

REPORT OF THE 23rd UCLA INTERNATIONAL KIR EXCHANGE

DECEMBER 14, 2010

KIR

89-92

Dear Colleagues:

For the 23rd KIR Exchange, 4 DNA samples (KDNA#89-92) were shipped to each laboratory on August 4, 2010. Sixty-one laboratories submitted their KIR typing results. The majority of the laboratories used either commercial or in-house developed sequence-specific primer (SSP) based PCR typing systems, and others used sequence-specific oligonucleotide probing (SSOP) method.

The results for the 23rd KIR Exchange are summarized in Table 1 and individual laboratory results reported for each DNA sample are provided in Tables 2-5. Subtyping results for KIR2DL2, 2DL5, 3DL1, 3DS1, 2DS1, 2DS4, and/or 3DP1 loci were reported by some laboratories. The positive/negative

assignments for all 4 DNA samples were reported without any discrepancy for 10 of the 16 tested KIR loci (KIR2DL1, 2DL3, 2DL4, 2DL5, 3DL2, 3DL3, 3DS1, 2DS1, 2DP1, and 3DP1). Discrepant results from the consensus typing are italicized in tables 1-5, and described in the summation for each sample. Discrepancies at the allele level are not italicized. We encourage the participating laboratories to resolve the discrepancies so that the information can be shared to develop reliable KIR typing systems.

We thank you for your continued participation in the UCLA KIR Exchange program.

KIR Exchange Sample: KDNA # 0089:

KDNA# 89 was isolated from an Hispanic donor. The consensus KIR type of this DNA is: 2DL1-2DL2-2DL3-2DL4-2DL5A-3DL1-3DL2-3DL3-3DS1-2DS1-2DS2-2DS5-2DP1-3DP1. One laboratory reported this sample as positive for KIR3DL1 and negative for KIR2DS5. Three laboratories reported this sample as positive for KIR2DS3. This genotype occurs most frequently in South American Natives (Warao, 10%; Amazonian Amerindians, 7.5%) (1, 2), but totally absent in populations of African origin (3-5).

KIR Exchange Sample: KDNA # 0090:

The ethnic information for KDNA#90 was not available. The consensus KIR type is reported as 2DL1-2DL2-2DL3-2DL4-2DL5A-3DL1-3DL2-3DL3-3DS1-2DS1-2DS2-2DS3-2DS4-2DP1-3DP1. One laboratory reported this sample as positive for KIR2DS5 and negative for KIR3DL1, KIR2DS3, and KIR2DS4. This is a commonly found genotype in Caucasians, occurring at a frequency of 3-10% (6). However, this genotype is totally absent in Native American populations (1, 2).

KIR Exchange Sample: KDNA # 0091:

KDNA#91 was isolated from a Caucasian individual. The consensus KIR

type of this sample is: 2DL1-2DL2-2DL3-2DL4-2DL5A-3DL1-3DL2-3DL3-3DS1-2DS1-2DS2-2DS4-2DS5-2DP1-3DP1. One laboratory reported this DNA as negative for both KIR2DL2 and KIR2DS2. Using the SBT typing method by Belle et al. (Tissue Antigens 2008, 71:434-9), Marsh and Schellekens reported that this DNA carries "a novel KIR3DL1 allele that resembles the KIR3DL1*00401 allele but has a non-synonymous C251T substitution in exon 3." This genotype occurs in all populations, with the highest frequencies observed in Native Americans (12.5% - 37.7%) and Mexican populations (12.8% - 26.44%) (1, 2, 7, 8).

KIR Exchange Sample: KDNA # 0092:

KDNA#92 was derived from an Hispanic donor. The consensus KIR type of this sample is: 2DL1-2DL3-2DL4-2DL5A-3DL1-3DL2-3DL3-3DS1-2DS1-2DS4-2DS5-2DP1-3DP1. Two laboratories reported this sample as positive for KIR2DL2 and KIR2DS2 and one laboratory reported it as positive for KIR2DS3. This is one of the most frequently occurring KIR genotypes in most populations, with the highest frequency observed in Mexican populations (7).

References

1. Gendzekhadze, K., P. J. Norman, L. Abi-Rached, Z. Layrisse, and P. Parham. 2006. High KIR diversity in Amerindians is maintained using few gene-content haplotypes. *Immunogenetics* 58:474.
2. Ewerton, P. D., M. Leite Mde, M. Magalhaes, L. Sena, and E. J. Melo dos Santos. 2007. Amazonian Amerindians exhibit high variability of KIR profiles. *Immunogenetics* 59:625.
3. Denis L, Sivula J, Gourraud PA, Kerdudou N, Chout R, Ricard C, Moisan JP, Gagne K, Partanen J, Bignon JD. 2005. Genetic diversity of KIR natural killer cell markers in populations from France, Guadeloupe, Finland, Senegal and Reunion. *Tissue Antigens* 66: 267-276.
4. Du, Z., D. W. Gjertson, E. F. Reed, and R. Rajalingam. 2007. Receptor-ligand analyses define minimal killer cell Ig-like receptor (KIR) in humans. *Immunogenetics* 59:1.
5. Norman, P. J., C. V. Carrington, M. Byng, L. D. Maxwell, M. D. Curran, H. A. Stephens, D. Chandanayingyong, D. H. Verity, K. Hameed, D. D. Ramdath, and R. W. Vaughan. 2002. Natural killer cell immunoglobulin-like receptor (KIR) locus profiles in African and South Asian populations. *Genes Immun* 3:86.
6. Yawata, M., N. Yawata, L. Abi-Rached, and P. Parham. 2002. Variation within the human killer cell immunoglobulin-like receptor (KIR) gene family. *Crit Rev Immunol* 22:463.
7. Gutierrez-Rodriguez, M. E., L. Sandoval-Ramirez, M. Diaz-Flores, S. G. Marsh, A. Valladares-Salgado, J. A. Madrigal, J. M. Mejia-Arangure, C. A. Garcia, A. Huerta-Zepeda, B. Ibarra-Cortes, C. Ortega-Camarillo, and M. Cruz. 2006. KIR gene in ethnic and Mestizo populations from Mexico. *Hum Immunol* 67:85.
8. Flores, A. C., C. Y. Marcos, N. Paladino, M. Capucchio, G. Theiler, L. Arruvito, R. Pardo, A. Habegger, F. Williams, D. Middleton, and L. Fainboim. 2007. KIR genes polymorphism in Argentinean Caucoid and Amerindian populations. *Tissue Antigens* 69:568.

NEXT MAILING DATE: February 2, 2011

Arlene Locke, Marie Lau, Elaine F. Reed, and Rajalingam Raja

Table 1. Summary of the 23rd KIR Exchange (KDNA#89-92)

| KIR Ex. | DNA | # reporting labs | 2DL1 | 2DL2 | 2DL3 | 2DL4 | 2DL5 | 3DL1 | 3DL2 | 3DL3 | 3DS1 | 2DS1 | 2DS2 | 2DS3 | 2DS4 | 2DS5 | 2DP1 | 3DP1 |
|---------|-------|------------------|------|--|------|---------------|---|--|---------------|---------------|-------------------|-----------------------|-----------------------|-----------------------|--|-----------------------|---------------|--|
| #23 | #0089 | 61 | POS | POS <i>*001-003/005 [2]</i> | POS | POS NT [2] | POS A [16] A*001/ *005 [3] A*001 [2] | NEG NT [1] POS [1] | POS NT [1] | POS NT [2] | POS *01301 [1] | POS *002-004 [2] | POS | NEG <i>POS [3]</i> | NEG *001-002 [1] | POS <i>NEG [1]</i> | POS NT [3] | POS *001/ *002/ *004, *003 [6] FULL, DEL [2] *001- *004 [1] *001/ *002/ *004, *00301/ *00302 [1] *001/ *002/ *004/ *007, *003/ *005/ *006 [1] *003 [1] NT [3] |
| | #0090 | 61 | POS | POS *001-005 [2] | POS | POS NT [2] | POS A [16] A*001/ *005 [3] A*005 [2] | POS *002 [2] *001/ *015/ *056/ *057 [1] <i>NEG [1]</i> | POS NT [1] | POS NT [2] | POS *01301 [1] | POS *002-004 [2] | POS | POS <i>NEG [1]</i> | POS *001/ *002 [11] FULL [7] *001 [5] *00101-00103 [2] DEL [1] <i>NEG [1]</i> | NEG <i>POS [1]</i> | POS NT [3] | POS *001/ *002/ *004, *003 [6] FULL/DEL [2] *001/ *002/ *004, *00301/ *00302 [1] DEL [1] *001/ *002/ *004/ *007, *003/ *005/ *006 [1] *001-004 [1] *003 [1] NT [3] |
| | #0091 | 61 | POS | POS *001-003/ *005 [2] <i>NEG [1]</i> | POS | POS NT [2] | POS A [16] A*001/ *005 [3] A*001 [2] | POS *001/ *004/ *015/ *056/ *057 [1] *00401 [1] | POS NT [1] | POS NT [2] | POS *01301 [1] | POS *002- *004 [2] | POS | NEG <i>NEG [1]</i> | POS DEL [8] *003-007 [7] *003/ *004/ *006/ *007 [3] *003/ *004/ *006/ *007/ *009 [3] *00103, *003/ *004/ *006-009 [2] *001/ *002 [1] *003/ *004/ *006 [1] *003/ *004/ *006- *009 [1] | POS | POS NT [3] | POS *001/ *002/ *004, *003 [6] FULL, DEL [2] *003 [2] *001-004 [1] *001/ *002/ *004, *00301/ *00302 [1] *001/ *002/ *004/ *007, *003/ *005/ *006 [1] NT [3] |
| | #0092 | 61 | POS | NEG <i>POS [2]</i> | POS | POS NT [2] | POS A [16] *001-005 [3] *001 [2] | POS *01502 [2] *001/ *015/ *056/ *057 [1] | POS NT [1] | POS NT [2] | POS *01301 [1] | POS *002-004 [2] | NEG <i>POS [2]</i> | NEG <i>POS [1]</i> | POS *001-002 [11] FULL [7] *001 [5] *00101-00103 [2] *003-007 [1] DEL [1] | POS | POS NT [3] | POS *003 [15] *003/ *005/ *006 [2] DEL [2] NT [3] |

KEY for Table 1

[] - number of labs reporting allele assignment/POS/NEG/NT
 POS - Presence of gene
 NEG - Absence of gene
 NT - Not typed
italics - assignment different from consensus

KEY for Tables 2-5

italics - assignment different from consensus
 SSP - Sequence-specific priming-based typing
 SSOP - Sequence-specific oligonucleotide probing-based typing
 RSSOP - Reverse Sequence-specific oligonucleotide probing-based typing
 SBT - Sequencing-based typing

Table 2. KIR Exchange Sample: KDNA #89 (Hispanic)

| CTR | Investigator Name | 2DL1 | 2DL2 | 2DL3 | 2DL4 | 2DL5 | 3DL1 | 3DL2 | 3DL3 | 3DS1 | 2DS1 | 2DS2 | 2DS3 | 2DS4 | 2DS5 | 2DP1 | 3DP1 | METHOD |
|------|---------------------|------|------------------------|------|------|-------------|------|------|------|------|---------------|------|------|---------------|------|------|--|-----------------------|
| 5488 | Adams, Sharon | POS | POS | POS | POS | A | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSP |
| 8050 | Baxter-Lowe, Lee | POS | POS | POS | POS | A*001/ *005 | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSP |
| 8025 | Carrington&Marti | POS | POS | POS | POS | A | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | *001/*002/ *004/ *007, *003/ *005/ *006 | SSP |
| 785 | Chan, Soh Ha | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | RT-PCR |
| 3224 | Chen, Dong-Feng | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSP, SSOP |
| 124 | Christiansen&Wit | POS | POS | POS | POS | POS | NT | POS | POS | POS | POS | POS | NEG | NEG | POS | NT | NT | MULTIPLEX SSP |
| 3632 | Colombe, Beth | POS | POS | POS | POS | A | NEG | POS | POS | POS | *002- *004 | POS | NEG | NEG | POS | POS | POS | SSP |
| 189 | Crowe, Deborah | POS | POS | POS | POS | A*001/ *005 | POS | POS | POS | POS | POS | POS | POS | *001/ *002 | NEG | POS | POS | SSP |
| 8030 | Davidson&Poulto | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | SSOP |
| 8031 | Dinauer, David | POS | POS | POS | POS | A | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | *001/ *002/ *004, *003 | SSP |
| 3186 | Dunckley, Heathe | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSP |
| 4251 | Ellis, Thomas | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSOP |
| 8051 | Endres, Robert | POS | POS | POS | POS | A | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | *001-*004 | SSP |
| 2549 | Fagoaga, Omar | POS | POS | POS | POS | A | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | *001/ *002/ *004, *003 | SSP |
| 8038 | Fernandez-Vina& | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSOP |
| 762 | Fischer&Mayr | POS | POS | POS | POS | A | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSP |
| 8026 | Gardiner, Clair M. | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | *003 | SSP |
| 8036 | Gillespie, Kathleen | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSP |
| 8040 | Gladman/Pellett/P | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSP |
| 234 | Gomez, Carmen | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSOP |
| 1694 | Gottwald&Hesse | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSP |
| 4985 | Graff, Ralph J. | POS | POS | POS | POS | A | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSP |
| 8041 | Han, Hoon | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSP |
| 1461 | Hidajat, M. | POS | POS | POS | POS | A | NEG | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | SSP |
| 5000 | Hsu, Susan H. | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSOP, SSP |
| 2344 | Hurley&Hartzman | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSP, SSOP |
| 3261 | Iwaki, Yui | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSP |
| 4337 | Kim, Tai-Gyu | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSP |
| 836 | KuKuruga, Debor | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSP |
| 8046 | Kusnierczyk, Piot | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | NT | NT | MULTIPLEX SSP, SSP |
| 8061 | Lanzer, G. | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSP |
| 278 | Lee, Jar-How | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSOP |
| 1108 | Linke, Robert | POS | *001- *003/ *005 | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSOP |

Table 2. KIR Exchange Sample: KDNA #89 (Hispanic)

| CTR | Investigator Name | 2DL1 | 2DL2 | 2DL3 | 2DL4 | 2DL5 | 3DL1 | 3DL2 | 3DL3 | 3DS1 | 2DS1 | 2DS2 | 2DS3 | 2DS4 | 2DS5 | 2DP1 | 3DP1 | METHOD |
|------|-------------------|------|------------------------|------|------|-------------|------|------|------|--------|---------------|------|------|------|------|------|---|---------------|
| 8067 | Marino,Susan R. | POS | POS | POS | POS | A | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSP,SSOP |
| 5142 | Marsh,Steven | POS | POS | POS | POS | POS | NEG | POS | POS | *01301 | POS | POS | NEG | NEG | POS | POS | *001/ *002/ *004, *003 | SSP,SBT |
| 733 | Mytilineos,Joanni | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSP |
| 8039 | Noreen,Harriet | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSOP |
| 8022 | Olerup,Olle | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSP |
| 3966 | Permpikul&Vejba | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSP |
| 16 | Pidwell/Askar | POS | POS | POS | POS | A | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSOP,SSP |
| 8057 | Ray&Balazs | POS | *001- *003/ *005 | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSOP |
| 3753 | Reed&Rajalingam | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSOP |
| 8064 | Roberts,Chrissy | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | *001/ *002/ *004, *003 | WGA-SSP |
| 8060 | Rost&Klein | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSOP |
| 3410 | Schroeder,M.L. | POS | POS | POS | POS | A | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | *001/ *002/ *004, *003 | SSP |
| 1426 | Senitzer,David | POS | POS | POS | POS | A*001 | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | MULTIPLEX SSP |
| 769 | Tavoularis,Sofia | POS | POS | POS | POS | A*001 | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSOP,SSP |
| 230 | Thoni,Deborah | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSOP |
| 5451 | Tilanus,Marcel | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSOP |
| 4021 | Trachtenberg,Eliz | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | MALDI-TOF |
| 8024 | Trowsdale,John | POS | POS | POS | NT | POS | NEG | NT | NT | POS | POS | POS | NEG | NEG | POS | POS | FULL, DEL | SSP |
| 5462 | Turner,E.V. | POS | POS | POS | POS | A | NEG | POS | POS | POS | *002- *004 | POS | NEG | NEG | POS | POS | POS | SSOP |
| 8053 | Tyan,Dolly | POS | POS | POS | POS | A | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | *001/ *002/ *004, *003 | SSP,SSOP |
| 8028 | Uhrberg,Markus | POS | POS | POS | NT | POS | NEG | POS | NT | POS | POS | POS | NEG | NEG | POS | NT | NT | SSP |
| 3775 | Vidan-Jeras,Blan | POS | POS | POS | POS | A | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSP |
| 8023 | Vilches,Carlos | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | FULL, DEL | SSP |
| 8047 | Wassmuth,Ralf | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSP |
| 705 | Watkins,David I. | POS | POS | POS | POS | A*001/ *005 | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | *001/ *002/ *004, *00301/ *00302 | SSP |
| 1466 | Yu,Neng | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSOP |
| 5282 | Yu_Neng/UMMHC | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSP |
| 713 | Zachary,Andrea | POS | POS | POS | POS | A | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSP |

Table 3. KIR Exchange Sample: KDNA #90 (Unknown)

| CTR | Investigator Name | 2DL1 | 2DL2 | 2DL3 | 2DL4 | 2DL5 | 3DL1 | 3DL2 | 3DL3 | 3DS1 | 2DS1 | 2DS2 | 2DS3 | 2DS4 | 2DS5 | 2DP1 | 3DP1 | METHOD |
|------|---------------------|------|---------------|------|------|-------------|------|------|------|--------|---------------|------|------|-------------------|------|------|--|-----------------------|
| 5488 | Adams, Sharon | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | POS | *001/ *002 | NEG | POS | POS | SSP |
| 8050 | Baxter-Lowe, Lee | POS | POS | POS | POS | A*001/ *005 | POS | POS | POS | POS | POS | POS | POS | *001/ *002 | NEG | POS | POS | SSP |
| 8025 | Carrington&Marti | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | POS | FULL | NEG | POS | *001/ *002/ *004/ *007, *003/ *005 / *006 | SSP |
| 785 | Chan, Soh Ha | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | RT-PCR |
| 3224 | Chen, Dong-Feng | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSP, SSOP |
| 124 | Christiansen&Wit | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NT | NT | MULTIPLEX SSP |
| 3632 | Colombe, Beth | POS | POS | POS | POS | A | POS | POS | POS | POS | *002- *004 | POS | POS | *001 | NEG | POS | POS | SSP |
| 189 | Crowe, Deborah | POS | POS | POS | POS | A*001/ *005 | NEG | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | SSP |
| 8030 | Davidson&Poulto | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSOP |
| 8031 | Dinauer, David | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | POS | *001/ *002 | NEG | POS | *001/ *002/ *004, *003 | SSP |
| 3186 | Dunkley, Heathe | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSP |
| 4251 | Ellis, Thomas | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSOP |
| 8051 | Endres, Robert | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | POS | *001/ *002 | NEG | POS | *001-004 | SSP |
| 2549 | Fagoaga, Omar | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | POS | *001/ *002 | NEG | POS | *001/ *002/ *004, *003 | SSP |
| 8038 | Fernandez-Vina& | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSOP |
| 762 | Fischer&Mayr | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | POS | *001/ *002 | NEG | POS | POS | SSP |
| 8026 | Gardiner, Clair M. | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | *001 | NEG | POS | *003 | SSP |
| 8036 | Gillespie, Kathleen | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSP |
| 8040 | Gladman/Pellet/P | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSP |
| 234 | Gomez, Carmen | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSOP |
| 1694 | Gottwald&Hesse | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSP |
| 4985 | Graff, Ralph J. | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | POS | *001/ *002 | NEG | POS | POS | SSP |
| 8041 | Han, Hoon | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | *001/ *002 | NEG | POS | POS | SSP |
| 1461 | Hidajat, M. | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | POS | DEL | NEG | POS | POS | SSP |
| 5000 | Hsu, Susan H. | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSOP, SSP |
| 2344 | Hurley&Hartzman | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSP, SSOP |
| 3261 | Iwaki, Yui | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSP |
| 4337 | Kim, Tai-Gyu | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSP |
| 836 | KuKuruga, Debor | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSP |
| 8046 | Kusnierczyk, Piot | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | FULL | NEG | NT | NT | MULTIPLEX SSP, SSP |
| 8061 | Lanzer, G. | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSP |
| 278 | Lee, Jar-How | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSOP |
| 1108 | Linke, Robert | POS | *001- *005 | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | *00101- *00103 | NEG | POS | POS | SSOP |
| 8067 | Marino, Susan R. | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSP, SSOP |
| 5142 | Marsh, Steven | POS | POS | POS | POS | POS | *002 | POS | POS | *01301 | POS | POS | POS | *001 | NEG | POS | *001/ *002/ *004, *003 | SSP, SBT |

Table 3. KIR Exchange Sample: KDNA #90 (Unknown)

| CTR | Investigator Name | 2DL1 | 2DL2 | 2DL3 | 2DL4 | 2DL5 | 3DL1 | 3DL2 | 3DL3 | 3DS1 | 2DS1 | 2DS2 | 2DS3 | 2DS4 | 2DS5 | 2DP1 | 3DP1 | METHOD |
|------|-------------------|------|---------------|------|------|-------------|---------------------------------|------|------|------|---------------|------|------|-------------------|------|------|---|---------------|
| 733 | Mytilineos,Joanni | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSP |
| 8039 | Noreen,Harriet | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSOP |
| 8022 | Olerup,Olle | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSP |
| 3966 | Permpikul&Vejba | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSP |
| 16 | Pidwell/Askar | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | POS | FULL | NEG | POS | POS | SSOP,SSP |
| 8057 | Ray&Balazs | POS | *001- *005 | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | *00101- *00103 | NEG | POS | POS | SSOP |
| 3753 | Reed&Rajalingam | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSOP |
| 8064 | Roberts,Chrissy | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | *001 | NEG | POS | *001/ *002/ *004, *003 | WGA-SSP |
| 8060 | Rost&Klein | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSOP |
| 3410 | Schroeder,M.L. | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | POS | *001/ *002 | NEG | POS | *001/ *002/ *004, *003 | SSP |
| 1426 | Senitzer,David | POS | POS | POS | POS | A*005 | *002 | POS | POS | POS | POS | POS | POS | FULL | NEG | POS | POS | MULTIPLEX SSP |
| 769 | Tavoularis,Sofia | POS | POS | POS | POS | A*005 | POS | POS | POS | POS | POS | POS | POS | FULL | NEG | POS | POS | SSOP,SSP |
| 230 | Thoni,Deborah | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSOP |
| 5451 | Tilanus,Marcel | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSOP |
| 4021 | Trachtenberg,Eliz | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | MALDI-TOF |
| 8024 | Trowsdale,John | POS | POS | POS | NT | POS | POS | NT | NT | POS | POS | POS | POS | FULL | NEG | POS | FULL, DEL | SSP |
| 5462 | Turner,E.V. | POS | POS | POS | POS | A | *001/ *015/ *056/ *057 | POS | POS | POS | *002- *004 | POS | POS | *001 | NEG | POS | POS | SSOP |
| 8053 | Tyan,Dolly | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | POS | *001/ *002 | NEG | POS | *001/ *002/ *004, *003 | SSP,SSOP |
| 8028 | Uhrberg,Markus | POS | POS | POS | NT | POS | POS | POS | NT | POS | POS | POS | POS | POS | NEG | NT | NT | SSP |
| 3775 | Vidan-Jeras,Blan | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSP |
| 8023 | Vilches,Carlos | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | FULL | NEG | POS | FULL, DEL | SSP |
| 8047 | Wassmuth,Ralf | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSP |
| 705 | Watkins,David I. | POS | POS | POS | POS | A*001/ *005 | POS | POS | POS | POS | POS | POS | POS | *001/ *002 | NEG | POS | *001/ *002/ *004, *00301/ *00302 | SSP |
| 1466 | Yu,Neng | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSOP |
| 5282 | Yu_Neng/UMMHC | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSP |
| 713 | Zachary,Andrea | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | SSP |

Table 4. KIR Exchange Sample: KDNA #91 (Caucasian)

| CTR | Investigator Name | 2DL1 | 2DL2 | 2DL3 | 2DL4 | 2DL5 | 3DL1 | 3DL2 | 3DL3 | 3DS1 | 2DS1 | 2DS2 | 2DS3 | 2DS4 | 2DS5 | 2DP1 | 3DP1 | METHOD |
|------|---------------------|------|------|------|------|----------------|------|------|------|------|---------------|------|------|----------------------------------|------|------|--|-----------------------|
| 5488 | Adams, Sharon | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | NEG | *003-*007 | POS | POS | POS | SSP |
| 8050 | Baxter-Lowe, Lee | POS | POS | POS | POS | A*001/ *005 | POS | POS | POS | POS | POS | POS | NEG | *003/*004/ *006/*007 | POS | POS | POS | SSP |
| 8025 | Carrington&Marti | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | NEG | DEL | POS | POS | *001/*002/ *004/*007, *003/*005/ *006 | SSP |
| 785 | Chan, Soh Ha | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | RT-PCR |
| 3224 | Chen, Dong-Feng | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSP, SSOP |
| 124 | Christiansen&Wit | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | NT | NT | MULTIPLEX SSP |
| 3632 | Colombe, Beth | POS | POS | POS | POS | A | POS | POS | POS | POS | *002- *004 | POS | NEG | *003/*004/ *006/*007/ *009 | POS | POS | POS | SSP |
| 189 | Crowe, Deborah | POS | NEG | POS | POS | A*001/ *005 | POS | POS | POS | POS | POS | NEG | NEG | *001/*002 | POS | POS | *003 | SSP |
| 8030 | Davidson&Poulto | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSOP |
| 8031 | Dinauer, David | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | NEG | *003-*007 | POS | POS | *001/*002/ *004, *003 | SSP |
| 3186 | Dunckley, Heathe | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSP |
| 4251 | Ellis, Thomas | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSOP |
| 8051 | Endres, Robert | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | NEG | *003/*004/ *006/*007 | POS | POS | *001-*004 | SSP |
| 2549 | Fagoaga, Omar | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | NEG | *003-*007 | POS | POS | *001/*002/ *004, *003 | SSP |
| 8038 | Fernandez-Vina& | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSOP |
| 762 | Fischer&Mayr | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | NEG | *003-*007 | POS | POS | POS | SSP |
| 8026 | Gardiner, Clair M. | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | *003 | SSP |
| 8036 | Gillespie, Kathleen | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSP |
| 8040 | Gladman/Pellett/P | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSP |
| 234 | Gomez, Carmen | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSOP |
| 1694 | Gottwald&Hesse | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSP |
| 4985 | Graff, Ralph J. | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | NEG | *003-*007 | POS | POS | POS | SSP |
| 8041 | Han, Hoon | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | *003/*004/ *006 | POS | POS | POS | SSP |
| 1461 | Hidajat, M. | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | NEG | DEL | POS | POS | POS | SSP |
| 5000 | Hsu, Susan H. | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSOP, SSP |
| 2344 | Hurley&Hartzman | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSP, SSOP |
| 3261 | Iwaki, Yui | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSP |
| 4337 | Kim, Tai-Gyu | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSP |
| 836 | KuKuruga, Debor | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSP |
| 8046 | Kusnierczyk, Piot | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | DEL | POS | NT | NT | MULTIPLEX SSP, SSP |
| 8061 | Lanzer, G. | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSP |
| 278 | Lee, Jar-How | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSOP |

Table 4. KIR Exchange Sample: KDNA #91 (Caucasian)

| CTR | Investigator Name | 2DL1 | 2DL2 | 2DL3 | 2DL4 | 2DL5 | 3DL1 | 3DL2 | 3DL3 | 3DS1 | 2DS1 | 2DS2 | 2DS3 | 2DS4 | 2DS5 | 2DP1 | 3DP1 | METHOD |
|------|-------------------|------|------------------------|------|------|----------------|--|------|------|--------|---------------|------|------|--------------------------------------|------|------|---|---------------|
| 1108 | Linke,Robert | POS | *001- *003/ *005 | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | *00103, *003/ *004/ *006- *009 | POS | POS | POS | SSOP |
| 8067 | Marino,Susan R. | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSP,SSOP |
| 5142 | Marsh,Steven | POS | POS | POS | POS | POS | POS | POS | POS | *01301 | POS | POS | NEG | *003/ *004/ *006/ *007/ *009 | POS | POS | *001/ *002/ *004, *003 | SSP,SBT |
| 733 | Mytilineos,Joanni | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSP |
| 8039 | Noreen,Harriet | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSOP |
| 8022 | Olerup,Olle | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSP |
| 3966 | Permpikul&Vejba | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSP |
| 16 | Pidwell/Askar | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | NEG | DEL | POS | POS | POS | SSOP,SSP |
| 8057 | Ray&Balazs | POS | *001- *003/ *005 | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | *00103, *003/ *004/ *006- *009 | POS | POS | POS | SSOP |
| 3753 | Reed&Rajalingam | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSOP |
| 8064 | Roberts,Chrissy | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | *003/ *004/ *006- *009 | POS | POS | *001/ *002/ *004, *003 | WGA-SSP |
| 8060 | Rost&Klein | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSOP |
| 3410 | Schroeder,M.L. | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | NEG | *003-*007 | POS | POS | *001/ *002/ *004, *003 | SSP |
| 1426 | Senitzer,David | POS | POS | POS | POS | A*001 | *00401 | POS | POS | POS | POS | POS | NEG | DEL | POS | POS | POS | MULTIPLEX SSP |
| 769 | Tavoularis,Sofia | POS | POS | POS | POS | A*001 | POS | POS | POS | POS | POS | POS | NEG | DEL | POS | POS | POS | SSOP,SSP |
| 230 | Thoni,Deborah | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSOP |
| 5451 | Tilanus,Marcel | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSOP |
| 4021 | Trachtenberg,Eliz | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | MALDI-TOF |
| 8024 | Trowsdale,John | POS | POS | POS | NT | POS | POS | NT | NT | POS | POS | POS | NEG | DEL | POS | POS | FULL,DEL | SSP |
| 5462 | Turner,E.V. | POS | POS | POS | POS | A | *001/ *004/ *015/ *056/ *057 | POS | POS | POS | *002- *004 | POS | NEG | *003/ *004/ *006/ *007/ *009 | POS | POS | POS | SSOP |
| 8053 | Tyan,Dolly | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | NEG | *003-*007 | POS | POS | *001/ *002/ *004, *003 | SSP,SSOP |
| 8028 | Uhrberg,Markus | POS | POS | POS | NT | POS | POS | POS | NT | POS | POS | POS | NEG | POS | POS | NT | NT | SSP |
| 3775 | Vidan-Jeras,Blan | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSP |
| 8023 | Vilches,Carlos | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | DEL | POS | POS | FULL,DEL | SSP |
| 8047 | Wassmuth,Ralf | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSP |
| 705 | Watkins,David I. | POS | POS | POS | POS | A*001/ *005 | POS | POS | POS | POS | POS | POS | NEG | *003/ *004/ *006/ *007 | POS | POS | *001/ *002/ *004, *00301/ *00302 | SSP |
| 1466 | Yu,Neng | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSOP |
| 5282 | Yu_Neng/UMMHC | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSP |
| 713 | Zachary,Andrea | POS | POS | POS | POS | A | POS | POS | POS | POS | POS | POS | NEG | POS | POS | POS | POS | SSP |

Table 5. KIR Exchange Sample: KDNA #92 (Hispanic)

| CTR | Investigator Name | 2DL1 | 2DL2 | 2DL3 | 2DL4 | 2DL5 | 3DL1 | 3DL2 | 3DL3 | 3DS1 | 2DS1 | 2DS2 | 2DS3 | 2DS4 | 2DS5 | 2DP1 | 3DP1 | METHOD |
|------|---------------------|------|------|------|------|-------------|--------|------|------|--------|---------------|------|------|-------------------|------|------|---------------------|-----------------------|
| 5488 | Adams, Sharon | POS | NEG | POS | POS | A | POS | POS | POS | POS | POS | NEG | NEG | *001/ *002 | POS | POS | *003 | SSP |
| 8050 | Baxter-Lowe, Lee | POS | NEG | POS | POS | A*001/ *005 | POS | POS | POS | POS | POS | NEG | NEG | *001/ *002 | POS | POS | *003 | SSP |
| 8025 | Carrington&Marti | POS | NEG | POS | POS | A | POS | POS | POS | POS | POS | NEG | NEG | FULL | POS | POS | *003/ *005/ *006 | SSP |
| 785 | Chan, Soh Ha | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | RT-PCR |
| 3224 | Chen, Dong-Feng | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSOP, SSP |
| 124 | Christiansen&Wit | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | NT | NT | MULTIPLEX SSP |
| 3632 | Colombe, Beth | POS | NEG | POS | POS | A | POS | POS | POS | POS | *002- *004 | NEG | NEG | *001 | POS | POS | POS | SSP |
| 189 | Crowe, Deborah | POS | POS | POS | POS | A*001/ *005 | POS | POS | POS | POS | POS | POS | NEG | *003- *007 | POS | POS | POS | SSP |
| 8030 | Davidson&Poulto | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | POS | SSOP |
| 8031 | Dinauer, David | POS | NEG | POS | POS | A | POS | POS | POS | POS | POS | NEG | NEG | *001/ *002 | POS | POS | *003 | SSP |
| 3186 | Dunkley, Heathe | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSP |
| 4251 | Ellis, Thomas | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSOP |
| 8051 | Endres, Robert | POS | NEG | POS | POS | A | POS | POS | POS | POS | POS | NEG | NEG | *001/ *002 | POS | POS | *003 | SSP |
| 2549 | Fagoaga, Omar | POS | NEG | POS | POS | A | POS | POS | POS | POS | POS | NEG | NEG | *001/ *002 | POS | POS | *003 | SSP |
| 8038 | Fernandez-Vina& | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSOP |
| 762 | Fischer&Mayr | POS | NEG | POS | POS | A | POS | POS | POS | POS | POS | NEG | NEG | *001/ *002 | POS | POS | *003 | SSP |
| 8026 | Gardiner, Clair M. | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | *001 | POS | POS | POS | SSP |
| 8036 | Gillespie, Kathleen | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSP |
| 8040 | Gladman/Pellett/P | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSP |
| 234 | Gomez, Carmen | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSOP |
| 1694 | Gottwald&Hesse | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSP |
| 4985 | Graff, Ralph J. | POS | NEG | POS | POS | A | POS | POS | POS | POS | POS | NEG | NEG | *001/ *002 | POS | POS | *003 | SSP |
| 8041 | Han, Hoon | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | *001/ *002 | POS | POS | *003 | SSP |
| 1461 | Hidajat, M. | POS | NEG | POS | POS | A | POS | POS | POS | POS | POS | NEG | NEG | DEL | POS | POS | *003 | SSP |
| 5000 | Hsu, Susan H. | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSOP, SSP |
| 2344 | Hurley&Hartzman | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSP, SSOP |
| 3261 | Iwaki, Yui | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSP |
| 4337 | Kim, Tai-Gyu | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSP |
| 836 | KuKuruga, Debor | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSP |
| 8046 | Kusnierczyk, Piot | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | FULL | POS | NT | NT | MULTIPLEX SSP, SSP |
| 8061 | Lanzer, G. | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSP |
| 278 | Lee, Jar-How | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSOP |
| 1108 | Linke, Robert | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | *00101- *00103 | POS | POS | POS | SSOP |
| 8067 | Marino, Susan R. | POS | NEG | POS | POS | A | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSOP, SSP |
| 5142 | Marsh, Steven | POS | NEG | POS | POS | POS | *01502 | POS | POS | *01301 | POS | NEG | NEG | *001 | POS | POS | *003 | SSP, SBT |
| 733 | Mytilineos, Joanni | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSP |
| 8039 | Noreen, Harriet | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSOP |
| 8022 | Olerup, Olle | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSP |

Table 5. KIR Exchange Sample: KDNA #92 (Hispanic)

| CTR | Investigator Name | 2DL1 | 2DL2 | 2DL3 | 2DL4 | 2DL5 | 3DL1 | 3DL2 | 3DL3 | 3DS1 | 2DS1 | 2DS2 | 2DS3 | 2DS4 | 2DS5 | 2DP1 | 3DP1 | METHOD |
|------|-------------------|------|------|------|------|-------------|---------------------------------|------|------|------|---------------|------|------|-------------------|------|------|---------------------|---------------|
| 3966 | Permpikul&Vejba | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSP |
| 16 | Pidwell/Askar | POS | NEG | POS | POS | A | POS | POS | POS | POS | POS | NEG | NEG | FULL | POS | POS | POS | SSOP,SSP |
| 8057 | Ray&Balazs | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | *00101- *00103 | POS | POS | POS | SSOP |
| 3753 | Reed&Rajalingam | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSOP |
| 8064 | Roberts,Chrissy | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | *001 | POS | POS | *003 | WGA-SSP |
| 8060 | Rost&Klein | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSOP |
| 3410 | Schroeder,M.L. | POS | NEG | POS | POS | A | POS | POS | POS | POS | POS | NEG | NEG | *001/ *002 | POS | POS | *003 | SSP |
| 1426 | Senitzer,David | POS | NEG | POS | POS | A*001 | *01502 | POS | POS | POS | POS | NEG | NEG | FULL | POS | POS | POS | MULTIPLEX SSP |
| 769 | Tavoularis,Sofia | POS | NEG | POS | POS | A*001 | POS | POS | POS | POS | POS | NEG | NEG | FULL | POS | POS | *003/ *005/ *006 | SSOP,SSP |
| 230 | Thoni,Deborah | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSOP |
| 5451 | Tilanus,Marcel | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSOP |
| 4021 | Trachtenberg,Eliz | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | MALDI-TOF |
| 8024 | Trowsdale,John | POS | NEG | POS | NT | POS | POS | NT | NT | POS | POS | NEG | NEG | FULL | POS | POS | DEL | SSP |
| 5462 | Turner,E.V. | POS | NEG | POS | POS | A | *001/ *015/ *056/ *057 | POS | POS | POS | *002- *004 | NEG | NEG | *001 | POS | POS | POS | SSOP |
| 8053 | Tyan,Dolly | POS | NEG | POS | POS | A | POS | POS | POS | POS | POS | NEG | NEG | *001/ *002 | POS | POS | *003 | SSP,SSOP |
| 8028 | Uhrberg,Markus | POS | NEG | POS | NT | POS | POS | POS | NT | POS | POS | NEG | NEG | POS | POS | NT | NT | SSP |
| 3775 | Vidan-Jeras,Blan | POS | NEG | POS | POS | A | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSP |
| 8023 | Vilches,Carlos | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | FULL | POS | POS | DEL | SSP |
| 8047 | Wassmuth,Ralf | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSP |
| 705 | Watkins,David I. | POS | NEG | POS | POS | A*001/ *005 | POS | POS | POS | POS | POS | NEG | NEG | *001/ *002 | POS | POS | *003 | SSP |
| 1466 | Yu,Neng | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSOP |
| 5282 | Yu_Neng/UMMHC | POS | NEG | POS | POS | POS | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | POS | SSP |
| 713 | Zachary,Andrea | POS | NEG | POS | POS | A | POS | POS | POS | POS | POS | NEG | NEG | POS | POS | POS | *003 | SSP |

PARTICIPATING CENTERS

| Name | | | City/State | Country | Name | | | City/State | Country |
|-------------------------|----------|------|------------------|-----------|---------------------|------------|------|----------------|-------------|
| Adams | Sharon | | Bethesda MD | | Lanzer | G. | Prof | Graz | Austria |
| Baxter-Lowe | Lee Ann | Dr | San Francisco CA | | Lee | Jar-How | Dr | Canoga Park CA | |
| Carrington/Martin | | Drs | Frederick MD | | Linke | Robert | PhD | Stamford CT | |
| Chan | Soh Ha | Prof | Singapore | Singapore | Marino | Susana R | | Chicago IL | |
| Charlton | Ronald | PhD | Jacksonville FL | | Marsh | Steven | Dr | London | England |
| Chen | Dongfeng | Dr | Durham NC | | Mytilineos | Joannis | MD | Ulm | Germany |
| Christiansen/Witt | | | Perth | Australia | Noreen | Harriet | | Minneapolis MN | |
| Colombe | Beth | PhD | Philadelphia PA | | Olerup | Olle | | Saltsjobaden | Sweden |
| Costeas | Paul A. | Dr | Nicosia | Cyprus | Permpikul/Vejbaesya | | Drs | Bangkok | Thailand |
| Crowe | Deborah | PhD | Nashville TN | | Pidwell/Askar | | | Cleveland OH | |
| Davidson/Poulton | | Drs | Manchester | England | Ray/Balazs | | | Stamford CT | |
| Dinauer | David | | Brown Deer WI | | Reed/Rajalingam | | Drs | Los Angeles CA | |
| Dunckley | Heather | PhD | Sydney NSW | Australia | Roberts | Chrissy H. | | London | England |
| Ellis | Thomas | PhD | Milwaukee WI | | Rost/Klein | | Drs | Martinsried | Germany |
| Endres | Robert | Drs | Tempe AZ | | Schroeder | M.L. | MD | Winnipeg MB | Canada |
| Fagoaga | Omar | Dr | Detroit MI | | Senitzer | David | PhD | Duarte CA | |
| Fernandez-Vina/Cano | | Drs | Houston TX | | Tavoularis | Sofia | Dr | Ottawa ON | Canada |
| Fischer/Mayr | | Drs | Vienna | Austria | Thoni | Deborah | MD | Orlando FL | |
| Gardiner | Clair | PhD | Dublin | Ireland | Tiercy | Jean-Marie | Dr | Geneva | Switzerland |
| Gillespie | Kathleen | Dr | Bristol | UK | Tilanus | Marcel | Dr | Maastricht | Germany |
| Gladman/Pellett/Pollack | | | Toronto ON | Canada | Trachtenberg | Elizabeth | PhD | Oakland CA | |
| Gomez | Carmen | | Miami FL | | Trowsdale | John | Prof | Cambridge | UK |
| Gottwald/Hesse | Norbert | | Lich | Germany | Turner | E.V. | PhD | Memphis TN | |
| Graff | Ralph J. | Dr | St Louis MO | | Tyan | Dolly | Dr | Palo Alto | |
| Han | Hoon | Dr | Seoul | S. Korea | Uhrberg | Markus | Dr | Dusseldorf | Germany |
| Hidajat | Melanny | | Brugge | Belgium | Vidan-Jeras | Blanka | | Ljubljana | Slovenia |
| Holdsworth | Rhonda | | South Melbourne | Australia | Vilches | Carlos | Dr | Madrid | Spain |
| Hsu | Susan H. | PhD | Philadelphia PA | | Wassmuth | Ralf | Prof | Dresden | Germany |
| Hurley/Hartzman | | Drs | Rockville MD | | Watkins | David | PhD | Madison WI | |
| Kim | Tai-Gyu | Prof | Seoul | S. Korea | Yu | Neng | MD | Dedham MA | |
| Kotsch | Katja | PhD | Berlin | Germany | Yu | Neng | MD | Worcester MA | |
| KuKuruga | Debra | PhD | Baltimore MD | | Zachary | Andrea | PhD | Baltimore MD | |
| Kusnierczyk | Piotr | | Wroclaw | Poland | | | | | |