RBMO

LETTER

Early menopause and epigenetic biomarkers of ageing

Yunsung Lee[1], Hans Ivar Hanevik[1,2,*]

We read with interest Professor Laven's recent *Countercurrent* contribution stating that early menopause is a result of premature general ageing (*Laven, 2022*). In our opinion, his position is anything but countercurrent. In fact, we recently published data in support of Professor Laven's reasoning from the field of epigenetics (*Lee et al., 2022*). Currently available epigenetic clocks express the epigenetic age of individuals in contrast to their chronological age. These epigenetic biomarkers of ageing have proven themselves as compelling predictors of age-related conditions such as the cardiovascular disease mentioned by Professor Laven. Specifically, our paper showed that mothers who became pregnant following IVF were epigenetically older than their peers who conceived by coitus, and we proposed them being closer to menopause as one biologically sensible reason for this finding. This proposition resonates with a previous epigenetic study by *Levine and co-workers (2016)* in other cohorts, showing that an early menopause is associated with accelerated epigenetic ageing measured after the reproductive period. Thus, while we acknowledge that DNA damage could also contribute to general ageing and early menopause, we think that by excluding evidence from the field of epigenetics Professor Laven has understated his case.

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[1] Centre for Fertility and Health, Norwegian Institute of Public Health, Oslo, Norway
[2] Fertility Department Sør, Telemark Hospital Trust, Porsgrunn, Norway

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