FERTILYSIS
MEDICAL LABORATORY & MEDICAL PRACTICES
1 ARGYROYPOLEOS St., 164 51 ARGYROUPOLI
GREECE

LAB REPORT

NAOMI FISHER (F) 20/01/2025

Patient Details
AGE (DOB): 25/05/1981
ORDER NUMBER: U9J7Q20
SAMPLE ID: 2412130006

Specimen Details
TYPE: PERIPHERAL BLOOD
RECEIVED: 14/01/2024
CONDITION: ACCEPTABLE (GOOD)

Partner Details
NAME: JAMES STRAY
AGE (DOB): 08/04/1980
GENDER: MALE

REPRODUCTIVE IMMUNOLOGY AUTOIMMUNITY TESTING

NK cell profile/Regulatory T-Cell assay (Tregs)	Your Result	Ref. Range
CD56+/CD16+ NK lymphocytes	8.29%	<12.0
Regulatory T-Cells (Tregs)	**0.77%**	>0.8

INTERPRETATION OF RESULTS AND RECOMMENDATIONS: LOW RISK

DIAGNOSIS: LOW RISK AUTOIMMUNITY DYSFUNCTION DETECTED

DESCRIPTION: The results of the autoimmunity dysfunction test so far demonstrate a normal immunological profile **with the exception of marginally low levels of Regulatory T-Cells (Tregs).** Tregs are essential mediators of the immune tolerance required to initiate pregnancy and a diminished Treg population may fail to effectively suppress pro-inflammatory Th1 immune responses, compromising the embryo's ability to evade maternal immune rejection.. **However, yours are only marginally reduced and thus considered of lower clinical significance.**

TREATMENT: **Treatment is optional and may not be required strictly based on the above results.** Your healthcare provider may consider anti-inflammatory and immune-modulating treatments in relation to your overall fertility clinical and laboratory testing profile. Options such as **Lymphocyte Immunization Therapy (LIT)** and/or **Intralipid treatment** could be evaluated as potential interventions tailored to address the observed immunological profile. This approach aims to optimize the balance of immune responses and enhance the likelihood of successful reproductive outcomes. The decision to pursue such treatments should be carefully discussed and personalized based on your individual health status and reproductive history.

RETESTING: During or following treatment, retesting is optional to evaluate therapeutic efficacy. At your doctor's discretion, continued monitoring may be advisable to ensure ongoing vigilance regarding your immunological status during pregnancy.

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REPRODUCTIVE IMMUNOLOGY ALLOIMMUNITY TESTING

Leukocyte antibody detection (LAD) (crossmatch)	Result	Ref. Range
T cells (IgM)	**Negative**	positive
T cells (IgG)	**Borderline increase**	positive
B cells (IgM)	**Negative**	positive
B cells (IgG)	**Borderline increase**	positive

- For results identified as positive, the percentage of positive T or B cells will be reported.

HLA DQA-1 high resolution (2-field) typing analysis

Allele 1	**DQA1*01:02 (Partial Match detected)**	no matching
Allele 2	DQA1*02:01 (No Match detected)	no matching

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Partner Allele 1		DQA1*01:02 (Partial Match detected)	no matching
Partner Allele 2		DQA1*03:01 (No Match detected)	no matching

Maternal KIR typing	Possible genotype	Result	
The following genotype is likely for the patient:	2DL1, 2DL2, 2DL3, 2DL4, 2DL5A, 2DL5B, 2DS1, 2DS2, 2DS3, 2DS5, 3DL2, 3DL3, 3DS1, 2DP1, 3DP1	Genotype Bx (AB+BB)	Bx

Paternal HLA-C high resolution (2-field) allele group typing analysis		Possible paternal haplotypes	
Allele 1	C*03:04:15/03:04:32/03:118/03:172	C1	C1
Allele 2	C*14:22	C1	C1

INTERPRETATION OF RESULTS AND RECOMMENDATIONS: POTENTIALLY HIGH RISK

DIAGNOSIS:	**POSSIBLE ALLOIMMUNITY DYSFUNCTION DETECTED**
LAD:	**The sample was negative or just borderline positive for anti-paternal antibodies.** With a history of recurrent miscarriages, this result can be considered unfavorable for pregnancy, however, your doctor will decide on the significance of this result based on your fertility history.
HLA DQA1 Matching	**You have a partial match with your partner. A partial HLA-DQα match between the two partners trying to conceive indicates a 50% chance of feto-maternal match and has been associated with reproductive immunopathology**, such as recurrent spontaneous abortions (RSA), idiopathic infertility and implantation failure in both natural and assisted reproduction attempts.
KIR/HLA-C2 Mismatch	KIR/HLA-C genotyping is used to assess the compatibility between uterine NK KIRs and HLA-C of paternal origin presented by the embryo. Maternal KIR analysis of the patient indicates a low-risk genotype for infertility consistent with the KIR Bx (AB+BB) genotype. Parental HLA-C genotyping indicates no paternal HLA-C2 expression (C1/C1 genotype) which is considered a low-risk genotype for infertility. **Overall, the combination of the above maternal and paternal genotypes is not considered a risk factor for infertility or recurrent pregnancy loss.**
TREATMENT:	**A partial HLA-DQα match**, can lead to immune tolerance issues that may result in recurrent implantation failure (RIF) or recurrent pregnancy loss (RPL). **This situation can be challenging to address, but specialized treatments and strategies are available that can significantly increase the chances of a successful pregnancy or, in some cases, bypass the issue entirely.** A **personalized approach** that may include LIT, IVIg, Intralipid infusions, steroids or other specialized immune-modulating treatments in conjunction with **close monitoring to assess treatment effectiveness and minimize potential medication side effects**, is recommended. Each case should be assessed individually by **an experienced reproductive immunologist or fertility specialist with expertise in immune-related infertility**. These treatments aim to promote immune tolerance and improve the chances of successful implantation and pregnancy. ***Note**: Many of these treatments are still evolving, and research continues. It's essential for couples to consult with a qualified specialist to determine the best course of action based on their unique situation and the latest scientific evidence.*
RETESTING:	Following treatment retesting is optional. At your doctor's discretion, following LIT therapy, LAD re-testing may be advisable to evaluate therapeutic efficacy.

P.D. Venieratos Ph.D.
Reproductive Biologist