Lecture Title:


By: Nurit Ashkenazi and Nomi Eshhar, Israel

DR. GÜNTHER FRIEDLANDER

FOUNDER OF TEVA JERUSALEM – ISRAEL, 1935

BORN 1902 IN KONIGSHÜTTE (CHORZÓW) GERMANY
(Poland)

PHARMACEUTICAL HISTORY:

The vision of Dr. Günther Friedlander which budded in Germany, took root and continued to grow in Israel.

Dr. G Friedlander a pharmacist, chemist and botanist gained his scientific education in Germany, the man who invented the name "TEVA", that is so familiar to all of us.

THE BOOK “ABA TEVA”

The history of Dr. Günther Friedlander my father and the history through his life (1902 -1968) in Germany and in Israel, his contribution to the development of the pharmaceutical industry in Israel and his pioneering work in the development and synthesis of many pharmaceutical drugs is narrated in the book “ABA TEVA” written by Mrs. Nurit Ashkenazi and by myself.

The Book in German language:

The book is in the process of translation to German and will be distributed by the Editor "Peter Lang verlag in the series under the logo of the Heinrich-Heine- University Düsseldorf "Düsseldorfer Schriften zur Pharmazie und Naturwissenschaftsgeschichte".

Book Cover is shown in the next slide.

“ABA-TEVA”
“FATHER – NATURE”
Dr. FRIEDLANDER DOCTRINE WAS: “WE WISH TO ASSIST “HUMAN NATURE” BY MEANS PRODUCED (EXTRACTED) FROM NATURE”:

Which means: Utilization of the country’s natural resources for therapeutic purposes,

- Manufacturing of Medicine from Plants and Minerals

HENCE the NAME “TEVA”

WALKING THROUGH DR. FREIDLANDER's YOUTH:

Pictures with high School friends and times as a member of the “BLAU WEISSE” the youth movement in Germany which stood for simple life, nature life, Jewish inheritance and later on after Balfur declaration (1917) joined Zionistic ideology.
Dr. Friedlander handled intensive correspondence with various peoples in Israel: Botanists, pharmacists and finance personalities.

From his “Blau Weiss” friend Friedel Ashner (later on a professor for Agronomy in Israel, who received the Israel price given in independence day) he requested in 1924 a list of all plants: flowers and trees that grow in Israel in order to learn which medical products can be produced in Israel and thereby to make his dream come true. A letter written by Friedel Ashner (dated 1924) which describes in details all flowers, trees, fruits and vegetables their Hebrew names and their Latin names was sent to Germany (the whole letter is presented in the book). In the next slide we can see Friedlander and Ashner in times of “blau weiss”.
PhD. Dissertation:  •
PhD thesis was carried out with Prof. Dr. A. TSCHIRCH (1856-1939) in BERN. Dissertation cover is presented in the next slide  •
Entwicklungsgeschichtliche Untersuchungen im Gebiete der Pharmakoanatomie und Pharmakochemie.


INAUGURAL-DISSERTATION
zur Erlangung der Doktorwürde
der Hohen Philosophischen Fakultät der Universität Bern
vorgelegt von
GÜNTHER FRIEDLÄNDER
Kand. d. Pharm.
an
Ratibor (Oberschlesien).

[Von der philosophischen Fakultät II auf Antrag des Herrn Prof. Dr. A. Tschirsch angenommen.]
1926 - DOCTORANDUS BEI Prof. Dr. A. TSCHIRCH (1856-1939) IN BERN
Alexander Tschirch was one of the most important teachers of pharmacy. In 1890 he was appointed Professor of Pharmacy and Pharmacognosy at Bern and he was a good director of his institute. His scientific work is represented by 21 books, 388 papers and 158 dissertations. The main topics were investigations of plants (phytochemical) and researches for pharmacopoeias. Tschirch had 2300 Students, 158 made their doctor-graduate and 11 are becoming professor. The research conditions in the pharmaceutical institute Bern were good and the research school of Tschirch has an important public and social recognition. Tschirch’s work provided the bases of the modern phytochemical research of plants.

IN MOHERN-APOTHEKE-BRESLAU
AFTER DOCTORATE EXAM - BERN
ASSISTANT IN BRESLAU 1928-1929
SHOP-WINDOW
How to organize a pharmacy shop –window according to the rules?
In einem modern eingerichteten Apothekenlaboratorium wird untersucht.

Das der Blut- Harn- der Stuhlbang.

Geheimnisse aus der Apotheke der Apotheke untersucht.

Der Apotheke fabriziert.
PHARMACY SHOP-WINDOW

Magazine for the Pharmacist: 1931, Publisher: Walter Karachi, Berlin

Article:
“The Function of the Pharmacy Shop-Window at the Service of the Pharmacist”

A STREET IN GÖERLITZ –
GÖERLITZ APOTHEKE TODAY
JOURNEY to ISRAEL

From Goerliz Dr. Friedlander traveled by ship to Israel to select a suitable place to build his pharmaceutical industry. He traveled around the country and decided to establish the company in Jerusalem. Why Jerusalem? He always dreamed about Jerusalem and wrote a poem about Jerusalem and many other stories when he was 15-17 years old. The poem and 3 other stories were translated to Hebrew and appear in the book. Moreover, Because of the dry climate in Jerusalem which is crucial for the stability of raw materials and the fact that several hospitals and the university were already located in Jerusalem Teva was build in Jerusalem. The first journey to Israel was in 1933 and the second trip was not a visit but the immigration to Israel - Palestine in 1935 when he started to build TEVA.

FOUNDATION OF TEVA-FIRST STEP
TEVA MIDDLE EAST PHARMACEUTICAL & CHEMICAL WORKS Co. Ltd.

JERUSALEM, PALESTINE
Chemicals into Pharmaceutical Products

"TEVA" REPORTS PROGRESS IN 1942

The progress reported during the past few years by Teva Middle East Pharmaceutical and Chemical Works Co. Ltd, Jerusalem, is due in no small measure to the fact that the production of most of the pharmaceutical preparations manufactured today, is based on chemical syntheses and does not depend to any large extent on imported raw or semi-manufactured materials.

According to the annual report for 1941/42 and a preliminary statement for the first half of 1942/43 sales both locally and in most of the neighbouring countries have registered a remarkable advance. The dividend for the past year was 10 per cent, as against 5 percent for 1940/41. The share capital has recently been raised from LP3,265 to LP6,100.

A reserve of more than the former's share capital has been formed during the past three years for scientific purposes and the development of the company.

The 40 employees, include 10 chemists and assistant chemists working in the laboratory.
Natural Medicine
MAP of the DEAE SEA

Production of medicine from the Dead Sea
Asphaltite Rocks from the Dead Sea (Bitumen)
A member of Kibutz EIN GEDI seats on dead sea asphaltite rock before driven out from the sea and being transported to TEVA for the preparation of Bitupal products.

5 - BITUPAL PRODUCTS (LIQUID & OINTMENT) FOR TREATING DERMATOLOGICAL DISEASES BASED ON ASPHALT MATERIAL FROM THE DEAD SEA
BITUPAL firnis 20%, liquid

FORMULA

The liquid contains: 20% Bitupal (a special fraction of the volatile oil derived from the asphaltite of the Dead Sea) in a specific adhesive varnish.

INDICATIONS

eczema, neurodermatitis, dyshydrosis, spongiosa cutis.

DOSAGE

for direct application to the diseased areas once or several times daily, according to doctors’ instructions.

PACKING

bottles of 30 Gm.
BITUPAL
liquid for external use

FORMULA

נוסחה
special fraction of the volatile oil derived from the asphaltite of the Dead Sea.

INDICATIONS

הטראות
eczema, neurodermatitis, dyshydrosis, spongiosa cutis.

DOSAGE

מענים
for direct application to the skin or as a constituent in specially prepared ointment 5—50%.

PACKING

אריזות
bottles of 30 and 100 Gm.
FDA APPROVAL
Bitupal product was registered by the FDA for use in 1959. FDA approval was published in the Jerusalem Post newspapers.
FDA approval is presented in the next slide.
Skin preparation

Editor, The Jerusalem Post

Sir - your report, on June 8, of the exhibition of the pharmaceutical product, Bitupal, at the annual meeting of the "American Medical Association", omits to mention that it is a product of the "TEVA, Middle East Pharmaceutical and Chemical Works Ltd., Jerusalem".

When "TEVA" was founded in 1934, its principal object was the utilization of the country's natural resources for therapeutic purposes. Hence the name "TEVA" (Nature). It may therefore be regarded as a special success that Bitupal which derives from the bituminous asphaltite of the Dead Sea, and which is prepared in Jerusalem, has been accepted on the American market.

The asphaltite is now gathered by Kibbutz Ein Gedi. Work on its Fractionalization was done by our pharmaceutical-chemical team, then headed by Dr. Markowitz, and the extensive clinical observations initiated by Professors Dostrovski and Sagner were conducted also by professor Katzenellenbogen of the Beilinson Hospital and Professor Berlin of Hadassah, Tel-Aviv.

The value of Bitupal for the treatment of a variety of skin conditions has been recognized in this country for more than 20 years. The reports of the American Dermatologists now amply confirm those of Israeli scientists. Credit for the introduction of Bitupal onto the American market is due to Mr. Sidney Musher, President of the Musher Foundation of New York.

Yours, etc.

TEVA Middle East Pharmaceutical and Chemical Works Ltd.
Jerusalem, June 8.

JERUSALEM POST
11.6.52
TOPICAL TREATMENT OF DERMATOSES WITH LEUKO-BITUPAL • CORDELTA. A REPORT ON 25 CASES
[Article in Swedish] • FEINSTEIN A, ZIPRKOWSKI L •

CARDIAC GLYCOSIDE PRODUCT
Manufactured from Palestinian oleander bush (Nerium oleander)
Foliandrin

Cass Hope Oil

Cristalline Glycoside from Nerium Oleander

100% 100% - Palestinian Origin

LIQUID 15 c.c.

 כל גא"ת אומראה המסחת משל תחלוק
Each c.c. i.e. 50 drops, contains 0.4 mg of the glycoside

TABLETS 20 x 0.2 mg

SUPPOSITORIES 6 x 0.2 mg

Indications: As a cardiac stimulant and diuretic in cases of:
Heart failure, Myocardial insufficiency, Myocarditis, Auricular
flutter and fibrillation, Edema, due to impaired circulation.

Contraindications: Myocardial infarct, Angina pectoris,
Acute infectious myocarditis.
FOLINADRIN PRODUCT–SCIENTIFIC PUBLICATION
PMCID: PMC480971

THE PLACE OF FOLIANDRIN WITHIN THE GROUP OF CARDIAC GLUCOSIDES
L. E. Schindel and K. Braun
Medical Department of the Hadassah University Hospital, Jerusalem

ARTICLE SUMMARY
The pure glucoside Foliadrin isolated from the Palestinian oleander bush (Nerium oleander) distinguishes itself very definitely from principles so far isolated from various oleander species. Apart from other chemical as well as physical characteristics, it could be shown by means of continuous electrocardiographic tracing from cat’s heart, that upon intravenous administration its action is identical with that of the principles belonging to the group of strophanthin (ouabain) glucoside and the drug should therefore be considered a “strophanthinoid”. In contradistinction to strophanthin, it display its cardiac activity upon peroral administration.

GINGISAN PRODUCT
BENZOCAINE; CHAMOMILE; EUCALYPTUS; LIQUORICE FOR GINGIVITIS, STOMATITS AND AS AN ADJUVANT IN TREATMENT OF PERIODONTITIS
“Modern Products”
EXAMPLES OF OTHER TEVA MEDICAL PRODUCTS
ANOVA
FOR COMBINED THERAPY
MADINON-S
FOR SEQUENTIAL THERAPY

TEVA'S TWO OUTSTANDING HORMONE-PRODUCTS FOR
INHIBITION OF OVULATION
AND REGULATION OF THE MENSTRUAL CYCLE
WORLD opinion on TEVA preparations
 עצמאות,علي ת صلى, שבב

FLUMETHONE
פלומצון

Teva, Middle East Pharmaceutical & Chemical Works Ltd., P.O.B. 1142, Jerusalem
LEMOSIN is a mixture of sugar with a specially prepared organic acid which is found in the same form in the mother's milk and is easily assimilated and fermented. It is used for the preparation of an unchanging acid milk in undiluted form as nourishment for infants and children who are under-weight or in case of insufficient mother's milk.

DIRECTIONS FOR USE: — The ordinary full milk which after addition of Lemosin turns into a supplementary and health-giving food, is to be boiled for a short time and then to cool off. Only after the milk has cooled off completely, Lemosin is to be added. The measuring glass attached to the packet is to be filled exactly and the contents should be dissolved in 100 c.c. milk by stirring. Lemosin milk, if kept cool, can be used without any danger for 24 hours thereafter.

“Lemosin” milk is a concentrated food which is to be taken on doctor’s prescription. Not more than 600 c.c. is to be given in 24 hours. “Lemosin” milk contains 850 Calories to every litre.
“HISTORY OF EQUIPMENT”
USED FOR THE MANUFACTURING OF TEVA PRODUCTS

Ampoule Department:
“Automatic Filling and Closure”
AMPOULE FILLING AND CLOSURE
Tablets Department- Mixture Preparation and Tablet Machine
PREPARATIONS OF OINTMENTS/SYRUPS
Visit of the high commissioners of the British mandate for Palestine
SIR ALAN CUNNINGHAM (1945-1948)
CUNNINGHAM VISIT – STERILE FILLING!
VISIT OF PROFESSORS
FIRST AUDIT???
FIRST TEVA CATALOGUE
250 Products, 200 Employees
TEVA

MEDICAMENTS

GENERAL CATALOGUE

1965