

## Preface

The cyclic ovary can be seen as a site of tissue damage, repair and precisely controlled tissue homeostasis, as long ovulation and luteolysis can be compared with acute and chronic inflammation. Innate immunity appears to be a powerful force in the endocrine system, representing a novel concept. In this monograph, remarkable evidence is given for the immune-privileged ovary being an implant on the chicken chorioallantoic membrane with a non reactive mesenchyme. Mild to severe tissue damages due to follicular atresia, follicular rupture, or intraovarian oocyte release do no lasting harm. The most exciting part relates to the analysis of cytokeratin-positive (CK<sup>+</sup>) cells, comparing the fate mapping of this cell type from the fetal ovary to the adult organ. Findings on toll-like receptor 4 regulation and interferon- $\gamma$ -dependent positive effects indicate that CK<sup>+</sup> cells from human preovulatory follicles and bovine corpora lutea have similarities with nonlymphoid dendritic cells, a discovery that has the makings of a top story in basic and clinical research on the ovary.

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Cytokeratin-Positive Cells as Potential Dendritic Cells

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