized patients. In fact, solid phase single antigen assays, used to define HLA antibodies in transplant candidates, show the presence of antibodies specific for all HLA molecules. Thus, an extended HLA typing of deceased donor is necessary to improve selection of the most suitable transplant candidate. Until July 2016, in our laboratory all donors were typed for HLA-A,-B,-C,-DR,-DQ loci by a PCR-SSP technique; when a sensitized patient was selected, the donor typing was prospectively enlarged to pertinent HLA molecules. To simplify this procedure and improve organ allocation we introduced the new RT PCR-SSP technique, based on an innovative chemistry (Linkage Bioscience Inc.), it enables us to provide intermediate resolution typing of 11 HLA loci, in less than 90 minutes. Allele-specific amplification combined with SYBR Green and real-time PCR instruments are used to detect amplification products and to collect dissociation data for automatic interpretation by SureTyper software. Since August 2016, 76 potential deceased donors were typed by this technique. No allelic ambiguities were evidenced but rather high resolution typing were obtained in several cases: 11 HLA-A alleles, 55 HLA-B alleles, 48 HLA-C alleles, 41 HLA-DRB1 alleles, 37 HLA-DRB345 alleles, 20 HLA-DQA1 alleles, 30 HLA-DQB1 alleles, one HLA-DPA1 allele, and 50 HLA-DPB1 alleles. Moreover, the extended HLA typing obtained by RT PCR-SSP avoided additional HLA-C, −DRB1, −DQA1 and -DPB1 typing in 12 cases (15.8%) and allowed us to define donor molecules against which 10 patients (13.2%) showed preformed high fluorescence intensity antibodies (MFI > 5000). In conclusion, RT PCR-SSP is less hands-on and, considering the number of typed HLA loci, cheaper than traditional PCR-SSP techniques. The extended donor HLA typing gives useful information for a more precise pre-transplant virtual crossmatch and for a better donor-recipient selection to improve clinical transplant outcome.

P61

PREDICTION OF FLOW CYTOMETRIC CROSSMATCH OUTCOME FROM BEAD ARRAY DATA

Sabine Wenda, Daniela Koren, Ingrid Faé, Gottfried F. Fischer

Medical University Vienna, Vienna, Austria

Correspondence: sabine.wenda@meduniwien.ac.at

In order to improve the virtual crossmatch for our center we studied the association of single antigen specific bead array results with the outcome of the flow cytometric crossmatch. Sera from 168 consecutive patients undergoing solid organ transplantation (kidney, liver, heart and lung) between May 2016 and November 2016 were drawn on the day of

Nikolaidou, Vasiliki P19
Nikolova, Milena P177
Nisihara, Renato M. P158, P161
Noble, Janelle A. O58
Norman, Paul J. O6, O30, O69
Norton, Susana Sampaio. MO3, P45
Novelli, Giorgio P194
Nowak, Jacek P84, P89, P169
Ntaountaki, Maria P62
Nunes, José Manuel O7, O61, O70, P88, P101
Núñez-Roldán, Antonio P31
Nurmohamed, Azam O21, MO4

O

Ocejo-Vinyals, J. Gonzalo P176, P213
O'Connor, David O59
Ogret, Yeliz P145
Ogunjimi, Benson P124
Oguz, Fatma S. P182, P212
O'Hara, David P22
Oksenberg, Jorge O6
Olbromski, Krzysztof P69
Olieslagers, Timo I. O14, O72
Oliveira, José Gerardo. MO3, P45
Oliveira, Luana C. P158, P161
Olivieri, Anna P144
Ontañón Rodríguez, Jesús P37, P213
Opelz, Gerhard O24, P1, P40, P58
Oppenheimer, Federico P18
Orie, Vaneesha O31
Orlić, Lidija P47
Orrù, Nicola P190
Orrù, Sandro O23, P190
Ortiz-Pareja, Macarena P64
Osoegawa, Kazutoyo MO7
Osorio Arango, luz K. P21
Ota, Masao O25
Otten, Henny G. O21, MO4
Otting, Nel O39, O59, O60
Oudshoorn, Machteld O25
Oweira, Hani P28
Özbek, Umut O47
Ozcan, Alper P211
Özkızılcık Koçyiğit, Aslı P9
Ozkul, Yusuf P211
Ozzella, Giuseppina P14, P60

P

Paakkanen, Riitta O64
Pacquola, E. P30
Padrón-Peréz, Norberto P143
Padyukov, Leonid P207
Paganini, Julien O57
Paillard, Catherine O25
Paisiou, Anna P80
Palacio-Gruber, Jose P131, P137, P141, P150, P152, P155
Palacios, Diana M. MO14
Palfi, Biserka P139
Pallardó, L P18
Palma, Eulalia P6, P11, P25
Palou, Eduard P95, P213
Pan, Wenjing P116
Panagouli, Efrosyni P63
Panicker, Sandip O9
Panoulis, Konstantinos P197
Pant, K.A. van der. O21
Paolillo, Rossella P42
Papachristou, Marianthi P3, P62
Papanikolaou, Vasilios P19
Papasteriades, Chryssa P197
Papert, Susanne O15, O50
Paraskevopoulou, Ioulia P19, P62
Parissiadis, Anne O25, P123
Parkner, Andreas P118
Parovichnikova, Elena N. P77
Parren, Paul W.H.I. P125
Parry, Graham C. O9
Partanen, Jukka O35
Pasch van de, Loes A.L. MO8
Pascual-Cascón, Maria J. P64
Pasi, Annamaria A. P71, P144, P181, P209
Pasztor, Agnes P127
Patel, Ashok P68
Patiroglu, Turkan P180, P206, P211
Paule, Pascale P51
Pauletti, Laura L. P209
Pavlatova, Lucie P75
Pavlov, Ivan U. P200
Pavlova, Anastasia P193
Pavlova, Irina P193
Pawlak-Adamska, Edyta P187
Pawliczak, Daria P89, P169
Pearson, Erik P104
Pedrosa, Francisco P204
Peffault de la Tour, Regis O55
Peffault de Latour, Régis O25
Pegova, Kristyna P75
Pelardy, Mattieu P51, P85
Pellegrini, Patrizia O48
Penning, Maarten T. O37, O51, MO8, P83, P222
Perea, Francisco P172, P173
Pérez-Arellano, Jose Luis P183, P220
Peristeri, Ioulia P80
Perola, Markus O46
Perrone, Milena P144, P209
Peter, Wolfgang P108, P111, P117, P118, P127, P129
Peters, Carrie P12, P114
Petersdorf, Effie W. O63
Petlichkovski, Aleksandar P56, P142
Petrek, Martin P73, P163, P184, P207
Petrillo, Marika P178, P189
Petrkova, Jana P163
Petzl-Erler, Maria Luiza O29, O67, MO24, P158, P161, P164, P165, P166
Pfreundschuh, Michael P91
Piancatelli, Daniela P55
Piazza, Antonina P14, P60
Picard, Christophe O25, O38, O41, O57, P51, P85, P123
Piccolo, Adriana A. P209
Pichereau, Delphine P94
Pichot, Angélique O25
Picolos, Michalis P175
Pietinalho, Anne P207
Pingel, Julia O30
Pino-Yanes, Maria MO23
Piredda, Gianbenedetto O23
Pisani, Franco P55
Pisos-Álamo, Elena P183, P220
Pizzochero, Cinzia P181
Plaisier, L. O21
Planelles, Dolores P213
Podgorná, Eliška O7
Poggi, Elvira P14, P60
Poirier, Nicolas O60
Pol, F. P30
Poles, Anthony P217
Poliakova, Anastasia P. P136
Pollack, Jane P99
Pomoni, Stella P186
Popa, Olivia M. P160
Porcella, Rita O23
Porcher, Raphael O55
Posch, Ursula P202
Poulton, Kay P67
Prakash, Rao P22
Pramov, Aleksandar O44
Prerovska, Renata P75
Primorac Maric, Anita P140
Proust, Barbara P123
Pruschke, Jens O30, O69
Puchala, Magdalena P174
Puglisi, Fabrizio P171
Pultrone, Cinzia O51