

# Risk Factors Associated with Recurrent Pregnancy Loss and Outcome of Pre-Implantation Genetic Screening of Affected Couples

Nayeralsadat Fatemi, Ph.D.<sup>1,2#</sup>, Maryam Varkiani, M.Sc.<sup>2,3#</sup>, Fariba Ramezani, M.D.<sup>4</sup>, Babak Babaabasi, M.Sc.<sup>2</sup>, Azadeh Ghaehri, Ph.D.<sup>5</sup>, Alireza Biglari, Ph.D.<sup>1\*</sup>, Mehdi Totonchi, Ph.D.<sup>2,6\*</sup>

1. Department of Genetics and Molecular Medicine, School of Medicine, Zanzan University of Medical Sciences (ZUMS), Zanzan, Iran

2. Department of Genetics, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran

3. Department of Molecular Genetics, Faculty of Basic Sciences and Advanced Technologies in Biology, University of Science and Culture, Tehran, Iran

4. Department of Endocrinology and Female Infertility, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran

5. Reproductive Epidemiology Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran

6. Department of Stem Cells and Developmental Biology, Cell Science Research Center, Royan Institute for Stem Cell Biology and Technology, ACECR, Tehran, Iran

**Table S1:** PGS outcome in RPL couples

| PGS/aCGH | Chromosomal state of couples | Cycles | Cycles with embryo transfer | Pregnancy | Pregnancy/Embryo transfer | Live birth  | Normal embryo/Total |
|----------|------------------------------|--------|-----------------------------|-----------|---------------------------|-------------|---------------------|
| Normal   |                              | 70     | 51                          | 27        | 27/51 (52.94%)            | 19 (70.37%) | 85/284 (32.19%)     |
| Abnormal |                              | 13     | 9                           | 3         | 3/9 (33.33%)              | 3 (100%)    | 12/58 (20.68%)      |
| Total    |                              | 83     | 60                          | 30        | 30/60(50%)                | 22(73.33%)  | 97/306(31.69%)      |

PGS; Pre-implantation genetic screening, RPL; Recurrent pregnancy loss, and aCGH; Array comparative genomic hybridization.

Received: 5/October/2020, Accepted: 30/January/2021

\*Corresponding Addresses:

P.O.Box: 45139-53115, Department of Genetics and Molecular Medicine, School of Medicine, Zanzan University of Medical Sciences (ZUMS), Zanzan, Iran

P.O.Box: 16635-148, Department of Genetics, Reproductive Biomedicine Research Center, Royan Institute for Reproductive Biomedicine, ACECR, Tehran, Iran

Emails: biglari@zums.ac.ir, m.totonchi@royaninstitute.org

# The first two authors equally contributed to this work.