

İSTANBUL MEDIPOL UNIVERSITY  
SCHOOL OF PHARMACY & ACTA PHARMACEUTICA SCIENCIA

# 2<sup>ND</sup> ACTA PHARMACEUTICA SCIENCIA INTERNATIONAL SYMPOSIUM (2<sup>ND</sup> APSIS) MEDICINAL PLANTS & PHYTOTHERAPY



MEDICINAL  
PLANTS



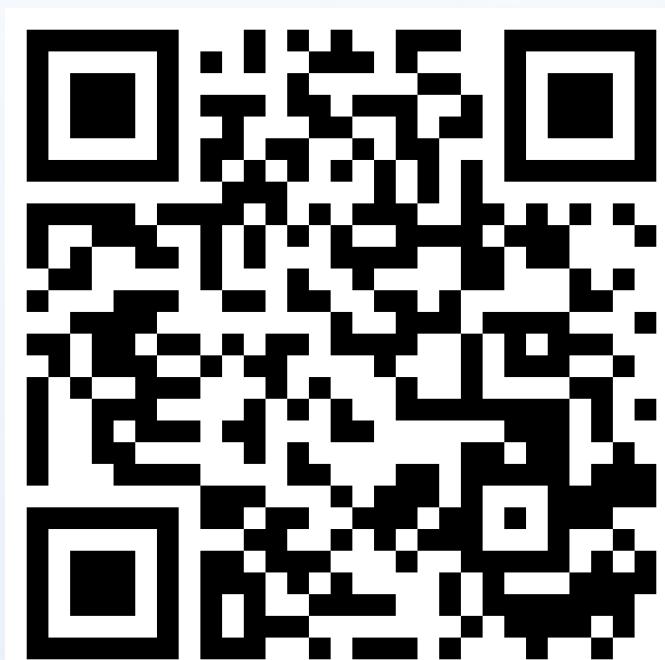
PHYTOTHERAPY

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## CO-CHAIRS

ASSOC. PROF. GÜLNUR EKİŞİ BONA & ASSİST. PROF. İPEK EROĞLU



FOR REGISTRATION

DATE : OCTOBER 4<sup>TH</sup>, 2023  
TIME : 11.00-16.30  
PLACE : ONLINE SYMPOSIUM  
LINK : <https://medipol-edu-tr.zoom.us/j/96268444163>

**2<sup>ND</sup> ACTA PHARMACEUTICA SCIENCIA**  
INTERNATIONAL SYMPOSIUM (2<sup>ND</sup> APSIS)



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**2<sup>ND</sup>ACTA PHARMACEUTICA SCIENCIA  
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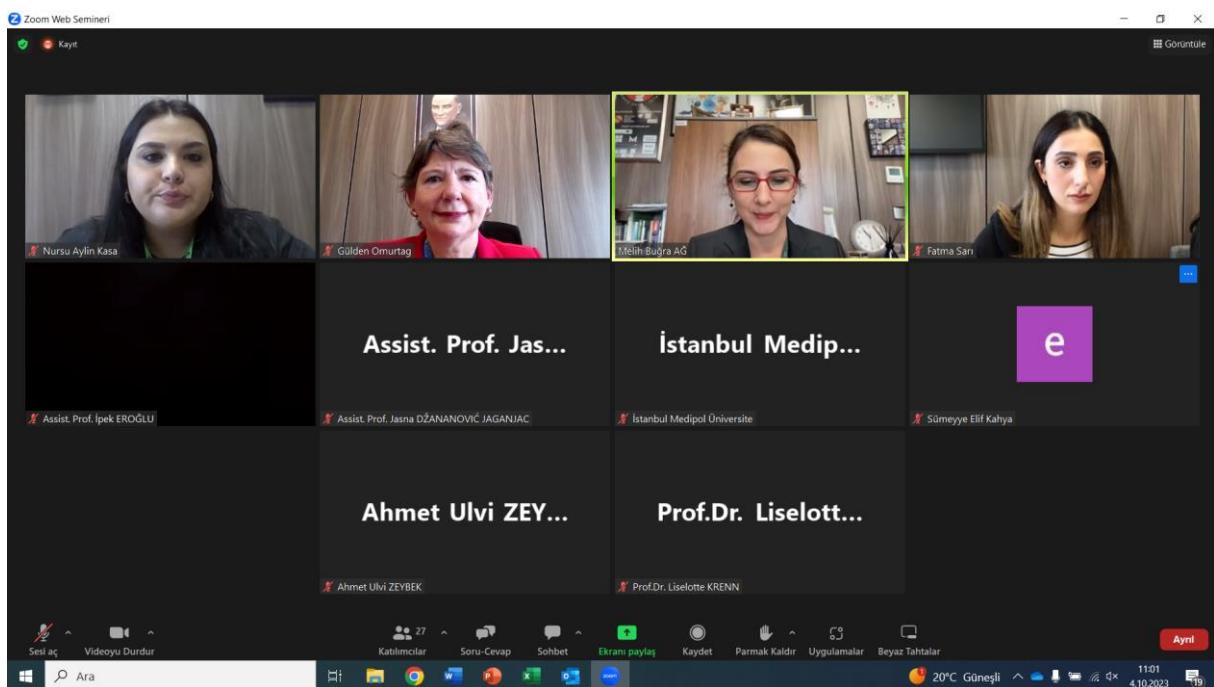
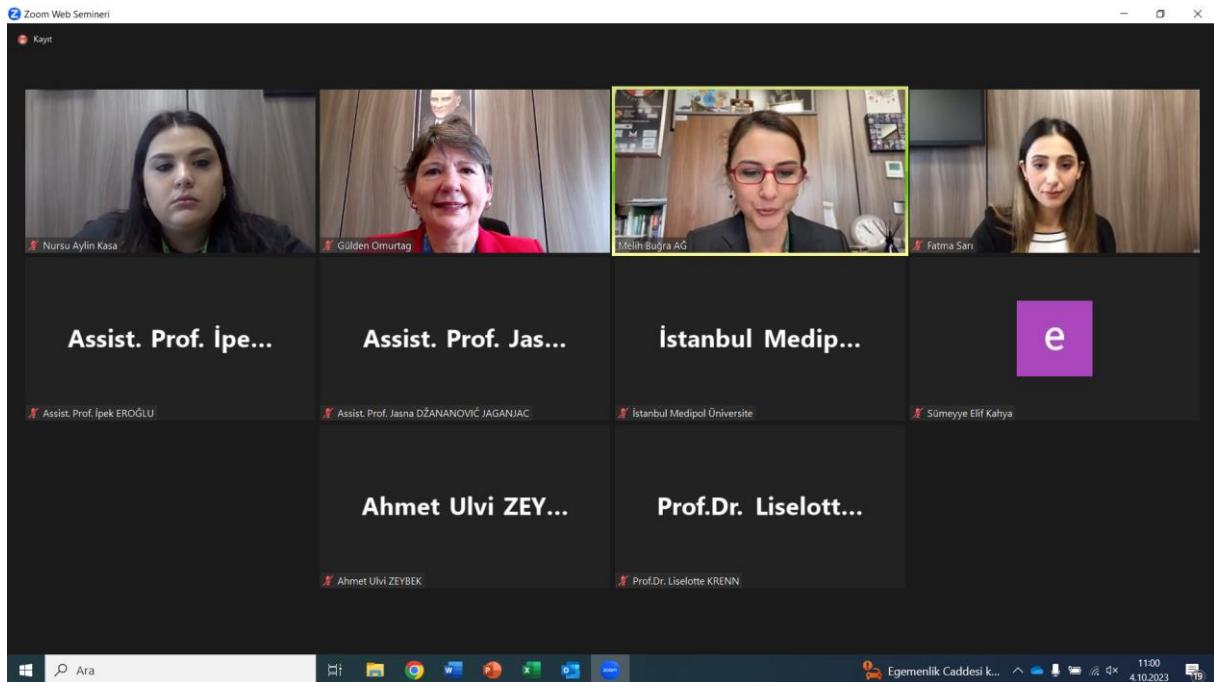
**MEDICINAL PLANTS & PHYTOTHERAPY**

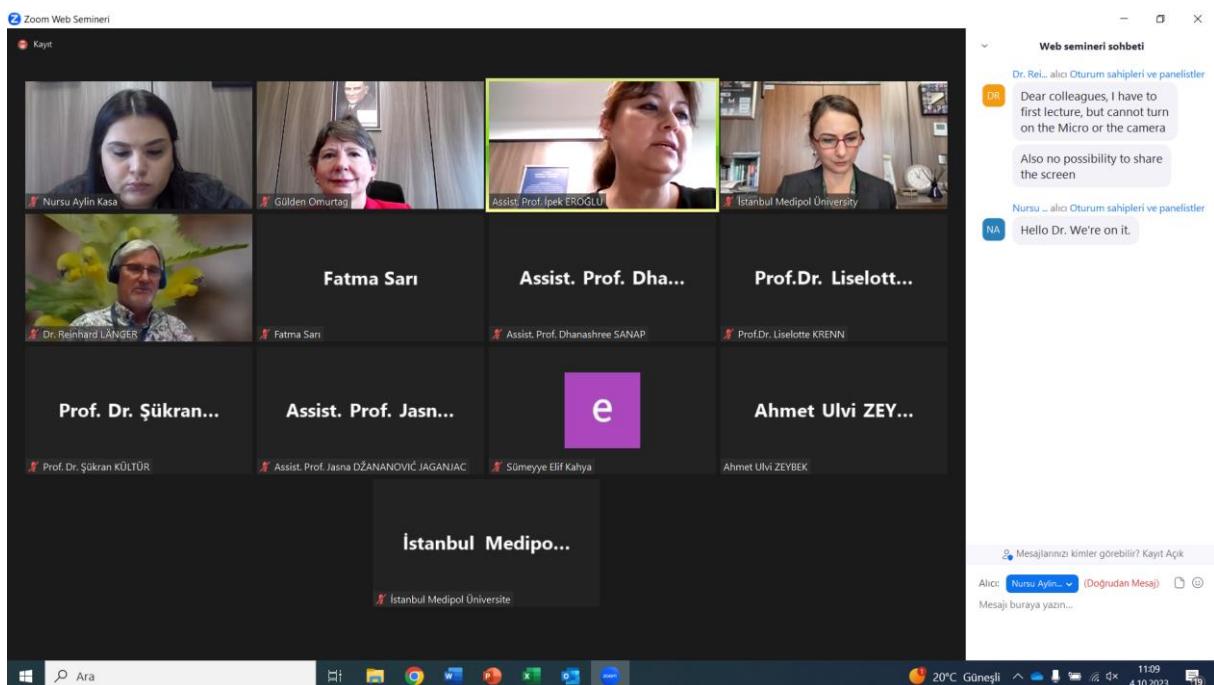
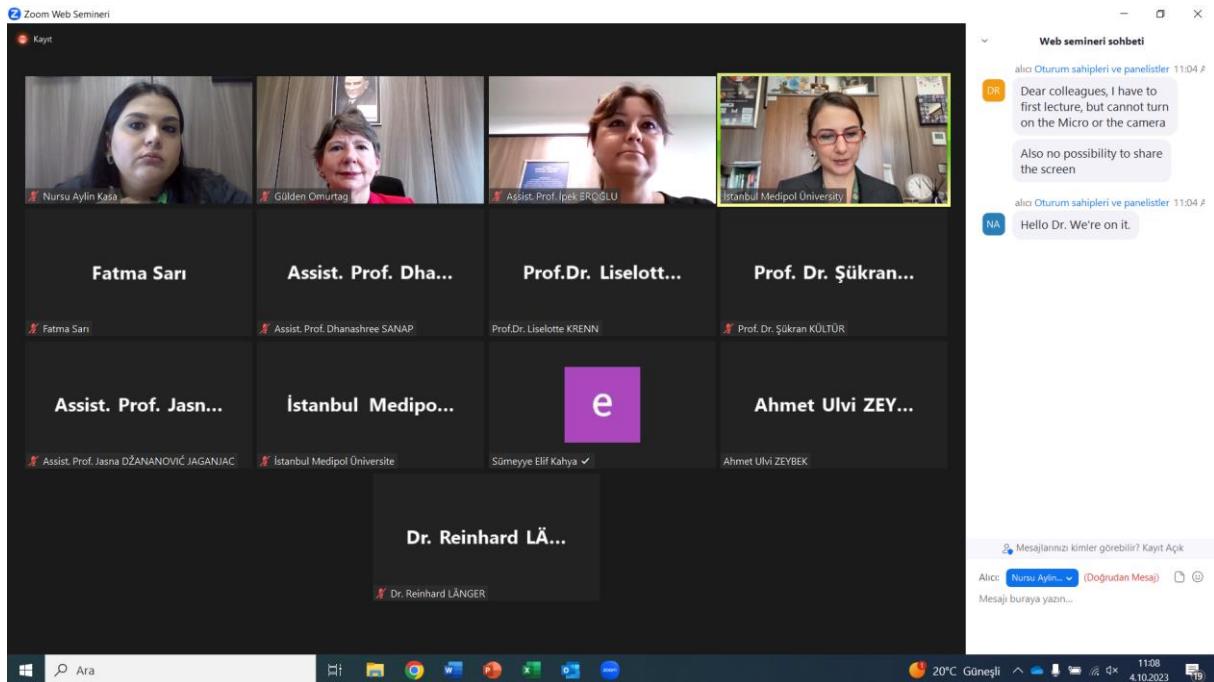
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MOSUL UNIVERSITY, MOSUL, IRAQ

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Kayıt

## Amendment of the EU legislation Directive 2004/24

Bundesamt für Sicherheit im Gesundheitswesen  
BASG

- New committee at the European Medicines Agency (EMA):
  - Committee on herbal medicinal products (HMPC)

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Prof.Dr. Liselotte KREN...  
Gülden Omurtag  
Assist. Prof. İpek EROĞ...  
İstanbul Medipol Univ...  
Dr. Reinhard LANGER  
Fatma Sarı  
Assist. Prof. Dha...  
Assist. Prof. Dhanash...

Kayıt

Dr. Reinhard LANGER ekranını görüntüleyorsunuz Seçenekleri Görüntüle Görüntüle

## Amendment of the EU legislation Directive 2004/24

Bundesamt für Sicherheit im Gesundheitswesen  
BASG

- New committee at the European Medicines Agency (EMA):
  - Committee on herbal medicinal products (HMPC)
  - Main tasks:
    - Elaboration of EU herbal monographs on traditional medicinal use or well-established medicinal use
    - Elaboration of guidance documents related to quality, safety and efficacy of herbal medicinal products
    - Specific assessment of potentially harmful plant constituents

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Prof.Dr. Liselott...  
Prof.Dr. Liselotte KREN...  
Gülden Omurtag  
Assist. Prof. İpek EROĞ...  
İstanbul Medipol Univ...  
Dr. Reinhard LANGER  
Fatma Sarı  
Nursu Aylin Kasa  
Nursu Aylin Kasa

Sesi aç Videoyu Durdur Katılımcılar Soru-Cevap Sohbet Ekrani paylaş Kaydet Parmak Kaldır Uygulamalar Beyaz Tahtalar Aynlı

## HMPC – Current composition

<https://www.ema.europa.eu/en/committees/committee-herbal-medicinal-products-hmpc>

- Chair: Emiel Van Galen (NL)
- Vice-Chair: Erika Svedlund (SE)



Prof.Dr. Liselott...

Prof.Dr. Liselotte KREN...

Gülten Ömürtag

Assist. Prof. İpek EROĞ...

İstanbul Medip...

İstanbul Medipol Univ...

Dr. Reinhard LANGER

Fatma Sarı

Nursu Aylin Kasa

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## EU herbal monographs

### Harmonised basis for assessment of applications



Prof.Dr. Liselott...

Prof.Dr. Liselotte KREN...

Gülten Ömürtag

Assist. Prof. İpek EROĞ...

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İstanbul Medipol Univ...

Dr. Reinhard LANGER

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Kayıt Dr. Reinhard LANGER ekranını görüntüleyiniz Seçenekleri Gözleme Gözleme

## EU herbal monographs: where to find?

[https://www.ema.europa.eu/en/medicines/field\\_ema\\_web\\_categories%253Aname\\_field/Herbal](https://www.ema.europa.eu/en/medicines/field_ema_web_categories%253Aname_field/Herbal)

EUROPEAN MEDICINES AGENCY SCIENCE MEDICINES HEALTH

Medicines

Search Download

Categories

**Herbal**  
 Human (10915)  
 Veterinary (1300)

Herbal substance (Latin name)  
- Select -

Herbal botanical name of plant  
- Select -

Herbal substance (English common name)  
- Select -

Bundesamt für Sicherheit im Gesundheitswesen BASG

- EU herbal monograph
- Assessment report
- List of references
- Opinion of the HMPC
- Information regarding revisions

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Sesi açı Videoyu Durdur 43 Katılımcılar Soru-Cevap Sohbet Ekrani paylaş Kaydet Parmak Kaldır Uygulamalar Beyaz Tahtalar Ayrınlık

Prof.Dr. Liselott... Prof.Dr. Liselotte KREN...  
Gülden Omurtag  
Assist. Prof. İpek EROĞ...  
İstanbul Medipol... İstanbul Medipol Üni...  
Dr. Reinhard LANGER  
Fatma Sarı  
Nursu Aylin Kasa Nursu Aylin Kasa

Kayıt Dr. Reinhard LANGER ekranını görüntüleyiniz Seçenekleri Gözleme Gözleme

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Bundesamt für Sicherheit im Gesundheitswesen BASG

- EU herbal monograph
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Gülden Omurtag  
Assist. Prof. İpek EROĞ...  
İstanbul Medipol... İstanbul Medipol Üni...  
Dr. Reinhard LANGER  
Fatma Sarı  
Nursu Aylin Kasa Nursu Aylin Kasa

Dr. Reinhard LANGER ekranını görüntüliyorsunuz Seçenekleri Görüntüle

**HMPc – Pyrrolizidine alkaloids**  
Assessment and guidance finalised!

Bundesamt für Sicherheit im Gesundheitswesen  
BASG

Daily exposure

- Applicable for PA containing herbal preparations and contamination
- Adult (50 kg BW): <= 1.0 µg
- Children and adolescents: <= 0.0237 µg/kg BW
- Pregnant and breastfeeding women: <= 0.0237 µg/kg BW
- No difference regarding route of administration

Senecionin

Necin

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Sesi aç Videoyu Durdur

Katılımcılar 47 Soru-Cevap Sohbet Ekranı paylaş Kaydet Parmak Kaldır Uygulamalar Beyaz Tahtalar Ayrınlık

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Assist. Prof. İpek EROĞ...  
İstanbul Medipol Univ...  
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Fatma Sarı  
Dr. Ahmet Ulvi Zeybek

Assist. Prof. Dhanashree SANAP ekranını görüntüliyorsunuz Seçenekleri Görüntüle

**METHOD OF PREPARATION**

Phospholipid → Silybin in acetone solution

Concentrate the supernatant

Allowed to stand overnight

Collect precipitants and place in desicator overnight

Dried sample is crushed and sieved

Dissolve Poloxamer 188 in distilled water

Mixture is homogenized

Cycles for milling

Freeze drying of prepared phytosome nanosuspension

Lyophilization

Sesi aç Videoyu Durdur

Katılımcılar 75 Soru-Cevap Sohbet Ekranı paylaş Kaydet Parmak Kaldır Uygulamalar Beyaz Tahtalar Ayrınlık

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Assist. Prof. Dhanashree S...  
İstanbul Medipol Univ...  
Fatma Sarı  
Nursu Aylin Kasa  
Nursu Aylin Kasa

Kayıt

## MARKET POTENTIAL

- Phytosomal technology will have a great impact on the cosmetic market.
- Phytosomes are effectively used in the treatment of cancer, which in addition, development and research can be the next big thing in medical history. With this newly created formulation tool, phytosomes has re-explained the significance of herbals in modern drug targeting tactics.
- Phytosomes as biodegradable substrate can be consumed risk free and without any hesitation. It has numerous benefits and a wide potential to treat skin conditions.
- It has the ability to promote blood clotting and wound healing, and to relieve burns and other skin diseases as well. It also enhances the stability and skin penetration of phytochemicals.

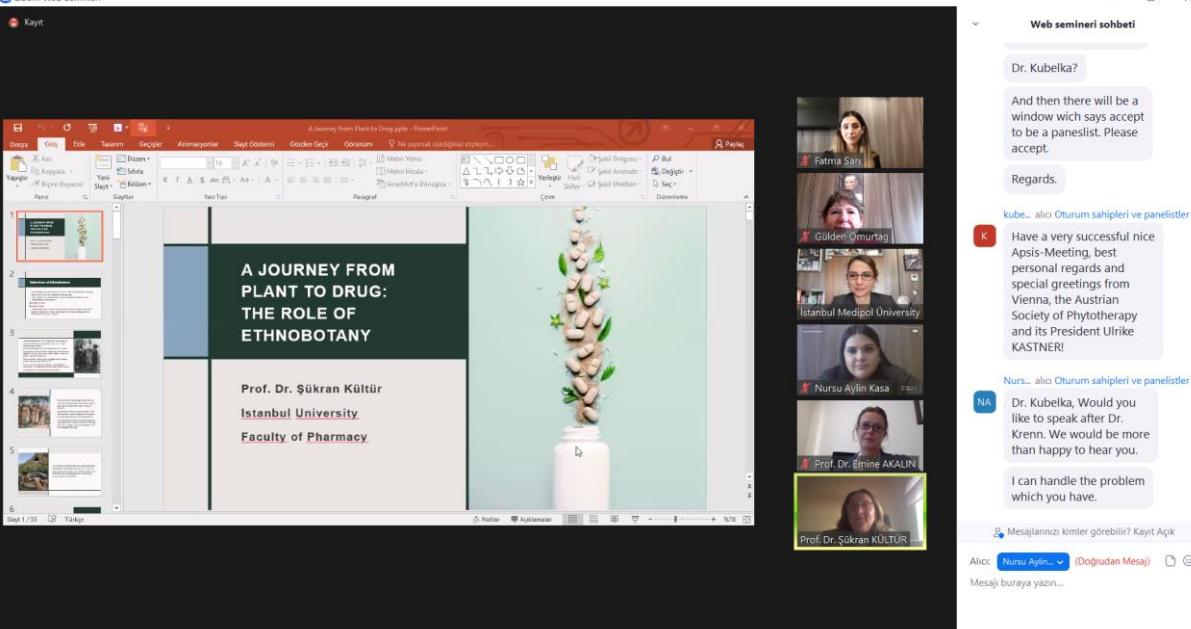




Zoom Web Semineri

Kayıt

A Journey from Plant to Drug - PowerPoint



Dr. Kubelka?

And then there will be a window which says accept to be a panelist. Please accept.

Regards.

kube... alici Oturum sahipleri ve panelistler

K Have a very successful nice Apps-Meeting, best personal regards and special greetings from Vienna, the Austrian Society of Phytotherapy and its President Ulrike KASTNER!

Nurs... alici Oturum sahipleri ve panelistler

NA Dr. Kubelka, Would you like to speak after Dr. Krenn. We would be more than happy to hear you.

I can handle the problem which you have.

Mesajlarınızı kimler görebilir? Kayıt Açık

Alici: Nursu Aylin... (Doğrudan Mesaj)

Mesajı buraya yazın...

22°C Güneşli 13:01 4.10.2023

Prof. Dr. Şükran KÜLTÜR ekranını görüntüleyiniz - PowerPoint

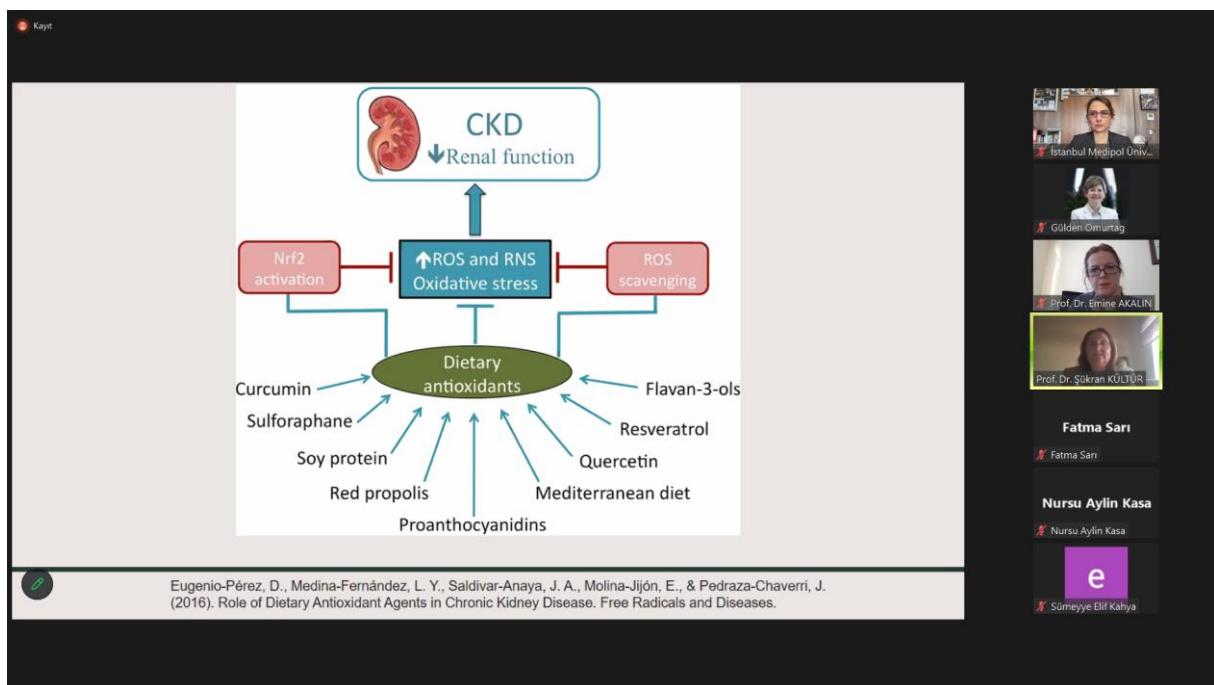
A Journey from Plant to Drug.pptx - PowerPoint

Kayıt Görüntüle

A JOURNEY FROM PLANT TO DRUG:  
THE ROLE OF  
ETHNOBOTANY

Prof. Dr. Şükran KÜLTÜR  
Istanbul University  
Faculty of Pharmacy

Ses açı Videoyu Durdur 42 Katılımcılar Soru-Cevap Sohbet Ekrani paylaş Kaydet Parmak Kaldır Uygulamalar Beyaz Tahtalar Ayrınlık



Prof. Dr. Şükran KÜLTÜR ekranını görüntüleyiniz | Seçenekleri Gözüyle | Görüntüle

## Conclusion

It is also important that the development of plants and other natural products for medicinal and other biological purposes should be potentiated on a sustainable and renewable basis in local environment.

Thus, pharmaceutical companies should consider developing local resources and decentralizing selected aspects of their research operations globally.

Continuous research by using the advanced technology can gift us the lead or leads to develop novel drug(s) from the treasure of Ethnomedicine.



Sesi aç | Videoyu Başlat | Katılımcılar 52 | Soru-Cevap | Sohbet | Ekrani paylaş | Kaydet | Parmak Kaldır | Uygulamalar | Beyaz Tahtalar | Ayrınlık

Kayıt | Gösteriyi Bitir | İpuçları | Slayt Gösterisini Kullan | 03:31 | 13:26 | Sonraki slayt

### Evidence Based Therapy with Phytotherapeutics

Prof. Dr. Emine AKALIN  
İstanbul University Faculty of Pharmacy  
Department of Pharmaceutical Botany



1 2 3 4 5 6



First of all, I would like to thank my dear professors and friends for organizing and inviting me to this nice symposium.

Assist. Prof. Jas... | Assist. Prof. Jasna DŽA... | Nursu Aylin Kasa | Nursu Aylin Kasa



Dr. Sneha Agrawal ekranını görüntüliyorumuz

Seçenekleri Görüntüle

Görüntüle

2<sup>nd</sup> ACTA PHARMACEUTICA SCIENCIA INTERNATIONAL SYMPOSIUM

(2<sup>nd</sup> APSIS) ON

MEDICINAL PLANTS AND PHYTOTHERAPY

**Evaluation of phytoconstituents for immunomodulatory effect and exploring their deposition in tissues of rats**

Presented by - Dr. Sneha A. Agrawal  
Assistant Professor Pharmacognosy and Pharmacology,  
BVCOP, Navi Mumbai

Assoc. Prof. Gülnur EK...

Gülden Omurtag

Dr. Sneha Agrawal

Burcu Üner

Assist. Prof. Jas...

Prof. Dr. Şükran...

Melih Buğra Ağ

Ses aç

Videoyu Başlat

Katılımcılar 73

Soru-Cevap

Sohibet

Ekrani paylaş

Kaydet

Parmak Kaldır

Uygulamalar

Beyaz Tahtalar

Aynlı

Kayıt

**KAYIT**

**KİMLİK**

**PHYTOCONSTITUENTS**

- Alkaloids
- Carotenoids
- Flavonoids
- Phenolic
- Coumarins
- Tannins
- Proteins
- High Water Content

**COUMARINS**

**COUMARINS**

Imperatorin  
Psoralen  
Xanthotoxol  
Scoparone  
Umbelliferone  
Skimmianine  
Scopoletin

Burcu Üner

Assoc. Prof. Gülnur EK...

Gülden Omurtag

Dr. Sneha Agrawal

Assist. Prof. Jas...

Assist. Prof. Jasna DŽA...

Prof. Dr. Şükran...

Prof. Dr. Şükran KÜLTÜ...

Melih Buğra Ağ

Melih Buğra Ağ

Kayıt

Dr. Sneha Agrawal ekranını görüntüleyiniz **Seçenekleri Görüntüle**

**GORUNTULE**

**Delayed Type Hypersensitivity**

On the 15<sup>th</sup> day, the animals were challenged via a sub plantar route with 0.1 ml sRBC into the left hind footpad

The thickness of the left hind footpad was measured before the challenge, 0 min, 24 h, and 48 h after the challenge

Plethysmometer

Sessiz Aşırı Videoyu Başlat

Katılımcılar 79 Soru-Cevap Sohbet Ekran paylaş Kaydet Parmak Kaldır Uygulamalar Beyaz Tahtalar

Ayrınlık

Kayıt

Posta - Gürür EKİSİ BONA - X Toplantıyi Başlatın - Zoom X Posta - Gürür EKİSİ BONA - X Heracleum Persicum-Acta Ph... +

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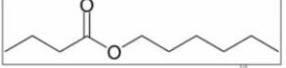
Docking results of Hexyl butyrate and octyl acetate

- There are **non-polar hydrocarbon chains** on **hexyl butyrate** and **octyl acetate**.
- They show tendency for **non-polar interaction** with the **non-polar amino acid Phe338**.
- Due to the presence of **14 aromatic amino acids** in the **active site** of the enzyme.
- The **active site** shows a greater tendency to form  $\pi-\pi$  bonds with rings of **aromatic ligand**.
- These two ligands **can not form non-covalent  $\pi-\pi$  interactions** with any of these 14 amino acids.



Hexyl butyrate

CC(=O)OCC(C)CCCCCCC



Octyl acetate

CC(=O)OCCCCCC

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Kayıt

Chrome Dosya Düzenle Görüntüle Geçmiş Yer İşaretleri Profiller Sekme Pencere Yardım

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## Conclusion

- IC<sub>50</sub> calculated for the **essential oil** and the **vacuum dried** form of petroleum ether extract were reported as **66 µg/ml** and **59 µg/ml**, respectively.
- **Petroleum extract** is **more active** than **essential oil**, which is consistent with docking results.
- The petroleum ether extracts of plant contain **furanocoumarin**.
- They have **anticholinesterase properties**.
- These **4 compounds** have an **enzyme inhibition effect**.
- Due to their **proper orientation** and **ability to interact** effectively with the **catalytic amino acids** of the **active site** of the enzyme.

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