1- **Composition of the Essential Oil of the Fruits of Pseudorlaya pumila (L.) Grande Growing in Egypt**

The essential fruit oil of Pseudorlaya pumila (L.) Grande was obtained by hydrodistillation (0.8% v/w). The oil was analyzed by GLC using capillary columns of different polarities as well as by GC-MS spectrometry. Thirteen components accounting for more than 96% of the oil were identified. The predominant compound is myristicin (37%). In addition, significant amounts of α-pinene, limonene, chrysanthene acetate, myrcene and humulene are present.

2- **Coumarins of Roots of Pituranthos triradiatus Growing in Egypt**

From the petroleum ether and diethyl ether extracts of roots of Pituranthos triradiatus (Hoschst ex Boiss) Aschers et Schweinf (Umbelliferae), trans-marmin, marmesin, umbelliferone, xanthotoxol, bergapten, imperatorin, isoimperatorin and isopimpinellin were isolated and their structures were established from their physico-chemical properties and spectral data. The first four compounds are reported for the first time in genus Pituranthos.

3- **Crocataone and Coumarins from the Roots of Torilis arvensis**

From the roots of Torilis arvensis (Huds.) Link., crocatone, xanthotin, bergapten, scopoletin and umbelliferone were isolated and their structures were established through spectroscopic analyses. Present isolation of crocatone represents the first report of this isomyristicin derivative in the Dandiceae and the Caucaideae.

4- **Pituranthoside from Pituranthos triradiatus**

The new monoterpenoid coumarin, pituranthoside [(−)-S-trans-marmin-7â€”-O-b-D-glucopyranoside] and(−)-S-trans-marmin, as well as four known coumarins, xanthotoxol, umbelliferone, isopimpinellin and bergapten, were isolated from the shoots of Pituranthos triradiatus and spectroscopically characterized.

5- **A Pharmacognostical Study of Certain Papaver Species Growing in Egypt, Part I: Investigation of the Lipid Content**

A phytochemical study of the lipid content of the leaves, flowers, fruits, stems and roots of Papaver rhoes L. (Papaveraceae), as well as a comparative study of the fixed oil of the seeds of P. somniferum L., P. bracteatum Lindl. and P. rhoes L. growing in Egypt were carried out adopting TLC, CC and GLC techniques. The study of the unsaponifiable matters of the different investigated parts of P. rhoes revealed the presence of *- and *-amyrins, *-sitosterol, campesterol, stigmasterol and two aliphatic alcohols. The investigation of these alcoholic substances revealed that they are saturated in nature. The first is a primary alcohol with an empirical formula C22 H46 O, while the second is a secondary with an empirical formula C29 H60 O.

6- **Investigation of Anthocyanin Content of Papaver rhoes L. Growing in Egypt**
A phytochemical study of the anthocyanin content of petals of Papaver rhoes L. (Papaveraceae) growing in Egypt was carried out adopting paper chromatographic and spectrophotometric techniques. This study revealed the presence of cyanidin-3,5-diglucoside, cyanidin-3-sophoroside (mekocyanin), pelargonidin-3,5-diglucoside and pelargonidin-3-sophoroside (mekopelargonidin).

7-

**Hypecorinine, a Secoberbine Alkaloid From Hypecoum aegyptiacum**

Investigation of the alkaloidal extract from Hypecoum aegyptiacum (Forssk.) Asch. et Schweinf native to Egypt resulted in the isolation of the secoberbine alkaloid, hypecorinine, together with the known ketonic base protopine. The present isolation of hypecorinine represents the first detection of a secoberbine alkaloid in the Egyptian Hypecoum. The presence of a secoberbine alkaloid in Hypecoum aegyptiacum is a further indication that this type of alkaloid may be considered as a characteristic chemotaxonomical feature of the genus Hypecoum. Furthermore, it substantiates the taxonomical separation of this genus from family Papaveraceae.

8-

**Macro- and Micromorphology of Leaf, Young Stem and Stem Bark of Calycodendron milnei (A.Gray) A.C. Smith**

The macro- and micromorphology of the leaf, young stem and stem bark of Calycodendron milnei (A. Gray) A. C. Smith are presented.

9-

**Macro- and Micromorphological Study of Calendula arvensis L. Growing in Egypt, Part II: The Inflorescence**

The macro- and micromorphological characters of the inflorescence of Calendula arvensis L. are presented.

10-

**Phytochemical Study of the Fruits of Torilis arvensis (Huds.) Link Growing in Egypt**

The fruit essential oil of Torilis arvensis (Huds.) Link. was obtained by hydrodistillation (0.5% v/w) and analyzed by CGC-MS. The oil consists of at least 87 components, 20 of which accounting for about 28.5% of the oil composition were identified. The oil can be easily distinguished from those of the studied European species by the presence of significant amounts of *-bisabolene, *-caryophyllene, thymol, *-pinene and cresol. Moreover, bergapten, xanthotoxin, scopoletin, luteolin-7-O-glucoside and apigenin-7-O-diglucoside were isolated and their structures were established from their physico-chemical properties and spectral data. The coumarins and apigenin-7-O-diglucoside are reported for the first time in the genus Torilis.

11-

**Composition of the Essential Oil of the Fruits of Pseudorlaya pumila (L.) Grande Growing in Egypt**

The fruit essential oil of Pseudorlaya pumila (L.) Grande was obtained by hydrodistillation (0.8% v/w). The oil was analyzed by GLS using capillary columns of different polarities as well as by GC-MS. Thirteen components accounting for more than 96% of
the oil were identified. The predominant compound is myristicin (37%). In addition, significant amount of *-pinene, limonene, chrysanthrenyl acetate, myrcene and humulene is present.

12-  
**Iridoid Glucosides From Veronica persica Growing in Egypt**  
From the ethyl acetate extract of the aerial parts of Veronica persica Poir. in Lam., aucubin, catalpol, veronicoside, amphiicoside, catalposide, verproside and 6-O-veratroylcatalpol were isolated and their structures were established by chemical, chromatographic and spectroscopic methods. Veronica persica Poir. in Lam. can be differentiated from the other closely related Veronica species of group Agrestis by its content of catalpol esters of benzoic acid derivatives.

13-  
**Composition of the Essential Oil of the Fruits of Malabaila suaveolens Coss.**  
The essential oil of the fruits of Malabaila suaveolens Coss. (Apiaceae) was obtained by hydrodistillation (1.6% v/w). The oil was analyzed by capillary gas chromatography (GC) and gas chromatography- mass spectrometry (GC-MS). The oil consists of at least 44 components, 14 of which accounting for about 95% of the oil composition, were identified. The oil is dominated by aliphatic esters (85.1%) accompanied by small amounts of monoterpenes (2.7%) and free alcohols (6.8%). The dominance of the long chain aliphatic esters could be used as a characteristic marker.

14-  
**8-Hydroxyglucosylharmine From the Egyptian Peganum harmala L. Seeds**  
8-Hydroxyglucosylharmine was isolated from the methanolic extract of the Egyptian Peganum harmala L.seeds. This glucosidic *-*carboline alkaloid is of common occurrence in seedling and callus derived from roots and hypocotyls but it is a rare and minor alkaloid of the seeds. The present isolation of 8-hydroxyglucosylharmine represents the first isolation of this alkaloid from the Egyptian P.harmala L. seeds. Moreover, harmine, harmaline, harmol and harmalol were also isolated. The structure of the isolated alkaloids were established from their physicochemical characters and spectral data.

15-  
**C-Glycosylflavones From Prosopis chilensis**  
Five apigenin-based C-glycosylflavones were isolated from the leaves and pods of Prosopis chilensis and identified as vicenin-1, 6â€£ -O-acetylvicenin-1, vicenin-2, vitexin and isovitexin. 6â€£ -O-acetylvicenin-1 could be a new acylated di-C-glycosylflavone and Vicenin-1 is reported here for the first time in the genus Prosopis. The structures of the isolated compounds were established through spectroscopic analyses including 2D-NMR (HMQC, HMBC).

16-  
**Alkaloids of Glaucium arabicum**  
Protopine, allocryptopine, 13-oxoallocryptopine and trans-canadinemethochloride dihydrate were isolated from the fruits of Glaucium arabicum Fres. and their structures were established by spectroscopic techniques. The present isolation of 13-Oxoallocryptopine represents the first report of this oxoprotopine alkaloid in genus
17-

**Microbial Reduction of Carvone and Citral, Two Unsaturated Carbonyl Monoterpenes**

R-(−)-Carvone has been transformed by Hansenula anomale ATCC 20144 into three pure metabolites, dihydrocarveol, 1, 2R, 4R, 7R (+)-2,7-Oxidomethan-8-ol, 2, and p-menth-8-en-3-ol, 3, in 19.2%, 25%, and 22.5% yield, respectively. Saccharomyces cervisiae UI-Sacch converted citral into two metabolites, 3,7-dimethyl-2,6-octadiene-1-ol, 4, and 3,7-dimethyl-6-octene-1-ol, 5, in 10% and 54% yield, respectively. Three types of reactions were observed namely, epoxidation and hydration of the double bond as well as reduction of the carbonyl. The identity of the isolated metabolites was established using IR, MS, as well as both 1H- and 13C-NMR (1D- and 2D) spectroscopy.

18-

**Studies on the Chemical Constituents of Atraphaxis spinosa L. var. Sinaica Boiss**

from the ether extract of Atraphaxis spinosa L. var. sinaica Boiss., nine compounds were isolated and identified as N-trans-p-coumaroyl-3â€”4’-dihydroxyphenylethylamine (1), N-trans-feruloyl-3â€”4’-dihydroxyphenylethylamine(2), (−)-fisetinidol, (−)-catechin, butin, quercetin, quercetin-3-methyl ether, 5-deoxykaempferol and *-sitosterol glucoside. The compounds 1 and 2 were first isolated from natural sources and were proven to have a cytotoxic activity against leukemic P 388 cells.

19-

**Biological Activities of Pyrrolidinoindoline Alkaloids From Calycodendron milnei**

Certain genera of the tribe Psychotrieae, specifically Calycodendron and Psychotria, found on Pacific Islands, synthesize a series of Nb-methyltryptamine-derived alkaloids made up of 2 to 8 pyrrolidinoindoline units. Nine alkaloids of this class have been isolated from the aerial parts and stem bark of Calycodendron milnei, a species endemic to the Vatā Islands (New Hebrides), and examined for potential application as anti-cancer and anti-infective agents. All members of the series exhibited readily detected cytotoxic activity against proliferating and non-proliferating Vero African green monkey kidney cells in culture, with the most potent activity being exhibited by vatamine and quadrigemine C. Only hodgkinsine A exhibited substantial antiviral activity against a DNA virus, Herpes simplex type 1, and an RNA virus, Vesicular stomatitis virus. All members of the series showed readily detected anti-bacterial, anti-fungal and anti-candidal activities using both tube dilution and disc diffusion assay methods. The most potent anti-microbial alkaloids were hodgkinsine A and quadrigemine C, which exhibited minimum inhibitory concentration (MIC) values as low as 5 Âµg/ml.

20-

**Macro- and Micromorphology of Leaf and Stem of Nitraria retusa**

The macro- and micromorphology of the leaf and stem of Nitraria retusa (Forssk.) Asch. are presented.

21-

**(+)-(Z)-Lanceol acetate from Toriis arvensis**

A new bisabolane sesquiterpene ester, (+)-(Z)-lanceol acetate, was isolated from the
fruit essential oil of Torilis arvensis. The structure of the new compound was established
by spectroscopic methods including 2D NMR (HMQC, HMBC). The E stereoisomer was
also detected and identified through GC-MS.

22-

(+)-8-Oxohypecorinine From Hypecoum procumbens var. Glaucescen
A new secobarbine alkaloid, (*)&-8-oxohypecorinine, together with (*)-hypecorinine,
isocorydine, allocryptopine, cryptopine and protopine were isolated from Hypecoum
procumbens var. Glaucescens and spectroscopically characterized.

23-

Anthraquinones From Galium Sinaicum
The new anthraquinones, 7-methyl anthragallol 1,3-dimethyl ether, 7-methyl anthragallol
2-methyl ether, 6-methyl anthragallol 3-methyl ether, 8-hydroxy anthragallol 2,3-
dimethyl ether, 7-formyl anthragallol 1,3-dimethyl ether, copareolatin 5,7-dimethyl ether,
copareolatin 6,7-dimethyl ether, 6-methoxy lucidin &-ethyl ether and 6-hydroxy
xanthopurpurin as well as the novel bianthraquinone, bisinaquinone [10,2&textdmid-bis (9-
hydroxy-3-methyl-1,4 anthraquinone)] were isolated from the roots of Galium sinaicum.
Their structures were established by spectroscopic techniques including 2D NMR
(COSY, NOESY, HMQC, HMBC). In addition, 8 known ones were also isolated and
fully characterized.

24-

Anthraquinones From the Polar Fractions of Galium sinaicum
The new anthraquinones, 6,7-dimethoxy xanthopurpurin, 6-hydroxy-7-methoxy rubiadin,
5-hydroxy-6-hydroxymethyl anthragallol 1,3-dimethyl ether, 7-carboxy anthragallol 1,3-
dimethyl ether, anthragallol 1-methyl ether 3-O-6-glucopyranoside, anthragallol 1-
methyl ether 3-O-6-rutinoside, anthragallol 3-O-6-rutinoside and alizarin 1-methyl ether 2-O-
primeveroside were isolated from the CH2Cl2 and n-BuOH extracts of Galium sinaicum
roots and their structures were established by various spectroscopic techniques. In
addition, two known anthraquinones were also isolated and fully characterized.

25-

Composition of the Essential Oils of the Leaves and Stems of Torilis arvensis
The leaf and stem essential oils of Torilis arvensis were obtained by hydrodistillation
(0.26% & 0.16%) and analyzed by GC-MS. The oils consist of at least 39 (leaves) and 34
(stems) components 25 and 22 of which, accounting for about 86% and 77% respectively
of the oils composition, were identified. Both oils are dominated by trans-6-farnesene and
containing significant amounts of cis*-farnesene, *-caryophyllene and nuciferyl acetate. The new and major sesquiterpene ester, (+)-(Z)-lanceol acetate, of the
fruit essential oil was totally absent from both oils.

26-

Essential Oils of Daucus carota ssp. Maximus
The fruit, leaf and stem essential oils of Daucus carota ssp. maximus have been studied
by GC-MS. The fruit oil consists chiefly of phenylpropanoids and sesquiterpene
hydrocarbons. It is characterized by the presence of trans-methylisoegenol, methyl-
eugenol, *-asarone, shyobunone and preisocalamendiol. Phenylpropanoids are
completely absent from both the leaf and stem oils and the oxygenated sesquiterpenes constitute about 52 and 80%, respectively of the oils composition, with shyobunones and preisolamendiol as major component. These monocyclic ketones as well as *-bourbonene, aristol-9-en-3-ol and aristolenol have never before been reported as components of any Daucus oil. Unlike most of the studied varieties, carotol, daucol and geranyl acetate are completely absent. These results reflect the unique composition of the essential oils of this Lebanese variety.

27-

Flavonol Glycosides from Nitraria retusa
The new flavonol trioside, isorhamnetin 3-O-4Rham-galactosylrobinobioside and five known flavonol glycosidess, isorhamnetin 3-robinobioside, isorhamnetin 3-rutinoside, isorhamnetin 3-galactoside, isorhamnetin 3-glucoside and the isorhamnetin were isolated from the leaves and young stems of Nitraria retusa and characterized by UV and NMR spectroscopy. Isorhamnetin 3-xylosyl-robinobioside was also tentatively identified.

28-

In Vitro Cytotoxicity of Polyindolenine Alkaloids on Rat Hepatoma Cell Line, Structure-Activity Relationships
The cytotoxic effect of a series of polyindolenine alkaloids isolated from Calycodendron milnei and Psychotria forsteriana of the family Rubiaceae is described. The alkaloids exhibited strong cytotoxic effects in micromolar range to rat hepatoma cell lines. The compounds with high molecular weight and/or with a terminal single tryptamine unit were the most toxic.

29-

Lignan Bis-Glucosides From Galium sinaicum
The new lariciresinol-based lignan bis-glucosides, 7S, 8R, 8â€™O-D-glucopyranoside and 5-methoxylariciresinol-4, 4â€™-O,D-glucopyranoside were isolated from the n-butanol extract of Galium sinaicum roots and their structures were established by various spectroscopic techniques. The isolated compounds represent the first report of lignan glycosides from the Rubiaceae. The two lariciresinol type glucosides exhibited weak cytotoxic activity against P388 cell line.

30-

Pituranthoside From Pituranthos triradiatus
The new monoterpenoid coumarins, pituranthoside [(-)-S-trans-marmin-7â€™-O,D-glucopyranoside] and (-)-S-trans-marmin, as well as four known coumarins, xanthotoxol, umbelliferone, isopimpinellin and bergapten, were isolated from the shoots of pituranthos triradiatus and spectroscopically characterized.

31-

New Polyindolenine Alkaloids From Calycodendron milnei
Four new alkaloids, representing the first members of new groups of polyindolinic alkaloids, have been isolated from the aerial parts of Calycodendron milnei along with other alkaloids. The names vatine, its stereoisomer vatine A, vatamine and vatamidine are proposed. They are polymers of six, seven and eight Nb-methyltryptamine units,
respectively.

New-Caledonian Plants, 116 (1) Lindenialine and Lindeniamine, Two New Iridoids From Lindenia Austro-caledonica Brongn.
The structures of lindenialine and lindeniamine, two new iridoid alkaloid artifacts isolated from Lindenia austro-caledonica Brongn. (Rubiaceae), were determined by spectral analysis. Lindenia-mine appears to be a dimer of lindenialine.

MACRO- AND MICROMORPHOLOGY OF ARNEBIA HISPIDISSIMA (LEHM.) DC. GROWING IN EGYPT
The macro- and micromorphological characters of the roots, stems, leaves, flowers, fruits, and seeds of Arnebia hispidissima (Lehm.) DC. Family Boraginaceae growing wild in Egypt have been studied in order to find out the ic features by which they could be identified in the entire and powdered forms.

HEAT SHOCKPROTEIN70 (HSP70). A NOML BIOMARKER FOR NARCOTIC DRUGS AND HEPATOTOXIC AGENTS
Heat shock protein (HSP70) was used as a good biomarker for intoxication of different hazardous chemicals. The impact of common narcotic drugs (heroin and opium), in comparison with experimentally proven hepatotoxic agents (CCU, ethanol and iron) on the induction of HSP70 in liver of both rat and mice was assessed. Heroin proved to be the most potent inducer of liver tissue intoxication followed by CC14, iron overloaded with ferric hydroxide dextran complex (Fe-HDC), ethanol, and opium. This may be related to defense mechanism against the rapidly occurring cell damage or subsequent processes of liver tissue inflammation. This is an attempt to define the incidence and severity of liver disorders among a large number of drug addicts. The expression levels of HSP70 were measured using Western dot blot technique. The obtained data demonstrate specific but statistically different significant values (P< 0.05) of HSP70 induction levels with all studied hepatotoxic agents. Heroin was the most potent inducer of (HSP70) followed by CC14, Fe-HDC, ethanol, and then opium. The increased levels of HSP70 in the liver tissues may be attributed to antioxidant defense mechanism against liver cell damage. In conclusion: Heat shock protein (HSP70) is a biomarker for hepatic cell injury playing an important role in tissue protection against narcotic drugs and hepatotoxic agents.

MACRO- AND MICROMORPHOLOGY OF LEAF, YOUNG STEM AND STEM BARK OF CALYCOCENDRON MILNEI
ABSTRACT: The macro- and micromorphology of the leaf, young stem, and stem bark of Calycocendron milnei (A.GrayH.C.Smith are presented. CD
The genus Calycocendron A.C.Smith family Rubiaceae, U)
?Wamiiy Rubioidgae , tribe Psychotrleae is endemic to the Islands Xew-Ke or ides in the Pacific Ocean and is represented (1,3) eight species .
The phytochemical study of the aerial parts and stem hark  one representative species, Calycodendron milnei (A.Gray) jgOiSinith, resulted in the isolation and structural elucidation of alkaloids, 12 of which belonging to the prolidinoindoliiie group and one of the Di3-tetralvydroisc-Mttolino typo. The isolated alkaloids are potent cytotoxic anti-tumour agents in vitro to hepatoma tissue culture (HBc) and human leukaemia(Molt.*) cell lines. They also exhibit strong central sedative and analgesic effects on mice, a potent inhibitory effect on human platelet aggregation induced by ADP, collagen or thrombin and antibacterial activity against some gram-positive and gram-negative bacteria. Accordingly, Calycodendron milnei(A.Gray)A.C.Smith was regarded

**MACRO- AND MICROMORPHOLOGICAL STUDY OF CALENDULA ARVENSTS L.GROWN IN EGYPT**

The Inflorescence Abstract:

The macro- and micromorphological characters of the inflorescence of Calendula arvensis L. (family Compositae) grown in Egypt are presented.

**8-HYDROXYGLUCOSYLHARMINE FROM THE EGYPTIAN PEGANUM HARMALA L. SEEDS**

8-Hydroxyglucosylharmine was isolated from the methanolic extract of the Egyptian Peganum harmala L. seeds. This glucosidic J-carboline alkaloid is of common occurrence in seedling and callus derived from roots and hypocotyls but it is a rare and minor alkaloid of the seeds. The present isolation of 8-hydroxyglucosylharmine represents the first isolation of this alkaloid from the Egyptian p.harmala L. seeds. Moreover, harmine, harmaline, harmol and harrnalol were also isolated. The structure of the isolated alkaloids were established from their physico-chemical characters and spectral data.

**MACRO- AND MICROMORPHOLOGY OF LEAF AND STEM OF NITRARLA RETUSA**

Abstract : The macro- and micromorphology of the leaf and stem of Nitraria retusa (Forssk.) Asch. are presented.

**C-GLYCOSYLFLAVONES FROM PROSOPIS CHILENSIS**
Abstract: Five apigenin-based C-glycosylflavones were isolated from the leaves and pods of Prosopis chilensis and identified as vicenin-1, 6â€¢-0-acetyrvicenin-1, vicenin-2, vitexin and isovitexin. 6*â€¢-0-acetyl-vicenin-1 could be a new acylated di-C-glycosylflavone and Vicerun-1 is reported here for the first time in the genus Prosopis. The structures of the isolated compounds were established through spectroscopic analyses including 2D-NMR (HMQC, HMBC).

ALKALOIDS OF GLAUCIUM ARABICUM

Abstract: Protopine, atfocryptopine, 13-oxoallocryptopine, and trans-cana-dinemethochJoride dihydrate were isolated from the fruits of Glaucaum arabicum Fres. and their structures were established by spectroscopic techniques. The present isolation of 13-Oxoallocryptopine represents the first report of this oxoprotopine alkaloid in genus Glaucium.