

ENDOMETRIOSIS & ADENOMYOSIS SOCIETY

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"One out of every ten women has endometriosis"

FOREWORD

Hello everyone,

We are delighted to be with you again in our 23rd issue.

In this new issue of our bulletin, which is published every three months, you can find the latest updates regarding endometriosis and adenomyosis, as well as detailed insights into our society's recent activities.

In this edition, we have compiled comprehensive literature summaries on several critical topics: the relationship between endometriosis and menopause, the impact of endocrine-disrupting chemicals on the incidence of endometriosis, the co-existence of endometriosis and migraine, the diagnostic value of PET scans in endometriosis patients, the healthcare and emotional expectations of patients and their family members, and the specific role of T-cells in the pathogenesis and development of endometriosis.

Regarding our academic activities during this period, our traditional "ENDO/ADENO Article Hour" sessions were successfully held on Thursday, August 11, and Thursday, September 8, 2022. Moderated by Prof. Dr. Engin Oral, these highly engaging scientific gatherings provided a platform for interactive discussions on breakthrough global articles with heavy participation from our colleagues.

Furthermore, this issue features a very special and exclusive interview. We had the privilege of interviewing Shannon Cohn, the director of the globally acclaimed documentary "Endo What?" and the newly released "Below the Belt." This interview sheds light on social awareness, patient advocacy, and the global impact of visual media on health policies. We are confident that you will read these insights with great interest.

We hope this scientific resource serves as an inspiring and beneficial guide for our entire medical community. We look forward to meeting you again in our upcoming issues filled with healthier days and pioneering scientific developments.

Best regards,

Executive Board of the Endometriosis & Adenomyosis Society

FEATURED CONTENT & BULLET POINTS

- **Co-Existence of Endometriosis and Migraine:** Clinical evaluation and shared neuro-inflammatory pathophysiological pathways.
- **Expectations of Patients and Relatives:** A patient-centric approach to diagnosing and managing chronic gynecological pain.
- **Hormonal Chemicals & Endometriosis:** How environmental endocrine-disrupting compounds correlate with lesion progression.
- **Exclusive Interview:** Shannon Cohn, Director of "Below the Belt" and "Endo What?".

FEATURED SCIENTIFIC LITERATURE REVIEW

Experimental Evaluation of Metformin, Letrozole, and Atorvastatin on Inflammation and Apoptosis in Rat Models of Ovarian and Peritoneal Endometriosis

Methodology & Study Design: In this pioneering experimental study, 35 rats were randomly allocated into five separate groups to investigate therapeutic strategies aimed at preserving fertility and minimizing inflammatory pathways. Group 1 served as the sham-operated control group. Group 2 consisted of the untreated endometriosis models. Group 3 received oral Metformin at a dose of 100 mg/kg/day. Group 4 was treated with oral Letrozole at 0.1 mg/kg/day, and Group 5 received oral Atorvastatin at 2.5 mg/kg/day. The experimental regimen was maintained strictly for 28 days.

Key Metrics & Tissue Analysis: Following the completion of the 28-day treatment window, advanced histopathological examinations were performed on both ovarian and peritoneal tissues. Specifically, immunoexpressions of Ki67 (proliferation marker), Bax (pro-apoptotic marker), and Bcl-2 (anti-apoptotic marker) were evaluated. Concurrently, concentrations of critical inflammatory cytokines including Interleukin-6 (IL-6), Interleukin-8 (IL-8), and Tumor Necrosis Factor-alpha (TNF- α) were quantitatively measured directly from the collected peritoneal fluid samples.

Results & Statistical Conclusions: All medical treatment arms (Metformin, Letrozole, and Atorvastatin) demonstrated a statistically significant down-regulation in Ki67 cellular expression. Conversely, a prominent increase in pro-apoptotic Bax expression was observed across all treated samples compared to the untreated endometriosis cohort. Furthermore, anti-apoptotic Bcl-2 expression was significantly diminished in the therapeutic intervention groups. On the inflammatory cascade front, peritoneal fluid concentrations of IL-6, IL-8, and TNF- α were markedly lower in all treated groups than in the untreated endometriosis group. In summary, Metformin, Letrozole, and Atorvastatin showcased exceptional apoptosis induction properties and strong anti-inflammatory effects on both ovarian and peritoneal endometriosis lesions within these experimental models.

The Endometriosis e-Bulletin is developed periodically by the Endometriosis & Adenomyosis Society. For scientific inquiries, article submissions, or collaborations, please visit our official channels.

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