

SCIENTIFIC PROGRAM

8TH IAHN



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CONGRESS

of the **International Association for the History of Nephrology**



September **11-14** 2013

Ancient Olympia - Patra, **GREECE**

Congress Secretariat



Scientific Program



IN COLLABORATION WITH:

- HELLENIC COLLEGE OF NEPHROLOGY AND HYPERTENSION
- PANHELLENIC SOCIETY FOR HISTORY AND ARCHAEOLOGY OF MEDICINE
- INTERNATIONAL SOCIETY FOR THE HISTORY OF MEDICINE
 - MEDICAL ASSOCIATION OF WESTERN GREECE
AND PELOPONNESE

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IAHN HISTORY - PAST CONGRESSES

1994
International Conferences on History
of Nephrology in Naples & Montecassino,
Italy, October 28/30
Chairs: Natale G. De Santo, Garabed Eknoyan

1996
1st Congress of IAHN in Kos, Greece
October 14/16
Chair: Spyros G. Marketos

1998
2nd IAHN Congress in Padua, Italy, October 4/7
Chair: Angela D'Angelo

2001
3rd IAHN Congress in Taormina, Italy,
November 15/18
Chair: Guido Bellinghieri

2003
4th IAHN Congress in Montecassino,
Italy, April 24/27
Chairs: Luigi Iorio, Natale G. De Santo

2005
5th IAHN Congress in Gdansk, Poland,
April 13/15
Chair: Boleslaw Rutkowski

2008
6th IAHN Congress in Taormina, Italy,
October 2/4
Chair: Guido Bellinghieri

2010
7th IAHN Congress in Torun, Poland,
June 17/19
Chair: Boleslaw Rutkowski

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* In the Scientific Program, only the names of the presenting authors are printed.
Full reference to all the authors and the affiliations will be in the Abstract Book

THURSDAY, SEPTEMBER 12TH 2013

- 08:30** DEPARTURE FROM PATRAS TO ANCIENT OLYMPIA
- 10:15-11:15** GUIDED TOUR OF OLYMPIA'S ARCHAEOLOGICAL SITE
- 11:15-12:15** GUIDED TOUR OF OLYMPIA'S NEW ARCHAEOLOGICAL MUSEUM
- 12:15-12:30** C O F F E E B R E A K
- 12:30-13:00** **LECTURE**
Moderators: **Biagio Ricciardi, Marek Muszytowski**
A two-thousand year history of Nephrology: Ten enduring scientific landmarks
Leon Fine
- 13:00-13:30** **"KINNE - SAFFRAN" LECTURE**
Moderators: **Lorenzo Calò, Ayse Balat**
Introductory Speech: **Emanuela Appetiti**
The winner's Lecture: **Jennifer Gordetsky**
- 13:30-14:30** B R E A K - L U N C H
- 14:30-16:00** **FREE COMMUNICATIONS - The famous two**
Moderators: **Sylvie Opatrna, Antonio Mezzogiorno**
- 14:30-14:50** Strauss and Welt's "Diseases of the Kidney": A Tale of Two Cities
John T. Harrington
- 14:50-15:10** Science on the Kidney in Early 18th Century Europe based on the Works of Jędrzej Sniadecki and Jons J. Berzelius: similarities and differences
Mirosław Smogorzewski
- 15:10-15:30** Oliver and Feigl - two forgotten fathers of urine stick testing
Stewart Cameron
- 15:30-16:00** Discussion
- 16:00-18:00** **ROUND TABLE - Plants as therapeutic agents for renal ailments**
Moderator: **Alain Touwaide**
- 16:00-16:20** General Introduction: The use of plants for the treatment of renal ailments
Alain Touwaide
- 16:20-16:40** Herbal medicine and renal disease: a survey of Cretan medicinal plants
Constantinos Trompoukis
- 16:40-17:00** Pharmaceutical plants with nephrological indications in the Hippocratic Botanic Gardens in KOS
Stefanos Geroulanos
- 17:00-17:20** From past to present, the history of herbs used in the treatment of nephrologic diseases in the south-east of Turkey
Ayşe Balat
- 17:20-17:40** Useful plants in renal therapy listed in some books and a manuscript written by Prospero Alpini
Giovanni Aliotta

17:40-18:00 Discussion

18:15-19:00 **OPENING CEREMONY - ADDRESSES**

- President of the Congress **Athanasios Diamandopoulos**
- President of the IAHN **Boleslaw Rutkowski**
- President of the ISHM **Giorgio Zanchin**
- President of the Hellenic College of Nephrology and Hypertension **Dimitris Vlachakos**
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- President of the Medical Association of Western Greece and Peloponnese **Ioannis Tsolakis**
- President of the Medical School of Patras **Panagiotis Goumas**
- Mayor of Ancient Olympia **Efthimios Kotzias**
- Proclamation of Emeritus Professor Stewart Cameron as IAHN Honorary Member **Boleslaw Rutkowski**

19:00-19:15 **Nikiforos Vlemmydis' 13th century Byzantine song "On Urines":**
Singer: Aristeidis Bouchager, Choir Leader, St. Andrew's Cathedral

Michael Psellos' 11th century Byzantine song "On Gout":
Singer: Andreas Skarpelos, Choir Leader, Senior Registrar,
 St. Andrew's Hospital

19:15-19:45 **INAUGURAL LECTURE: In Memory of Spyros Marketos (1931-2012)**

Moderators: Boleslaw Rutkowski, Dimitris Vlachakos

The "Other" Olympic Games:

- The view of the Archaeologist **Georgia Chatzi - Spyliopoulou**
- The view of the Medical Doctor **Athanasios Diamandopoulos**

19:45-20:15 **PRIVATE VISIT TO THE GALLERIES OF THE OLD MUSEUM**

20:15-20:45 **MUSICAL PERFORMANCE**

Pianist: Stefanos Nasos

Viola: Ilias Sdoukos

20:45 **WELCOME RECEPTION**

21:30 **DEPARTURE FOR PATRAS**

FRIDAY, SEPTEMBER 13th 2013



- 09:00-11:30 FREE COMMUNICATIONS - Kidneys and the exotic: Languages, lands and likenesses**
Moderators: Natale G. De Santo, Pavlos Goudas
- 09:00-09:20** Concepts of Nephrology in the work of Nemesius of Emesa (4th Century AD)
Constantinos Tsiamis
- 09:20-09:40** On Uroscopy Treatise in the Chilandar Medical Codex N° 517: Its Contents and Origin
Gordana Subaric Gorgieva
- 09:40-10:00** A preliminary comparison between Greek and Tibetan uroscopy
Constantinos Grivas
- 10:00-10:20** The concept of kidneys in Traditional Chinese Medicine
Alexandros Tilikidis
- 10:20-10:40** Description of urolithiasis in the sources of traditional Ayurvedic medicine
Mikhail Subotylov
- 10:40-11:00** Semblances of the kidneys according to ancient Greek writers and some modern relevant artifacts:
In Memory of Antonis Billis (1932 -2013)
Athanasios Diamandopoulos

11:00-11:30 Discussion

- 11:30-12:00 LECTURE**
Moderators: Katarina Derzsiová, Theodoros Mountokalakis
The mind behind the structure. Vesalius on the “Fabrica” of the human body
Giorgio Zanchin

12:00-12:15 C O F F E E B R E A K

- 12:15-12:45 LECTURE**
Moderators: Miroslav Mydlik, Ilias Lianos
Contribution of three outstanding Polish Scientists (18th-19th centuries) - Jędrzej Śniadecki, Samuel Goldflam and Józef Konrad Dietl- to clinical Nephrology
Janusz Ostrowski, Boleslaw Rutkowski

- 12:45-14:20 FREE COMMUNICATIONS - On the quantity and quality of urine**
Moderators: Athanasios Agrafiotis, Luigi Iorio

- 12:45-13:05** Morbus Dominorum
Vincenzo Savica

- 13:05-13:25** Diuretics in the 19th century
Guido Bellinghieri

- 13:25-13:45** The Hypertension and the kidney: evolution of knowledge about an egg and chicken problem
Theodoros Mountokalakis

- 13:45-14:05** The renal aphorisms of Santorio Santorio (1561-1636)
Natale G. De Santo

14:05-14:20	Discussion
14:20-16:00	L U N C H
14:20-16:00	BOARD MEETING I
16:00-18:00	ROUND TABLE Moderator: Athanasios Diamandopoulos The spread of nephrological knowledge from the centers of excellence into Eastern Europe, during the 18 th , 19 th and beginning of 20 th centuries
16:00-16:05	General Introduction Athanasios Diamandopoulos
16:05-16:25	Eugeny Tareyev (1895-1986), the founder of Nephrology in Russia and the European Nephrology Tatiana Sorokina
16:25-16:45	Aspects of a translational history of Nephrology in Romania: Feed-back relationships Dana Baran
16:45-17:05	On the Development of Nephrology in Serbia: From the Folk remedy and Medical advices Anthologies to the modern textbooks Gordana Subaric Gorgieva
17:05-17:30	Discussion
17:30-18:00	LECTURE Moderators: Neil Turner, Erasmia Psimenou Lessons from the history of transplantation David Hamilton
20:30	D I N N E R



SATURDAY, SEPTEMBER 14th 2013



09:00-11:00 SYMPOSIUM "THE GIANTS OF NEPHROLOGY" In Memory of Karl Julius Ullrich (1925 - 2010)

Moderators: **Natale G. De Santo, Garabed Eknoyan**

09:00-09:20 The Legacy of Professor Karl Julius Ullrich
August Heidland

09:20-09:30 Reminiscence: The Berlin Years of Karl Julius Ullrich (1962-1967)
Michael Wiederholt

09:30-09:50 Exupere-Joseph Bertin (1712-1781) and the description of the "petits siphons recourbes" (Henle's loops a century ahead)
Antonio Mezzogiorno

09:50 -10:10 Professor Albert Válek, MD DSc. (1925-1995) - Well-known nephrologist and his contribution to Czech and Slovak Nephrology
Katarina Derzsiová

10:10-10:30 Karl von Rokitanski (1804-1878): contribution of a famous pathologist born in Bohemia to Nephrology
Sylvie Opatrna

10:30-11:00 Discussion

11:00-12:30 FREE COMMUNICATIONS - Precision in Nephrology: Words and Numbers (A) Moderators: **František Šimon, Constantinos Fourtounas**

11:00-11:20 The epidemiology of Kidney conditions in Antiquity and in Byzantium
Alain Touwaide

11:20-11:40 Symptoms and Signs through the ages: Physicians of the past and future thinking alike **Pavlos Goudas**

11:40-12:00 "The kidneys" of Jan Brod. Impact of lucky textbook of Nephrology
Miroslav Mydlik

12:00-12:30 Discussion

12:30-12:50 C O F F E E B R E A K

12:50-14:30 FREE COMMUNICATIONS - Precision in Nephrology: Words and Numbers (B) Moderators: **Vincenzo Savica, Aggeliki Zerva**

12:50-13:10 The quest for certitude in Medicine and Nephrology **Garabed Eknoyan**

13:10-13:30 History of the term Pelvis renalis **František Šimon**

13:30-13:50 The loop of Henle as the milestone of mammalian kidney concentrating ability: a historical review **Efstathios Koulouridis**

13:50-14:10 Molecular genetics and nephrogenetics studies support historical phylogeographic evidence about the origin of the population in Cyprus
Constantinos Deltas

14:10-14:30 Discussion

14:30-15:30 B R E A K - L U N C H

14:30-15:30 **BOARD MEETING II**

15:30-18:00 **ROUND TABLE**

Moderator: **Panos N. Ziroyiannis**

The spread of nephrological knowledge from the centers of excellence into the Americas, Balkans and Middle East during the 18th, 19th and beginning of 20th centuries. The future ahead.

15:30-15:40 General Introduction **Panos N. Ziroyiannis**

15:40-16:00 Greece I: From *Iatrosophia* to printed books **Agamemnon Tselikas**

16:00-16:20 Greece II: The transfer of medical knowledge from central Europe to Greece during the Enlightenment **Constantina Triga**

16:20-16:40 The development of Nephrology in Turkey and its connection with the Western literature on the subject **Ayla San**

16:40-17:00 History of Nephrology in Mediterranean Arab countries and the translation of Western terminology into Arabic **Aziz El Matri**

17:00-17:20 Nephrology in Mexico. Its early references and knowledge of classical nephrological texts **Carlos Viesca**

17:20-17:40 No longer recherché - the impact of the Internet on the History of Nephrology **Neil Turner**

17:40-18:00 **Discussion**

18:00-18:15 C O F F E E B R E A K

18:15-19:45 **POSTER SESSION (A)**

Moderators: **Garabed Eknoyan, Natale G. De Santo**

1. Academies allied extra muros of the universities in a time of economical crisis in Europe (1550-1700). The case of the Padua Studium Aniello Montano, **Natale G. De Santo**, Gerardo Marotta
2. "De lapidibus podagra et chiragra in humano corpore productis" (Rome, 1699): the contribution of Giovanni Battista Contoli to the urinary tract stones description and classification **Lorenzo A. Calò**, Angela D'Angelo and Piero Marson
3. Diabetes mellitus; a revival of the past and a perspective for the future **Panos N. Ziroyiannis**
4. The renal stone disease of Michel Eyquem de Montaigne (1533-1592) **Carmela Bisaccia**, Gabriel Richet, Rosa Maria De Santo, Massimo Cirillo, Dietrich von Engelhardt
5. Cures for urinary stones in *De medicina aegyptiorum* of Prospero Alpini (Venice, Franciscus de Franciscis, 1591) **Natale G. De Santo**, Biagio Di Iorio, Carmela Bisaccia, Giuseppe Ongaro
6. Some errors, under the light of the current knowledge, in the ideas of Hippocrates, Aristotle and Galen on renal physiology **Dimitris Vlachakos**
7. Foam in urine: from Hippocrates to the Medical School of Salerno **Luigi Iorio**



8. Prognosis of life and death and disease duration from urine examination according to Prospero Alpini (1553-1616) reader in simples at the University of Padua
Biagio Di Iorio, Giulia Lacedelli Colussi, Natale G. De Santo, Gianni Aliotta, Carmela Bisaccia, Massimo Cirillo, Giuseppe Ongaro
9. The influence of medicine by “ethnomedical” traditional practices. The urine therapy example **Maria Kalientzidou**
10. Perceptions about gout (podagra) during the Byzantine era, with a special focus on a Michael Psellus’ poem **Constantinos Fourtounas**

18:15-19:45

POSTER SESSION (B)

Moderators: **Guido Bellinghieri, Dimitris Grekas**

11. Antoine Ferrein and his “tuyaux blancs”
Gabriel Richet, Carmela Bisaccia, **Antonio Mezzogiorno**, Natale G. De Santo
12. Leech therapy and kidney diseases from the past to modern medical research
Evanthia Perikleous, Manthoula Kazamia, Polyxeny Vourlioti, Despina Missiou, **Manthos Dardamanis**
13. Cupping therapy with scarificator in the district of Epirus, Greece
Manthoula Kazamia, Polyxeni Vourlioti, Evanthia Perikleous, Despina Missiou, **Manthos Dardamanis**
14. History of low protein alimentation in ckd: from chestnuts to aminoacids-ketoacids diets (1869-1982)
Biagio Di Iorio, Massimo Cirillo, Alessandra Perna, Massimo Manzo and Natale G. De Santo
15. The history of Hemodialysis’ vascular access
Constantina Goula, **Ourania Drakoulogkona**
16. The first introduction of the matula at the imagery of Saints Cosmas and Damian into Orthodox Post-Byzantine religious painting in Greece
Athanasios Diamandopoulos
17. The evolution of imaging in Nephrology
Despina Spyropoulou, Ekaterini Spiliopoulou, **Dimitris Kardamakis**
18. History of Algerian Nephrology **Rayane Tahar**

19:45-20:00

CLOSING REMARKS

Moderators: **Athanasios Diamandopoulos, Miroslaw Smogorzewski**

Commentator: **Garabed Eknayan**

20:00-20:15

GENERAL ASSEMBLY

21:00

G A L A D I N N E R

21:00- 21:15

PRE - DINNER SPEECH

Moderator: **Dimitris Kardamakis**

Dining and wining in Ancient Greece. *The Symposia Spyros Retsas*

ABSTRACTS & POSTERS



A TWO-THOUSAND YEAR HISTORY OF NEPHROLOGY: TEN ENDURING SCIENTIFIC LANDMARKS

Leon G. Fine, MD

*Professor and Chair, Department of Biomedical Sciences, Vice-Dean, Research
and Graduate Research Education, Cedars-Sinai Medical Center,
University of California, Los Angeles, USA*



This analysis looks back to the time of Galen at the beginning of the first millennium A.D. and attempts to identify seminal contributions which have marked the evolution of our knowledge of the function of the kidney and its diseases and therapies up to the latter half of the 20th Century.

Vast expanses of time are omitted in which no contributions can be found which are of relevance to our modern understandings. Naturally, the advances of importance have increased over the past two centuries, in which cases the selections must, of necessity, be the personal opinion of this writer, and open to argumentation.

In each case, an author and a specific publication are chosen for discussion, with some coverage of knowledge accrued in the intervening periods.

STRAUSS & WELT'S "DISEASES OF THE KIDNEY": A TALE OF TWO CITIES

John T. Harrington, MD, MACP

Professor of Medicine, Dean Emeritus, Tufts University School of Medicine, Boston, MA, USA

The two cities of my title are Boston and Chapel Hill, although New Haven via the influence of John Peters' many illustrious trainees also played a role in "Diseases of the Kidney." I trained in Internal Medicine in Chapel Hill (1962-1965) with Dr. Louis Welt. Later I was a renal fellow and a faculty member at Tufts in the mid-late 1960s-1970s when Dr. Maurice Strauss was Dean of Student Affairs. I knew both very well. Both graduated from prestigious medical schools, Strauss from Johns Hopkins in 1928 and Welt from Yale in 1938. Each served 4 years in WWII. More importantly, for our purposes, each wrote excellent salt and water texts published by Little, Brown in the mid-late 1950s. Simultaneously, the first successful kidney transplant (identical twins) was carried out in 1954 at the Brigham Hospital in Boston by Drs. Joseph Murray and John Merrill; their work led to the Nobel Prize.

In 1963, Strauss and Welt co-edited "Diseases of the Kidney" also published by Little, Brown. "THE BOOK" then cost \$32.50; \$246 in constant dollars. Weighing 5.6 lbs (~ 2.5 kg), it contained 1033 pages, and 37 chapters by 43 authors. Boston led with 12 authors; New York, New Haven and Baltimore each contributed 2; the Bethesda/Washington D.C. area and Chapel Hill each had 4; and there were 5 international authors. If we "collectivize" the 7 John Peters' trainees who contributed to this text, "Petersberg" would come in second to Boston. Peters' trainees spread his interest in Body Water from New Haven to Vermont, Boston, Washington, D.C., Chapel Hill and then to Texas (Donald Seldin). I will present the five best chapters, lead by Berliner's incomparable "Renal Physiology Monograph". THE BOOK received strong reviews, and nine editions have been published to date; the latest (2760 pages) was published last year by Lippincott, Williams and Wilkins, successor to Little, Brown. The editors are Robert Schrier and 4 colleagues.

I will close by speculating on the reason why Dr. Strauss changed his career from hematology, which he practiced and investigated for approximately the 1st one-half of his professional career, to what we now call Nephrology.

SCIENCE ON THE KIDNEY IN EARLY 18th CENTURY EUROPE BASED ON THE WORKS OF JEDRZEJ SNIADOCKI AND JONS J. BERZELIUS: SIMILARITIES AND DIFFERENCES

Mirosław J. Smogorzewski, MD, PhD

*Associate Professor of Medicine, Division of Nephrology,
USC Keck School of Medicine, Los Angeles, CA, USA*



Both, Jędrzej Sniadecki (1768-1838) from Poland and Jöns J. Berzelius (1779-1848) from Sweden were chemist and physician with strong education obtained in their countries and abroad. In young age they were appointed as professors in Vilnius University (Sniadecki, 1797-1832) and Stockholm Medical College (Berzelius, 1807-1848) and in addition to their chemical discoveries, both show interest in kidney function and diseases.

Berzelius described his findings of chemical analysis of urine in a paper on “General views on the composition of animal fluids” (1812) and once again summarized his understanding of kidney function in treatise entitled “Kidney and Urine” (1843).

Sniadecki completed his medical studies in Pavia (Italy)(1793) and supplemented his knowledge in Edinburgh, London and Vienna (1774-1776). His prominent books are “Początki Chemii” (Elements of Chemistry) (1800) and “Teoria Jęstestw Organicznych” (The Theory of Organic Entities) (1804-1811). The latter book, translated also in German (1810), is rather a manual of physiology and biological chemistry and has one chapter devoted to kidney and urine. This chapter seems to be less solid scientifically than works of Berzelius but contains novel observations as well. Sniadecki was also fascinated by total anuria in unilateral kidney stone and presented interesting explanation in one of his two papers on this subject. In addition, Sniadecki made original observations on the cure of rickets (“English Disease”) and stated, “the direct action of the sun on the body of children is one of the most efficient methods for the prevention and the cure of this disease” (On the Physical Education of Children, 1822).

The similarities and differences between those two scientists living and working in two emerging scientific centers in Northern and Central Europe in understanding of kidney function and diseases will be reviewed and discussed as well.

OLIVER AND FEIGL - TWO FORGOTTEN FATHERS OF URINE STICK TESTING

Stewart Cameron¹, Guy Neild²

¹King's College London, ²University College London, UK

"Dipstick" testing for the detection of proteinuria is a central part of the evaluation of any patient, especially one with suspected renal disease, following the emphasis of Bright and many others on the primacy of proteinuria as a sign of renal damage. The introduction into clinical medicine of "dipstick" testing is often assumed to have followed the work of Albert Free (1913-2000) his wife Helen and other colleagues in the Miles-Ames Research Laboratory, Elkhart, Indiana, USA (now part of Bayer) in the late 1950s and early 1960s. This exploited the pH change in dyes such as bromophenol blue in the presence of even trace amounts of albumin - the "protein error" of indicators, described by Sørensen in 1902. Free's paper does not acknowledge any previous work, but the idea of "dipstick" testing, or "dry chemistry", has a long history, going back at least 150 years, and perhaps even into antiquity. In 19th century Europe, urine testing for protein at first largely involved such dangerous agents as Johann Florian Haller's concentrated nitric acid "ring" test, which precluded use at the bedside, and above all in domestic consultations in general practice. The heating of acidified urine, popular in the UK, was similarly restricted.

Two of the early and productive advocates of paper reagent testing of urine to replace this awkward or even dangerous "wet" chemistry were George Oliver (1841-1915), a general practitioner - and notable laboratory researcher who discovered adrenaline - of Harrogate, England; and Fritz Feigl (1891-1971) a biochemist from Vienna, Austria. Neither enjoy any reputation or even awareness today amongst nephrologists, except in the little-cited review of the historian Voswinkel in 1994.

In 1883-4 Oliver published first a paper in the *Lancet*, and then a short book *On bedside urine testing: qualitative albumen and sugar* (HK Lewis, London, 1884), describing the use of "test papers" for the detection of albumen and glucose, the two most commonly sought abnormal substances in the urine. After several preliminary assays using different reagents, his "albumen" test papers involved first acidifying the urine using citrate impregnated paper, then the use of potassium mercuric iodide paper, which produced an opalescence in the urine as the reagent leached out of the paper. His test papers were used extensively in late 19th century England, but by the beginning of the 20th century interest died out for reasons unknown, although the manufacture of his papers continued in Germany.

Obviously the principle of Oliver's methodology differed from modern stick testing. This was not the case with Feigl, however, who in the 1920s and 1930s exploited Sørensen's protein indicator change, using tetrabromophenolphthalein to detect protein, one of many "Tüpfelreaktions" (spot tests) he described. Perhaps the subsequent ignorance of his work amongst clinicians despite his major reputation as a chemist arose, first because in 1938 being Jewish he emigrated from Austria to Brazil via appointments in Switzerland, Belgium and France, where he was put in a camp by the Nazis. Second, because all his prolific papers (over 400) were published in German-language chemical publications, rather than clinical journals, although in a review of one of his several books in the *Wiener Klin Wschr* in 1931 indicated its potential importance.

THE USE OF PLANTS FOR THE TREATMENT OF RENAL AILMENTS

Alain Touwaide, PhD

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This paper will introduce the roundtable devoted to the use of plants in the treatment of renal ailments through history. It will draw on the contributions of the speakers and highlight the current state of research in the field. In so doing, it will also identify sectors that need to be investigated, thus opening new avenues for fresh research. A specific attention will be devoted to methodological issues which are often critical.

HERBAL MEDICINE AND RENAL DISEASE: A SURVEY OF CRETAN MEDICINAL PLANTS

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Herbs are widely used for medicinal purposes, as their curative properties are now well documented and reported in several clinical studies. Numerous Cretan herbs are traditionally used for their medicinal properties in renal disease. The aim of this work is to provide a first insight into these plants.

Therefore, a detailed survey of the relevant literature was undertaken. The references concerning the usage of Cretan medicinal plants for renal disease were found and are discussed. We also present the active ingredients and scientific names of such herbs and compare with the conventional drugs used in modern pharmaceuticals.

PHARMACEUTICAL PLANTS WITH NEPHROLOGICAL INDICATIONS IN THE HIPPOCRATIC BOTANIC GARDENS IN KOS

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With the aid of the Prefecture of South Aegean, the Municipality of Kos, the NGOs Horizon, Hellas Clean, Hippocrates 2500 and the Natural products company APIVITA, the International Hippocratic Foundation has planted behind the building of the Foundation housing an Exhibition/Museum on Hippocratic Medicine, a Botanical Garden with 220 different sorts of pharmaceutical plants mentioned in “The Hippocratic Collection” with its 70 books.

In this Collection, gathered together from the librarians of the Bibliotheca Alexandrina around 300 BC, the well known “corpus hippocraticum” two hundred forty eight (248) pharmaceutical plants are mentioned (Kiapokas M., 2007). Most of them were used for gynaecological affections and less for other indications.

However at least ten plants out of 248 were used as diuretics (asparangus acutifolius, delphinium staphis agria, inula viscosa & graveolens, crithmum maritimum, fraxinus ornus, mentha pulegium, ruta graveolens, apium graveolens, cucumis sativus, and allium sativum), three as painkillers for urological affections (athamanta cretensis, silphium, papaver somniferum), one plant against dysuria (adiantum kalliphyllum) and one against kidney infection (gnaphalium sanguineum).

Not mentioned in the corpus hippocraticum as uro-nephrological drugs but mentioned for another indication and used in Antiquity for uro-nephrological indications are another twenty seven (27) plants used as diuretics, six used against kidney disorders, three against dysuria, four are spasmolytics or were used against colic pains, four were used against podagra, four against kidney stones, three against cystitis, two against leukorroeia, one against hyperplasia of the prostate and two against diabetes.

In total 72 plants are growing in the Botanical Hippocrates Garden in Kos, that were planted here either for their uro-nephrological or for another indication mentioned by the Hippocratic authors. However 56 of them mentioned for other indications were also widely used in Antiquity against uro-nephrological disorders.

Most of the extracts of the plants were taken orally as teas, syrups, powders or tablets but some of them were given as suppositories showing the increased interest of the ancient physicians to smoothen or heal uro-nephrological affections.

FROM PAST TO PRESENT, THE HISTORY OF HERBS USED IN THE TREATMENT OF NEPHROLOGIC DISEASES IN THE SOUTH-EAST OF TURKEY

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Herbal products have been used for centuries in almost every country to treat various illnesses, including nephrologic diseases. Such as nettle (*Urtica dioica*), licorice roots, sumach for urolithiasis, thyme for pyelonephritis, raspberry, white mulberry and couch grass for diuresis, almond and fava bean to reduce the pain, red pepper, raised especially in Gaziantep and Urfa region, for immune stimulation, hawthorn for hypertension, etc.

Although there is a profound disagreement between conventional and alternative medicine practitioners about the value of plants in treatment of illnesses, nowadays complementary and alternative medicine is being used in several modern countries. However, there are several serious issues to be considered regarding herbs such as; the quality due to the lack of standardized production, the scarcity of pharmacokinetic data, and severe adverse effects.

Even if something is useful, like some herbs, Hippocrates says that “Everything in excess is opposed to nature”, and Confucius says that “Never give a sword to a man who can't dance”. Therefore the usage of herbs with no scientific basis may be very dangerous, thus our aim should be to raise the awareness of people on the consequences of improper usage of these plants in case of illness.

Considering the re-gaining popularity of herbal medicines, it will be useful to recall the most commonly used herbs in several regions, along with their benefits and adverse effects, and also to discuss the scientific basis of using such herbs.

USEFUL PLANTS IN RENAL THERAPY LISTED IN SOME BOOKS AND A MANUSCRIPT WRITTEN BY PROSPERO ALPINI

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Prospero Alpini was born in 1533 in Marostica and studied in Padua, where he graduated in philosophy and medicine. He spent some years in Egypt as the physician of the Venice Republic consul. Alpini's scientific activity was very intense and his observations, not only in medicine and natural history, but also ethnological and archaeological ones were at the basis of his works. At age 50 he was appointed Prefect of the first ever Botanical Garden in Padua, a prestigious institution founded in 1545 that has always been exchanging plants, seeds and scientific material with other international institutions. In this respect, the authors have combined their expertise to focus on the useful plants in renal therapy, listed in important Alpini's works: *De Plantis Aegypti Liber* (1592), *De Medicina Methodica* (1611) *Semina Horti Medici* (1614) and *De Plantis Exoticis* (1621), reviewing the past and present botanical and ethnopharmacological information on plants used in renal therapy.

In *De Plantis Aegypti Liber*, Alpini points out errors about plants, thus many legitimate medicines were unknown to doctors and neglected. The diuretic plants listed are: Chatè (*Cucumis melo L. var. chate*), Zatarendi (*Origanum sp.*), Atle (*Tamarix gallica L.*) Alpini also describes the plant Bon (*Coffea arabica L.*), as well as the preparation and the properties of a coffee beverage, but does not mention its diuretic properties. In *De Medicina Methodica*, chapter X deals with the therapeutic approaches which can be adopted in the treatment of urine suppression. According to Alpini, it is possible to identify three levels of intensity of the affection: a mild one, characterized by a drop-by-drop urination, an intermediate level in which the urine flux is very reduced, and urination is very painful, and the last one, in which urine is entirely retained, leading to lethal effects.

The therapy suggested ranged from the application of catheters for the drainage of the bladder, thus removing the obstacles to the urine flow such as pus, or tumor abscesses, to a pharmacological approach, which can be pursued through ointments or fomentation applied on the pubic region, or giving decoctions, or potions. In both cases, the prescriptions rely mainly on plants, and to a much minor extent on animals. Plants are generally administered in combination of three or more species, and seeds are among the most common components (*seminum althaeae, malvarum, foenugreci, melonis*), followed by the roots (*Asparagus, Senecio, Phoeniculum* and *Juniperus*) and the aerial parts (*Althea, Parietaria*). The *Semina Horti Medici*, a 13-page-manuscript written by Alpini in 1614, represents the first ever Index *Seminum* of a

botanical garden. It was recently found and published by E. Cappelletti and G. Ongaro, who also identified about 150 plants named with a pre-Linnean nomenclature.

The amount of seeds reported on the list is less than the number of plants cultivated in the botanical garden in 1591 (more than 800). Most of the seeds listed are from indigenous Italian species. Some diuretic plants listed on the Index are: Antillis (*Cressa cretica* L.), Moly (*Allium subhirsutum* L.), *Digitalis alba* (*Digitalis purpurea* L. subsp. *Heywoodii* P. & M. Silva - Foxglove), *Hissopus Graecorum* (*Origanum onites* L.?), *Sabdariffa* (*Hibiscus sabdariffa* L. - Roselle or Karkade) and some others.

Moly and Foxglove caused controversies in the history of science. Most of the plants cited in the previous works are described in details, including a marvelous iconography in the *De Plantis Exoticis*, published in 1621 after Alpi's death. Finally, it is worth to mention that Alpi was celebrated as a botanist with the important genus *Alpinia* (Ginger lily) dedicated to him by the Scottish botanist William Roxburgh (1751-1815).

THE VIEW OF THE ARCHAEOLOGIST**Georgia Chatzi-Spyliopoulou***Director, Z' Inspectorate of Antiquities of Olympia, Archaeologist, GREECE*

In the distant, fertile and picturesque valley of Olympia, the "most beautiful place in Greece" according to the historian Lysias, noted for its religiosity and the worship of the war god and father of gods Zeus, the Panhellenes - citizens of the East and West - gathered every four years in a meeting that symbolised the universal assemblage of free citizens.

In the famous Sanctuary of Zeus, the spiritual cultivation of the youth took place in harmony with physical exercise. The exercise of adolescents and men, combined with music and theatrical performances, was part of their education. This multidimensional education helped them to balance spirit and body, to become "good and virtuous" free citizens. Thus, religion, education and art could not be understood and deeply appreciated if not in conjunction with the concept of the Race. And Racing, according to the great Plato, led to the conquest of virtue.

The ancient Olympic Games were the premier athletic, but also political-social and artistic-spiritual event of the era. In the valley of the mythical Alpheus there gathered not only politicians, leaders, delegations of States, but also private citizens and villagers, as well as musicians and poets such as Pindar, who composed his 14 Olympic anthems. Philosophers, orators and historians like Gorgias, Lysias and Isocrates, made famous speeches in Olympia. At the same time, painters and sculptors competed for the victory that would lend them fame. Their exquisite carvings and paintings illustrate the deeper meaning of sportsmanship in their heyday (5th century B. C. until the mid 4th century B. C.). The presence of significant people of science and art in the National Olympics brought unparalleled spiritual glory to the sanctuary of Zeus.

OLYMPIC GAMES, ARTS AND SCIENCES. THE VIEW OF THE MEDICAL DOCTOR

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Introduction

Olympia is known worldwide as the birthplace of the Olympic Games. In fact, this is its main claim to glory. However, our perception of the Olympic Games in Antiquity and their meaning is distorted by the spectacular promotion of sport events today and their immense commercialization due the change of the global attitude towards any grand event and the unlimited power of technology. Not that traces of commercialization did not exist in the Ancient Olympic Games, but this was observed mainly in their late Roman period, when Cicero already mocked the festivities at Olympia as the greatest shopping centre in the world, the maximus mercatus. In their very beginning, they were purely religious events to honour Zeus, the patron God of the area, in memory of the legendary founder of an athletic competition here, Iphitos. This spiritual side of the games is now forgotten, as is the fact that, apart from the athletes, many intellectuals gathered there during the games either to compete, or to support the athletes.

Purpose

This paper discusses the relationship between medicine and the Olympic Games.

Methods

- 1) Archaeological evidence was used, such as the gold and ivory relief from the temple of Hera in Olympia, depicting the Agon, the personification of the Games, together with Asclepius, the god of Medicine and his daughter, Hygeia. It seems the relationship between Medicine and the Olympic Games in people's minds is very old.
- 2) Ancient Greek and Byzantine texts on medicine and gymnastics, mainly Pausanias, Hippocrates, Plato, Cicero, Galen, Oribasios, and Aretaeus, were studied.
- 3) Modern Congresses using the title "Medical Olympiad", a gathering similar to the 8th IAHN Congress in Olympia, are presented.

Results

- a) This relationship assumed the form of medical advice to athletes on exercise and diet and medical assistance during accidents or post-completion fatigue. Hippocrates mocks this tactic and it is interesting to note the distinction he makes between true health and excessive strength, demonstrated by hypertrophic muscles. Later, Orivasius, a famous doctor of the 4th cent. AD, commented on diet, saying that a restricted diet is the best guard of health, with the exception of athletes who are more interested in enhancing their strength than in their health.
- b) here is an abundance of "Medical Olympiads" in our era, mainly in the fringe of the Western World and the Greco/Roman heritage that misuse the term in order to add a false "intellectual lustre" in these gatherings. A habit that has its root in Renaissance.

Conclusions

The relationship between the Olympic Games and Medicine is closely intertwined and there is a danger of betraying the true meaning of either medicine or the Games if in-depth research is missing.

CONCEPTS OF NEPHROLOGY IN THE WORK OF NEMESIUS OF EMESA (4th CENTURY AD)

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Aim: To present some concepts of Nephrology in early Byzantium, mainly inherited from the Hellenistic medicine.

MATERIAL AND METHODS: The review of the original work of Nemesius "On the Nature of Man" (written in Greek) and the relevant contemporary references.

Results: The Byzantine period (330-1453 AD) is particularly important for medical science because it preserved the priceless heritage of ancient Greek medical knowledge in the texts of Hippocrates and Galen, but also applying new scientific methods and innovative medical practices which affected the Arab world and the West, because of the translation into Arabic and Latin respectively.

An important representative of early Byzantine medicine is Nemesius, bishop of Emesa, who lived in the late 4th century AD, in the city of Emesa in Syria. In his book entitled "On Human Nature (De Natura Hominis) containing important elements of medical physiology, such as mapping the human brain (brain mapping), he is involved with all the systems and the organs. He offers many detailed descriptions of the Anatomy and Physiology of the whole human organism and special reference to the kidneys, the bladder and the genitals. He emphasized on the important role the kidneys in cleansing blood, reflecting significant influences from the work of Galen (2nd century AD).

Conclusions: The main contribution of the Byzantine medical authors is the preservation of the medicine of antiquity, and the influence on the neighboring civilizations. Nemesius, a pioneer in Physiology, provides early concepts in the anatomy and function of the kidneys and their role in the body's homoeostasis.

ON UROSCOPY TREATISE IN THE CHILANDAR MEDICAL CODEX N^o 517: ITS CONTENTS AND ORIGIN

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The current paper aims to evaluate the Uroscopy treatise which exists as a distinctive chapter in the Chilandar Medical Codex N^o 517, a comprehensive medieval medical compilation, preserved in the library of the Serbian Monastery Chilandar, on Mount Athos (Greece).

This coherent uroscopy manuscript is, actually, a textual continuation of the Codex introductory chapter *De pulsibus*, and has a precise incipit: 'Here begins a Discourse on Recognizing Illness by Examining the Urine ('Water'), while the explicit ('The end of the theory on urine, as Hippocrates, the philosopher says'), is written in two languages: Serbian and Greek. Beside the name of Hippocrates, mentioned three times in this chapter, and alleged citation of his work *Aphorisms*, the famous authors, also described as teachers or philosophers, such as Galen, Isaac Israeli, Avicenna, Theophilus Protospatharius and Constantin the African are quoted. There are 56 passages on the Hippocratic definition of urine formation, differentiating and classifying urine according to the quantity, colours, consistency, odour and sediment. The physiological background of this work is the antique philosophical concept of *Alcameon* (*isonomia*), later defined as the Four-humour system of blood, phlegm, yellow and black bile, in the earliest known Hippocratic text (*De Natura Hominis*); thanks to Galen, this concept was broadly accepted in medieval medical schools.

The Chilandar's Uroscopy was already assessed as a typical medieval treatise based on the scientific medical knowledge of the Salerno and Montpellier schools (M. Grmek, R. Katić), but the correlation with the known and published Latin and/or Greek Uroscopy texts is still unclear. It does not contain any astrological or magic notions, or prayers for the sick. This Cyrillic manuscript, written in Serbian/Old-Slavic, is considered a unique copy, and probably is the transcript and/or translation of an older version (created in the 13th century).

In our survey, we compared the Chilandar Uroscopy with several accessible Latin translations of the authors mentioned above, together with Ioannis Actuarius' treatise *Peri ouron* (ed. I.L. Ideler). We found a considerable analogy with the work of Theophilus Protospatharius *Liber Urinarum Teophili* (Articella; ed. Hermann Liechtenstein, Venezia, 1483). Remarkable resemblance between two uroscopy treatises, in terms of their content and style, can be found also in the preceding chapters - the pulse treatises. Finally, in the Chilandar Medical Codex N^o 517 and Uroscopy text we found several important components that are characteristic and crucial for the Articella, the main medieval medical textbook.

A PRELIMINARY COMPARISON BETWEEN GREEK AND TIBETAN UROSCOPY

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Examination of urine was certainly one of the basic diagnostic (or prognostic) methods in ancient and Roman times. There are several scattered references of the subject in Corpus Hippocraticum and the works of Galen, among others. However, the surviving dedicated works on uroscopy (all titled “On Urine”) are dated from 4th c. AD onwards (Magnus, Theophilos Protospatharios, Stephanos of Alexandria and Ioannis Actuarius). Uroscopy was presumably established in Tibet as part of the Greek school of medicine sometime between the era of the Tibetan king Songtsen Gampo (Srong btsan sgam po, 7th c. AD) and 900 AD. Today Tibetan uroscopy is a living practice of traditional medicine, the main diagnostic tool together with pulse diagnosis.

We proceeded with a parallel preliminary comparison between uroscopy methods of Greek and Tibetan medical traditions. For that purpose we had to examine closely a number of Greek (mainly Magnus, Theophilos and Stephanos works) and Tibetan texts (rGyud bzhi, Sman dpyad zla ba’i rgyal po etc.) looking for similar parts or structure among them, but most importantly we searched for identical specialized terms and similar theoretical approaches on a particular phenomenon (like the appearance of sediments).

There were certainly some sound similarities between these traditions of uroscopy, but we also found several important differences.

As with philosophical and other texts, Tibetan scholars demonstrated exceptional abilities in organizing (or re-organizing) translated texts, so for the moment it seems difficult to discover a Greek text translated in Tibetan. However, a lot more needs to be done in comparing these traditions, as well as to expand the research to the Arabic one.

THE CONCEPT OF KIDNEYS IN TRADITIONAL CHINESE MEDICINE

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According to the Traditional Chinese Medicine (TCM) the human body is developed through the interaction of the 5 elements: wood, fire, earth, metal and water. Each one of the elements creates different organs: liver, heart, spleen (digestion), lungs and kidneys respectively. Created by the water element, kidneys attract the water of the human body and discard part of it. TCM seem not to understand the function of producing and expelling urine in the glomerulus, as it is understood today. According to TCM this function is of secondary importance.

Based on classic TCM texts I investigate the basic ideas of kidney functions and some parallels in Western medicine.

Kidneys accommodate the genetic memory of the body or jing (essence), the source of male or female sperm. This function can be attributed to the adrenals. Kidneys are connected with marrow (testicles, bone marrow, brain, spinal cord, nervous system), while in Western medicine erythropoietin (produced in the kidneys) stimulates red blood cell progenitors in bone marrow to produce red cells. Kidneys are also connected with bones and skeleton development, like the active form of vitamin D (produced in the kidneys) is responsible for accumulation of Ca in the bones. The primordial memory is expressed through the formation of one of the five types of souls, called zhi (will), which resides in the kidneys. According to TCM the sentiment of fear comes as a result of the water element threatening to extinguish the fire in the heart. This fear is causing downward movements (the natural direction of the water element), a very well-known phenomenon! Finally, kidneys are connected with hair, ears and hearing.

As a conclusion it is clear that kidneys in TCM are perceived in a much broader sense, including functions associated with the hormonal system, skeleton development or even the sentiment of fear. Most importantly kidneys are considered the foundation of the human body.

DESCRIPTION OF UROLITHIASIS IN THE SOURCES OF TRADITIONAL AYURVEDIC MEDICINE

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Traditional texts of Ayurveda (āyurveda) contain a lot of information about diseases related to the urinary system. Among them there is urolithiasis (aśmarī) described in 'Caraka-saṁhitā', 'Suśruta-saṁhitā', 'Aṣṭāṅga-hṛdaya-saṁhitā', 'Madhava-nidāna', etc.

Aśmarī means aśmanam rāti, that is 'the giver of stone' (urolithiasis).

Developing of this disease is described in 'Suśruta-saṁhitā' (2.3.4): Kapha dosha comes in contact with urine (mūtra-saṁpṛktaḥ), forming stones in the bladder (vasti). According to 'Caraka-saṁhitā' (6.26.36), Vata dosha exsiccates urine in the bladder, as well as semen, Pitta and Kapha, thus stone gradually is formed, similar to gallstones are formed when cow bile becomes dry.

The first signs of the disease (pūrva-rūpa), according to the 'Aṣṭāṅga-hṛdaya-saṁhitā' (3.9.7-8) are the following: distension of the bladder (vastyādhmānam), severe pain in this area (atiruk), goat smell of urine (basta-sagandhatvam), difficulties of urinating (mūtra-kṛcchra), fever (jvara), anorexia (aruci), hematuria (sarakta-mūtra), the reflection of pain in the umbilical area (nabhi), genitals and perineum (sevanī).

Depending on causes, this disease is divided into 4 types: vātaja, pittaja, kaphaja, and śukraja.

Vātaja is caused by Vata dosha. The patient feels severe pain, urine is separated by drops. Stone usually is black or reddish color and has an irregular shape – it seems like it's coated of spikes.

Pittaja is caused by Pitta dosha. The patient feels fever in the bladder, the stone is red, yellow, or black, shaped like a seed of the bhallataka plant (Lat. Semecarpus anacardium).

Kaphaja is caused by Kapha dosha. The patient has a sense of pricking in the bladder, a feeling of heaviness and coldness. The stone is large, smooth, white or the colour of honey.

These three types are also observed in childhood.

Śukraja caused by semen in old age, manifested in the difficult urination (mūtra-kṛcchra), pain in the bladder (vasti-vedana), the scrotal oedema (vr̥ṣaṇa-śoṭha).

'Suśruta-saṁhitā' (2.3.16-17) describes the symptoms accompanying cleavage and passage of stones in the urinary tract.

According to 'Suśruta-saṁhitā', urolithiasis can be cured by surgery (śāstra-sādhyavyādhi). A poor prognosis is given for a long-term and long-standing forms (cirotthita).

SEMBLANCES OF THE KIDNEYS ACCORDING TO ANCIENT GREEK WRITERS AND SOME MODERN RELEVANT ARTIFACTS

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This paper aims to highlight the ingenious descriptions ancient Greek writers used to liken the kidneys and their function.

Since the beginning of education, the methods used for teaching medicine -and any other subject- include examples, similarities and semblances. The strong points of this method are that it allows students to picture an unknown subject via another known one, its easiness to be memorized and, sometimes, the development of an accepted bond between the tutor and the student when referring to mutually familiar objects, events and actions used as similes. In an era when purely scientific terminology, medical illustrations and educational databases were scarce, the use of examples and similarities were more widely applicable than in modern times.

In this paper, we traced several such examples in the writings of Aristotle, Galen, Aristophanes Grammaticus, Philo Judeus, Epicure, Alexander Aphrodiseus, Athanasios of Alexandria and of a late comer, Meletios Monachos. These semblances range from the obvious (e.g. human kidneys are like those of other mammals) to the bizarre and droll (e.g. renal tissue has the tendency to swallow the blood's litter as a dog has the tendency to swallow human faeces!). We also present for comparison some semblances of the kidneys with several modern artifacts.

We believe that highlighting and analysing these examples, used by early medical and lay writers on renal issues, allows us to better understand the difficulties they faced, the ways in which they overcame them and the cultural milieu in which they and their pupils lived.

THE MIND BEHIND THE STRUCTURE. VESALIUS ON THE "FABRICA" OF THE HUMAN BODY

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Next year we will both celebrate the birth and commemorate the death of Andreas Vesalius (1514-1564), recognized as the founder of modern anatomy, in turn a fundament of the scientific revolution that brought to the accomplishments of contemporary evidence-based medicine. Considering the interest of an audience of nephrologists and of a speaker who is neurologist, I will briefly examine the contribution of his main work "De humani corporis fabrica" to the knowledge of kidneys and brain. Both fascinating organs to Vesalius, in their description the passion with which he engaged in his research is vividly expressed, e.g. when he dismisses sharply the current Galenic opinion maintaining the existence of a "membrane perforated like a sieve" in the kidney; or in his emphatic denial of the structure called "rete mirabile" in the human brain.

But the most relevant aspect behind these important acquisitions is the Vesalian method, based on direct, systematic observation on the human body, combined with an innovative teaching attitude using naturalistic illustrations.

On the background of 16th century Padua University, quoted as the cradle of modern medicine, and of the Titian's Venice, the Author of the "Fabrica" stands out as a Renaissance man, already bound for the knowledge gained through the personal, critical observation of the nature, the only procedure accepted since then as a reliable judgement on the validity of the inherited scientific tradition.

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CONTRIBUTION OF THREE OUTSTANDING POLISH SCIENTISTS (18TH-19TH CENTURIES): JĘDRZEJ ŚNIADECKI AND HIS FLIRTATION WITH NEPHROLOGY

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The Enlightenment, was a breakthrough for the European medicine. Jędrzej Śniadecki, born in Żnin on 30th November 1768, was one of the key representatives of the period in the Polish medicine. His education included the renowned Nowodworski's school in Krakow, which he completed with a distinction receiving a "diligentiae" medal from King Stanisław August. Then, he studied physics and mathematics at the Main Crown School in Krakow, changing, after a year, for the medical faculty and graduating in 1791. The same year, he went to study in Pavia, Italy, where he obtained his PhD in medicine and philosophy. In Italy, he met the great names of the time including the pioneers in the field of electricity – Galvani and Volta, the anatomist Scarpa or the physiologists Spallanzani and Frank. Next, in Edinburgh, where he moved in 1793, he learned from the famous chemist Black, the anatomist Monro and the internist Duncan. In Vienna, for over a year, he maintained contacts with the first Vienna School of Medicine. In 1797, Śniadecki became professor of chemistry at the Principal School of the Grand Duchy of Lithuania in Vilnius, later Vilnius University, where, in 1827, he was appointed Head of the medical clinic. He died on 11th May 1838 in Vilnius. Śniadecki is renowned for his activities in medicine and chemistry.

Two of his works are of particular interest for nephrologists: "On Urinary Retention Caused by a Calculus in a Single Kidney", published in Journal of Vilnius Medical Association in 1818, and "A Peculiar Case of Urinary Retention (Ischuria) Quoted by dr. Charles Hastings (The London Medical and Physical Journal 1829)" published in Journal of Medicine, Surgery and Pharmacy in 1830. Both works include descriptions of common urinary tract diseases and treatment suggestions. Simultaneously, he offers a vivid description of a syndrome referred to as obstructive nephropathy. Also, his presentation of subsequent stages of uraemia is one of the first such accounts in the European medical literature since Richard Bright. In 1804, he published his most significant work: "Theory of Organic Beings", where he discusses the constant metabolism in the human organism, thus adding to the development of the Polish pathophysiology.

Śniadecki also researched on the impact of vitamin D. In 1822, as the first researcher in the world, in his work "On Physical Upbringing of Children" he pointed at the importance of the sunlight in the treatment and prevention of rickets in children. The same conclusions were reached by the British scientist Palm only in 1890, yet he is quoted as the author of the discovery. Śniadecki's input in this field was recognised by the medical world after the publication of works by Mozołowski in Nature, and Holick. In 1800, Śniadecki published 2 volumes of "The Beginnings of Chemistry" regarded as the first chemistry handbooks for students in Poland establishing him as the pioneer of chemistry in Poland. Śniadecki's achievements in the fields of medicine, chemistry and philosophy place him among the greatest of the Enlightenment in Poland, but also in Europe.

CONTRIBUTION OF THREE OUTSTANDING POLISH SCIENTISTS (18TH-19TH CENTURIES): DOCTOR SAMUEL GOLDFLAM, THE WORLD- FAMOUS NEUROLOGIST AND HIS CONTRIBUTION TO NEPHROLOGY

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At the turn of 18th and 19th centuries the French doctors Pierre Cabanis and Philip Pinel promoted a new trend in medicine in which new specialities, like neurology created by Thomas Willis, Carl Westphal and Jean Charcot, emerged. One of the pioneers of neurology in Poland was doctor Samuel Goldflam born in Warsaw on 15 February 1852. After graduating from a Warsaw secondary school and studied medicine at the University of Warsaw between 1870 and 1875.

Subsequently, he started working in the Internal Medicine Clinic of a hospital headed by the Czech doctor Vilem Lambl. Later, he studied neurology with Carl Westphal in Berlin and Jean Charcot in Paris - the first professor of neurology and the head of the world's first clinic of neurology. In Warsaw S. Goldflam opened his clinic of internal medicine and neurology for underprivileged patients. In 1922-1932 he worked as a volunteer at the department of neurology headed by another Polish neurologist – Edward Flatau. Samuel Goldflam co-organised and was the first President of the Warsaw Society of Neurology but he was also active socially and politically. Doctor Goldflam died on 26 August 1932. 2012 marks his 160th birthday and 80th death anniversary.

His achievements in neurology include his contribution in the description of myasthenia gravis (“Erb-Goldflam syndrome”), his work on the value of Rossolimo’s sign in the early diagnosis of multiple sclerosis and periodic paralysis, where he first described the familial form of the disease. In recognition of his achievements, during the 1949 Paris International Congress of Neurologists the portrait of Samuel Goldflam was placed among the greatest neurologists of the 20th century. Doctor Goldflam was also interested in renal diseases and published the work “Costophrenic Angle Tenderness” in a magazine “Medicine” in June 1900. Although he does not quote any clinical case there the work is known to every medical student and doctor. In the work he emphasised that the field of renal pathology, unlike others, was undergoing substantial development resulting from new research methods, perfecting the old ones and the development of bacteriology. This opinion mostly concerned the borderline between internal medicine and surgery.

The syndrome named after him – Goldflam’s sign (costophrenic angle tenderness) is described by him: “[...] The Patient with his upper part of the body naked and slightly leaning forwards stands or sits with his back facing the examiner. With the outside edge of the fist, the examiner performs short, gentle percussions in the lumbar area or perpendicularly to the lumbar spine muscles or slightly next to them. The result is the concussion of this area which in healthy people is painless, whereas in case of certain renal diseases invariably causes pain [...]”. The author observed this symptom in patients with renal calculus, pyelitis, renal tuberculosis, renal abscess and tumor etc. He explains that the sign is auxiliary to other kidney examination methods. Samuel Goldflam’s achievements in neurology and in the future nephrology position him among the greatest in both Polish and world medicine.

PROFESSOR JÓZEF KONRAD DIETL, THE OUTSTANDING INTERNIST AND REFORMER OF THE MEDICAL SCIENCES AND HIS CONTRIBUTION TO THE DEVELOPMENT OF NEPHROLOGY

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The works of Vesalius gave the 16th century the nickname of the age of anatomy and, in a similar pattern, the 19th century can be referred to as the age of pathology. One of the major representatives of the new model in medicine based on pathological anatomy, medicinal chemistry and an in-depth examination of the patient was Carl von Rokitansky from Vienna, a co-founder of “the second Vienna School of Medicine” characterised by therapeutic scepticism and scientific radicalism. The Polish physician, Józef Dietl, involved in the creation of the School manifesto, was Rokitansky’s student and co-worker. Born on 24 January 1804 in Podbuże, Austria-Hungary-annexed Galicia, Dietl initially studied philosophy at the University of Lviv, and later medicine at the University of Vienna, where he graduated in 1829. Still working in Vienna he published one of his most significant works in which he expressed his critical opinion about bloodletting in pneumonia, a therapy in use since Hippocrates and Galen up to the late 19th century. In the years 1851-1865 Józef Dietl worked at the Jagiellonian University in Krakow as the Head of the Medical Clinic, and later as the University rector. In the Krakow period he rejected the existence of the disease called the Polish plait (*plica polonica*) and worked on climatotherapy and balneotherapy in Poland, thus adding to the development of the latter.

After he had retired, Dietl was engaged in political and administrative activities becoming the President of Krakow twice, the position for which he also gained respect and admiration. Józef Dietl died on 18 January 1879 in Krakow. The wide scope of his medical activities covered also the borderline between nephrology and urology. In 1864, in *Wiener Medizinische Wochenschrift* he published his work titled “Wandernde nieren and deren einklemmung”. The work in great detail described his 3-year long experience gained in the Krakow clinic concerning nephroptosis, a pathological condition which may result in urinary retention, renal colic, hydronephrosis and kidney damage. The condition known as “Dietl’s crisis” as commonly accompanied by severe renal, lumbar or abdominal pain, fever, tachycardia, cold sweats, nausea and emesis and even collapse. In such cases Dietl recommended conservative treatment based on taking an appropriate body position, using band aids and corsets. In a prolonged pain sensation he recommended taking a horizontal body position and exerting pressure on the lower pole of the floating kidney enabling its correct repositioning. The term “Dietl’s Crisis” is still commonly used by nephrologists, and notably by urologists around the world. Professor Józef Dietl was an outstanding Polish internist and his remarkable achievements in the fields of pulmonology, balneotherapy, rheumatology and nephrology combined with his contribution in the development of medical sciences put him among the most renowned doctors of the 19th century in Europe.

MORBUS DOMINORUM**Vincenzo Savica***Professor of Nephrology, Department of Internal Medicine University of Messina, ITALY*

Egyptians in 2640 BC identified an acute pain attack occurred in the first metatarsophalangeal joint later recognized by Hippocrates in the fifth century BC. Latin defined the word gutta, drop, because they considered that one of the four humors, which in equilibrium maintained health, under certain circumstances drop or flow into a joint causing shooting pain and inflammation according to humoral conception of diseases. Galen, six centuries later Hippocrates, describing tophi associated with gout with debauchery and intemperance.

Seneca recognized a hereditary trait of gout. Cappadocian physician Aretaeus described in the second century AD a “gouty diathesis”. Dominican monk Randolphus of Bocking was the first person who coined the word gout and defined “gutta quam podagram vel artiticam vocant”, the gout that is called podagra and arthritis. Gout affected kings and very important persons as King Priam of Troy, Achilles, Oedipus King of Thebes, Ulysses, Pleisthenes, Julius Caesar, Galileus, Charlemagne, Darwin, Newton and Roman soldiers, in antiquity, suggesting to Svetonius to coin the term “Morbus Dominorum” or after “Disease of the Gods” describing Claudius, Tiberius, and Caligula and many other very important persons, suffered from saturnine gout that was 10 times prevalent in aristocrats than in plebeians or slaves: This aspect was pandemic in the Roman Empire and, in the nobility, was due to wine consumption that per personam was 1-5 liters per day. Moreover during the Roman Empire wine was enhanced by pouring sweetened grape juice into wine which was stored in lead containers.

Also food was contaminated from lead content in dishes and utensils producing saturnine gout. On long time gout, the disease of Demetrius Pepagomenous, influenced decision of wars and Emperors: Charles V was debilitated by gout probably prompted him to put off military action against the French city of Metz and led him to abdicate to his brother Ferdinand I. William Pitt the Elder, British statesman, was disabling gouty arthritis and this was the major factor in Britain’s loss of American colonies. Gout influenced important decision during American revolution because Benjamin Franklin, Thomas Jefferson and Comte de Vergennes were severely affected by this disease. It is very singular that gout was touted as having aphrodisiac properties as reported Hieronymus Cardanus, Michel de Mointagne and Gerhardus Feltmann. In the past a link between gout and sex resulted from the idea that gout was also a consequence of overindulgence in sex and this consideration persisted into Christian era.

Gout was personified as one of the Greek deities, Podagra, born from Dionysus (Bacchus), the god of wine, and Aphrodite, Venus, the goddess of love: this was the association followed from a long time. Knight Templars, for their noble origin were accustomed to high meat consumption and for this were affected by gout: Templar Order commanded to eat meat three times in the week suggesting to eat fish, vegetables, fruits.

Antoni van Leewenhoek, one of the pioneers of microscopy, William Stukeley, physician and noted antiquarian who suffered from gout, the Swedish chemist Scheele, the English chemist Woolaston demonstrated urate in the tophus. Subsequently Sir Alfred Baring Garrod described his famous “thread test” to measure uric acid in the serum and urine described in “The volume and treatment of gout and rheumatic gout”. McCarty, Hollander, William Cullen, William Cadogan, Baron von Stoek, were the pivotal researchers for the modern definition of the gout. Seegmiller and after Thomas Sydenham, the so called English Hippocrates, founded the modern concept of the gout but we must research still because nothing is finished and “Survival is not enough”.

DIURETICS IN THE 19TH CENTURY**Domenico Santoro, Antonio Passantino, Vincenzo Savica, Guido Bellinghieri***Department of Clinical-Experimental of Medicine and Pharmacology, Unit of Nephrology and Dialysis,
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The knowledge that some substances were able to increase urine excretion has been known since ancient times. In the XIX century diuretics were called “oriniferi” divided in direct and indirect, according to their action directly on the kidney or to other systemic disease secondarily affecting the kidney. Morning hours were preferred for diuretic assumption.

Poliuria was considered a side effects, depending on their dose and may result in dehydration, menstrual irregularities and dry mouth. In order to ensure the action, diuretics should be given in liquid form, not solid, and ingested with huge quantity of water, but if it is not contraindicated also with light white wine or with beer; moreover, skin should be hydrated because the excessive use of diuretics may cause dry skin. Diuretics were used for many purposes, few of them are still maintained.

One of these purposes was defined resolutive, especially in situations characterized by water increase, like pulmonary edema or hypertensive crisis. Other diseases that may take advantages by the use of diuretics were: hydropsies, abscesses, hemorrhagic effusions, fever, inflammations, acute congestions, urinary retention, also known as ischuria and albuminuria. In the last conditions the use of diuretics is indicated for treating diseases causing proteinuria. Moreover the use of diuretics in poisoning may favour their excretion with urine. Drug interactions, obstructive uropathy and excessive sweating were considered contraindications in their use.

THE HYPERTENSION AND THE KIDNEY: EVOLUTION OF KNOWLEDGE ABOUT AN EGG AND CHICKEN PROBLEM

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The association between hypertension and the kidney was first suggested by Richard Bright, who in 1836 observed that “the hypertrophy of the heart seems, in some degree, to have kept pace with the advance of disease of the kidneys”.

The discovery of renin by Tigerstedt and Bergmann in 1898, and Goldblatt’s landmark experiment on the production of hypertension by partial constriction of the renal arteries, established the role of the kidneys in the genesis of hypertension. Almost 20 years later, when awareness of increased mortality in hypertension led to an analysis of the causes of death in hypertensive patients, it became clear that not only can the kidney cause hypertension, but hypertension can adversely affect the kidney. In particular, uremia was the cause of death in almost one-half of the cases of malignant hypertension before antihypertensive treatment became available.

As far as essential hypertension is concerned, in a study published in 1955, of 500 essential hypertensive patients followed until death, 7% developed malignant hypertension, 42% proteinuria, and 18% renal insufficiency. The most recent advancement in our knowledge concerning the relationship of hypertension with kidney disease is the recognition of impaired renal function as a risk factor for the development of cardiovascular disease. This means that not only hypertension control can prevent deterioration of renal function, but also that hypertension treatment recommendations based on cardiovascular risk stratification should take into account the highest-risk status of patients with chronic kidney disease.

THE RENAL APHORISMS OF SANTORIO SANTORIO (1561-1636)

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Santorio Santorio (1561-1636), a physician trained in the exacting environment of Vesalius, a man used to exchange ideas in the brilliant circle of people meeting in the drawing room of Morosini Palace (among whom Paolo Sarpi, Galileo Galilei, Fabrizio d'Acquapendente, Giovambattista della Porta, Prospero Alpini) used the power of the experimental method to unseat a model of metabolic balance.

Santorio embodied the role of a modern physician-scientist directly experimenting on patients, who after measuring the deviation from norm of their functions (metabolism, temperature, pulse) offers a reasoned therapy. He was the model of a charismatic physician for the thousands of medical students who trained in Padua, benefiting from the tolerant atmosphere of the Republic of Venice. They, returning back in their homelands, granted a continuous discussion and success to Santorio's teachings and works. He introduced quantitative medicine by measuring foods, drinkables, urine, feces and calculating perspiration.

He also developed - inspired by Galilei's experiments – a clinical thermometer and the rules to measure temperature in humans (on the skin, in the mouth, in expired air), and a stop clock to measure the pulse, by developing the pulsilogium (pulsometer) based on the Galileian principle of oscillation. The present study gives a start to Santorio's contribution to nephrology by discussing aphorisms related to kidney function and body fluid balance.

THE SPREAD OF NEPHROLOGICAL KNOWLEDGE FROM THE CENTERS OF EXCELLENCE INTO EASTERN EUROPE, DURING THE 18TH, 19TH AND BEGINNING OF 20TH CENTURIES

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The spread of scientific knowledge from the Eastern shores of the Mediterranean to the West during the antiquity is very well documented. The same movement was repeated later during the Late Medieval and Early Renaissance period, with new protagonists in the trade e.g. the Islam and Jewish scholars. Very many books, articles and lectures have verified this trend. However, the reverse movement during the Enlightenment i.e. the spread of scientific knowledge (and for the purpose of this Congress, the nephrological one) from the West to the East and ahead, has attracted less interest. This latter movement, a kind of paying back a loan, had largely improved the level of medical care in these areas, although a minor side-victim was the abandonment of any traditional medical cures which were ridiculed. The scope of this Round Table is to restore the right balance, hence to soft any nationalistic feeling of scientific superiority that proudly declares that we, the Greeks/Byzantines/ Arabs/Jewish etc, were the first to enlighten the barbaric West, or vice versa, we the enlightened Europeans had opened the eyes of the ignorant. The participants, well known historians of Medicine in their countries and abroad, will offer their experience in the field, never discussed in any previous IAHN Congress.

EUGENY TAREYEV (1895 - 1986), THE FOUNDER OF NEPHROLOGY IN RUSSIA, AND THE EUROPEAN NEPHROLOGY

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During the first half of the 20th century studies of kidney diseases developed in Russia as a part of common therapeutic clinic, and was based on the translations of classical European treatises. The main book among them was the Russian translation of Diseases of the Kidneys (1902) by Hermann Senator.

Since 1960^s nephrology in Russia developed as an independent branch of Medicine. Its founder Professor Eugeny Tareyev, a son of famous Russian theologian and philosopher, was very well educated, knew several European languages (English, French, German), fluently spoke Latin, and was very knowledgeable about the foreign scientific publications, which he studied in the original languages. He was well acquainted with Richard Bright's works, laid the ground for the specialty of nephrology; with clinical-morphological trend of German scientists Franz Volhard and Theodor Fahr, and their "Die Brightsche Nierenkrankheit" published in 1914 and translated later into Russian (1923).

But one of the major components of the Tareyev's nephrological conception became clinical and functional-physiological approach developed by the French nephrology school and its founders F. Widal and L. Ambard.

Tareyev's idea of the integrative role of nephrology as a trend uniting many special fields of Internal Medicine occupied a particular place in his scientific legacy.

His activity was focused on classification of renal diseases, rare forms of lesion of kidneys, formation mechanisms of the nephritic syndrome, stages in development of renal deficiency, amyloidosis of the kidneys, etc. For decades he studied etiology, pathogenesis, pathomorphology, and pathobiology of autoimmune diseases of the kidneys, etc.

Professor Tareyev was the author of more than 700 publications, including 10 monographs, as well as text books, manuals, and Internal Medicine curricula for students and lecturers. His long-term studies of renal diseases are presented in his monographs Anemia of Brightics (1929), The Kidneys and the Organism (1933); Renal Diseases. Functional Abnormalities, Clinical Picture and Treatment of Bright's disease (1936); Nephritis (1958); Nephrology Bases (1972) - the first Soviet clinical manual on nephrology; Clinical Nephrology (1983), written in Russian.

NEPHROLOGY IN THE UKRAINE**Ludmila Makarova****Assistant Professor of Kyiv Slavonic University, Department of Philology, UKRAINE*

In 1632 the Kyiv-Mohyla Academy was founded in Kiev. It was the first higher education institution and a major cultural and educational center of the future of Ukraine, where in the XVIII century was also studied natural science and medicine. It played a prominent role in the development of Ukrainian medicine. Many graduates of the Academy received doctorate degrees.

In the XVI and XVII centuries medical schools were established at the universities of Kharkov, Kiev, Lviv, Odessa and prepared the ground for radical changes and transformations that have occurred in medicine in the XVIII-XIX ages.

During this period in the history of Ukrainian medicine many eminent medical scientists such as O.M.Shumlyansky, M.D.Strazhesko, V.P.Obratsov and others appeared.

The first milestone in the history of Ukrainian nephrology was in 1782, when a prominent physician of the XVIII century O. Shumlyansky graduated from the Kyiv-Mohyla Academy, and at the University of Strasbourg in the pages of his doctoral thesis described the capsule and the renal glomerulus far ahead in this of English anatomist Bowman. In fact, the discovery that in the world of science associated with the names of the two researchers can be considered as a prelude of nephrology clinical science discipline.

It is noteworthy that further mental efforts of Ukrainian clinicians continue the scientific progress successfully combining centuries. Professor of Kiev University V. Basil in articles in the "Journal of medical" pointed criteria of differential diagnosis of chronic glomerulonephritis and renal amyloidosis with congestive kidney (1862), described the method of palpation wandering kidney (1864). The original works on nephrology issued prominent Kyiv professors S. Alfer'yev, V. Obratsov, M. Strazhesko.

The largest contribution to the clinical nephrology in Ukraine academician F. Yanovsky made in the article "Semiotics of acute nephritis" (1907), he identified and described a new symptom "osovolist" that appears in acute nephritis with symptoms of uremia and initial perideklampsia. In another article, "The clinical significance of smell" (1925), this talented therapist said negative predictive value "urnoznoho smell" out of the mouth in patients with chronic nephritis. In the paper, "Principles of therapeutic interventions for urinary stones before and now" (1928).



Academician F. Yanovsky critically reviewed existing at that time conceptions of causes the formation of stones in the urinary tract. He made presentations at the Fourth Congress of Russian Therapists ("The methods of functional recognition of renal disease", Kyiv, 1912), the International Congress of physiotherapy ("The current state of diet in nephrology", Berlin, 1913), the first All-Union Congress of Physicians ("Syphilis kidney", Moscow, 1928). In 1927 F. Yanovsky published a monograph "Diagnosis kidney diseases in connection with s pathology", which elaborated on the changes in the urine in nephritis, described the features of edema, stressed the importance of hypertension as one of the important symptoms of kidney failure.

Study of renal coursed considerable attention of the students of Theophilus Gavrilovich Janowski, V. Vasilenko (prognostic role indykanemiyi), A. Zyukov (diagnostic value of determination of residual nitrogen and urea in the blood), A. Kakovsky (first worked out quantitative evaluation method urinary sediment, which is known now as the method Kakovsky-Addis), B. Shkliar (clinical significance of albuminuria) and other researchers. Line of nephrological issues continued M. Frankfurt (Donetsk), Y. Shulga (Kharkiv) and their students. However, real progress has been achieved only in the 60s of the twentieth century - in this time nephrology released as a separate medical specialty and Kyiv Institute of Urology and Nephrology (since 2002 - Institute of Nephrology of Ukraine) was established. Regularly nationwide conference on Nephrology was conducted (total - 14), and in 2001 and Ukraine National Congress of Nephrology was held in Donetsk.

** The presenter of the paper on the influence of the Western Medicine in Ukraine, for personal reasons will not be able to participate. Their manuscripts will be submitted for publication.*

ASPECTS OF A TRANSLATIONAL HISTORY OF NEPHROLOGY IN ROMANIA: FEED-BACK RELATIONSHIPS

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Translational history of nephrology pinpoints reciprocal relationships between development of Romanian medical schools and dependence on international centers of excellence mainly based in France, Austria and Germany. In the XVIIIth century, at the Princely Academy in Iasi, theoretical medicine *-iatrosophia-* was probably taught, since a copy of the first known translation of Hippocratic Aphorisms into Romanian was discovered, dating back to 1713.

Medical Faculties were established in Romanian Principalities in the XIXth century, when kidney diseases belonged to both internal and external pathologies. Renal physiology, chemistry and pathology were studied by pioneering professors of Iasi University, including Socor and, above all, Riegler, trained in Vienna with famous German scientists such as von Brücke and Ludwig, respectively. Later, genito-urinary illnesses detached from general surgery. Only in the XXth century second half, nephrology became a distinct branch within internal medicine. No nephrological treatise was translated into Romanian: outstanding handbooks circulated in their original versions. Romanian contributions emerged, too. In 1926, professor Stefanescu-Galati (Iasi) wrote *Sur la dynamique des organes urinaires*.

His observations that uretero-pielic dysfunctions preceded urologic pathology were accepted by his French fellows, as Legueu underlined. Other monographs focused on Nephritis or mineral waters efficiency in nephropathies. Nicolae Paulescu (Bucharest), discoverer of pancreine/insulin, equally investigated kidney physiology. Collaborator in France of Dastre and Lancereaux, Paulescu criticized Ambard's laws and ureo-secretory constant (1924, 1926). In 1930, Paulescu published at Sibiu *Traité de Médecine. IV. Pathologie des appareils assimilateurs, urinaire et génital*. Previous tomes of this Medical Treatise, coedited with Lancereaux, appeared in Paris (1903, 1906, 1912). In 1940, the future Romanian Nobel Laureate, George Emil Palade, delivered his doctoral thesis in Bucharest, on the dolphin urinary tubule: experiments comparatively explained nephron filtration processes under normosmotic and hyperosmotic conditions. Constantin C. Dimitriu and Vicentiu Beroniade published the first Nephrology book in Romanian (Bucharest, 1963).

Constantin Zosin's valuable works on *Nephrology* (Iasi, Timisoara, Bucharest) and Nicolae Ursea's treatises (Bucharest) followed. *Nephrology* specialty was integrated into Romanian medical schools and practice in 1974 and incessantly evolved thereafter. Recently, professor Cioaltea (Bucharest) implemented an original peritoneal filtration dialysis method (*Gold medal, Geneva Invention Salon, 2010*).

ON DEVELOPMENT OF NEPHROLOGY IN SERBIA: FROM THE FOLK REMEDY AND MEDICAL ADVICES ANTHOLOGIES TO THE MODERN TEXTBOOKS

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The beginnings of modern medicine in Serbia historically coincided with the key social event, such as a strong cultural influence of the Enlightenment, movement that came from neighboring Austria-Hungary and other countries of Western Europe (mainly France and Germany), but, above all, it has become possible after the country liberation from the Ottoman Empires authority (first half of 19th century). During the five centuries of slavery, traditions and knowledge of medieval medicine were lost and medical manuscripts, such as Chilandar Medical Codex and Hodoch Code, based on a long tradition of Hippocrates, Galen, Dioscorides, were forgotten. The treatment of patients was primitive and educated physicians were quite rare. At best, sick people were treated by a domestic empiricist - healer, or by a stranger -an itinerant herbalist and healer: kaloyatro or heçim – if these were Greek or Turkish origin. However, the vast majority of them were charlatans, sorcerers, or faith healers (priests, monks, hodzas). The main content of the preserved manuscripts of that era was a strange mixture of distorted remains of Hellenic/Byzantine and Western medieval knowledge with descriptions of the apocryphal medicine doings (prayers, sorceries, magic formulas, amulets, divinations).

During the 18th century the ideas of the Enlightenment have had a major impact on Serbian culture (linguistic and educational reforms), on science and medicine, as well. Among the earliest scientific works that reflect a new era of rationalism was Zacharius Orphelin (1726-1785) opus: The Eternal Calendar which contains chapters on several science disciplines (physics, geography, astronomy, medicine); and unfinished book The Great Serbian Herbal Collection, with descriptions of about 500 herbs and, in addition to their Latin and Serbian/folk names, their medical effects and therapeutic usage were precisely described. Among the most important and earliest publications and books of scientific medicine, were the works written by the Serbs from Vojvodina (duchy; at that time it was a province under the Habsburg Monarchy). The first educated Serbian doctors, J. Apostolović and P. Miloradović completed their medical studies at the University of Halle, Germany. Apostolovic PhD thesis (Modum quo affectus animi in corpus humanum agunt) was published 1757, in Halle; Miloradović, moreover, wrote and published three dissertations (Halle 1769; Budim 1778). Strong influence of European medical schools is reflected in the increasing number of translations of significant works (mostly from German) and a substantial number of original works in various fields of medicine (hygiene, pediatrics, pharmacology, physiology, infectious diseases), written in Serbian language. Among many known names and works (E. Janković; P. Hadžić; P. Beriç; V. Rakić), here we emphasize The Macrobiotics, a comprehensive book (650 pages) of an educational character, translated into Serbian by J. Steiç, and published in 1826 in Vienna. The original was written in 1796 by Christoph Wilhelm Hufeland, a famous professor of medicine from Jena, Germany.

Turbulent events in the Balkans during the 19th and early 20th century: Serbian-Ottoman war (1876-1877), The Balkan Wars (1912-1913), The Great War (1914-1918) caused many devastating effects on society and definitely slowed down the development of the health system and medicine in general.

The establishment of the Faculty of Medicine in Belgrade in 1920, had a crucial importance on the development of Serbian medicine and all its branches. The founders of the faculty were professors: Milan Jovanović-Batut (the dean), Vojislav Subbotić (surgeon), and Niko Miljanić (anatomist and surgeon). Furthermore, founding of the modern hospitals and clinics by the famous professors and surgeons - Vladan Djordjević, disciple of the Billroth; Mihajlo Petrović, brigadier general of the Serbian Military Medical Corps, contributed to the strict enforcement of the scientific medical methods in daily practice. Since the majority of those professors were Paris ex-pupils and Francophiles, during the first half of 19th century, French medicine and literature dominated in Serbia.

Within the Serbian literature of the history of medicine, one can find many records of renal pathology (dropsy, renal and bladder calculi, incontinence and urinary retention, hematuria), but these fragments are scattered throughout publications of varying value. However, nephrology - as a separate branch of medicine, developed relatively late: it was studied within the internal medicine and pediatrics, while urology was a part of the surgery. Among the many books in the Serbian language in the field of nephrology, dialysis and urology, here we highlight only three of them because of their comprehensiveness, pioneering character and perfect language: M. Nešković, V. Jovanović: *Kidney Diseases*, 1960 / S. Petković et al: *Urology*, 1984 / Lj. Djukanović et al: *Kidney diseases*, 1999). Actually, extensive nephrology and urology chapters were published earlier, within the textbooks of Internal Medicine and Surgery. The first scientific papers in nephrology were published in *The Serbian Archives of Medicine*, the best known medical journal in Serbia, which is being published since 1874. The first published works were those written by Serbian authors, as well as numerous translations and quotations from the foreign literature [H. Famehon: *On the frequency of nephritis in the army*; *Srp Arh (I)*: 7-8; 1895 / V. Subbotić: *Urolithiasis (urinary stone) in Serbia*; *Srp Arh (I)*:9; 1895: 241-245 / K. Müller: *About nephrolithiasis due to spinal cord injury*; *Srp Arh (II)*:2; 1896 / H. Horovitz: *Pathogenesis and clinical features of albuminuria*; *Srp Arh (17)* 9; 1911: 499-509], but also in other medical journals from Serbia [B. Stojanović: *Functional testing and diagnosis of kidney disease*; *Medical Review (VI)*: 4; 1931].

The main sources for this survey were books, documents and data from the largest library in Belgrade: The University Library "S. Marković", The National Library of Serbia, the Archives of the Serbian Academy of Science and Art; and Matica Srpska Library from Novi Sad.

UROLOGICAL SURGERY IN AZERBAIJAN IN THE 20TH CENTURY**Farid Alakbarli**

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During the Middle Ages, the urological diseases in Azerbaijan were treated with the methods of the Islamic or Greco-Arab medicine. The rich heritage of this medical school is reflected in the 11th-18th centuries' manuscripts which are preserved in the Institute of Manuscripts of the Azerbaijan National Academy of Sciences. However, the modern practice of urological surgery started to spread in Azerbaijan from the beginning of the 20th century with the efforts of such scholars as M.M.Mirkasimov, M.A. Topchubashov and M. J. Javad Zadeh. They firstly introduced the Western approach to nephrology and urological surgery in Azerbaijan. This paper is devoted to activities and contributions of these physicians and researchers.

Mirkasimov Mir Asadullah Mir Alasgar oglu was born in November 17, 1883 in Baku. In 1913 he graduated from the Medical Faculty of the Novorossiysk (Odessa) University in Ukraine. In 1926 he was sent to the surgical clinic in Germany to complete one of the sections of his work related with preparation and research of sections and cuts of the stones removed from the urinary organs. In 1927 M.A. Mirkasimov became the first Azerbaijani who defended doctoral thesis on the topic: "Materials for the study of urolithiasis in Azerbaijan". This work has not lost its relevance even today.

Mirkasimov was one of the first authors of scientific papers and books in Azeri on general and urological surgery, including 6 books and textbooks and 50 scientific papers. His main scientific activity has been focused on the study of the etiology of urolithiasis and purulent peritonitis. Besides, he is the author of numerous works in the field of anesthesiology, traumatology, urological surgery and topical issues. In 1927, he became a doctor of medical sciences, in 1929 – Professor, in 1945 - the member and the first President of the Academy of Sciences of the Azerbaijan Soviet Socialist Republic. He died on July 20, 1958 in Baku.

Mustafa bey Aga bey oglu Topchubashov also deeply contributed to development of urological surgery in Azerbaijan. This scholar was born in 1895 in Erivan (now, Yerevan in Armenia). In 1919, he graduated from the Kiev University and started to work at the Medical Department of the Baku State University. Professor Topchubashov was the author of numerous works in the field of urology, urological surgery neurosurgery, traumathology and anesthesiology. He was the Vice-President of the Azerbaijan National Academy of Sciences and the Honorary Chairman of the International Society of Urologists.

Another famous Azerbaijani urologist is Mir-Mammad Javad oglu Javad Zadeh. He was born on May 18, 1927 in Lankaran (Azerbaijan) and graduated from the 2nd Moscow Medical Institute named after N.I. Pirogov. In 1969, he founded a laboratory of the artificial kidney, and in 1971 he was the first in the Caucasus who performed a kidney transplant for the end-stage renal failure. Under the leadership of Prof. Javad Zadeh, for the first time in the Soviet Union, the method of autotransfusion during the surgery on urinary organs was applied. For this work, Prof. Javad Zadeh was awarded in 1986 with the Prize of the Council of Ministers of USSR. He is the author of more than 600 scientific works, including 33 monographs and textbooks, guidelines, patents and innovations including: "Surgery of the anomalies of the kidneys" (1977), "Handbook of Urology" (1978), "Chronic Renal Failure" (1978), "Surgery of kidney and ureteral anomalies" (1980), etc.

Therefore, we may conclude that starting from the beginning of the 20th century, the traditional methods of treatment of urinary diseases in Azerbaijan, which were based on many-century's experience of Islamic or Greco-Arab medicine, were supplemented and enriched with the progressive practice of the European scientific urology. As a result, a scientific school of urological surgery was created in Azerbaijan by such scholars as Prof. M.M.Mirkasimov, Prof. M.A. Topchubashov, and Prof. M. J. Javad Zadeh.

**The presenter of the paper on the influence of the Western Medicine in Azerbaijan, for personal reasons will not be able to participate. Their manuscripts will be submitted for publication.*



NEPHROLOGY IN GEORGIA: FROM MEDIEVAL MEDICAL MANUSCRIPTS TOWARDS THE EUROPEAN MEDICINE

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In Georgian medical manuscripts, accounted since the VI century, description of the diseases, treatment methods and tools are mostly in line with the structure and conceptual basis, described in the Greco - Roman and Arabic sources of relevant period. The mentioned refers also to nephrologic (urologic) diseases that are mostly described in the Georgian Karabadians of medieval - XIII-XV centuries. Certainly, a conceptual basis is the Theory of Humoral Pathology.

It should be emphasized a diagnostic side of nephrological and urological diseases, where can be unambiguously said that very much is based on the original - own experience. The above-mentioned is particularly referred to the inspection, where patient's position, posture, facial color and expression in the bed are of great importance. In addition, it should be noted that within the frames of treating aspect, after summing up the other authors' position, Georgian author always gives own opinion that in it's side, taking into consideration the traditions of medical literature, raises a pretension of originality. At the same time, Georgian medical literature, that has been repeatedly mentioned before, was constantly exposed to the equal effects/influences of the West and the East; consequently, it is very easy to observe some components of Indian and Chinese medicine in it as well.

Appearance of nephrology as a systemic discipline in Georgia (the Caucasus) is associated with the XIX century and Caucasian Medical Society (1864). At that time, translation from Western European languages into Russian and dissemination of relevant literature was carried out. For this period only literature of popular character but most important for the local population was translated into Georgian language, as the language of conquered nation. Since 1918 (establishment of Georgian University) development of Georgian medical science with appropriate modern terminology and original schools was started.

** The presenter of the paper on the influence of the Western Medicine in Georgia, for personal reasons will not be able to participate. Their manuscripts will be submitted for publication.*

LESSONS FROM THE HISTORY OF TRANSPLANTATION

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The first lesson is that the geographical centres of innovation in tissue grafting (and in medicine in general) moved steadily from country to country over the centuries. Initiatives in tissue replacement surgery appeared first in ancient India and then passed on via the Mediterranean and were improved in Renaissance Italy. That nation's vitality faded and leaders in medicine emerged further North. Britain dominated for a while and in turn lost the lead to Germany and France: Britain and France had a revival after WW1, with America now as a dominant force. In short, medical and scientific advancement seems to go with economic, even military, strength.

A second lesson is that clinical advances are not always based on basic science and indeed the concepts of basic science can be quite misleading. The earlier tissue transplanters were held back by the idea that success in human transplantation would be similar to the established success of grafting in agriculture. More recently, transplanters were first told by immunologists that rejection was antibody-mediated, not cellular. Conventional immunology said that giving blood transfusions to dialysis patients was a bad thing: instead it was helpful to grafting. Nor were laboratory animal models always a guide to human reactions in organ transplantation.

Dog immune responses are not affected by radiation but are sensitive to steroids; rat kidney transplants are easily enhanced; pig liver grafts give tolerance to other organs; cyclosporin is nephrotoxic to man but fortunately did not affect the animals used in initial testing. Crucially human organ graft recipients show "adaptation" - a steadily lowering need for immunosuppression with time after grafting, a phenomenon not suspected from animal studies.

Lastly, the history of transplantation shows that pioneering is not easy or obvious, as might appear in retrospect. In the 1950s, it was thought that attaining successful organ transplantation would not only be impossible, but that it should not be attempted; even the kidney grafting between twins was opposed. The modern era was only brought in by innovators of determination who worked in tolerant institutions.

THE LEGACY OF PROF DR.DR.H.C.MULT KARL JULIUS ULLRICH**August Heidland, Dr. med.***Professor, Department of Internal Medicine, University of Würzburg and KfH Kidney Centre, Würzburg, GERMANY*A
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Prof. Karl Julius Ullrich, the former Director of the the Max – Planck – Institute of Biophysics in Frankfurt/Main (Germany), died in 2010 at the age of 84. He was an extraordinary personality with highest international reputation. His research on basic transport mechanisms in the nephron provided important information about renal function. A detailed description about Ullrich's biography and his scientific investigations is published in the obituaries by Eberhard Frömter & Irene Schulz (Pflügers Arch-Eur J Physiol, 2011 and Heini Murer & Gerhard Burckhardt, Kid. Int. 2010).

Karl Ullrich was born in Würzburg in 1925. He carried out his medical studies at his hometown university from 1946 to 1951. Interestingly, in this time he seriously considered the possibility to work after his graduation with Albert Schweitzer in Lambaréné in Gabune to help the poor and severely ill patients. Ullrich had a two-year training in Internal Medicine at the University of Würzburg under the tutelage of Prof. Ernst Wollheim. In this time he performed his dissertation about the effect of post-infectious orthostatic disturbances on water metabolism. In subsequent investigations he also studied the systemic haemodynamics, renal plasma flow and secretory function of the proximal tubules in these patients.

Impressed by his scientific efforts and after reading Homer W.Smith's book, "The Kidney in Health and Disease", Ullrich decided to work in future in basic research and moved to the University of Marburg to the famous physiologist Professor Kurt Kramer. Already his first research project on urinary concentration/ dilution mechanism was a significant breakthrough. He confirmed the counter-current theory by the demonstration that during antidiuresis the osmolality of the renal medulla increased due to accumulation of salt and urea as well as inositol and glycerophosphocoline. In 1955 he followed Kurt Kramer to the University of Göttingen and developed there various new sophisticated techniques for the evaluation of tubular functions such as microcatherization of the papillary collecting duct, a microcuvette for measurement of nanoliter probes and the shrinking droplet method for measurement of tubular volume reabsorption (with Heinz Gertz).

In 1962 Karl Ullrich was appointed as the Director of the Institute of Physiology at the Free University of Berlin. Here he guided a strong working group with the well-known scientist Klaus Hierholzer and collaborators from all over the world. Together with Gerhard Rumrich, Ullrich worked on ion transport processes across the renal proximal tubular wall, while Eberhard Frömter performed measurements of transepithelial potentials. For the first time Ullrichs group with Irene Schulz, John Young, Eberhard Frömter and Heinz Holzgreve performed micropuncture and electrical potential measurements of sweet and salivary glands.

In 1967 Ullrich was elected as Director of the Max Planck Institute of Biophysics in Frankfurt/Main. In recognition of his impressive and enthusiastic work in Berlin he was honoured by his students with a torchlight procession. The department in Frankfurt offered the best work possibilities including an excellent laboratory for biochemical studies, the facility for electron microscopy and the presence of Departments of Biology and Physical Chemistry at the same institute. Ullrich worked in particular on the driving forces of tubular electrotype absorption and the Na⁺ dependence of other transporters in the proximal tubules. In the laboratory of Rolf Kinne experiments on membrane vesicles were performed together with Heini Murer, Gerhard Burckhardt and Hermann Koepsell. In the eighties Ullrich focused his interest on the transport systems of organic anions and organic cations. One of Ullrich's latest papers concerned the affinity of drugs to the different transporters for these systems.

Besides his pioneering basic research and his strong support of his collaborators Ullrich was a bridge-builder for many projects. With great effort he promoted the transmission of knowledge of basic research into clinical medicine. An excellent forum for this goal was his monthly seminar about new theoretical and clinical developments, where nephrologists from Frankfurt (Wilhelm Schoeppe), Heidelberg (Eberhard Ritz) and Würzburg (August Heidland and his collaborators) regularly participated. Here our group was stimulated to study the electrolyte transport of the parotid gland by analysis of the saliva in health and disease states. Ullrich always stated that the duct system of salivary glands show many similarities with the kidney and offer the possibility to investigate the local transport processes. With support of Heinz Knauf we studied in the human parotid saliva the flow dependent electrolyte patterns of mono- and divalent ions. Using this technique in patients with Conn's and Bartter's syndrome as well as in end-stage renal disease we could demonstrate marked alterations of the local electrolyte transport. In further studies the excretion pattern of kallikrein and cyclic AMP were analyzed both in clinical and experimental investigations (Arnold Röckel and Gerhard Schmid). In collaboration with Irene Schulz her model of experimental pancreas perfusion was used by Ekkehart Heidebreder to study potential effects of various uremic toxins on the excretory function of the pancreas. Three habilitations resulted from the collaboration with Karl Ullrich and his team.

Another effective bridge was created by Ullrich for nephrologists in Eastern Europe, in particular in the time of the "iron curtain". He created innumerable connections to the colleagues including Jiri Heller and Karel Capek (Prague), Angielski (Gdansk), Orłowski (Warsaw), Knapowski (Poznan) and Yuri Natchin (St. Petersburg). The support concerned practical and scientific aids, invitations for scientific stays in his institute and organization of seminars.

Karl Ullrich played a leading role in the "Gesellschaft für Nephrologie", the society of German speaking countries Germany, Austria and Switzerland. In 1961, he was one of its founders. Three years later he acted as president of the society and organized an unforgettable symposium in Berlin. Thereafter he remained a board member for two decades and promoted the basic and clinical research of German nephrology.

The merits of Karl Ullrich for his basic research and his support of researchers both in his institute and all over the world were recognized by many scientific and academic organizations. He received the Homer W. Smith award of the American Society of Nephrology, the Purkinje Medal of Czechoslovak Academy of Sciences (Prague), the Ernst-Jung Prize for Medicine (Hamburg), the Ivan Pavlov Medal of the Russian Academy of Sciences (Moscow), the Borelli Gold Medal (Naples), and the Copernicus Medal and membership of the Polish Academy of Sciences (Warsaw). Moreover he has been awarded a Doctor Honoris Causa from the universities of Marburg, Berlin and Zürich.

Anybody who had the chance to contact or to work with Karl Ullrich will never forget his extraordinary human qualities, his sincere concern for others, his kindness to the students and colleagues, and his unforgettable personality.

REMINISCENCE: THE BERLIN YEARS OF KARL JULIUS ULLRICH (1962-1967)

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In 1962 K.J.Ullrich accepted the newly created chair of the Department of Physiology at Freie Universität Berlin (founded in 1948) only under the condition of having a co-chairman (O.H.Gauer). The new institute, located just opposite the famous Dahlem Museum, was finished in 1963. Berlin was in the centre of the Cold War (1961 Berlin Wall, 1962 Cuban Missile Crisis, 1963 President Kennedy's visit to Berlin) and the political situation was very unstable. 1966 the student revolution started with protests against the war in Vietnam.

The university offered Ullrich ideal working conditions: lots of space and enough money for expensive instruments, positions and grants to invite visitors from all over the world for lectures and short-time research projects. The initial money for equipment could be stretched over a period of 5 years. In addition to three senior scientists (Gertz, Hierholzer, and the neurophysiologist Grüsser), Ullrich raised funds for positions to attract a large, strong group of young postdocs, some of them from abroad, and students for doctoral theses. A list of co-workers in alphabetical order: Baldamus, Baumann, Capek, De Santo, Ebel, Emrich, Frömter, Gertz, Hegel, Heller, Hierholzer, Holzgreve, Hopfer, Kinne, Kinne-Saffran, Kirsten, Löschke, Mangos, Marsh, Martinez, Oelert, Schulz, Sonnenberg, Sterzel, Stolte, Uhlich, Wiederholt, Young. During the Cold War period Ullrich continuously supported colleagues in Eastern-Block countries.

With an arsenal of new techniques such as elaborate micropuncture and microperfusion methods and ultramicroanalysis methods Ullrich's group became a leading team to open the "black box" kidney. Ullrich significantly contributed to our understanding of kidney functions. In addition, he stimulated and started first projects to investigate epithelial transport processes in exocrine glands such as sweat glands, salivary glands and pancreas. The author's interest in epithelia of the eye was based on Ullrich's enthusiasm for epithelial transport. The research family at the Berlin institute was competitive and hard working in a general cooperative atmosphere. This productive family was created by Ullrich, our supportive and kind paternal friend.

In 1967 Ullrich was elected director of the Max-Planck Institute of Biophysics in Frankfurt/Main. In 1994 he was made an Honorary Doctor of the Medical Faculty of Freie Universität Berlin.

EXUPERE - JOSEPH BERTIN (1712-1781) AND THE DESCRIPTION OF THE “PETITS SIPHONS RECOURBES” (HENLE’S LOOPS A CENTURY AHEAD)

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The celebre professor of anatomy at the university of Paris, the physician in chief of the army during the Austrian War of Successions deserved on death a commemoration by Condorcet at the Royal Academy of Sciences on November 14, 1781, as a man of the century of philosophers and of Enlightenment.

Very young, at the faculty of medicine in Paris he was attracted to anatomy in the laboratory of Joseph Hunauld (the successor of Duverney), also originating in Bretagne, but then he moved to Reims where he got his MD at age of 25. There after he was acting physician in chief at the Valachia and Moldavia Hospital in Rumania for two years.

He started the university career the year in 1743 following the nomination as associate anatomist and professor of osteology, anatomy and child delivery at the Royal Academy of Sciences the year before at the age of 32 after being one of the best fellows of medicine and preparing his doctoral thesis and acting

He contributed to nephrology on July 4, 1744 a presentation “Memoire pour servir a l’histoire des reins, which was printed in Paris by the “Imprimerie Royale” in *Histoire de l’Académie Royale des Sciences, Mémoires de la Mathématique e de Physique*” four years later. His description of the kidneys were so precise, that they were used by Haller in his textbook of anatomy. Apparently he settled his anatomy of the kidney in the line of Berengario da Carpi, Da Grado, Falloppia, Eustachius, Malpighi, Ruysch, Boerhaave. However he criticized Malpighi for 1. his imprecision, 2. the discrepancy between the glands described in the papers and those really observed in the sections, 3. the origin of blood vessels, 4. his idea about urine separation in the glands. Bertin introduced many novelties brought about by his concise and efficient descriptions of the renal peduncle, the position of the artery and of the vein, the origin of the innervation in the ganglion of Viessesux and the origin of the lymphatic vessels. He is innovative in describing the petits siphons⁽¹⁾, and the description of tubules, the anticipations of Henle’s loop.

1. Diaz F. *Bibliographie de Exupère - Joseph Bertin (1712-1781). Thesis Perpignan October 10, 1939.*



PROFESSOR ALBERT VÁLEK, MD DSC. (*16. 04. 1925 – †18. 11. 1995) - WELL-KNOWN NEPHROLOGIST AND HIS CONTRIBUTION TO CZECH AND SLOVAK NEPHROLOGY

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Professor Albert Válek, MD, DSc. was born on April 16, 1925 in Přebuz, near Pilsen, Czechoslovakia. In 1945 he became a medical student at the Faculty of Medicine, Charles University in Prague where he graduated in 1951. Professor Válek was interested in internal medicine during his medical study and he was a clerk at the 2nd Internal Clinic, Faculty Hospital in Prague. From 1951 until 1956 he worked in several hospitals: the 2nd Internal Clinic, Faculty Hospital in Prague, the Central Military Hospital in Prague-Střešovice and the Military Medical Academy in Hradec Králove. Albert Válek, MD was the Head of haemodialysis center at the 2nd Internal Clinic of Faculty Hospital in Prague from 1956 until 1971. His main interest in that time was diagnosis and extracorporeal treatment of acute renal failure of various origin and of acute poisoning.

The first haemodialysis in Czechoslovakia was performed at his department in 1956 by M. Chytil, MD, S. Daum, MD, A. Hornych, MD, and A. Válek, MD, PhD in a patient suffered from acute mercury chloride poisoning. In 1967 he became associated professor of internal medicine. His first monography "Acute renal failure" was published in 1967. Several Slovak nephrologists were educated in haemodialysis therapy at his haemodialysis center. In the years 1971 until 1990 Professor Válek was the Head of Internal Department Strahov, where he created at that time the biggest modern dialysis unit in Czechoslovakia. His second monography „Chronic renal failure“ was published 1973. Ass. Prof. A. Válek, PhD became DSc in 1976 and in 1980 he was appointed as a full professor. CAPD as a new renal replacement therapy was established in Internal Department Strahov (1979) by ass. Prof. Válek and R. Kuklík, MD. His department as a leading dialysis center in Czechoslovakia was quickly recognised as one of Eastern European leading centers and educated numerous nephrologists also from abroad. Prof. A. Válek, MD, DSc was the President of Czechoslovak Nephrological Society from 1973 until 1990. During that time he invited many well-known nephrologists as the active speakers in Czechoslovak nephrological meetings, which were held mainly in Prague and Košice (Kolff, Ålwall, Massry, Koppke, Bergström, Klinkmann, Gurland, Bonomini, Kokot and others).

He was elected as a council member of EDTA, a member of the Board of the ESAO and became a member of the Editorial Boards of numerous scientific journals. In 1980 he was the President of the EDTA-ERA Congress in Prague and 1988 the President of the ESAO Congress also in Prague. Both congresses were perceived as highlights by the international nephrological and artificial organs community.

Professor Albert Válek, MD, DSc left a historical impact in the international medical and scientific community.

KARL VON ROKITANSKI: CONTRIBUTION OF A FAMOUS PATHOLOGIST BORN IN BOHEMIA TO NEPHROLOGY

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Karl Freiherr von Rokitanski, born February 19, 1804, Hradec Kralove (Koniggratz), Bohemia, Austrian Empire (now Czech Republic), died July 23, 1878, Wien.

K. von Rokitanski studied medicine in Charles University in Prague and in Vienna where he graduated in 1828.

Rokitanski started his professional career as a pathologist in Vienna General Hospital becoming the best descriptive pathologist of his days. Figures of autopsies performed by him or by an assistant directed by him differ from 30 000 to about 100 000 but are no doubt extremely high. Based on this experience he published the Handook of Pathologic Anatomy (1842) which helped to establish pathology as a recognized science. He became ordinarius in this discipline in 1844 in Vienna Medical School and the same year pathology had been made an obligate object of teaching.

His contribution to the field of nephrology is represented by the fact that he differentiated Bright's disease from amyloid degeneration of the kidney and description of polyarteritis nodosa.

Later on (1849) he became dean of the medical faculty in Vienna and rector of the university in 1853. He was then elected President of the Imperial Academy of Sciences and was a distinguished Vienna personality. He was also awarded honorary doctorate by Charles University.

Despite the fact that Rokitanski spent all his professional life in Vienna he never forgot his Czech origin, spoke Czech and supported his Czech friends and their patriotic activities. He financially contributed to the construction of the Czech National Theatre in Prague.

He was in touch with the Czech Academic Association represented e.g. by T.G. Masaryk who in 1918 became the first president of newly established Czechoslovakia.

THE EPIDEMIOLOGY OF KIDNEY CONDITIONS IN ANTIQUITY AND BYZANTIUM

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Historical research on ancient medical conditions is a delicate topic. Retrospective diagnosis (differential or not) is controversial and physical evidence (paleopathology) is rare.

On this basis, epidemiological (quantitative) approach seems impossible. A different approach to quantitative evaluation of diseases among ancient populations seems possible by using indications of therapeutic agents as bio-markers making it possible to trace the presence of a pathology.

On the basis of this hypothesis, we can propose an epidemiological approach which will be applied here to kidney conditions in Antiquity and Byzantium.

SYMPTOMS AND SIGNS THROUGH THE AGES: PHYSICIANS OF THE PAST AND FUTURE THINKING ALIKE

Pavlos Goudas, MD

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The greatest step in the evolution of medical science was probably the application of logic and reasoning in the understanding of diseases, something that occurred primarily during the Hippocratic era. Despite the fact that medicine has evolved enormously from the 5th c BC to our days, there are some symptoms and signs that not only were they observed by physicians through the ages, but also they still have the same interpretation as they had in antiquity. It is such similarities that show the resemblances in the reasoning of physicians through history.

A physician of the 4th c. BC had the same way of thinking as any physician of our era. If they had the same means and knowledge they would also share the same effectiveness in diagnosis and treatment with their modern colleagues. In this small work I will try to show these resemblances for symptoms and signs that were attributed to diseases of the kidneys, like patterns of pain, skin problems, patterns of pulse, symptoms from urination and signs from urine. In all the conditions described the ancient passages will be compared to modern ones taken from contemporary books or other sources on physical examination.

It is interesting that not only were the symptoms and signs described in exactly the same manner as they are today, but in some cases even the diagnoses given then would be correct if examined by modern means, despite the lack of technological support in those eras. Some of the most characteristic of these signs and symptoms are types of oedema, patterns of pain during micturition, changes in urine colour etc. The conclusion that physicians of the past think in a similar manner with modern physicians, comes effortlessly.

“THE KIDNEYS” OF JAN BROD. IMPACT OF LUCKY TEXTBOOK OF NEPHROLOGY

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Professor Jan Brod, MD, DSc. (Prague, Czechoslovakia) wrote the extensive monography “The Kidneys. Physiology, Clinical Physiology, Clinic” in 1962 in Czech language. He was one of the first nephrologists in the world who significantly contributed to the creation of the new clinical discipline - nephrology in the framework of the Internal medicine. The monography was translated into German language in 1964 and was edited by publishers Volk und Gesundheit in Berlin and into English language in 1973 and was edited by publishers Butterworths in London.

Professor Brod used during the writing of his monography, at that time the known, physiological and pathophysiological notions on renal functions which he used in diagnosis and differential diagnosis of various kidney diseases. The monography contains non-invasive renal functional investigations and their interpretation in kidney diseases in details. In his book he was concentrated on the right procedures for the examination of a patient, that means anamnesis, physical examination and various forms of blood pressure measurement, i.e. absence of bilateral positive palpation of a.femoralis showed for the coarctation of aorta; a presence of systolic murmur in mesogastrium laterally from umbilicus showed for the stenosis of a. renalis.

Functional examination of the kidneys allowed at that time multiple differential diagnostic possibilities in various kidney diseases. One of the most important knowledge is the correlation of glomerular filtration rate and maximal concentrating ability of the kidneys, i.e. in the progression of vascular nephrosclerosis first of all glomerular filtration rate decreases and maximal concentrating ability is unchanged; in the progression of chronic glomerulonephritis both parameters simultaneously decrease; in the progression of chronic tubulointerstitial nephropaties first of all maximal concentrating ability decreases and mean glomerular filtration rate is unchanged for a long time.

Professor Jan Brod recommended kidney biopsy only after when kidney functional investigation did not lead to the clear diagnostic conclusion. The technique of percutaneous kidney biopsy using Vim-Silverman needle was used in many internal clinic and renal units in former Czechoslovakia and in other middle European countries according to Brod.

Sites of tubular necrosis after various toxic substances of various specific sections of the nephrons, according to Oliver, Mc Dowell and Tracy which were published in Brod monography were used many times in differential diagnosis and therapy of acute poisoning in our dialysis unit. The standard therapy of uremic syndrome in patients suffering from acute kidney failure was a conservative treatment, but also peritoneal dialysis and haemodialysis using coil dialysers in Czechoslovakia, in the years 1961-1962.

Professor Jan Brod's monography significantly enriched the knowledge of clinical nephrology, contributed to the post-graduate study of the internists and the young doctors in this field not only in Czechoslovakia but also in other middle European countries.

THE QUEST FOR CERTITUDE IN MEDICINE AND NEPHROLOGY**Garabed Eknayan, MD***Baylor College of Medicine Houston, TX, USA*

Throughout most of history medical care has been a personal undertaking, and medical knowledge descriptive and derived from the personal experience of healers of relatively independent mind pursuing careful but often chance observations. Using deductive reasoning, these individual observations were then generalized, authoritatively presented, and dogmatically promulgated.

This, coupled with firmly grounded principles of divine determinism, came to define medical knowledge through the 16th century, and precluded any serious consideration of randomness, even when variations from recorded, but erroneous, observations were actually made - as in the case of the right kidney being higher than the left. Probability was considered but only as an attribute of personal opinion, and not one supported by data. The gradual erosion of this scholastic edifice during the scientific revolution of the 17th century led to the flourishing of the nascent basic sciences. While clinicians applauded and adopted these basic contributions, there remained resistance to the application of the new inductive reasoning and experimental methods of investigation to the study of disease or therapy.

The “numerical method” of Pierre Louis (1787-1872) first introduced systematic quantification into clinical medicine during the first half of the 19th century, when it was applied to multicenter studies of urolithiasis. Analysis of accrued quantifiable data found its principal application in epidemiology, which flourished during the second half of the 19th century. The subsequent adoption of probability calculus for the analysis of quantifiable data by Jules Gavarret (1809-1890) refined the process further and led to the gradual emergence of medical statistics, with a distinct role in clinical research in the 20th century.

The mathematical precision provided by quantification and statistical analysis established certainty in medicine, and ultimately changed the conjectural art of clinical practice to a disciplined science founded on clinical investigation, especially in therapeutics. The unfortunate trade-off during this evolution has been neglect of the individual patient’s inborn biological variation from the norm, mean or median, an omission has come to erode the personal in medical care.

HISTORY OF THE TERM PELVIS RENALIS**Šimon František, doc., PhD., CSc.***Head of Department of Romance and Classical Languages, Philosophical faculty
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In *Onomatologia anatomica*, released in 1880, and in *Onomatologia anatomica nova VI*, released in 1978, both Hyrtl and Goyanes dealt with the question who first used the term “pelvis” in the sense of “part of kidney”, however, both explanations need a correction. The term *Pelvis (renalis)* appeared in the anatomical nomenclature as late as the Modern era.

Even though the first anatomists were referring to renal pelvis, they used names such as *lacuna* (Berengar of Carpi, 1530) or *sinus* (Vesalius in the famous *De corporis humani fabrica*, 1543). The term *pelvis* can first be encountered in Eustachi’s work *Tractatio de renibus* (*Opuscula anatomica*, 1564), in which the author compared the “sinus of kidney” with *scyphus*, i.e. drinking-vessel or *pelvis*, i.e. basin. The term *pelvis* did not appear in the first edition of Bauhin’s book *Theatrum anatomicum* (1592), but it occurred in the 1621 edition, in which the author mentions that *sinus* of the kidney is called *infundibulum* or *pelvis*. Another author, Highmore, similarly states in 1651 that *sinus* of the kidney is called *pelvis*. In the same year, Thomas Bartholin published his work *Anatomia reformata* and the term *pelvis ureteris* is mentioned in the illustrations.

There were no illustrations in the previous editions and therefore there was no mention of *pelvis*. The use of the term *pelvis* denoting a part of kidney was extended in 18th century, it occurred in Bellini (1726), James (*Medicinal dictionary*, 1745), Haller (1765), and Heister mentioned *pelvis renum* in 1727 as well. Other terms were also used in parallel, e.g. *infundibulum* in Vesling (1666), similarly Haller (1765), *choanae* in Albini (1761). The first edition of the well-known Gray’s anatomy (1828) also used the term *pelvis*.

It was already in 18th century and then later in 19th century when the meaning of the term *pelvis* was extended to *pelvis renum* or *pelvis renalis*, e.g. Dunglison (1839, 1848). In 19th century the Greek equivalent of the Latin *pelvis*, the term *pyelos*, started to be used in the form of *pyelitis*, inflammation of the *pelvis renalis*. It was used for the first time (?) by Rayer (1841) and the extension of the meaning is evidenced in medical dictionaries. The edition of the German dictionary by Kraus from the year 1831 does not contain the lemma *pyelitis*, however, it can be found in the edition of 1844, similarly the French dictionary by Nysten does not contain the term *pyelitis* in the 1833 edition, but it was included in the edition of 1855.

THE LOOP OF HENLE AS THE MILESTONE OF MAMMALIAN KIDNEY CONCENTRATING ABILITY: A HISTORICAL REVIEW

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Introduction: After mammals migration from the water to terrestrial life and in order to survive in the new environment they had to develop an excretory organ with the capacity of independently conserve water and sodium. This organ was the kidney. The fundamental structure of urine concentration in mammalian kidney is the “U” shaped loop of Henle.

Purpose: To unravel the quest of our knowledge concerning the understanding of urine concentrating mechanism and the time gap between description of loop of Henle and the scientific proof of its importance in urine concentrating mechanism.

Methods: Available literature was searched and 14 articles were selected (eight original research articles, 1 review article, 2 lectures and 3 historical articles).

Results: The first description of renal tubules is attributed to Lorenzo Bellini in 1662 who described the papillary ducts. Four years later Marcello Malpighi described the glomerulus. About two centuries later in 1842 Sir William Bowman described the homonym capsule which surrounds the Malpighian body and its connection with the renal tubule and introduced the “excretory” theory of urine formation. In the same year Carl Ludwig introduced the “filtration-reabsorption” theory of urine formation. The first theory accepted by “vitalists” and the second by “mechanists” and the controversy between these two schools lasted for 80 years. In the middle of this confliction Jacob Henle in 1862 described with excellent accuracy the “U” shaped loop of Henle and his discovery has neglected mainly because of the scant knowledge upon structure and function of the elemental kidney unit the nephron. In 1922 Alfred Richards and his colleagues introduced the “micropuncture technique” in the experimental investigation of renal function and showed that Ludwig’s theory was quite right. Homer Smith in 1932 introduced the renal clearance of inulin and measured the glomerular filtration rate and the fractional excretion of various solutes from the kidney. After that researcher’s interest monopolized by the investigation of filtration, absorption and excretion of various solutes and substances by the kidney and Henle’s discovery remained again dormant. In 1942 Werner Kuhn, a physical chemist in Basel University, proposed that the loop of Henle may be the natural analog of the hairpin countercurrent multiplication system which concentrates urine in mammalian kidney. In 1951 Werner Kuhn, Bart Hargitay and Heinrich Wirz showed experimentally that the loop of Henle was the most important part of the countercurrent multiplication system of urine concentrating mechanism in mammalian kidney. The new theory has not accepted by English speaking scientists neither Homer Smith until Carl Gottschalk and Margaret Mylle in 1958 published their experimental work which proved the correctness of Kuhn’s theory.



After that the new theory was accepted by Homer Smith who established its validity in an excellent lecture delivered in October 17, 1958 at the Annual Postgraduate Week organized by the New York Academy of Medicine. Gottschalk summarized the evidence of the accumulated knowledge upon the countercurrent hypothesis in a lecture presented in “The Harvey Lectures” in 1962 three centuries after description of collecting ducts and one century after description of the loop of Henle.

Conclusion: The evolution of our basic knowledge upon anatomy and functional properties of the nephron lasted almost three centuries. The reasons for this delay were the lack of proper knowledge, the lack of proper instrumentation for experimental investigation and the limited spread of knowledge during the previous centuries.

MOLECULAR GENETICS AND NEPHROGENETICS STUDIES SUPPORT HISTORICAL PHYLOGEOGRAPHIC EVIDENCE ABOUT THE ORIGIN OF THE POPULATION IN CYPRUS

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The island of Cyprus at the north-eastern corner of the Mediterranean basin, arose from the sea floor 90-92 million years ago, owing to under-sea volcano activity. Consequently, the first inhabitants of Cyprus must have been people from neighboring lands while there is genetic evidence for close relationship with peoples of the Levant. Cyprus is the third largest island in the Mediterranean, after Sicily and Sardinia, with a population of about 838.897, of whom 659.350 (78 %) belong to the Greek-Cypriot community, 87.600 (11%) to the Turkish Cypriot community and 66.000 (8,3 %) are foreigners residing in Cyprus.

During its long history Cyprus has repeatedly become the apple of discord for many interested parties, while she has been conquered and exploited consecutively by the superpowers. It was inevitable for its population, therefore, to be influenced significantly in its cultural development and its genetic make up. The Achaean Greeks had massively colonized the island since the ancient times, an event that resulted in the adoption and conservation of the Greek identity for many centuries and till today, by the majority of the Cypriot population. However, the relationship between the conquered Cypriots and the successive conquerors, did not prevent the development of social and sexual relationships, to the extent that this becomes conspicuous through research of contemporary human molecular genetics. The marks of the foreign visitors-conquerors emerge through the description of the various inherited diseases, where we detect many common genetic characteristics. Usually these characteristics become more easily perceptible when accompanied by some pathology, thereby making it evident that some of the conquerors or visitors left behind not only their castles and cultures but also their genes. There are many examples of genetic defects that nearly pin-point the previous colonizations or visits and effects of close and distant neighbors. Such examples include mutations for monogenic kidney disorders, while some strong founder effects of renal gene mutations trace parts of the past history of the Cypriot population.

Especially worth noting is a pathogenic mutation in the COL4A3 gene, G1334E, which was detected in 169 patients of 15 families with thin basement membrane nephropathy, while another mutation in the CFHR5 gene was found in 136 patients of 21 families segregating C3 glomerulonephritis. In certain villages and religious communities the frequency of specific inherited conditions is significantly increased compared to the rest of the island. It is useful to note also that the Turkish invasion in 1974, which had as a consequence the massive refuge and relocation of large populations, as well as the most recent pacific invasion of many aliens, a large proportion of whom are married to Cypriots, is expected to alter the Cypriot gene pool, resulting in larger admixture of genetic characteristics, and thereby enriching it even further.

FROM IATROSOPHIA TO PRINTED BOOKS

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Kidney diseases in post-Byzantine medical manuscripts.

A series of post-Byzantine medical manuscripts, dating from the 17th to the early 19th century, record formulas relating to kidney diseases. This communication attempts to compare the formulas among themselves, to explore their relationship with previous medical treatises of the classical and Byzantine periods and the influences therein by medieval Eastern and Western medical textbooks, from a literary and historical perspective.

THE TRANSFER OF MEDICAL KNOWLEDGE FROM CENTRAL EUROPE TO GREECE DURING THE ENLIGHTENMENT

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The Enlightenment is an intellectual movement of the eighteenth century, associated with rationality and the search for evidence, which inspired the French Revolution. The Greek Enlightenment is an ideological movement that attempted to convey the ideas of the European Enlightenment to the occupied nation. It was mainly supported by Greeks living in central European countries, who adhered to the ideas of the illuminati; however, most Greeks remained faithful to traditions and the eastern way of thinking.

This is the context in which medical knowledge was conveyed from central European countries to Greece. Medicine becomes closely linked to natural sciences, frees itself of theocratic beliefs and starts to be based on scientific criteria.

Greeks living in central Europe at that time translated European texts or composed their own, transferring modern medical knowledge in order to disseminate it to a larger percentage of people.

Modern medical texts first appear in Greek books in 1745. The medical knowledge disseminated in Greece during the Greek Enlightenment appears in three categories of texts: A) purely medical books, B) various other books and C) pre-revolutionary magazines, especially in “Hermes the scholar” [*Ermis o logios*].

During the 1745-1821 period, there is an increase in the number of books published by physicians. The literature contained in medical texts at that time was the contemporary European literature.

The average temporal interval between the European publication and the corresponding Greek translation was 6.6 years, suggesting that scientific medical knowledge was transferred rapidly to the Greek territory.

Medical knowledge was also recorded in non-medical books (physics, philosophy, chemistry, natural history, religious, historical, cosmographies).

One of the features of the Greek Enlightenment is the attempt to create a Greek scientific terminology.

THE DEVELOPMENT OF NEPHROLOGY IN TURKEY AND ITS CONNECTION WITH THE WESTERN LITERATURE ON THE SUBJECT

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Turkish Medicine until 18th century advanced together with Arabic-Islamic Medicine, which did not differ from the Western Medicine until the 16th Century.

Suphizade Abdulaziz translated aphorisms of Boerhaave (b. 31 December 1668- d. 23 September 1738) a Dutch humanist and physicist of European fame, who was the first to isolate the chemical urea from urine. In addition, he was the first person to introduce Harvey's invention of circulation to Turks.

The second half of the 18 century was the period of Turkish physicians in the Ottoman period who were self trained people who examined the European works.

Şanizade Ataullah was another scientist of the late 18th and early 19th century. With his self attained French language, he created an anatomy map in Turkey without the support of the government.

Opening to West and the Modernization Period (after 1827): The first modern medical school was established in İstanbul in 1827, with Mustafa Behçet's leadership, with the name Tiphâne-i Amire (Imperial Medical School).

With the opening of the Medical Faculty and the appointment of Dr. A. Bernard in 1839, there was more approach to Western medicine. The first medical journal "Vaka-i Tibbiye", was published by Mekteb-i Şahane in 1849.

The period between 1933-1946 is the period of University Reform.

The Modern Medicine is considered the period after 1946 up to present.

Prof. Eric Frank, M.D. (1884-1957): As the author of the first Turkish textbook of Nephrology and a teacher who inspired his students, some of whom went on to become the first generation of Turkish Nephrologists, Frank was a pioneer in Nephrology who helped establish the discipline in his adopted country.

Prof. Cavit Sökmen, M.D. (1910-1983): He published Internal Renal Diseases in 1950, one of the first Turkish books about Nephrology.

Prof. Kemal Önen, M.D. (1923): He first organized International Nephrology Symposium in the form of seminars after 1965. He successfully chaired 1978 EDTA and EDTNA Congresses in İstanbul. This year the third ERA-EDTA Congress in our country has been organised to celebrate the 50th year, in İstanbul which indicates the level of development in the field of Nephrology in Turkey.

According to recent research, it is clearly seen that Nephrology and Urology are started together. Vural Solok M.D., wrote Turkish Urology and Nephrology Bibliography (1849-1968). And even during the late 20th Century, this situation continued. For example; in 1988, Vural Solok M.D., and Mete Çek M.D. published the translation of Pediatric Urology and Nephrology written by B. Gauthier, C.M. Edelmann, H.L. Barnett in 1982.

In a modern sense, Nephrology is observed to have gained on a worldwide identity in the 1940s. And from a historical development point of view, it is in the 1950s that the seeds of Nephrology have first been sown in our country, and has accelerated through the 70s. Having displayed, in the first place a rather slow development as a result of individual endeavor and acts of self-giving; Nephrology, thanks to the establishment of hemodialysis centers in the 80s and the initiation of kidney transplantation, made progress and managed in the 90s to keep up with world standard.

HISTORY OF NEPHROLOGY IN MEDITERRANEAN ARAB COUNTRIES AND THE TRANSLATION OF WESTERN TERMINOLOGY INTO ARABIC

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Nephrology is a relatively recent speciality which has been incorporated in the Mediterranean Arab Countries (MAC) since the 1960's. We present a historical panorama in this area which includes the "Maghreb" made of four North African countries: Algeria, Libya, Morocco and Tunisia which counts about 80 millions inhabitants and the "Machrek" made of three Middle-Eastern countries: Egypt, Lebanon and Syria counting about 105 millions inhabitants.

In the "Maghreb", pioneers and mentors involved in kidney disease management in the late sixties were H. Ben Ayed (Tunisia), Ph. Ould Aoudia, R.M. Hamladgi, M. Drif (Algeria) and A. Berbich (Morocco). They sent younger physicians for specialization and training in famous universities abroad, mainly in France and Britain. Among those were: A. El Matri, H. Ben Maiz (Tunisia), M. Boukari, Laradi, Laradi, O. Salah (Algeria), L. Balafrej, D. Zaid, M. Mahfoudh (Morocco). N. Fitouri and H. Osman (Libya). After initiating acute haemodialysis and peritoneal dialysis, chronic haemodialysis (CHD) programs were created in Tunisia in 1975, Algeria in 1978, Morocco in 1979 and Libya in 1980. Intermittent peritoneal dialysis (IPD) and chronic ambulatory peritoneal dialysis (CAPD) commenced later respectively in 1981, 1979, 2004 and 2005. LRD kidney transplantation started in Tunisia and Algeria the same year in 1986, Libya in 1987 and Morocco in 1990. Deceased Donor (DD) transplantation commenced in Tunisia in 1986, in Algeria in 2002 and in Morocco in 2010.

In the "Machrek" the pioneers were: A. Badry, A. Hassaballah, Z. El Baz (Egypt), E. Shwayri (Lebanon), B. Yafi and J. Sayegh (Syria). Specialization and training took place in Great Britain or USA for R. Barsoum (Egypt), A. Stephan (Lebanon) and B. Yafi (Syria). Chronic haemodialysis programs started in Egypt in 1964, in Lebanon in 1970 and in Syria in 1975. IPD and CAPD started later in the 1980's but evolved very slowly in this area. LRD transplant programs started in Egypt in 1976, in Syria in 1979 and in Lebanon in 1985. In this area only Lebanon developed a DD transplant program which commenced in 1990.

Nephrology healthcare has been dispensed in all MAC for at least 30 years. Renal biopsy is becoming a common procedure. Chronic haemodialysis continues to be the main therapy but no chronic peritoneal dialysis modality gained popularity. LRD transplant which is presently implemented in all countries and DD transplant which is performed in only 4 of them do not meet the needs of patients and should be developed.

In most medical schools of this area, nephrology as well as other specialties is taught in French or English except in Syria and El Azhar University in Egypt where courses are delivered in Arabic. The first medical school using Arabic was Kasr El Aini medical school founded in Cairo in 1827 under the reign of Sultan Mehmet Ali. French and Italian medical textbooks were translated into Arabic by Egyptian, Syrian and Lebanese translators. But after 55 years this experience was stopped under the British rule and Arabic was replaced by English. That is only in the 1960 that El Azhar Medical school resumed teaching medicine in Arabic. In Syria the Damascus medical school which was founded in 1903 under the Osmani rule, started in 1919 delivering courses translated from Turkish into Arabic. Since that medicine is taught in Arabic in all medical schools of Syria. In the 1980's Sudan and Libya started teaching medicine in Arabic.

NEPHROLOGY IN MEXICO. ITS EARLY REFERENCES AND KNOWLEDGE OF CLASSICAL NEPHROLOGICAL TEXTS

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The origin of nephrology as a modern medical knowledge comes only from the 1830s, but the early data on renal diseases come from the middle XVIth century and some relations between urinary problems and renal alteration are recorded in the scarce prehispanic medical texts. Pain in the lumbar regions appears in López de Hinojosa (1578) and Farfán (1579) books, and in 1608, Juan de Barrios discusses on haematuria and renal stones and obstructions. Translations of European medical texts to Spanish was a very scarce fact, limited to Hippocrates aphorisms translated in 1680, with isolated mentions to renal problems. Citations to Hippocrates and Galen and some modern authors like Boerhaave, van Swieten, or, later, the Viennese and French clinicians were always made with reference to European editions mainly in Latin or French.

Bright's disease was registered in Mexican medical journals in 1836; albumin excretion through urine and the concomitant lesions are discussed in 1868. The start of nephrology as a definite medical speciality comes only in the 1920s, when at the Mexico City General Hospital is created the first specialized service with Aquilino Villanueva as a head. From then are registered renal radiological studies and renal cancer diagnoses and treatment. At the same time starts renal functional studies and precisions on renal failure. Around the fifties in the National Institute of Cardiology and in the Hospital Infantil de México were established services of nephrology. The studies realized in the National Institute of Nutrition and the foundation there of a laboratory oriented to study renal physiology and water and electrolytes alterations represents an important advance. Nephrology services proliferated in the sixties and in 1965 was realized the first renal transplant.

In this paper we present the narrative of the evolution of knowledge of renal functions and diseases and the integration of specialized services. Also we comment about the French, English and North American texts translated in to Spanish and the role they play in the formation of Mexican Nephrologists.

NO LONGER RECHERCHÉ - THE IMPACT OF THE INTERNET ON THE HISTORY OF NEPHROLOGY

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The Internet is creating the biggest shift in information availability since the mass production of books in the 19th century. We are probably just at the beginning of the comparable revolution that will be attributable to the Internet.

A remarkable feature of the Internet is the 'long tail' phenomenon. Low production costs make it possible to publish and sell things of niche interest. Search engines make it possible for people to find it. Despite the prominence of Facebook and YouTube, much of the Internet's business is carried out in vast networks of less-frequented pages.

The increased accessibility of information is creating opportunities and possibilities that seem likely to revolutionise many professions. Already it is possible for patients to know more about a small corner of knowledge than their clinicians. However while using it to search PubMed and do shopping, doctors and medical institutions have been slow to take up the broader opportunities that the Internet offers for publishing their own output.

The history of the History of Nephrology on the Internet seems to begin with manufacturers, professional societies and museums each posting limited information relevant to their own past. That has widened, and been added to by generic information providers such as Wikipedia, which continue to expand patchily into many niche areas.

In the last decade or so the most prominent developments in Internet Nephrology have been steered by a number of individuals. This is not always apparent as they have sometimes published under their own banner, but more often under the auspices of other organisations. They have led efforts to cover nephrological topics more carefully and comprehensively, and some of these are outstanding examples of publishing. They have often included some history. Across the same decade almost every nephrological journal has moved to electronic publishing. However many of their articles are locked behind paywalls, a position which may or may not be stable.

The last several years have seen the development of some openly accessible sites which major in History of Medicine or in History of Nephrology. Again these have often been driven by individuals rather than organisations. They vary in the level at which they are pitched and in their scholarly depth, but are beginning to provide rich sources of information that will ensure that modern nephrologists have ready access to information about our history – giving them the opportunity to see how important it is. All can be aware of our history and learn from it.

Further expansion of information availability is inevitable. It is exciting and offers extraordinary opportunities. It will shape the future of nephrology.

ACADEMIES ALLIED EXTRA MUROS OF THE UNIVERSITIES IN A TIME OF ECONOMICAL CRISIS IN EUROPE (1550-1700). THE CASE OF THE PADUA STUDIUM

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Hobsbawn, Trevor Roper and Devries have shown that the economical crises in the past were long lasting. By contrast nowadays we do not have enough experience with globalization, however an immediate effect is seen on the expenditure for culture and health.

The Republic of Venice, as we learn from Frederic Lane (Venice a maritime Republic), in a difficult time, wasted also by plague, through the Magistracy of the Republic “Riformatori dello studio” did not reduce the economical support to the University of Padua, so that some seven thousand students came from the whole Europe. At that time the university was in a decadent conditions, however they were kept alive by their competitors, the Academies, defined by Marc Fumaroli “the allied extra muros” (out-of-walls). They were a novelty and contributed to the general debate and to the progress of science (A. Montano, I Testimoni del tempo, 2010).

The academies aggregated the intelligent people of the time, the free spirits who organized themselves in order to exchange ideas and to promote research. A few examples: Accademia Cosentina-Telesiana (Cosenza), Accademia dei Segreti (Naples), Accademia dei Lincei (Rome), Accademia del Cimento (Florence), Academy of France (Paris), Royal Academy (London). The academies injected new fresh blood in culture of the time in a spirit of collaboration-opposition to the universities thus preparing the Enlightenment.

The University of Padua (1550-1650) was a great centre of culture maintained through a system of taxation (a citizen tax and a tax on any chart entering in Padua), familism was prevented by strict enrolment rules, by allowing no tenures, but time-limited contracts, by giving the students the real power of controlling the teaching of the professors (the word rector, now used for president originated in those days). There was also place for an institution dedicated to natural sciences like the Botanic Garden (the first worldwide). The real motors of the cultural enterprise were the Circle of Gian Vincenzo Pinelli (Padua), Palace Morosini and La Nave d’ Oro (in Venice), not necessarily in this order.

Gian Vincenzo Pinelli, born in Naples, after completing the studies moved to Padua attracted by the stimulating life, the great number of printing houses, and the botanic garden. He enriched his home of Greek Codices and many thousands of printed books. In that circle were usual hosts Galileo Galilei, Cardinal Bellarmino, Cardinal Federico Borromeo, Torquato Tasso, Nicholas de Peiresch. Therein Galileo Galilei wrote the application for professorship to Riformatori dello Studio (The Magistracy of the Venice Senate guiding the university) and therein he prepared his first set of lectures presented in the Studium after he was nominated professor.



That place was defined by Fulgenzio Micanzio in *Vita di padre Paolo/Life of father Paul* (Paolo Sarpi) “the place of all muses and academy of virtues of the time”. Frederic Lane has written that the young generations were attracted by the “ridotto” of Morosini Palace in a City (Venice) where “a huge number of academies, dedicated more to natural sciences than to humanities” existed.

Therein one could meet Galileo Galilei, Santorio Santorio (a founder of medicine based on measurement) Paolo Sarpi, Andrea Morosini (historian), Antonio Morosini (a doge), Giovambattista Della Porta (the Neapolitan scientist), Prospero Alpini (reader in *Simples* and prefect of the botanic garden), Girolamo Fabrici d’Acquapendente, professor of surgery and all important politicians, economist, philosophers (including Giordano Bruno), ambassadors, intellectual from any part of the world. Therein any news was digested as it happened with in spring 1509 the news arrived about the possibility to enlarge images. This prompted Galileo Galilei to reinvent with the artisans of the glass the telescope which on January 30, was turned to the sky. Thereafter everything changed.

La Nave d’Oro (the golden ship) was a merchant house where persons arriving from everywhere met to drink a glass, to discuss all the novelties inherent the Republic. It was a place for business, culture and gossip, a great place for the destiny of Venice and where Paolo Sarpi enjoyed to meet Venice visitors.

In that period at the University of Padua taught Galilei, Vesalio, Realdo Colombo, Falloppio, Girolamo Fabrici d’Acquapendente, Girolamo Mercuriale, Giacomo Zabarella. At Padua had studied Copernicus, at Padua studied William Harvey. The circulation of ideas between Galilei, Della Porta and Santorio generated the thermometer, the first clinical thermometer, a stop clock to measure the pulse (pulsiloge), the starting of the quantitative medicine, bedside teaching (with Montano), it was decided to start a chair on prognosis of diseases, and Prosper Alpini started to divide diseases in acute and chronic. Furthermore Venice was embellished by Monteverdi (Maestro di Cappella), by Tintoretto’s paintings and the palaces of Palladio, Da Ponte. The investment of public and private resources kept the culture alive, it can still be the driver nowadays.

DE LAPIDIBUS PODAGRA ET CHIRAGRA IN HUMANO CORPORE PRODUCTIS” (ROME, 1699): THE CONTRIBUTION OF GIOVANNI BATTISTA CONTOLI TO THE URINARY TRACT STONES DESCRIPTION AND CLASSIFICATION

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Paleopathology documentations made the history of nephrolithiasis to be dated likely old as the history of human being. A number of theories on the lithogenesis date since the time of Hippocrates. However, the interest for the therapeutic aspects, in particular those related to different lithotomy techniques, has been always prevalent ⁽¹⁾ compared to those less frequent dealing with pathogenetic aspects of lithogenesis.

In the XVII e XVIII centuries several books of lithology had been published [Bartholomeus Schobinger, 1637 ⁽²⁾; Johann Daniel Widt, 1663 ⁽³⁾; Joannes Groenveldt, 1684 ⁽⁴⁾; Martin Schurig, 1744 ⁽⁵⁾]. In these books in addition to different morphologic characteristics of calcareous formations in different part of the human body, theories on the pathogenesis of lithiasis were also considered.

Besides the above mentioned authors, a particular mention merits Giovanni Battista Contoli, a physician from Bologna who published in 1699 “*De lapidibus podagra et chiragra in humano corpore productis*” ⁽⁶⁾. In this book Contoli, in addition to consider the causes for the stone production in patients affected by gout (“*podagra et chiragra*”), in particular due to the passage of acidic substances from the digestive tract to the kidney and urinary tract and to other districts of the body, reports where these stones may deposit (brain, thyroid, lung, stomach, liver, gallbladder, uterus, intestine and, mostly, kidney and urinary bladder). Using very accurate drawn images, Contoli describes the macroscopic characteristics of renal stones (“*marmoreus*”, “*crustaceus*”, “*arzilosus*”, “*thuphaceus*”, “*ex arenulis vitreis*”) both in the whole and in section. He also described findings from the autopsies of two cardinals, Giacomo Franzoni and Niccolò Rodolovico and provided very clear drawn images of stones found in the kidney and urinary tract.

The work of Consoli reflects the iatrochemical view of the pathophysiology, which in the previous decades, due to the contributions of Jan Baptist van Helmont and Franz de le Boë Sylvius, became preminent in Europe ⁽⁷⁾.

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DIABETES MELLITUS; A REVIVAL OF THE PAST AND A PERSPECTIVE FOR THE FUTURE

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Diabetes mellitus is considered one of the most catastrophic diseases of our times and a cause of considerable morbidity and mortality worldwide. Its presence is accompanied by an increased incidence of cardiovascular and renal disease, metabolic syndrome, amputations, and blindness. Current management of diabetes requires laborious life-altering efforts and longstanding medical attendance on behalf of the patients, as well as continuous search of new medicine and interventional treatments, all of which bear a considerable burden on patients as well as public health systems. In spite of the tremendous impact of diabetes in modern era, very little is known about its history since antiquity.

More specifically, few are aware that diabetes mellitus is an ancient disease that has accompanied mankind until today. The first references of diabetes were recorded over 3,500 years ago by the Egyptians. Ancient Greeks, Romans, Hindus and Persians have provided vivid descriptions of the disease and its complications, suggested interpretation and treatment strategies. Over time, some of the greatest medical doctors worldwide dedicated their lives to management of diabetic patients and pioneered in the first scientific attempts and experiments on diabetes. In this review, the historic course of diabetes mellitus from antiquity throughout the centuries is presented, starting from the origin of its name.

Some of the most common perceptions as well as misconceptions about the etiology and pathogenesis of diabetes are discussed. Diagnostic methods and early efforts on therapeutic management of diabetic nephropathy are analyzed. Moreover, primal experimental studies on diabetes are examined in the context of contemporary scientific knowledge and sociopolitical status. The spirited descriptions of ancient documents, the wisdom offered by our ancestors through observation and study of nature, as well as the zest and selflessness of major pioneers in medical research, outline a distinct view of diabetes mellitus which, especially in this time of specialized knowledge, could become an inspiration and guidance to any young physician who faces the challenge of managing the diabetic patient.

THE RENAL STONE DISEASE OF MICHEL EYQUEM DE MONTAIGNE (1533-1592)

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For Montaigne, the author of the Essays/Essais (essayer in French means to perform an experiment) and of Travel Journal/Journal de Voyage, wise persons are those who have the capability of recognising that health is the only thing “deserving by everyone dedication of time, sweats, work and even life to be achieved, since, without a good health, life is painful and tiresome”. Moderation was his target. Moderation, being the greatest virtue, meant capability to understand that pleasures occur along with pain, to be able to enjoy life through senses, to be able to accept youth and old age, to catch the soul with our teeth, having no fear for death, and being capable to face death”. Renal colic affected him and to excrete stones and gravels he visited numerous spas in France, Germany, Switzerland and Italy. Since for him even a disease was an opportunity, the renal colic “will be useful in achieving the difficult task of making myself acquainted with death and to be familiar with her”. In the Essays Montaigne looks for help, and speaks “of life and death, in the faces of humans, where sculptured signs of life and death are present, and in the examples provided by history also recounting life and death”⁽¹⁾.

He suffered of gout and his first renal colic is dated July 20, 1578: “I am suffering the worst disease, the most subtle, the most painful, the most mortal, beyond all remedy”⁽²⁾. Also his father used to excreted stones but he started at the age of 57 and went on for 7 years before dying of a renal disease at 64, whereas Michel was only 45 years old at the time of the first renal colic ⁽³⁾. However he did not die of a renal disease but of a severe sore throat. To cure his stones and gravels he used to visit spas moving on horses, being convinced that horse riding reduced the pain. Waters were used to increase urine output, as well as for baths to alleviate pain. Although he knew everything about renal stones, he could not escape depression thus he continuously concentrated on his disease. Once visiting Pope Gregory XIII, a majestic healthy bearded man, he thought that the pope had no stones, no colic, no pain. During a ten day stay at Plombières ⁽⁴⁾ he had “a strong colic, exceeding the pain of the usual colics [...], localized on the right side, where previously he never had had pain [...] passed two small bladder stones and some gravels [...]. In describing the disease is very precise about time-course. “On awakening in the morning I excreted a stone of middle size which broke in small pieces. It was yellowish externally, and after the breaking, whitish internally [...]” He detailed about his stones and their sizes, his pains, his ridings. He reported the shape, colour, size, consistence of stones excreted at Baden or at Abano. His descriptions are clinically precise and a reason for wonder.



From Travel Journal we learn that in Lucca at the Baths La Villa “ On the 21st I bathed in the morning and by mid-day I felt a violent pain in the kidney, abundant turbid urine were passed which contained gravels. [...] Turbid urine let me suspect the passage of a great stone “ (Ref 4, p.329). “On the 24 in the morning I passed a stone which stopped in its way-out and no urine was excreted till lunch[...]. Finally the stone was excreted with pain and abundant blood. It was like a small apple, or like a small pine nut, the size of a broad bean, the shape of a male member. Its excretion was a reason for happiness. Thereafter I never excreted a stone of that size” (Ref 4, p.331). However as a man capable to learn from life events he was even capable to foresee the advantages of his colic which “will bring to an end what I myself was unable to achieve, the acceptance of death and the capacity to familiarize with her”.

Montaigne, one of the most original thinkers and writers of his time was a philosopher capable of applying himself in the administrative problems of Bordeaux. He despised physicians since they turn health into disease in order to preserve their power, justified active euthanasia, and considered death in loneliness the most appropriate, a displeasing comedy for one character. He aimed to conclude his life as it happens nowadays in the hospitals and in hospices, places “Where someone is paid to find the appropriate position for our head, to scrub our feet, being kind enough, with an indifferent face and on our side, allowing us to moan at our wish” ⁽⁵⁾.

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CURES FOR URINARY STONES IN DE MEDICINA AEGYPTIORUM OF PROSPERO ALPINI (VENICE, FRANCISCUS DE FRANCISCIS, 1591)

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Prospero Alpini (1553-1616), a reader in simples at the university of Padua in the years 1494 to 1616, started his career as personal physician of Giorgio Emo, the Venetian Consul to Cairo in the years 1581-1584. His work at Cairo was an occasion for him to study the Egyptian traditions, plants, and medical practices which were reported in the book *On the medicine of the Egyptians / De medicina Aegyptiorum* ^(1,2).

The book was inspired by Girolamo Mercuriale and Alessandro Massaria professors at the University of Padua and dedicated to Antonio Morosini, Senator and Supreme Councillor of the Republic. A book in 4 sections of which Giuseppe Ongaro has traced 10 editions ⁽³⁾, structured on a dialogue of Alpini with his beloved master Guilandinus (Wieland) ostensor in the botanic garden of Padua.. Interesting chapters are dedicated to urinary stones. Alpini described his personal experience with the use of Nile water to treat his own renal colic (1st book, chapter XIII). "I will not omit to narrate you that a large oral quantity of that water healed me from a strong and deep renal pain due to stones. Furthermore, being afflicted by that pain, and being very thirsty I exposed to airs many jars full of that water in the windows of my home ... I drank a great deal of that water, not less than six pounds.

After drinking I fell in sleep, weakened by the pain and later on I urinated. Having drunk a great quantity of that water I passed 5 stones and the size of a kidney bean, and was liberated by pain". This lead Alpini to prescribe water therapy for stones using the springs in the Padua area, Alpini also described the method used in Cairo to extract bladder stones without incision. The description-as usual for the format of that book – emerges from a dialogue between Guilandinus and Alpinus. The latter informs that the physician after introducing in the urethra a woody cannula - one finger thick - blows into the bladder to dilate its neck. When this is achieved an assistant introduces a finger in the rectum and pushes the stone towards the bladder orifice of cannula, thus the stone may be advanced near the prepuce. At this time the cannula is rapidly withdrawn. Alpini reports that stones great as olives could be removed. Years later Alpini also reported that his successor at Cairo, Ottaviano Rovereti ⁽⁴⁾ had informed him about a different method used by an Arab physician who used to dilate urethra through flexible cannulae of increasing size. After introducing the first (the smallest size) the physicians blow in the bladder to dilate it. The introduced the second cannula and again blows into the bladder to achieve dilation. When the largest cannula is positioned the stone is advanced, through a finger in the rectum, to the bladder orifice of the cannula and thereafter aspirated by the physician.



The primacy of Alpini in the description of the method was supported by Wilhelm Fabry von Hilden and by a paper of Robert Master Kerrison in the *Medico-Chirurgical Transactions of the London Academy* in 1823⁽⁵⁾. The book indicates that Alpini was a man of Renaissance, scientifically curious, capable of learning from other's experience.

He was so taken by the medical practices in Cairo on patients with urinary stones that he discussed these findings years later in *The medicine of methodists (De medicina methodica, Patavii, apud Franciscum Bolzettam, 1611)*.

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SOME ERRORS, UNDER THE LIGHT OF THE CURRENT KNOWLEDGE, IN THE IDEAS OF HIPPOCRATES, ARISTOTLE AND GALEN ON RENAL PHYSIOLOGY

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Aim: The aim of this paper was to support the idea that the stereotypic glorification of many great researchers by claiming that they were always right in their ideas is a mistake, eventually devaluates their real strength. This habit was, and in a minor scale still is, used to describe the ancient Greek doctors' contribution to nephrology.

Material and Method: We read all the available to us works concerning kidneys and their function by the three greatest ancient Greek authors on medical issues, namely Hippocrates (5th cent. BC), Aristotle (4th cent. BC) and Galen (1/2 cent. AD). Apart of their valuable and original contributions to what we call now Nephrology, and which do not concern this study, we tried to trace the errors they did under the light of the current knowledge.

Results: For the purpose of shortness of the abstract, our findings are summarized as such:

- 1) Hippocrates, despite his impressive clinical observations, knew little about anatomy and physiology of urinary system. He failed to realize that urine is produced in the kidneys and he believed that the bladder is the place of this function.
- 2) Aristotle, in his work "Historia Animalum", provides an accurate description of the urinary system. However, he believed that the kidneys were not of actual necessity, but as matters of greater finesse and perfection, and he claimed that their role was to produce sperm rather than urine, the latter probably formed in the bladder. He also claimed that calculi occurred only in humans, as a result of humors passing down from the kidneys.
- 3) Galen, who proved undoubtedly that the urine, is produced in the kidneys; pass through the ureters to the bladder where an ureterocystic valve exists to avoid reflux, still believed that the right kidney is higher than the left one in order to receive the blood directly from the liver for quick purification.

Conclusions: From the above few examples, it is evident that great minds were still doing great mistakes, unavoidable in the scientific level of their era. By covering these, and others mistakes that will be discussed in the full paper, either out of national pride or out of a tendency to beautify the past, we only weakens our support to their great achievements.

FOAM IN URINE: FROM HIPPOCRATES TO THE MEDICAL SCHOOL OF SALERNO

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The formation of persistent little bubbles in urine, similar to those of beer, were noticed since ancient times by the first scholars of uroscopy. The diagnostic interest, rare and uncertain in Hippocrates, has increased with the time. The Hippocratic school limited itself to observing the sign without interpreting the pathophysiology and did not compare it with other clinical signs; Hippocratic texts only expressed an opinion on the severity and prognosis of the pathology which had produced it.

Galen does not differ much from the Hippocratic school, however, he tries to interpret the cause of the formation of bubbles in urine. Certainly, being the laws on fluid unknown to him and therefore, about the superficial tension of liquids, he believes that the air contained in the bubbles of the foam in the urine comes from within the organism. However, he realizes that the foam in urine is formed only when it is denser (more viscous).

The Byzantine uroscopist, Teophilus Protospatharius and Stephen of Athens, consider the presence of foam quite important, in fact, they state that the bubbles appear in the urine when there is a severe failure of the organism and it is a sign of the attempt produced by the body to eliminate the bad humours produced in the different zones where digestion takes place. Several authors from the School of Salerno express different opinions on the production of foam in urine: Cofone says it derives from the putrefied blood in dense urine, he also uses this sign for diagnostic and prognostic results.

Mattheus Archiepiscopus confirms Galen's belief that the foam derives from wind bubbles produced in the stomach. "De Urinis" of Maestro Mauro is strongly influenced by the writings of Constantine the African, who reports the experience of Isaac. The "humani corporis regionibus" and "regionibus urine" are described and therefore Mauro tries to localize in which region of the body the bad humours were produced. In particular, the chapter on "De ycteritia" is an exact description of the foam in urine generated by the elimination of bad humours produced in excess by the liver (bile salts).

PROGNOSIS OF LIFE AND DEATH AND DISEASE DURATION FROM URINE EXAMINATION ACCORDING TO PROSPERO ALPINI (1553-1616) READER IN SIMPLES AT THE UNIVERSITY OF PADUA

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In 1601 in Venice, in the printing house of the Heirs of Melchior Sessa a book with a great destiny came to light. It dealt with *De Presagienda vita et morte aegrotantium libri septem*, in quibus ars tota hippocratica praedicandi in aegrotis varios morborum eventus cum ex veterum Medicorum dogmatis, tam ex longa accurataque observatione, novo modo elucescit. The book dedicated to the board of directors of the University of Padua asked in the preface the establishment of a new chair to cover prognostics. The book (quarto, pages 8+163+16) also known as *De Presagienda* was authorized by Prosper Alpinus (1553-1616) from Marostica (Republic of Venice) who discussed the possibility to make a prognosis of life and death in various diseases, through a new method. The book in the same year was also published in Padua (apud Robertum Meietum) and in Frankfurt (apud Jonam Rhodium).

Alpini, a brilliant man, usual guest at the Morosini Palace, more than an academy in Venice, a former pupil of Girolamo Mercuriale, Girolamo Fabrici d'Acquapendente, and Guilandinus, was a famous physician with many private patients to see and a beloved university professor at the University of Padua, since May 2, 1594, the year the Anatomical Theatre was completed. He was titular of the ordinary lecture (primus locus) of the actions of simples (*legēt libros de simplicium medicamentorum facultatibus*), drugs from animal, vegetal and mineral origins, a discipline which for the first time with him became part of the curriculum at the faculty of Philosophy and Medicine. To this duty from 1604 was associated the practical teaching of simples in the Botanic Garden, and the direction (prefect) of that worldwide renowned institution which was turned more and more into a centre of research.

Alpinus based prognosis on signs derived from the patient and on examination of excretions (sweat, spit, feces, blood, abscesses, and urine). Urine examination was useful to make prognosis in many diseases, being the first resource for kidney and bladder affections and the second resource for diseases of the chest and for gastrointestinal diseases. Alpinus departs from urine definition (serous secretion from blood attracted by kidneys), from substance, qualities, quantity and contents, then he is ready to discuss the various kinds of urine presentation in various affections, and finally is ready to predict from urine examination good health or death.

Referring to the authority of Galen stresses that urine is important since it drains from liver and other upper body organs like heart and veins, as well as from kidney and bladder and blood vessels. He advises that in many diseases, patients pass a urine not different from that in the healthy state thus it may deceive the inexpert physician.



A small quantity of urine, especially when very diluted, carries a severe prognosis as it occurs with the small burning quantity of urine in high fevers. Of course one can die also of copious urine voiding (as in diabetes) which occurs through consumption and it is not an acute event since it may be caused by excessive drinking, dropsy, suppression of stools, inflammation of the kidneys.

By contrast reduced volume may be caused by little drinking, excessive stools, burning fevers, acute inflammation, obstruction of urinary tract. Anuria is synonymous with death and may occur in febrile heat or exhaustion of functions. A very bad prognosis is associated with black urine and black sediment.

Alpinus also made prognostics of short and long lasting diseases utilizing urine examination (*De longitudine et brevitate morborum libri duo*, a manuscript transcribed by Giuseppe Ongaro). "A great quantity of urine associated with symptomatic voiding may indicate near death or a long disease. Non mortal urine may turn into mortal when they are malignant and undigested". "A scarce quantity in acute fevers indicates near death especially if associated with painful emission". "A copious urine at the beginning of the disease indicates a long time-course, however it may indicate imminent death when humours are diluted but other many other symptomatic excretions coexist so that it might occur only with a long time". A diluted urine in absence of lethal signs and unfavourable circumstances, herald diseases of long duration. Usually a red urine forecasts a long disease which is certain in cases presenting with a reddish sediment. The same holds for black urine associated with lethal signs.

THE INFLUENCE OF MEDICINE BY “ETHNOMEDICAL” TRADITIONAL PRACTICES. THE URINE THERAPY EXAMPLE

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From ancient times till today the status of health is often evaluated by urine analysis. This issue is not referred to urine as an indicator of disease but as a cure of human diseases (urine therapy). Urine therapy refers to a various applications of urine for medical or cosmetic purposes, including drinking of one's own urine.

Historical Retrospection: Urine therapy has been practiced for thousands years. It has been known throughout centuries both in the West and in the East. The Ebers Papyrus of the 1500 BC one of the oldest surviving Egyptian text document, a Sanskrit text called “Damar Tantra” include teaching to drink urine for health. In Buddhist tradition medical monks drink urine as an ancient yoga practice to promote meditation. Medical traditions in many cultures like Ayurvedic in India, Chinese medicine, Native American medicine were also promoters of urine therapy. In Byzantine and Islamic Medicine urotherapy, the use of camel urine specially, was a common remedy. Even today, although in the absence of sufficient scientific evidence is claimed by many practitioners as beneficial for health. The first question that probably arises from the opponents of the urine therapy is how a waste product could ever be beneficial for health. Controversially the promoters claim that urine is equal as any other body fluid and additionally has a wide scale medical properties (antiviral, antibacterial, immune stabilizing, antineoplastic etc).

Purpose: The aim of this issue is not to convince of “the orthodox” or not of urine therapy but to emphasize the traditional, local cultural, religious, ethical influences in medical practice, throughout the history of medicine, even though for many of them there is no scientific basis at all.

Epilogue: Medicine as any other science can not be separated of these influences as we most of us we continue to follow the ancient texts of our religious faiths, local cultures and traditions or other spiritual practices. These influences are as “diachronic” as diachronic is the the human motive to find out the “secret” formula to wealth, happiness and health always ending to leave us the “bitter taste” of wanting more.

PERCEPTIONS ABOUT GOUT (PODAGRA) DURING THE BYZANTINE ERA, WITH A SPECIAL FOCUS ON A MICHAEL PSELLUS POEM

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Gout (podagra) was highly prevalent in the inhabitants of Constantinople during the era of the Byzantine Empire and 14 out of 86 Byzantine emperors had suffered from some form of arthritis. Its main cause might have been excessive meat and alcohol consumption.

The combination of poetry and music with medicine has been a common finding among different cultures and civilizations across the world. It is also noteworthy that in Greek mythology, the god of music was the father or the god of medicine. So, there are some poems referring to medical conditions (diseases) with exceptional scientific interest, as they provide details about pathogenesis, clinical presentation or treatment options.

Michael Psellus, a Byzantine monk, philosopher and politician (1018-1078) has included 15 lines (poem number 9, lines 1227-1241) for podagra in his large poem entitled: “Ponema iatrikon ariston dia iamvon”. In these lines, he is describing in a fashionable way the main symptoms of gout such as the painful joint swelling and proposes as a pathogenetic mechanism the accumulation of some waste products from excessive food consumption. In addition this is one of the first reports claiming that gout can not only affect the foot but also many other joints (polyarthritis).

Emperor Monomachus Constantine IX (980-1055) has been claimed to have suffered from gout attacks as described by M. Psellus in “Chronographia” (1063). However, some investigators have challenged this diagnosis, claiming that his illness should not be attributed to gout but to rheumatoid arthritis or Reiter’s disease.

Byzantine writers also refer to the basic medicine for gouty arthritis, “hermodactylus” a constituent of the herb *Colchicum autumnale*. Hermodactylus means, in Greek, the 'finger of Hermes' – the ancient god of speed- implicating the speed of movement that the drug provided for patients. This drug was first introduced in the treatment of podagra by Jacob Psychristus, the personal physician of Emperor Leon I (457-474), and was widely prescribed during the Byzantine era.

ANTOINE FERREIN AND HIS “TUYAUX BLANCS”

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Antoine Ferrein (1693-1769) MD at Montpellier in 1727, after receiving his second MD in Paris (1738), in latter city became Member of the Academy of Sciences, Professor of Surgery at the College of France, Professor of Medicine (as successor of Winslow), Professor at the Jardin des Plants under Buffon, Professor of Pharmacy and Botantics. His curriculum, inspired by Borelli's *De motu animalium*, as a founder of functional anatomy, is also a testimony of the life of the universities and of the academies and of the horrible relationships between scientists of any origin^(1,2). He left masterpieces like those on human phonation, and on the reduction of human heart during systole and on organ palpation, introduced Portal into science and elected him as a successor. As reported in his Eloge he nurtured a group of talented people “who occupy the most important chairs and the most brilliant positions in Europe, thus deserving the rang of first anatomist of the century”. His clinical skill “increased his reputation and attracted patients asking for consultations which unfortunately wasted his time”. “A few writing have been left to posterity which however will be pleased by the anatomist he nurtured, the glory they acquired with their contributions which will fall on the man who made them capable of such achievements”⁽³⁾. He was interested into the kidneys during his studies on the glandular structure of various organs and described the renal pyramids in a presentation to the academy in 1749⁽⁴⁾ as the center of the renal, cortical lobule, consisting of the ascending or descending limbs of the nephronic loop or of the collecting tubules. (Ferrein's pyramid).

By microscopic observations he opposes the Malpighian corpuscles as well as the bloody vessels of Ruysch and favours the double tubular system of Boerhaave. At the Academy he described exactly the “tuyaux blancs/ white tubes”) giving origin to pyramids departing from the cortex and reaching the medulla. He illustrates the concept with composite tables. The first includes figure a. (a bisected kidney), Figure b. (a pyramid), Figure c. (the surface of the kidney). The second table includes figures d. and e. both devoted to pyramids and their blood vessels. The third table is devoted to the kidney in birds. Haller gave strong support to Antoine Ferrein and reported on it in his anatomy. The eponym survives and is health nowadays. Our presentation will dissect Ferrein's contribution, his methods, and his difficulties with the experiments of Malpighi and Ruysch.

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LEECH THERAPY AND KIDNEY DISEASES FROM THE PAST TO MODERN MEDICAL RESEARCH

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Phlebotomy, or bloodletting, is the longest-running tradition in medicine. It originated in the ancient civilizations of Egypt and Greece, persisted through the Medieval, Renaissance, and Enlightenment period, flourished in Arabic and Indian medicine, and lasted through the second Industrial Revolution. The practice continued for 2,500 years until it was replaced by the techniques of modern medicine.

Several thousand years ago, whether you were an Egyptian with migraines or a feverish Greek, chances are your doctor would try one first-line treatment before all others: bloodletting. He or she would open a vein with a lancet or sharpened piece of wood, causing blood to flow out and into a waiting receptacle. If you got lucky, leeches might perform the gruesome task in place of crude instruments.

In our district in the Prefecture of Epirus leeches were used until the middle of the last century. After research we established that these methods had stopped and one found it difficult to find the traditional leeches even though they would definitely be found in the marshes. The most well known leech marshes in the area are marked on the google map. Leeches were used for every ailment, headaches, hypertension and strokes. It was the main therapy immediately after a stroke and paralysis, but also as a precaution in cases of headaches with cerebral congestion to guard against “damplass” (further apoplectic fit and haemorrhage). It has been found that leech therapy can significantly help individuals to have healthier kidneys. With information gathered from practical leech healers; especially around the Lake of Joannina with its rich source of leeches in the bamboo canes; the leeches were used to treat oedema and every nephropathy such as nephrosis (nephrotic syndrome).

Leech therapy is discussed from the perspective of studies in staphylococcus aureus infections and the next step that is hunting drugs to block staph’s iron-stealing ability, or the research has shown that leeches can improve metabolic syndrome. In this area leeches were used by Orthopedic Professor Soukakos P. specialist in the reattaching severed body parts such as fingers and toes. Furthermore it is discussed anti-ageing leech therapy.

Key words: bloodletting, leeches, kidney diseases, staphylococcus aureus, anti-ageing

CUPPING THERAPY WITH SCARIFICATOR IN THE DISTRICT OF EPIRUS, GREECE

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Bloodletting is one of the oldest medical practices, having been practiced among diverse ancient peoples, including the Mesopotamians, the Egyptians, the Greeks, the Mayans, and the Aztecs. In Greece, bloodletting was in use around the time of Hippocrates, who mentions bloodletting but in general relied on dietary techniques. The popularity of bloodletting in Greece was reinforced by the ideas of Galen. There were two key concepts in his system of bloodletting. The first was that blood was created and then used up, it did not circulate and so it could 'stagnate' in the extremities. The second was that humoral balance was the basis of illness or health, the four humours being blood, phlegm, black bile, and yellow bile, relating to the four Greek classical elements of air, water, earth and fire. Even after the humoral system fell into disuse, the practice was continued by surgeons and barber-surgeons.

Bloodletting is said to be general when blood is taken from a vein or artery. It is termed local when, by means of leeches, cupping, or scarification, blood is taken in smaller quantities, with a view of relieving limited congestion and vascular tension.

In our district of Greece, in the prefecture of Epirus, dry cupping was almost always used for treating colds and coughs while wet cupping was added as a further treatment for patients with oedema and breathlessness. The tradition of dry cupping was known to all especially housewives. For wet cupping special knowledge was required. It was carried out by barbers. We present a one hundred and fifty year old barber shop photograph from Preveza, in which three generations of barbers have applied the same therapy. This was practiced until 40 years ago with a six blade scarificator. These surgeon-barbers used a nineteenth century scarificator shown in our photograph. According to the severity of the condition, the cuts were deeper. Those who did not have a scarificator used a normal razor in the same way.

In conclusion, cupping therapy can alleviate many symptoms and discomforts in renal failure such as high blood pressure, headache, back pain, abdominal pain, fatigue, anaemia, poor appetite and oedema.

Key words: bloodletting, cupping, scarificator, renal failure, photographs



HISTORY OF LOW PROTEIN ALIMENTATION IN CKD: FROM CESTNUTS TO AMINOACIDS-KETOACIDS DIETS (1869-1982)

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The first to use a low protein nutrition in Bright disease was Mariano Semmola who published his results in the Proceedings of the Academy of Naples in 1850 and later on the in the Proceedings of the Academy in Paris. He used a soup of greens and bread. The second on the list is L.S. Beale who advised a low protein alimentation in renal disease because this would lead to a reduced urea generation and therefore to a reduced renal work load ⁽²⁾. He wrote "A large proportions of excess of meat taken passes off from the body to the form of urea and other urinary constituents, which is the special work of the kidney to remove from the blood. It is obviously of the utmost importance to relieve the kidneys of at least of this unnecessary and useless work in cases in which they are diseased, when their working power is seriously impaired".

Nearly fifty years later Franz Volhard showed a reduction of body urea nitrogen, symptomatology and prolonged survival with a vegetarian diet providing 2000 calories. Subsequently in 1948 Kempner introduced a 20 g protein diet, Borst a nitrogen free diet and Thomas Addis, on the basis of studies in rats, supported the protective role of a low protein alimentation. However Homer Smith the most powerful scientist in renal physiology in (The Kidney), his masterpiece, disclosed his scepticism towards low protein nutrition in CKD. Furthermore Peters and van Slyke at the same time warned against malnutrition. This weakened research in the field, but luckily enough it did not affect the experimentation of Theodore N Pullman who disclosed the hemodynamic effect of protein feeding leading to an increase in RPF and GFR and that of John P. Merrill who advised a diet containing 0.5-0.6 g of proteins of high biological value + an amount equal to urinary protein losses.

The revival of low protein alimentation began with Carmelo Giordano in Naples. He and his collaborators-with the long lasting support of the National Institutes of Health in Bethesda 1961-1980) - started publishing data on the clinical effects of low protein alimentation based on L-essential amino-acids which appeared in the years 1961-1963 for which he was invited at the Congress of the International Society of Nephrology and was the only presenter on that topic through the congress.

In 1964 Giovannetti and Maggiore reported in Lancet on 9 patients treated with a protein deficient diet (1.0-1.5 g of N), followed by an aminoacid diet (1.7 f N) and finally by a restricted protien diet (2.2 g N). From that year the names of Giordano and Giovannetti were associated thus Geoffrey Berlyne in Manchester introduced the UK modification of the Giordano-Giovannetti diet.

However a long debate on primacy arose. Giordano with reasons defends his priority also on the basis of a letter of Giovannetti dated January 3, 1963 requesting some reprints in order “to personally test what you have already shown”.

The next important step of this story is represented by the introduction of the 40 g protein diet by Joel D. Kopple which was presented at a Conference at Scottsdale in Arizona and published in 1968 in American Journal of Clinical Nutrition. That paper is a landmark in the field.

Finally, ketoacids came of age. Richards, Brown, Oughton and Thompson published in 1971 in Lancet data on the synthesis of phenylalanine and valine by healthy and uremic men, and the subsequent year in the same journal Giordano et al in collaboration with the group of Richards showed the utilisation of ketoanalogues of valine and phenylalanine in health and uremia. Ketoacids reached their best in the hands of Mackenzie Walser, although doubts were cast on their suitability in CKD of childhood.

A very important – but not final step – is represented by the use of low phosphate diets introduced by Ibel et al in 1978 and strongly supported by the studies of Maschio et al (1981) and by those of Barsotti et al (1982) and by many other studies.

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THE HISTORY OF HEMODIALYSIS VASCULAR ACCESS**Constantina Goula, Ourania Drakoulogkona***Nephrology Department, St Andrews' General State Hospital, Patras, GREECE*

Vascular access has been used medically for centuries. The circulatory system was first described in 1616 by Harvey. In 1896 Jaboulay and Briau published an experimental technique in dogs which consisted of suturing an artery-end-to-end-anastomosis. A few years later, Alexis Carrel introduced the three-point end-to-end- and a side-to-side-anastomosis. In October 1924, Georg Haas performed the first hemodialysis treatment using a glass cannulae which obtained arterial blood from the radial artery and returned it to the cubital vein. In 1943, Willem Kolff, a young physician from The Netherlands, developed a “rotating drum kidney” with a larger filter surface area made of cellophane membrane. The first patient he dialyzed was a 29-year-old housemaid with CKD. She received 12 dialysis treatments, but the therapy was stopped because of a lack of access sites, since placing each cannula required a cut down to the artery. In 1960, Dr Belding Scribner and engineer Wayne Quinton developed an in-dwelling arteriovenous shunt at the University of Washington. The Teflon shunt was an early example of an implanted medical device that is partly internal and partly external. In 1961, Shaldon, unable to find a surgeon to place the necessary dialysis cannulae, inserted catheters into the femoral artery and vein with the Seldinger-technique. Drs Brescia and Cimino later pioneered the arteriovenous fistula in 1964. In the late 1970s, synthetic graft material - such as polytetrafluoroethylene (PTFE) - and bovine grafts came into use. Intravenous dual-lumen catheters also became a mainstay of vascular access. Knowledge of these major steps in the history of vascular access is not only interesting but also helpful to the physicians dealing with dialysis patients nowadays.

THE FIRST INTRODUCTION OF THE MATULA AT THE IMAGERY OF SAINTS COSMAS AND DAMIAN INTO ORTHODOX POST-BYZANTINE RELIGIOUS PAINTING IN GREECE

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Introduction:

This pair of Saints was one of the many Medical Doctors/Healers referred to in Christian Tradition as having the grace of healing without asking for any material reward, thus called in Greek Agioi Anargyroi (saints without silver, i.e. money). This particular pair are the most well-known and widely revered; their cult spread from the Middle East to the end of Christianity, throughout its dominations. They were born in the 3rd century AD in the city of Aleppo, in nowadays Syria, during the reign of the Roman Emperor. They were brothers and professional medical doctors. During their life, they produced many healing miracles without any payment, just by the Grace of God. They were executed during the Prosecution of the Christians under the Roman Emperor Diocletian. Soon, their cult flourished and churches in their honor were built in both Eastern and Western Christian areas. They were depicted dressed in ceremonial medical robes, holding their tools of trade, usually a casket with medical drugs and some surgical tools. By the 14th century, in Catholic Christian art a matula was added as by then uroscopy had been acknowledged as the main medical instrument for diagnosis and prognosis. Since then, innumerable representations of the Saints with a matula had been created in the West in any conceivable material. There was a striking absence of such imaginary in Eastern Byzantine iconography. In this paper, we present the first and only (to our knowledge) such imagery.

Material and Method:

We visited many byzantine and post-byzantine churches in the orthodox world where depictions of the Saints were documented. We also looked at portable icons in the same area with the same subject.

Results:

The only representation of Saint Cosmas holding a urinary vial was traced on a 16th cent. mural on a side wall of the Old Cathedral of the Dormition of Mary, at Calampaca of Meteora, in Central Greece. It had been painted by the famous artist Theophanes of Crete.

Conclusion:

The scarcity of a matula representation in Byzantine art is a logical outcome of the avoidance to depict Holy Persons with their atributa (particular subjects of their vita) as, in the Orthodox World, a Saint should be revered standing alone amidst the holy light and/or the Sky or Earth, thus immersed in a gold, blue or green background. The Kalambaca exception should be understood as a cultural loan from the West, even two centuries after its first appearance there, by a Cretan painter when Crete was under Venetian rule, hence influenced by its conquerors' cultural style.

THE EVOLUTION OF IMAGING IN NEPHROLOGY**Despoina Spyropoulou¹, Ekaterini Spiliopoulou², Dimitris Kardamakis¹***¹University of Patras Medical School, Department of Radiation Oncology, Patra, GREECE**²Department of Linguistics, University of Patras, GREECE*

The evolution of imaging has had a major impact on the diagnosis and treatment of urological diseases. Two major turning points are encountered as important in the management of these diseases: the discovery of X-rays by Roentgen in 1895 and the application of ultrasound technology for body imaging by John Julian Cuttance Wild in the 1950s. Early developments included plain films of the abdomen, retrograde urographic techniques, development of contrast media, excretory urography, renal mass biopsy, angiography, cystography and nuclear medicine procedures.

These procedures led to the maturation of the specialties of diagnostic radiology and urology, and the development of subspecialties such as pediatric urology and urological radiology. Ultrasound and computed tomography and magnetic resonance imaging are increasingly applied in urological evaluation, treatment and surveillance. It is the responsibility of all physicians to assess the advantages of new developments while weighing those advantages against the additional radiation exposure and the costs associated with new procedures.

HISTORY OF ALGERIAN NEPHROLOGY**Tahar Rayane***Professor of Nephrology, Director of National Renal Kidney Center, Blida Universitary Hospital, ALGERIA*

The nephrology was born in Algeria in 1973. This naissance coincides with the first hemodialysis sessions performed by Dr. CALONNA in the medical department of Mustapha hospital in Algiers. Directed by Professor MESSERCHMIT.

One year later, the treatment of acute renal failure was started in El Kettar Hospital by doctors: Pr. M. DRIF, Dr. Daoud, Dr. M.BENALI.

In 1975, Dr. AOUDIA and Dr. BASTA began the first training of Nephrology in Médical Graduation. In 1978, the Chronic Renal Failure (CRF) was traited in the first hemodialysis center in Mustapha University Hospital's (ALGIERS). This activity coincided with the come back of the first Nephrologists trained in France (Pr Benabadji, Pr. Laradi, Pr BOUKARI).

In 1979, the treatment of Chronic Renal Failure by Continuous Ambulatory Péritoneal dialysis (CAPD) is introduced at University Hospital of Beni Messous by Dr. Bouayed and Dr. A. KROURI. This technique was proposed to the patients of CHU Mustapha by Dr AIT SLIMANE.

The first renal transplant was performed in June 14, 1986 by Prof. BENOIT (PAUL Brousse Hospital, PARIS) in collaboration with Algerian Team (D. MOHAMEDi, M. OUZIALA, A. MEROUANI and T. RAYANE).

In 1987, Professor MARCEL LEGRAEN of the PITIE SALPETRIERE Hospital, introduces an CRF integrated system care, and helps the Algerian Nephrologist Team. He stayed two years in Algéria. The start of teaching the speciality of Néphrology in Post Graduation began in 1989, and since then, Algeria has trained over 300 Néphrologistes practicing in 270 Dialysis centers and 14 University Hospitals.

DINING AND WINING IN ANCIENT GREECE: THE SYMPOSIA**Spyros Retsas, MD, FRCP***Medical Oncologist, London, UK*

Ἔστι ὁ Θεόπομπος ὁ Χίος τὴν ἄμπελον ἱστορεῖ εὐρεθῆναι ἐν Ὀλυμπίᾳ παρὰ τὸν Ἄλφειόν· καὶ ὅτι τῆς Ἠλείας τόπος ἐστὶν ἀπέχων ὀκτώ στάδια, ἐν ᾧ οἱ ἐγχώριοι κατακλείοντες τοῖς Διονυσίοις χαλκοῦς λέβητας τρεῖς κενοὺς παρόντων τῶν ἐπιδημούντων ἀποσφραγίζονται καὶ ὕστερον ἀνοίγοντες εὐρίσκουσιν οἴνου πεπληρωμένους.

Theopompus of Chios relates that the vine was discovered in Olympia, on the banks of the Alpheius; and that there is a district in Elis a mile away, in which, at the Festival of Dionysus, the inhabitants shut up and seal three empty cauldrons in the presence of visitors; later they open the cauldrons and find them full of wine.

Athenaeus. *Deipnosophistae*, i 33-34. Loeb Classical Library. Vol 1 pp 148-49 Translated by C.B. Gullick

Dining and Wining in Ancient Greece encompasses diets and drinking habits over a period of at least 13 centuries, from the siege of Troy to the 2nd century AD, the time when Athenaeus of Naucratis, an Egyptian Hellene, wrote about the food and wines of Greek antiquity.

The landscape of this survey includes not only metropolitan Greece and her islands but also the entire Mediterranean basin, the Black Sea, the Arab peninsula, and Asia as far south as India; areas which the Greeks colonised, visited or conquered. During this period and within this vast geographical area produce, dietary habits and custom were inevitably diverse and varied.

But before discussing the hors d'oeuvres, and before considering whether the Ancient Greeks enjoyed champagne with caviar, we shall be reminded of a very special banquet which may have influenced the course of history.

And our gastronomic journey will conclude with a famous symposium in which Dr Eryximachus examines the question of desire and gives sound advice on hiccups.

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GENERAL INFORMATION

CONGRESS DATE

September, 11-14, 2013

CONGRESS VENUE

September, 12th 2013

Ancient Olympia

September, 13th & 14th 2013

Hotel Astir- Patra

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OFFICIAL LANGUAGE

The official language of the Congress is English.

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All registered participants will receive a Certificate of Attendance from the Secretariat desk, at the closing session of the Congress.

NAME BADGES

Each participant will receive a name badge upon registration. For their convenience, participants are requested to wear their badge at all times during the Congress.

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8TH CONGRESS

of the **International Association for the History of Nephrology**

September **11-14** 2013

Ancient Olympia - Patra, **GREECE**

Congress Secretariat



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