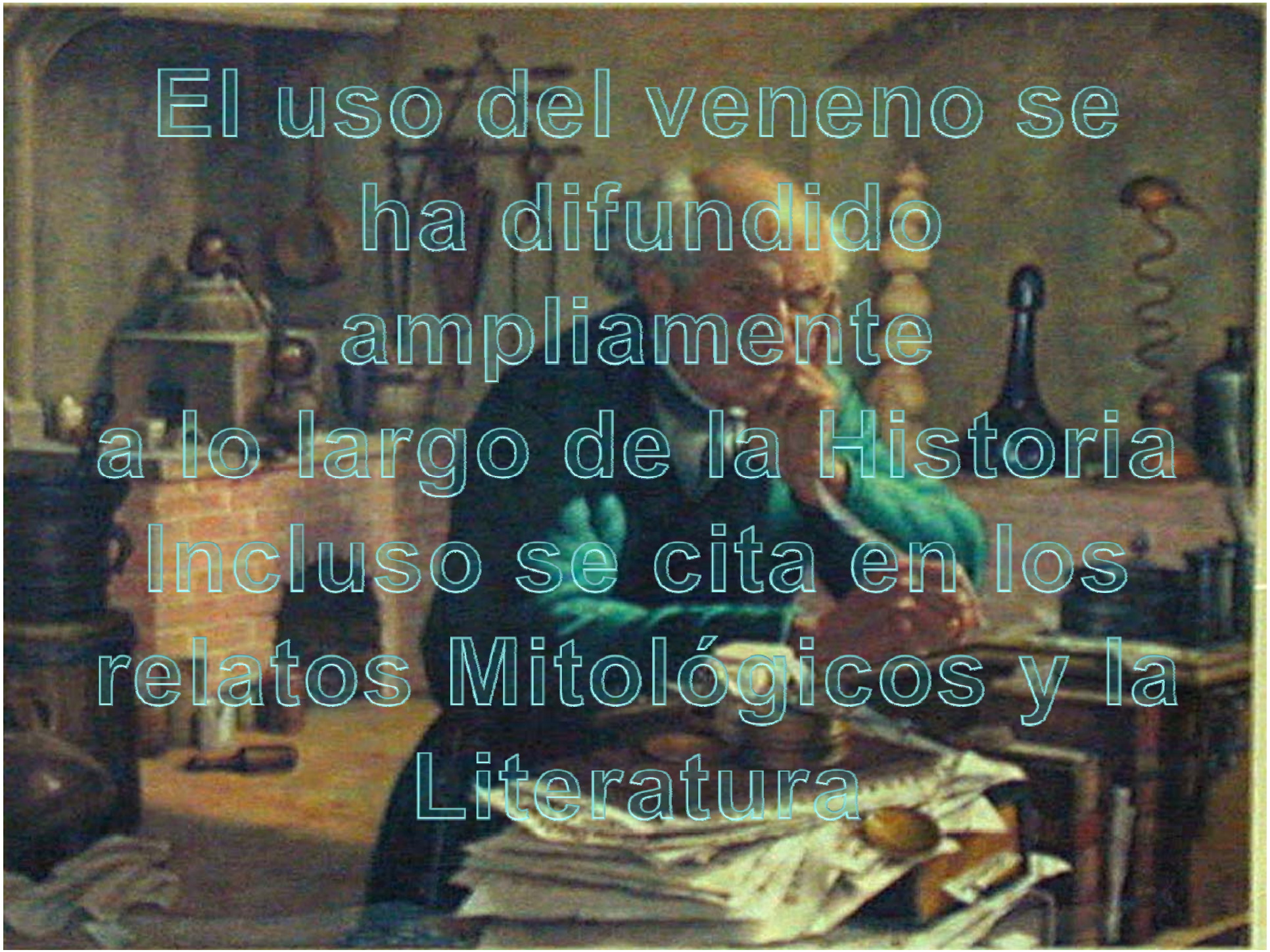
Envenenamientos célebres en la Historia

Arturo J. Brugger
Catedrático de Farmacología

11-03-2014

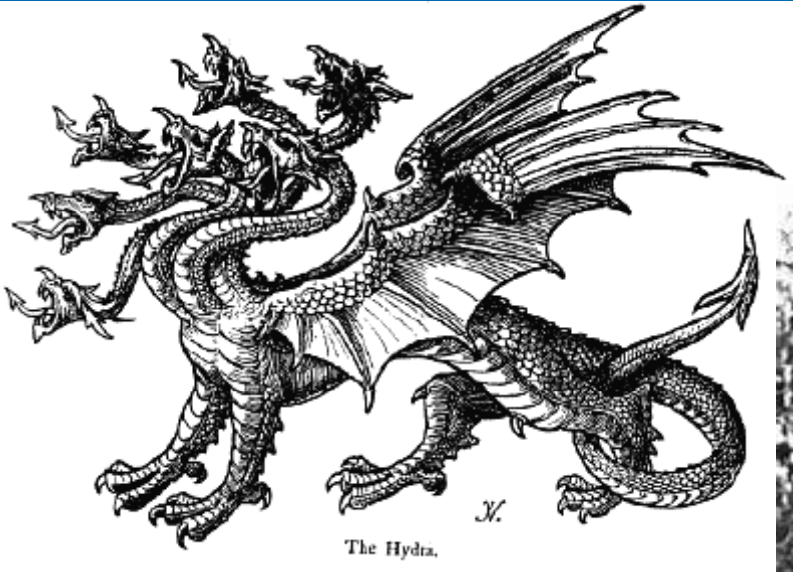

El uso del veneno se
ha difundido
ampliamente
a lo largo de la Historia
Incluso se cita en los
relatos Mitológicos y la
Literatura

Amplios conocimientos del potencial tóxico de las plantas

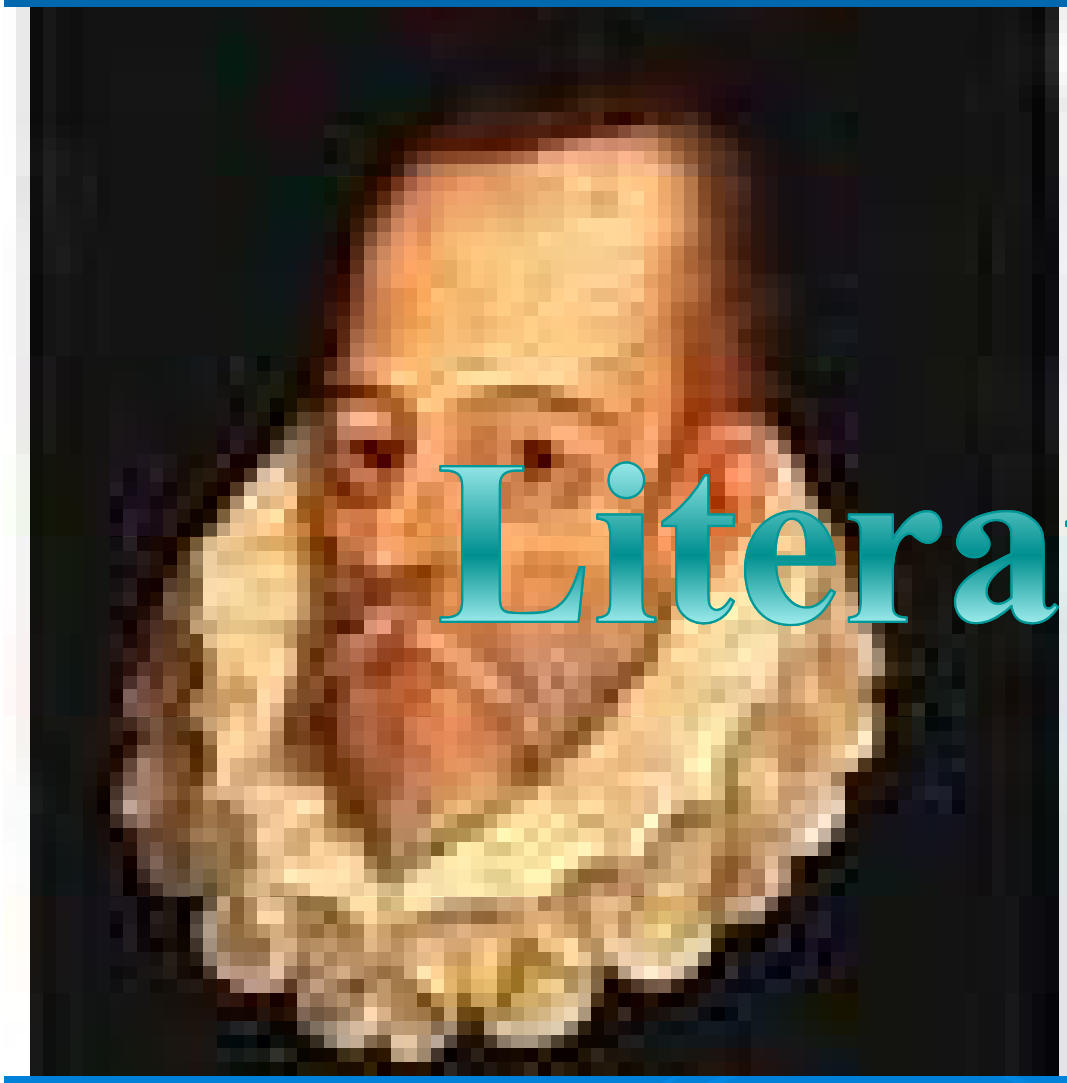

Mitos

Medea le ofrece una copa con acónito a Teseo

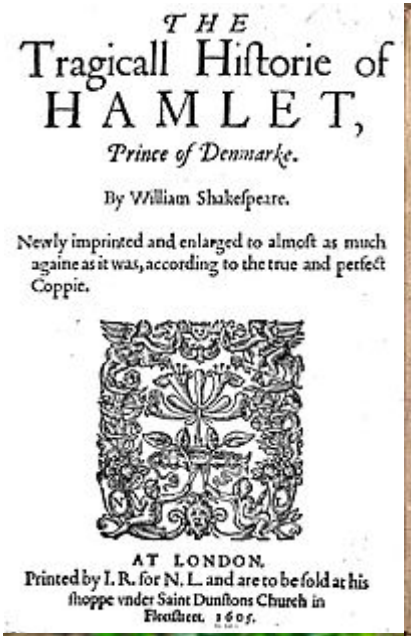
Hércules mata a la Hidra de Lema



The Hydra.



Literatura

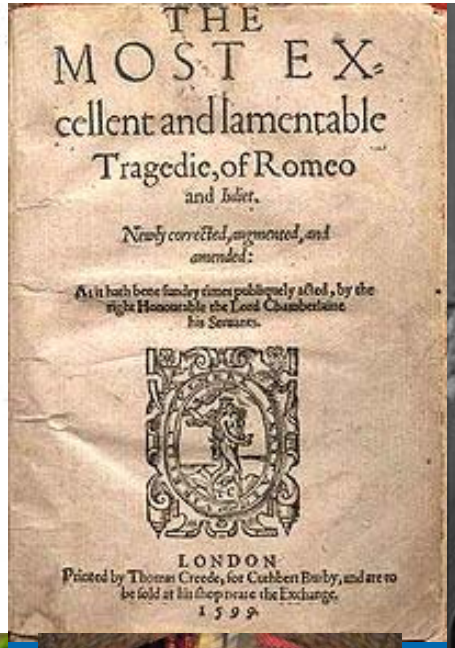


THE
Tragicall Hiſtorie of
HAMLET,
Prince of Denmarke.

By William Shakeſpeare.

Newly imprinted and enlarged to almoſt as much againe as it was, according to the true and perfect Coppie.

AT LONDON,
Printed by I. R. for N. L. and are to be ſold at his ſhoppe vnder Saint Dunſtons Church in Fleetſtreet. 1605.

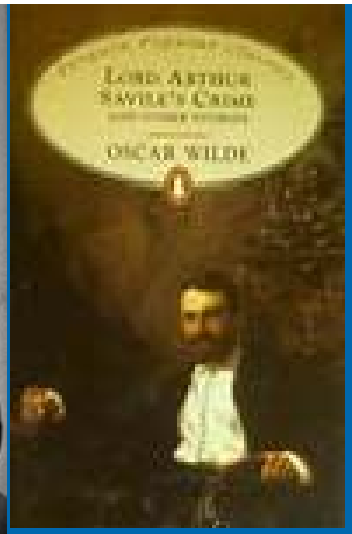


THE
MOST EX-
cellent and lamentable
Tragedie, of Romeo
and Iuliet.

Newly corrected, augmented, and amended:

As it hath bene ſundry times publiquely acted, by the right Honourable the Lord Chamberlaine his Seruants.

LONDON
Printed by Thomas Creede, for Cuthbert Burby, and are to be ſold at his ſhop neare the Exchange.
1599.



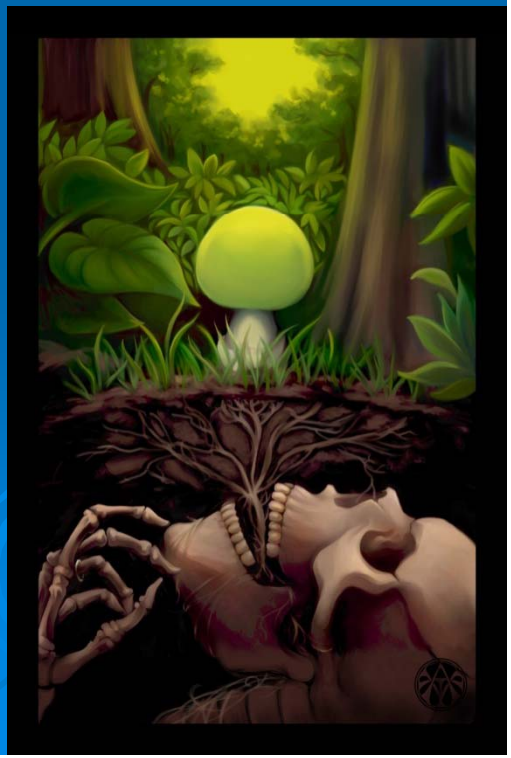
De nuevo el acónito

Romeo: Temerario piloto, lanza tu zarandeado navío contra la roca implacable, Ah leal boticario, tus drogas son rápidas, con un beso muero

Tu tío me sorprende en aquella hora de quietud, y trayendo consigo una ampolla de licor venenoso, derrama en mi oido su ponzoñosa destilación. Hamlet, escena XII

TOXIKOV

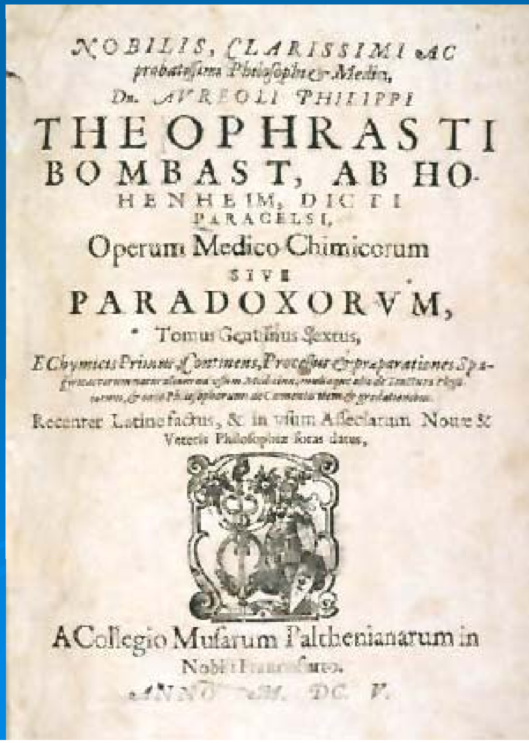
Toxicología deriva del Griego: Toxicon = Veneno



¿Qué es tóxico?

Según Paracelso 1493 -1541: “Nada es tóxico, todo puede ser tóxico, *Solo dosis facit venenum*”

Depende de la dosis, la vía de entrada y de las circunstancias



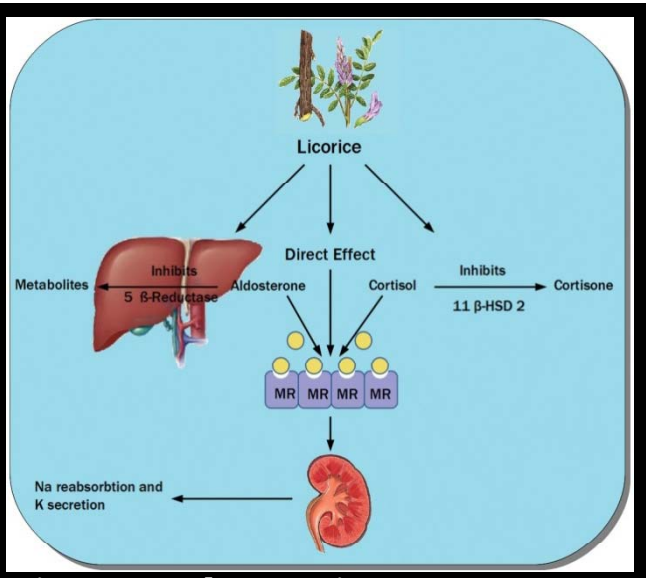
NOBILIS, CLARISSIMI AC
probatissimi Philosophi & Medici,
Dn. AVREOLI PHILIPPI
THEOPHRASTI
BOMBAST, AB HO-
HENHEIM, DICTI
PARACELSI,
Operum Medico Chimicorum
SIVE
PARADOXORVM,
Tomus Genuinus Sextus,

Recenter Latine factus, & in usum Affectarum Nouæ & Veteris Philosophiæ foras datus,

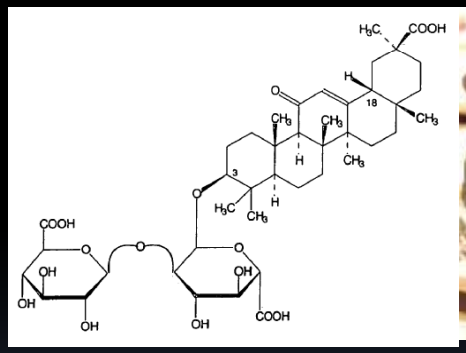
A Collegio Musarum Palthenianarum in
Nobili Francofurto.
ANNO M. DC. V.

Ejemplos

Bicarbonato
Regaliz
Curare



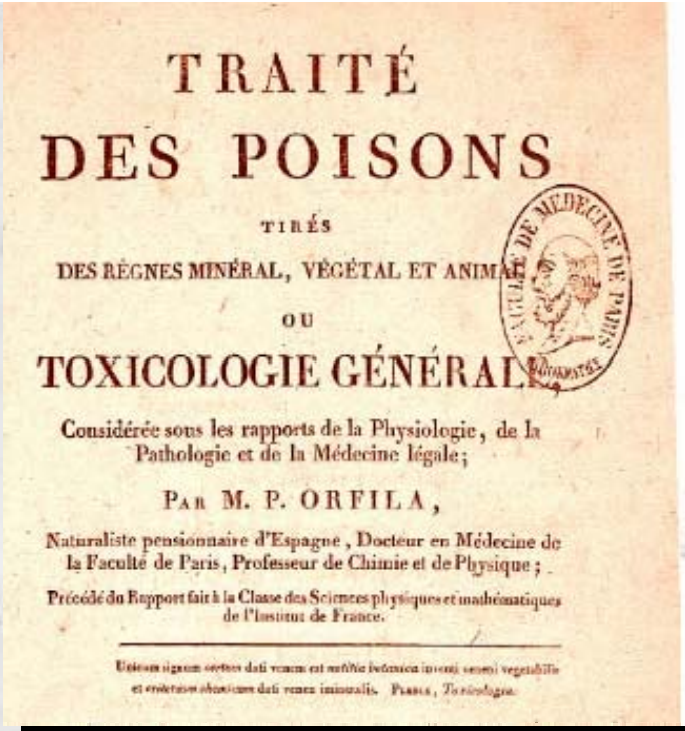
Licorice abuse: time to send a warning message
Ther Adv Endocrinol Metab. Aug 2012; 3(4): 125–138.



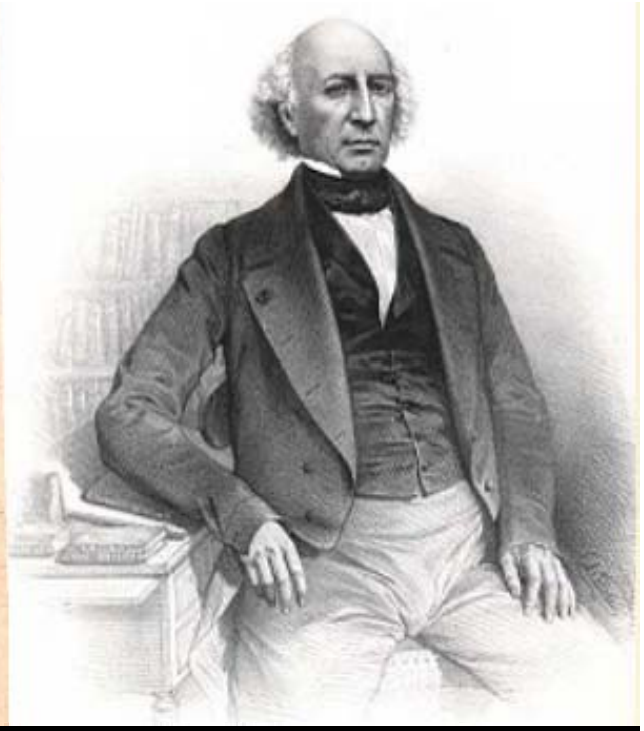
Neuroprotction by glycyrrycin containing SMNC
Anat Cell Biol 2011;44:304-313

Chinese Journal of Traumatology 2014;17(1):1-7

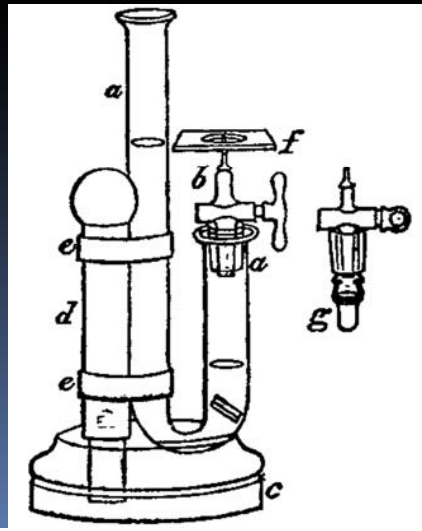
Glycyrrhicin attenuates tissue injury and reduces neutrophil accumulation in experimental acute pancreatitis
Int J Clin Exp Pathol 2014;7(1):101-109



TRAITÉ
DES POISONS
TIRÉS
DES RÈGNES MINÉRAL, VÉGÉTAL ET ANIMAL
OU
TOXICOLOGIE GÉNÉRALE
Considérée sous les rapports de la Physiologie, de la Pathologie et de la Médecine légale;
PAR M. P. ORFILA,
Naturaliste pensionnaire d'Espagne, Docteur en Médecine de la Faculté de Paris, Professeur de Chimie et de Physique;
Précédé du Rapport fait à la Classe des Sciences physiques et mathématiques de l'Institut de France.



Mateo José Buenaventura Orfila, Menorca 1787 – París 1853
Juicio de Madame Lafarge
Ensayo de Mars



Facultad de Medicina de la Universidad de Valencia

PROGRAMA

— DE —

MEDICINA LEGAL Y TOXICOLOGÍA

POR EL

Dr. D. Juan Peset

Catedrático de la Asignatura

III

Valencia.—1925-26
GRAN LIBRERÍA MÉDICA
F. GARCÍA MUÑOZ
Hospital, 14

Juan Bautista Peset Aleixandre 1886 - 1941

Milestones of Toxicology

Steven G. Gilbert[1] and Antoinette Hayes[2]

[1]Institute of Neurotoxicology and Neurological Disorders and [2]Northeastern University

Contact information: Steven G. Gilbert at sgilbert@innd.org – more information at www.asmalldoseof.org – © 2005 Steven G. Gilbert

Antiquity 000 BCE – 90 CE

Shen Nung 2696 BCE
The Father of Chinese medicine; noted for tasting 365 herbs and said to have died of a toxic overdose.

Ebers Papyrus 1500 BCE
Egyptian records contains 110 pages on anatomy and physiology; toxicology, spells, and treatment recorded on papyrus.

Gula 1400 BCE
Sumerian texts refer to a female deity, Gula. This mythological figure was associated with charms, spells and poisons.

Homer 850 BCE
Wrote of the use of arrows poisoned with venom in the epic tale of *The Odyssey* and *The Iliad*. From Greek *toxikon* arrow poison.

Socrates (470-399 BCE)
Charged with religious heresy and corrupting the morals of local youth. Death by Hemlock - active chemical alkaloid conine.

Hippocrates (460-377 BCE)
Greek physician, observational approach to human disease and treatment. Founder of modern medicine, named cancer after creeping crab.

Mithridates VI (131-63 BCE)
Tested and dotes to poisons on himself and used prisoners as guinea pigs. Created mixtures of substances leading to term *mithridatic*.

L. Cornelius Sulla 82 BCE
Lex Cornelia de sicariis et veneficiis – law against poisoning people in prisoners, could not buy, sell or possess poisons.

Cleopatra (69-30 BCE)
Experimented with strychnine and other poisons on prisoners and poor. Committed suicide with Egyptian Asp.

Pedanius Dioscorides (40-90 CE)
Greek pharmacologist and *Physician* wrote *De Materia Medica* basis for the modern pharmacopeia.

Mount Vesuvius Erupted August 24th 79 CE
City of Pompeii & Herculaneum destroyed and buried by ash. Pliny the Elder suffocated by volcanic gases.

Middle Ages 476 CE – 1453

Greek Fire 673 CE
Ancient "napalm" described by the Crusaders as consisting of naptha, quicklime, sulphur, & saltpeter.

Ergot Outbreak 994 CE
40,000 died from eating contaminated wheat/rye caused gangrene - known as *St. Anthony's Fire*.

Moses Maimonides (1135-1204)
Jewish philosopher & physician wrote *Treatise on Poisons and Their Antidotes*.

Albertus Magnus (1193-1280)
Dominican friar wrote extensively on compatibility religion and science and isolated arsenic in 1250.

Raymundus Lullius 1275
Ether discovered by Spanish chemist and later called "sweet vitriol".

Knights Templars (1118-1307)
Christian military order alleged to be experts with poisons. They searched for the "Elixir of Life".

Petrus de Abano (1250-1315)
Italian scholar translated Hippocrates and Galen to Latin. Wrote book on poisons: *De Venenis*.

The Black Death (1347-1351)
Bubonic & pneumonic plague ravaged Europe leaving the highest number of casualties in history.

Venetian Council of Ten - 1419
Group of people who carried out murders with poison for a fee.

Zhou Man 1423
Chinese explorer lost 1000s of crew members from uranium exposure while mining lead in Jabiru Australia.

Rodrigo & Cesare Borgia (1400-1500)
Poisoned many people in Italy for political and monetary gain. Used arsenic in a concoction called "La Cantrella".

Renaissance 14th–16th Centuries

Leonardo de Vinci (1452-1519)
Experimented with bioaccumulation of poisons in animals and called the procedure "passages".

Pope Clement VII (1478-1534)
Died (possibly murdered) after eating *amanita Phalloides*, (death cap) mushroom.

Paracelsus (1493-1541)
"All substances are poisons, there is none which is not a poison. The right dose differentiates a poison from a remedy."

Georgius Agricola (1494-1555)
Wrote *De Re Metallica* published 1556. The most comprehensive book on mining and metallurgy.

Catherine Medici (1519-1589)
Queen of France, expert assassin, tested poisons on the poor and the sick.

William Piso 1640
In Brazil, studied effects of *Cephaelis Ipecacuanha*, an emetic; treat dysentery.

Shakespeare (1564-1616)
From Romeo & Juliet - act 5
"Here's to my love! O true apothecary! Thy drugs are quick. Thus with a kiss I die."

Hieronyma Spara –1659
Roman women & fortune teller organized wealthy wives and sold them a arsenic elixir to murder their husbands.

Catherine Monvoisin (LaVoisin) (1640-1680)
Accused sorcerer and convicted poisoner in France. She was burned at the stake.

Guilia Tophania (1635-1719)
Italian woman who supplied poison (arsenic) to wives looking to murder their husbands. Later executed by strangulation.

King Louis XIV 1682
Passed royal decree forbidding apothecaries to sell arsenic or poisonous substances except to persons known to them.

1700s

Devonshire Colic 1700's
Devonshire, England. High incidence of lead colic drinking contaminated cider.

John Jones 1701
English doctor wrote *The Mysteries of Opium Revised*; described many treatments of opium; but also withdrawal and addiction.

Richard Meade (1673-1754)
In 1702, wrote *A Mechanical Account of Poisons* dedicated to poisons snakes, animals and plants.

Carl Wilhelm Scheele (1742-176)
Swedish apothecary and chemist, discovered oxygen, barium, chlorine, manganese, and hydrogen cyanide.

Percivall Pott (1714-1788)
British physician who recognized coal-tar caused cancer of the scrotum in chimney sweeps. Chimney Sweepers Act of 1788.

Felice Fontana 1767
Italian chemist and physiologist who was the first to study venomous snakes. Discovered that viper venom affects blood.

Freidrich Serturner (1783-1841)
Isolated an alkaloid From opium poppy in 1803. He named it *Morphine* after Morpheus, the Greek god of dreams.

Francoise Magendie (1783-1855)
Discovered emetine and studied effects of strychnine & cyanide. Called the father of experimental pharmacology.

Fowler's Solution 1786-1936
Potassium arsenite solution prescribed as a general tonic and used from about 1786 to 1936. Used by Charles Darwin?

Pierre Ordinaire 1797-1915
Created elixir using absinthe popularized and sold by Henry Pernod. Absinthe was used by Vincent Van Gogh; banned in 1915, subject of Degas.

Mateu J.B. Orfila (1787-1853)
Considered the father of modern toxicology in 1813 he published *Traite des Poisons*; which described the symptoms of poisons.

1800s

Thomas de Quincey (1785-1859)
English writer became addicted to opium in early 1800's and published *Confessions of an Opium Eater* in 1821.

James Marsh (1794-1846)
Chemist developed and perfected the Marsh test for arsenic. The improved Marsh test was used forensically for the first time in 1840 during the trial of Marie Lafarge.

Robert Christison (1797-1882)
Toxicologist at University of Edinburgh wrote *Treatise on Poisons* in 1829; invented poison harpoon for whaling that contained prussic acid.

Claude Bernard (1813-1878)
French physiologist studied the effects of carbon monoxide and curare. Influenced by Francoise Magendie.

Ascanio Sobrero (1812-1888)
Italian chemist, in 1847 discovered nitroglycerin, a powerful explosive and vasodilator. Alfred Nobel was his student.

Theodore G. Wormley (1826-1897)
Wrote the first American book dedicated to poisons in 1869 entitled *Microchemistry of Poisons*.

Joseph Caventou & Pierre Pelletier 1820
French pharmacists isolated quinine from bark of *Cinchona* tree in back of their pharmacy.

Arsenic Act 1851
Required arsenic to be colored with soot or indigo to prevent "accidental" poisoning.

Friedrich Gaedcke 1855
Isolated cocaine from *Erythroxylon coca*.

Louis Lewin (1854-1929)
German pharmacologist studied and classified hallucinogenic plants: alcohols and other psychoactive compounds.

Emil Fischer 1852-1919
Isolated the stimulant caffeine from plant extracts in 1895.

Constantine Fahlberg Saccharin 1879
Constantine Fahlberg discovered saccharin while working in the laboratory of Ira Remsen (right) in 1879.

1900-1930s

Upton Sinclair (1878-1968)
Published *The Jungle* in 1905. Chronicled the unsanitary conditions in meat packing industry in Chicago.

Pure Food and Drugs Act - 1906
Harvey Washington Wiley, MD. (1844-1930). Law prevents production or trafficking of misbranded, adulterated or poisonous foods, drugs, medicines, and liquors.

Chemical Warfare A Reality 1915
German chemist Fritz Haber (1868-1934) developed blistering agents used in WWI; chlorine and cyanide gases.

U.S. Prohibition 1919-1933
Law that made the production and sale of alcoholic beverages illegal but very profitable.

Geneva Protocol 1925
Banned use of chemical weapons. Updated in 1993 as the "Chemical Weapons Convention" to include banning production.

Ginger Jake 1929
Alcoholic tonic produced illegally during prohibition adulterated with TOCP produced OPIDN (Jake Leg), affecting 50,000 adults.

Hawk's Nest Incident 1927-1935
Hundreds of black workers die from acute silicosis while digging tunnel for a hydroelectric project for Union Carbide.

Gerhard Schrader (1903-1990)
German Chemist accidentally made nerve agents; sarin, tabun, soman, and cyclosarin while developing insecticides 1938; agents used in WWII.

Elixir Sulfanilamide 1937
Food Drug & Cosmetic Act 1938
100 die, diethylene glycol as a vehicle.

Albert Hofmann 1938
Lysergic acid (LSD) synthesized in the Sandoz Laboratory (now Novartis). In 1943 Hoffman tested LSD on himself.

Marijuana Tax Act 1937
Federal criminal offense to possess, produce, or dispense hemp. Non-medical use prohibited in California (1913) and Texas (1919).

1940-1960s

DDT – 1939
Recognized as insecticide by the Swiss scientist Paul Hermann Muller, who was awarded the 1948 Nobel Prize in Physiology and Medicine. Banned in 1972.

2,4-D – 1946
Developed during WW II at British Rothamsted Experimental Station, by J.H. Quastela and sold commercially in 1946. Used to control broadleaf plants.

Minimata Japan (1950's)
Minimata Bay contaminated with mercury by chemical industry. Thousands adults and children were poisoned from eating fish contaminated with methyl mercury.

Poison Control Centers 1953
First, Chicago **1953**, second at Duke University, NC in **1954**, and third opened in Boston **1955**.

Journal of Tox. & App. Pharmacology **1959**
Adopted by SOT until 1981 when SOT founded *Fundamentals of Applied Toxicology*.

Thalidomide (1959-1960's)
Drug prescribed to pregnant women for morning sickness induced birth defects. Frances Kelsey of FDA blocked approval in U.S.

Society of Toxicology 1961
Founded March 4, 1961, first formal meeting held April 15, 1962 (9 founders, 183 charter members).

Alice Hamilton (1869-1970)
Pathologist and first female faculty member at Harvard Medical School. Associated worksite chemical hazards with disease. Studied effects of lead & rubber on workers.

Rachel Carson (1907-1964)
Scientist lead crusade against the use of dichlorodiphenyltrichloroethane (DDT) a pesticide and persistent organic pollutant. Carson several books including *Silent Spring* published 1962.

Occupational Safety & Health Act 1970
Act passed on December 29, 1970 to ensure every worker a safe and healthful workplace.

OSHA

U.S. EPA 1970
Established to consolidate federal research, monitoring, standard-setting and enforcement activities to ensure human & environment protection.

1970-2006

Mr. Yuk 1971
Symbol adopted by the Pittsburgh Poison Center at The Children's Hospital in 1971. Used to educate children and parents about poisons and to prevent accidental poisonings.

Iraq – Mercury 1971
Pink-colored seed grain coated with a mercury fungicide was tragically consumed by Iraqis tragically affecting *over* 40,000 people.

Bangladeshi 1970s Arsenic poisoning
Tubewells, drilled to provide clean drinking water, are contaminated by arsenic resulting in millions of people harmed.

First Modern Toxicology Textbook 1975
Louis J. Casarett & John Doull edited, *Toxicology: The Basic Science of Poisons*, in 1975.

Love Canal Disaster 1978
August 7, 1978
US President Jimmy Carter declared Love Canal a federal emergency. 42 million pounds of over 200 chemicals contaminated Love Canal, disrupting many lives.

IUTOX 1980
International Union of Toxicology
American Board of Toxicology (ABT) 1979 – First exam Aug. 1980
Academy of Toxicological Sciences (ATS) 1981

Times Beach 1983
Dangerous levels of dioxin discovered in Times Beach, MO. EPA orders the town evacuation and makes it a Superfund site. All residents gone by 1985.

Bhopal Disaster Dec. 3, 1984
Accidental release 40 metric tons of methyl isocyanate from a Union Carbide Indian pesticide plant in heart of city resulted in the killing thousands, and injured 100s of thousands.

Chernobyl Accident April 26, 1986
The Chernobyl nuclear power plant accident produced a plume of radioactive debris over the Ukraine, Eastern Europe, Scandinavia, UK, and eastern USA.

Tokyo Subway Sarin Gas Attack 1995
Members of religious group Aum Shinrikyo released sarin gas in 5 places in Tokyo subway, killing 12 and injuring 6,000.

Vioxx (1999-2004)
A nonsteroidal anti-inflammatory COX-2 selective inhibitor for treatment of osteoarthritis, produced by Merck & Co and voluntarily withdrawn because of risk of heart attack & stroke.

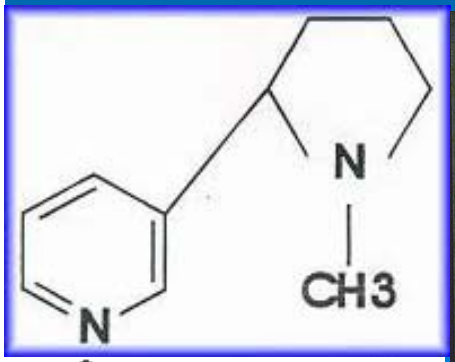
¿Qué es veneno?

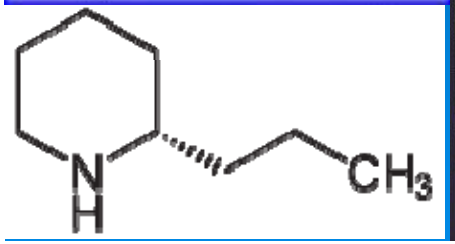
- Podíamos definir veneno como un tóxico muy potente usado con fines deletéreos
- Arma ejecutoria de sentencias judiciales.
- Arma de guerra, dardos envenenados, gases tóxicos
- Útil doloso, para ejecutar una venganza o acelerar la muerte de una persona con fines lucrativos o políticos.
- Uso suicida

Sócrates 470-399 a J.C.

- Condenado a muerte por corrupción de menores
- Lo ejecutaron dándole a beber una copa de cicuta
- Introducida en el sistema penal por los 30 tiranos 404 a J. C.
- Principio activo la coniina

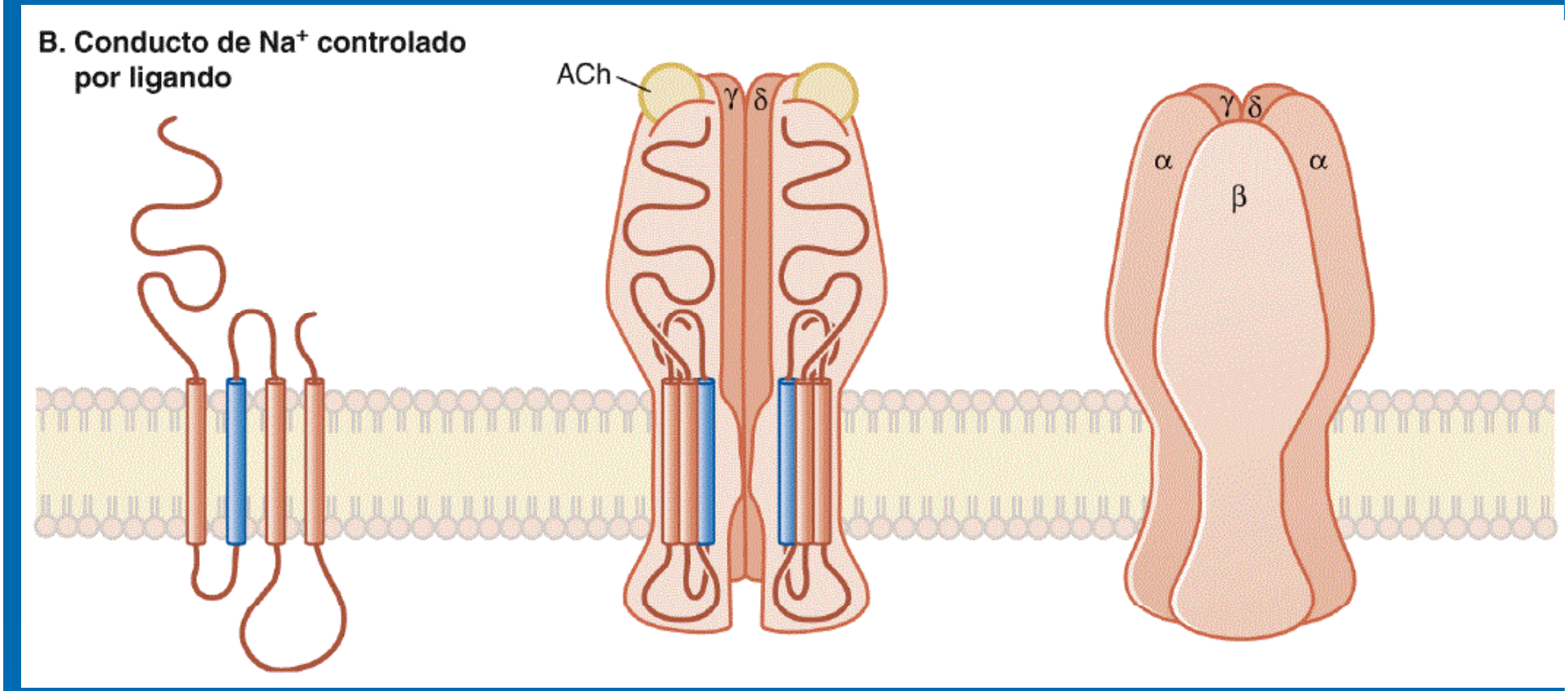
Aristófanes: Las Ranas 404 a. J. C. Hércules se la recomienda a Dionisio para entrar en el Hades





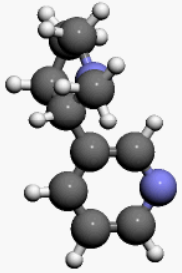
Toxicoses in Livestock from the Hemlocks (*Conium and Cicuta SPP*) *J ANIM SCI 1988, 66:2407-2413*.

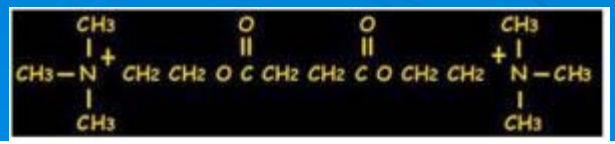
J ANIM SCI 1988, 66:2407-2413

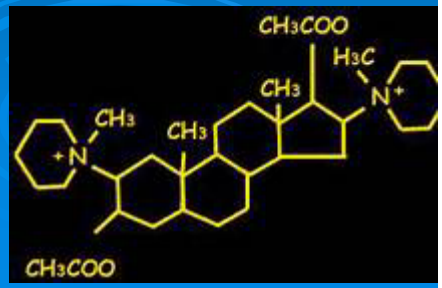


North Shore Medical Center Sued for Accidentally Injecting Grandpa With Execution Drug

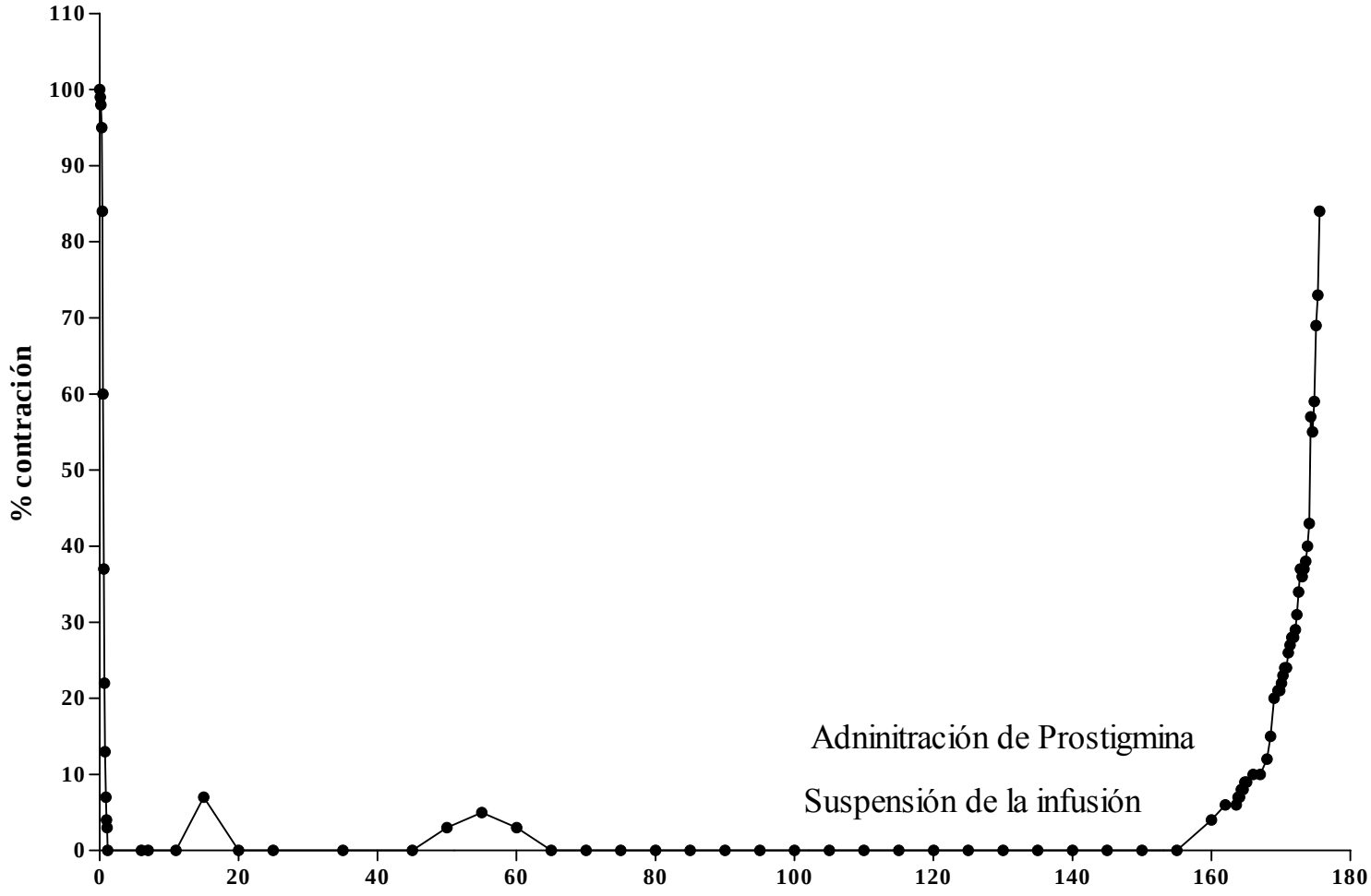
By Kyle Munzenrieder Fri., Nov. 18 2011 at 10:52 Miami new Times







% Contracción del abductor del pulgar durante la infusión de Rocuronio y reversión con prostigmina



A. J. Brugger y J. A. Álvarez 2000

Mitrídates 132-63 a J.C.

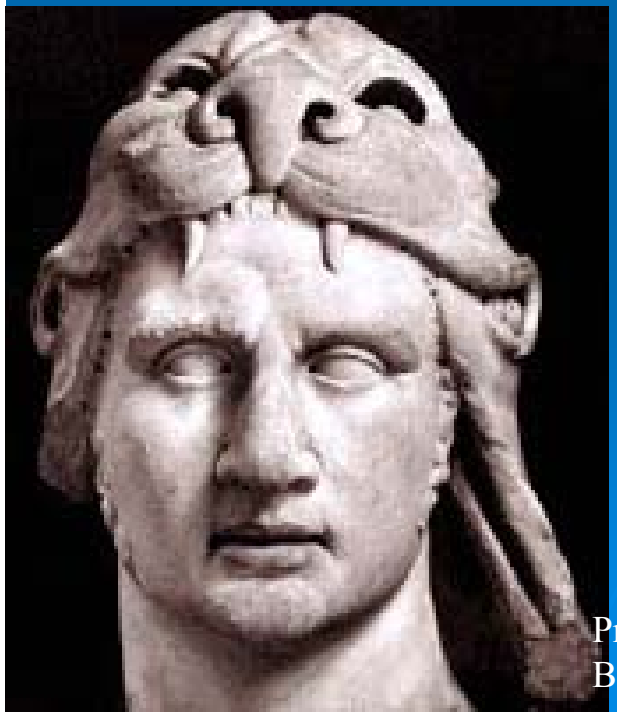
En busca del antídoto universal

Experiencias con prisioneros y esclavos

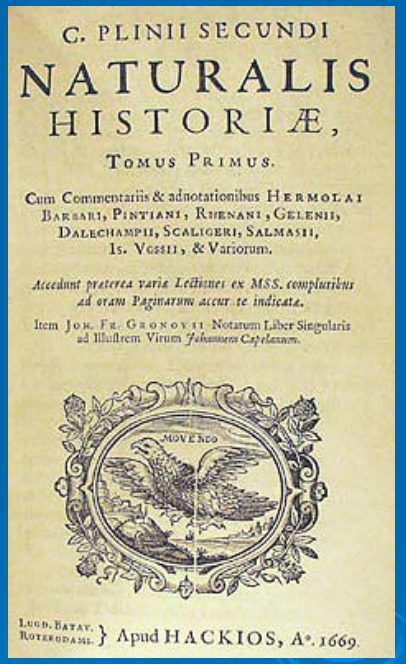
Se administró, pequeñas cantidades de tóxicos

Experiencias precursoras de la inmunoterapia

Era proverbial su resistencia a los venenos



Mitridato : antídoto universal, muy complejo fabricado por Mitídates , con más de 50 componentes, descrito por Celso, año 30 y criticado por Plinio el viejo

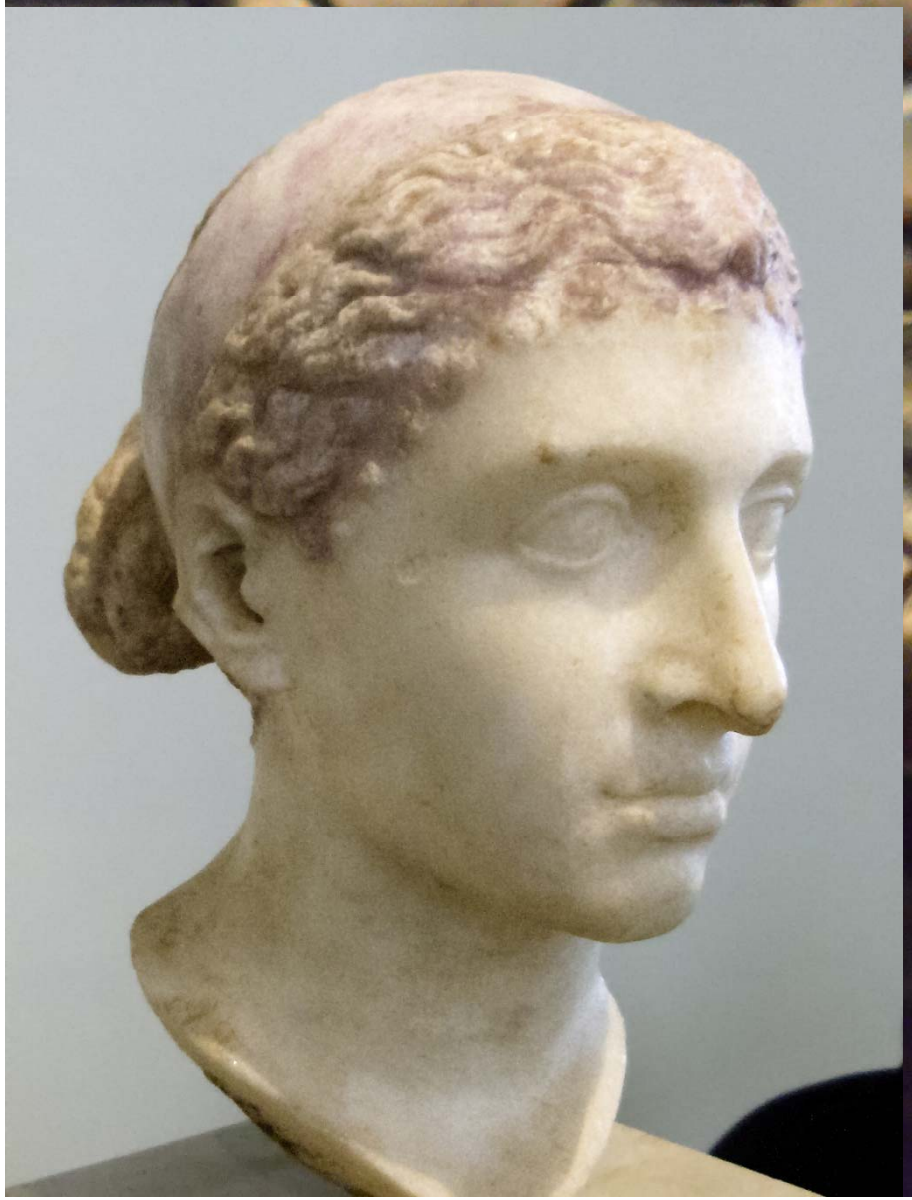

C. PLINII SECUNDI
NATURALIS HISTORIÆ,
TOMUS PRIMUS.
Cum Commentariis & adnotationibus HERMOLAI BARBARI, PINTIANI, RHENANI, GELENII, DALECHAMPII, SCALIGERI, SALMASII, Is. VOSSII, & Variorum.
MOVENDO
Apud HACKIOS, A°. 1669.

Occupational Medicine and Toxicology 2011, 6:3

Juniano Justino, *Epitoma Historiarum Philippicarum* xxxvii.2

Priciples of antidote pharmacology: an update on prophylaxis, postexposure treatment
British Journal of Pharmacology (2010) **161 721–748**

Cleopatra VII 69-30 a. J.C.

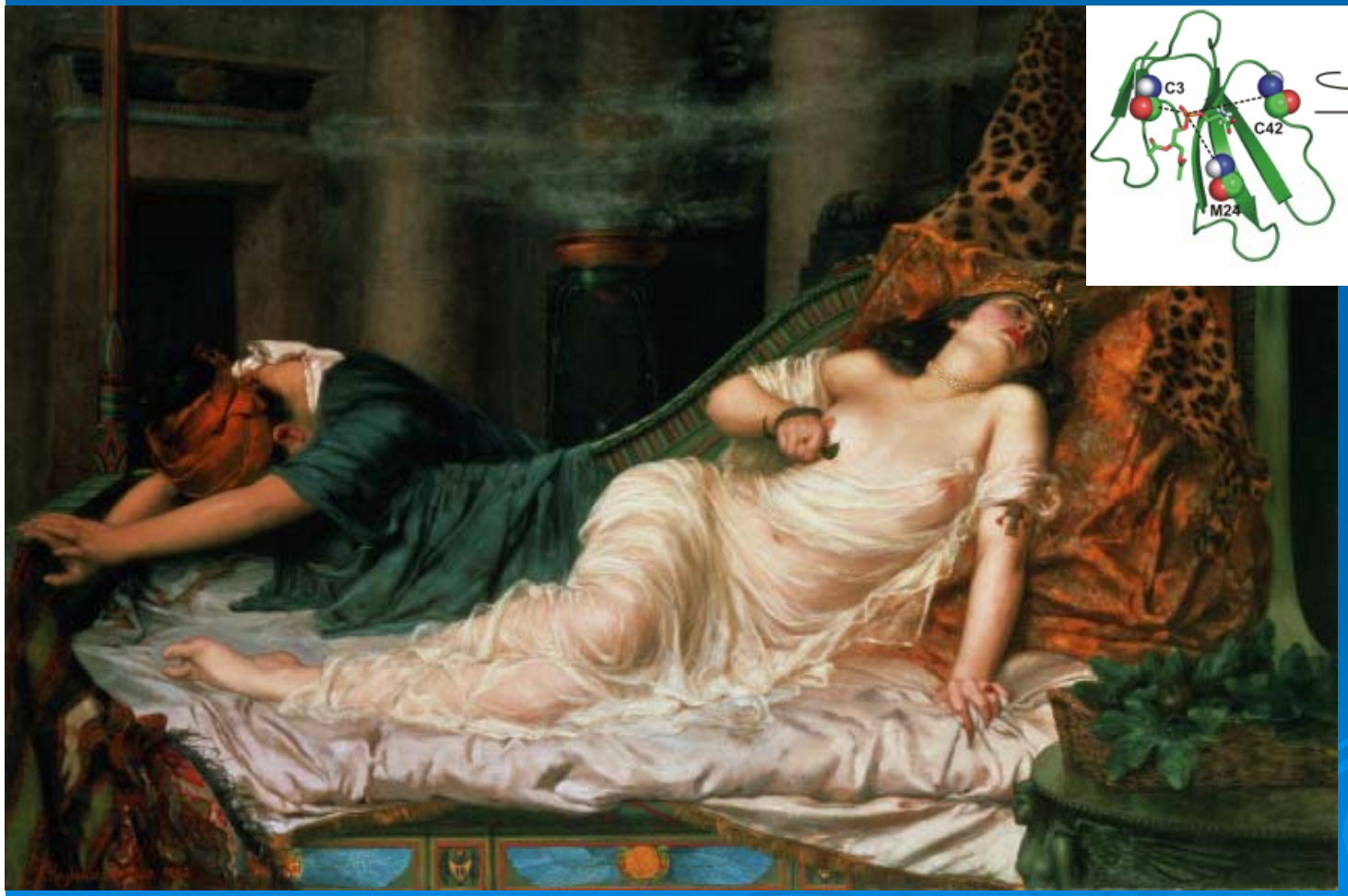


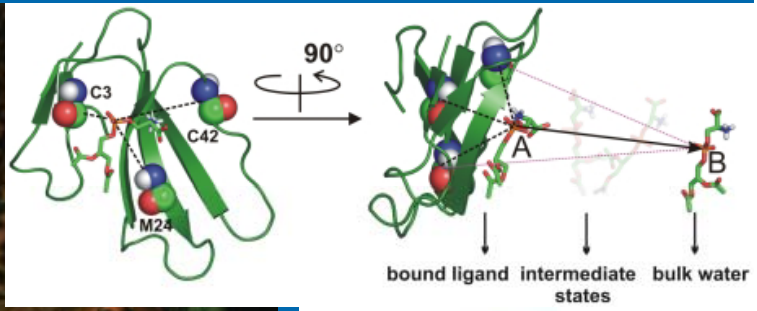
Mujer culta e instruida dominaba el lenguaje egipcio además del griego, latín, hebreo, arameo, instruida en matemáticas y astronomía, figura esbelta y voz aterciopelada y seductora

Muerte de Cleopatra, mordedura de una cobra, Áspid de Cleopatra

Veneno neurotoxina con lecitinasa que disuelve las membranas celulares

Se han identificado76 proteínas, pertenecientes a 9 familias





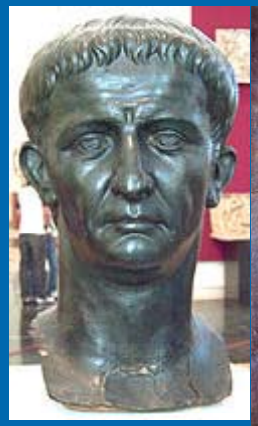
Protyeomic analysis of Marocan cobra Naja haje legionisvenom using tandem mass spectrometry
J. Proteomics 2014 , 96:240-52

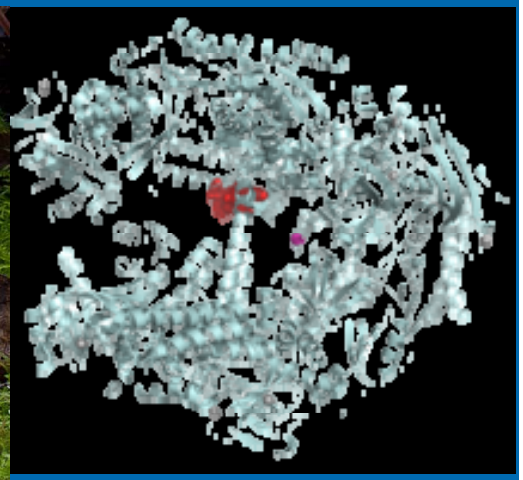
Basic & Clinical Pharmacology & Toxicology, 2013, 112, 138–143

Toxins ***2013, 5, 2172-2208;***
Toxins ***2014, 6, 359-370***

Claudio 54 d. J. C.

Casado con Agripina la Menor, madre de Nerón
Setas venenosas Amanita Phalloides α amanitina, inhibición de la RNA polimerasa II, hepatolisis



The binding of silibinin to ERp57
Chem Biol Interac. 2014, 14: 50-57

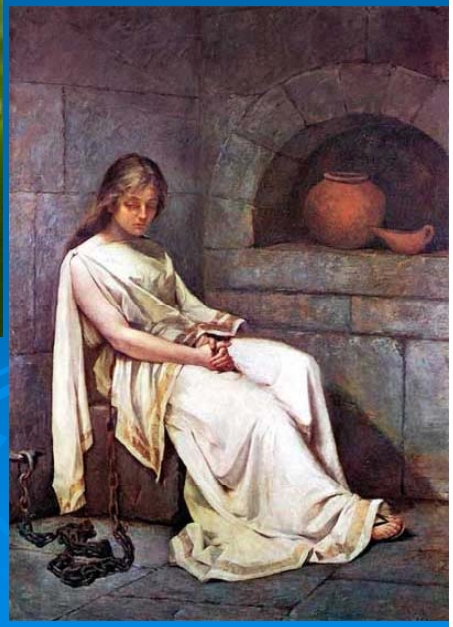
Acute liver failure caused by mushroom poisoning: a case report and review of the literature
International Medical Case Reports Journal 2013:6 85–90

Los venenos en el Imperio romano

- Muy utilizados desde Octavio 27 a.J.C. hasta Nerón 68
- Usados principalmente por las mujeres, Livia, Agripina, Locusta
- Además de la cicuta se introdujeron otros venenos muy activos acónito, sardonia, etc

Locusta

Campesina experta en venenos vegetales, sirviente de Agripina
Asesinato de Britanico con sardonia
Se le atribuyen 400 envenenamientos
1ª asesina en serie, al servicio de Agripina y otros poderosos
Después de la muerte de Nerón fue ejecutada



Ranunculin
Acta Cryst. (2010). E66, o2503

Phytocontact dermatitis due to Ranunculus arvensis mimicking burn injury: report of three cases and literature review

Akbulut et al. International Journal of Emergency Medicine 2011, 4:7

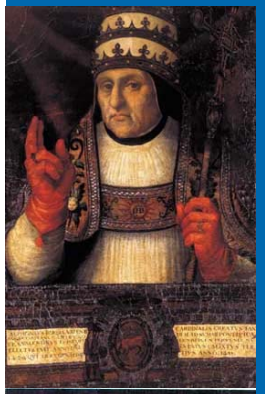
Ranunculin: The Precursor of the Vesicant Substance of the Buttercup
J. Soc. chem. Ind., Lond.42, 32T.

DISCUSSION ON PLANT POISONING IN MAN AND ANIMALS.
Proceedings of the Royal Society of Medicine feb 1933
Poisoned by herbs

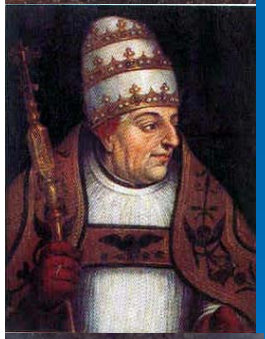
BRITISH MEDICAL JOURNAL VOLUME 295 19-26 DECEMBER 1987

Los Borgia 1455-1519

Víctimas de la leyenda negra



Calixto III 1378-1458, Papa 1455-1458
Canonizó a San Vicente



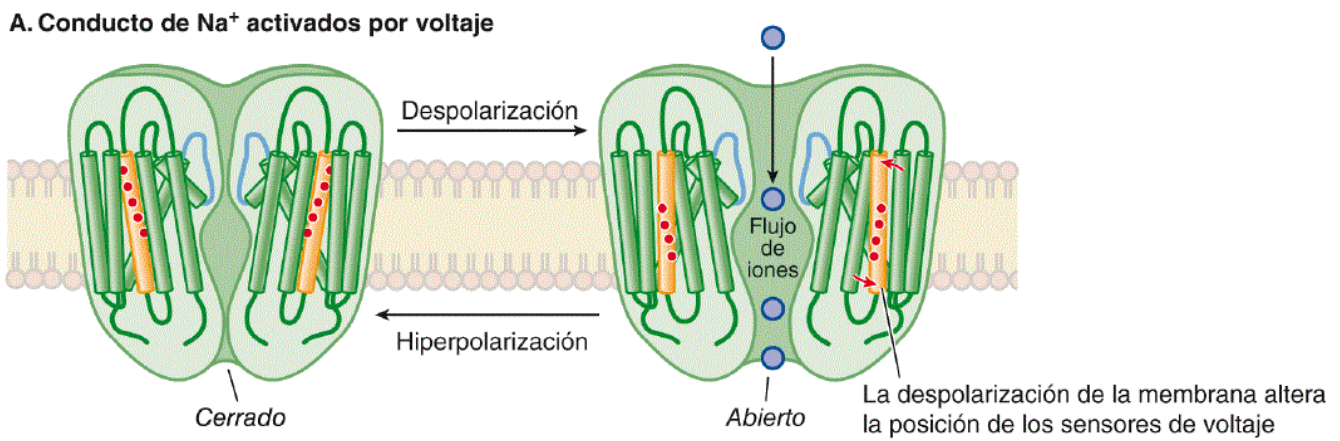
Alejandro VI 1431-1503, Papa 1492-1503
Tratado de Tordesillas 1494
Probablemente murió envenenado

Lucrecia, Instruida, experta en remedios
Instrumento del poder político de Alejandro VI
La leyenda negra se ensañó con ella, sortija hueca, cantarella

Acónito

- Muy eficaz 2mg. Mortales
- Arma ejecutoria por el Consejo de los diez en Venecia 1310-1797

THE .BRITISH MEDICAL JOURNAL. May 20, 1882.
British Journal of Pharmacology (2002) 135, 816 - 822



AQUA TOFFANA

Teofanía d´Adamo: fundadora de una saga de envenenadoras. Ajusticiada 1633, 600 muertes

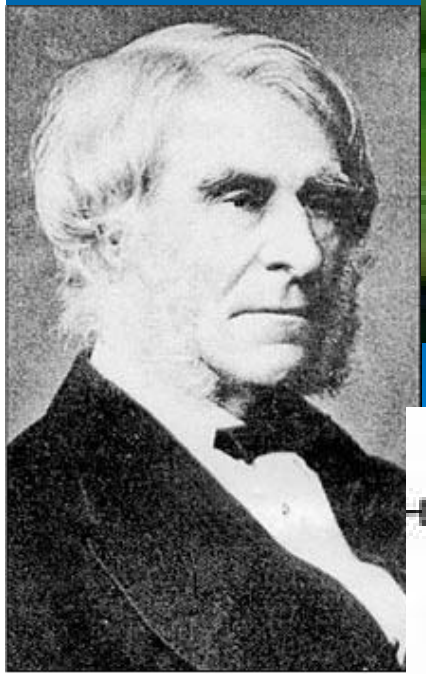
Giulia d`Adamo Hija de la anterior, siguió sus prácticas, Aqua di Napoles, Maná de San Nicolás

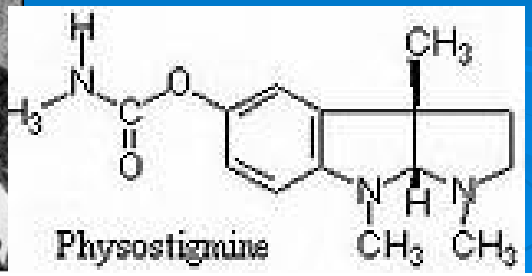
Girolana d´Adamo Nieta de la primera 580 muertes

Muerte de Mozart 1791

Robert Christison 1797-1882

Toxicólogo escocés, presidente del Real Colegio de Médicos de Edimburgo
Discípulo de Orfila
Explorador, Nigeria, la tribu de los Efik, juicios de Dios





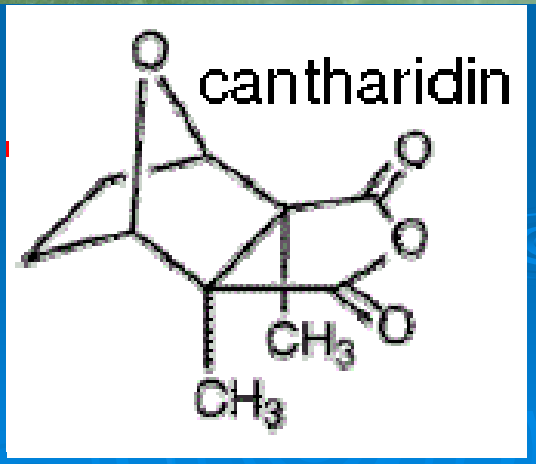
"persons suspected of a crime are forced to swallow a deadly poison made from the poisonous seeds of an aquatic leguminous plant which rapidly destroys life." The seed is called esere by the natives, which accounts for one of the alkaloids of calabar being named eserine.

REPRINTED FROM THE WESTERN DRUGGIST, CHICAGO, JUNE, 1897

La muerte de Simón Bolívar 17-12-1830, Dr. Reverend?

Karl Marx, en un curioso artículo de 1858, cita una descripción de Ducoudray- Holstein: "Mide cinco pies y cuatro pulgadas, su rostro es enjuto, de mejillas hundidas y de tez pardusca y lívida; los ojos, ni grandes ni pequeños, se hunden profundamente en las órbitas, su cabello es ralo... Todo su cuerpo es flaco y descarnado…"

Simón Bolívar y las cantáridas
Rev Chil Infect 2007; 24 (5): 409-412



Molecular biology of cantharidin in cancer cell
Chinese Medicine 2007, ***2:8***

Cianuro

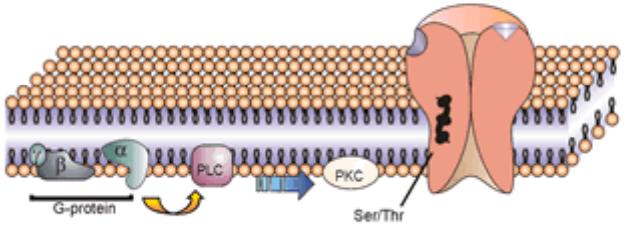
Index Merk DL 10-15 mg. kg^{-1} Ratones oral
Bedate Brugger 1966 Rev Esp Fisiol 22:25-30, 6 mg kg^{-1} I.V.

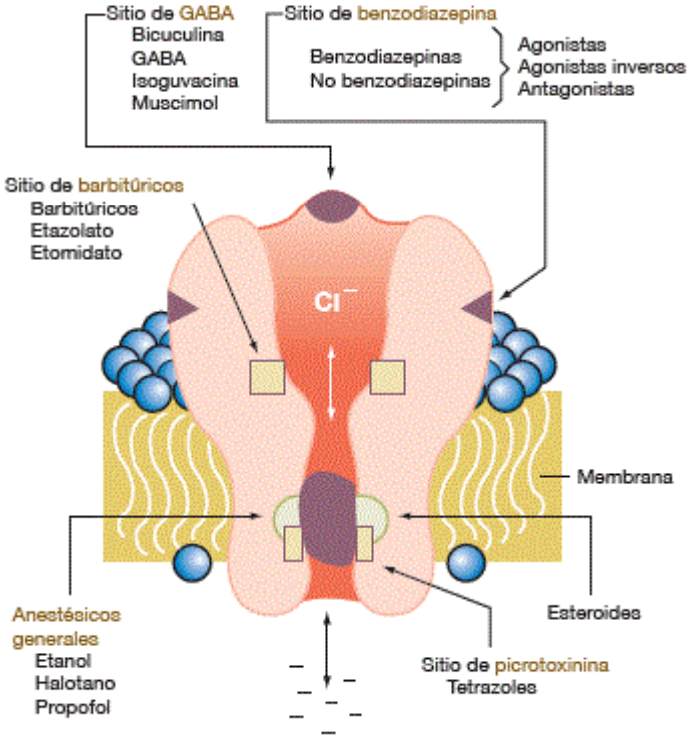
- Olor a almendras amargas
- Gas cianhídrico
- Envenenamiento de Rasputin 1869-1916
- Ziclon B
- Cámara de gas

Grigori Moissevich Mairanovsky

Laboratorio secreto de Toxicología de Moscú, supervisado por Lenin
1938 Crea el Laboratorio Nº 1 de la NKVD, desarrollo y ensayo de tóxicos y venenos
Profesor veneno o el Menguele ruso, Digitalina, talio, aconitina, colchicina, ricina, etc.
Gases venenosos
Ensayos en prisioneros y disidentes
Envenenamientos de estado, ejecuciones
Objetivo: Veneno rápido, sin caracteres organolépticos e indetectable *"post mortem"*
Muerte del Arzobispo de la Iglesia Greco-Católica Ucraniana Theodore George Romzha
Muere misteriosamente en 1964

Nembutal Agosto1962





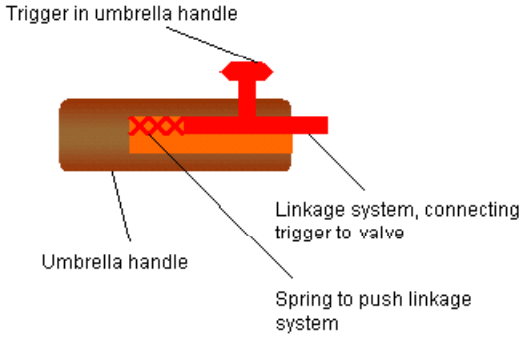
Envenenamiento de los espías

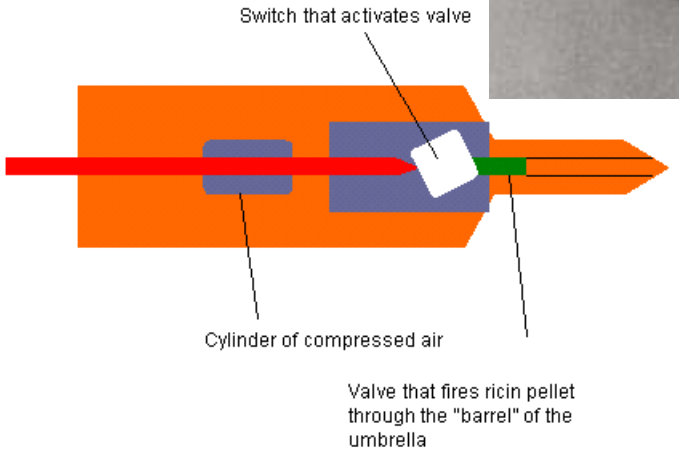
- Georgi Marcov 1929-1978, escritor de éxito
- Huyó de Bulgaria, periodista de la BBC, Informes de ausencia

7-09 Puente Waterloo, 11-09

Diámetro 1.5 mm. Vol. 1.83 mm^3

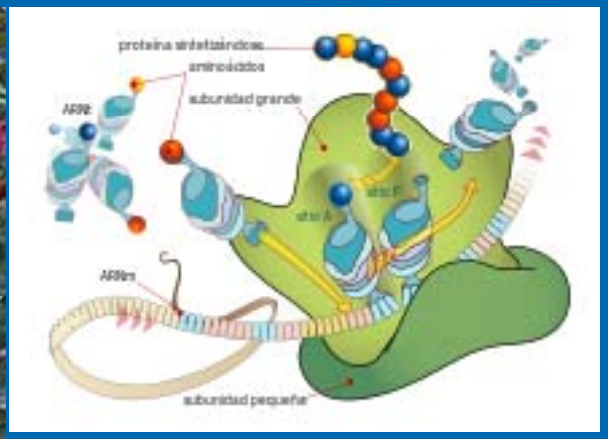
Taladros 0.35mm, Ricina 0.266 mm^3

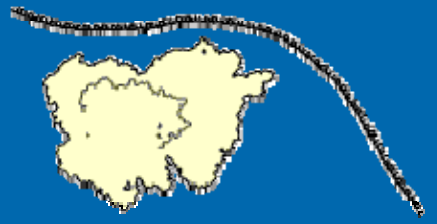


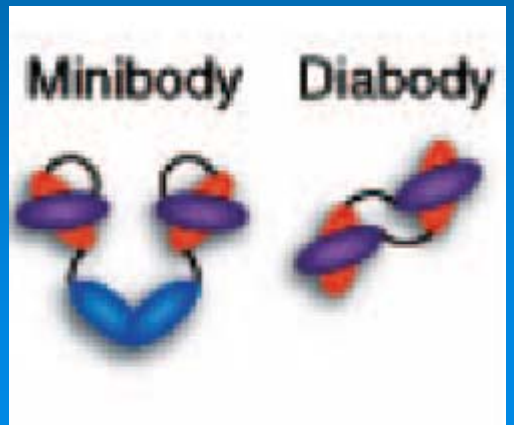


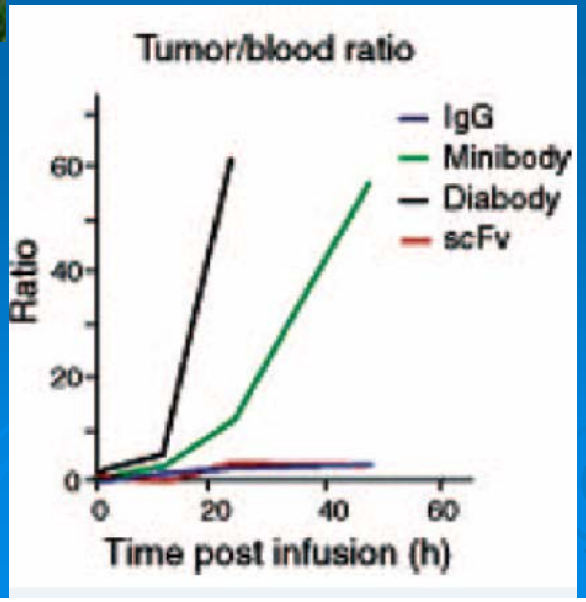
Ricina Abrina

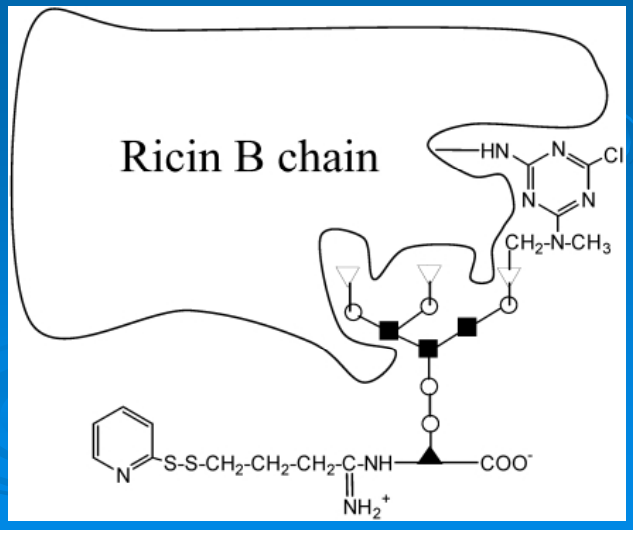
- Toxialbúminas vegetales, muy potentes











Abrina

- Abrus precatoria 2010
- Jo Wallacott y la pulsera maldita se vendieron miles por eBay

Año 2002 tragedia en el teatro Dubrovka

23 de Octubre, 40-50 terroristas chechenos invaden el teatro. 850 espectadores rehenes

26 de Octubre, comandos de las fuerzas especiales bombean un gas paralizante, desconocido a través de los conductos de ventilación: resultado 29 terroristas y 128 espectadores muertos

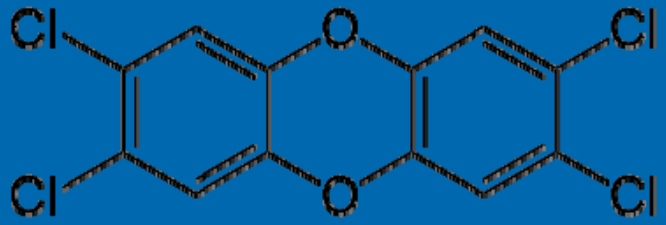
Muchos supervivientes intoxicados pudieron recuperarse con naloxona ¿opiode gaseoso?

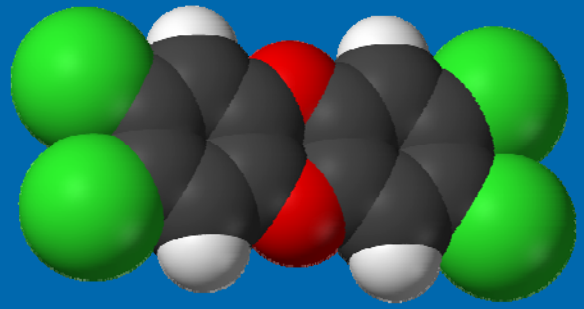
Año 2004 Dioxina

Viktor Andriyovych Yushchenko 1954

2004 crea el partido "Nuestra Ucrania" y se une a Yulia Timosenko "Bloque Balkivshchina"
Carácter proocidental freta a Viktor Yanokovich prosoviético

Septiembre 2004 cena con altos funcionarios sovéticos e intoxicación con TCDD, tratado en Austria, salva la vida, pero queda desfigurado





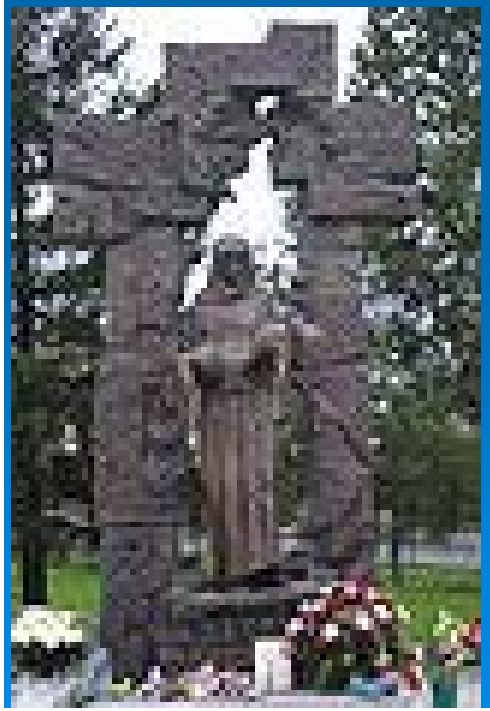
Año 2004 masacre en la escuela de Beslam

1 de Septiembre 39 terroristas chechenos toman el colegio de Beslam (Osetia del Norte)

1181 rehenes

3 de Septiembre asalto al colegio por las fuerzas especiales. Resultado : 370 muuertos 171 niño

El suceso lo cubrió Anna Politkovskaya, periodista rusa de nacionalidad norteamericana



Anna Politkóvskaya

- Periodista, ruso-americana, crítica con el régimen soviético y con la guerra en Chechenia
- Quiso mediar en la tragedia en la escuela de Beslam 370 muertos
- Sufrió un intento de envenenamiento en el vuelo Rostov del Don, hacia Beslam sobrevivió y siguió informando-

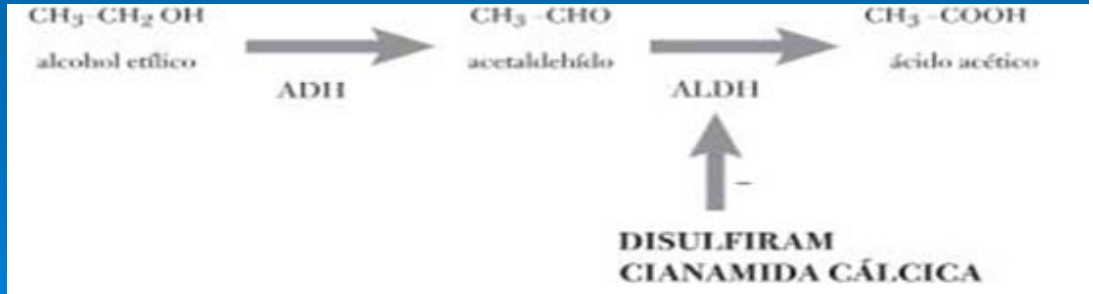
  Murió tiroteada en el ascensor de su apartamento, en Mocú el 7-10-2006

Polonio 210

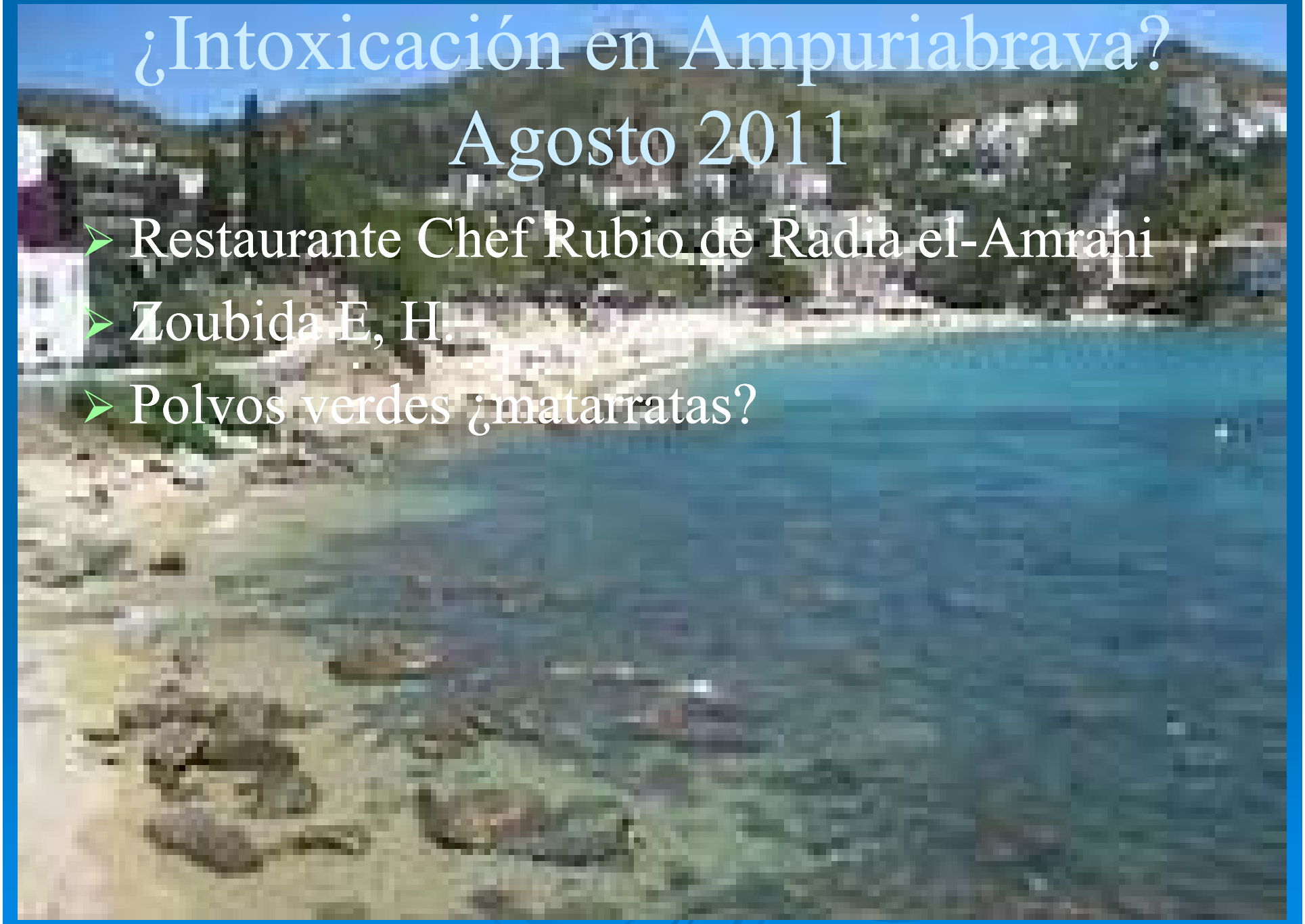
- Alexander Litvinenko ex-coronel del servicio secreto ruso.
- Crítico del régimen soviético
- Investigo la muerte de Anna Politkovskaya
- Envenenado con un susi, con Po210, el 1-XI-2006
- Falleció 23-XI-2006

El extraño caso del Lavaderu año 2011

- Andrés “el Candasu”
- Pinche de cocina
- Prisión el 5-II-2013



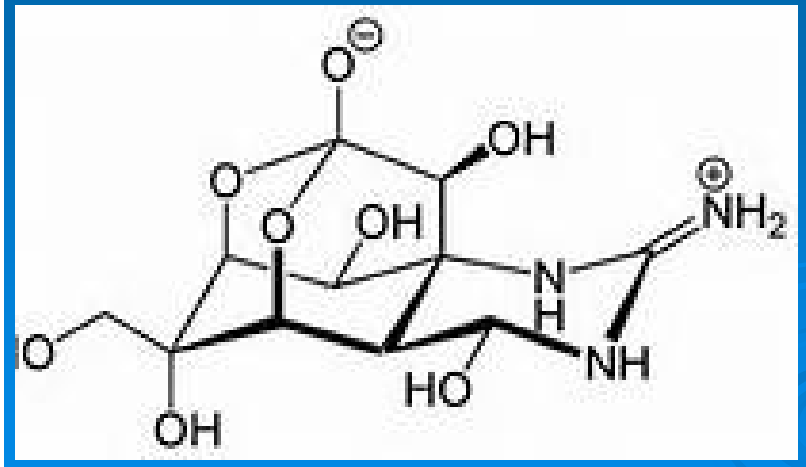
¿Intoxicación en Ampuriabrava? Agosto 2011

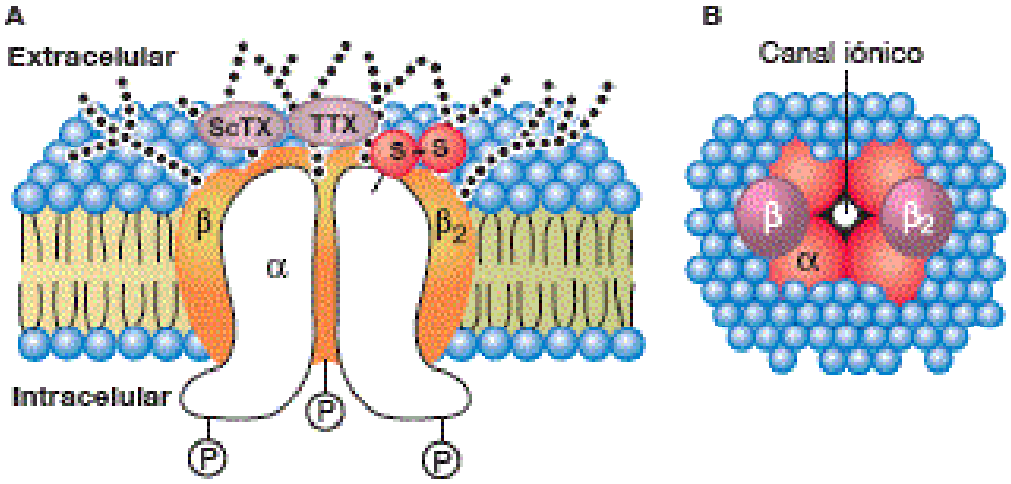


- Restaurante Chef Rubio de Radia el-Amrani
- Zoubida E, H.
- Polvos verdes ¿matarratas?

Síndrome del restaurante chino: Atribuido al glutamato monosódico

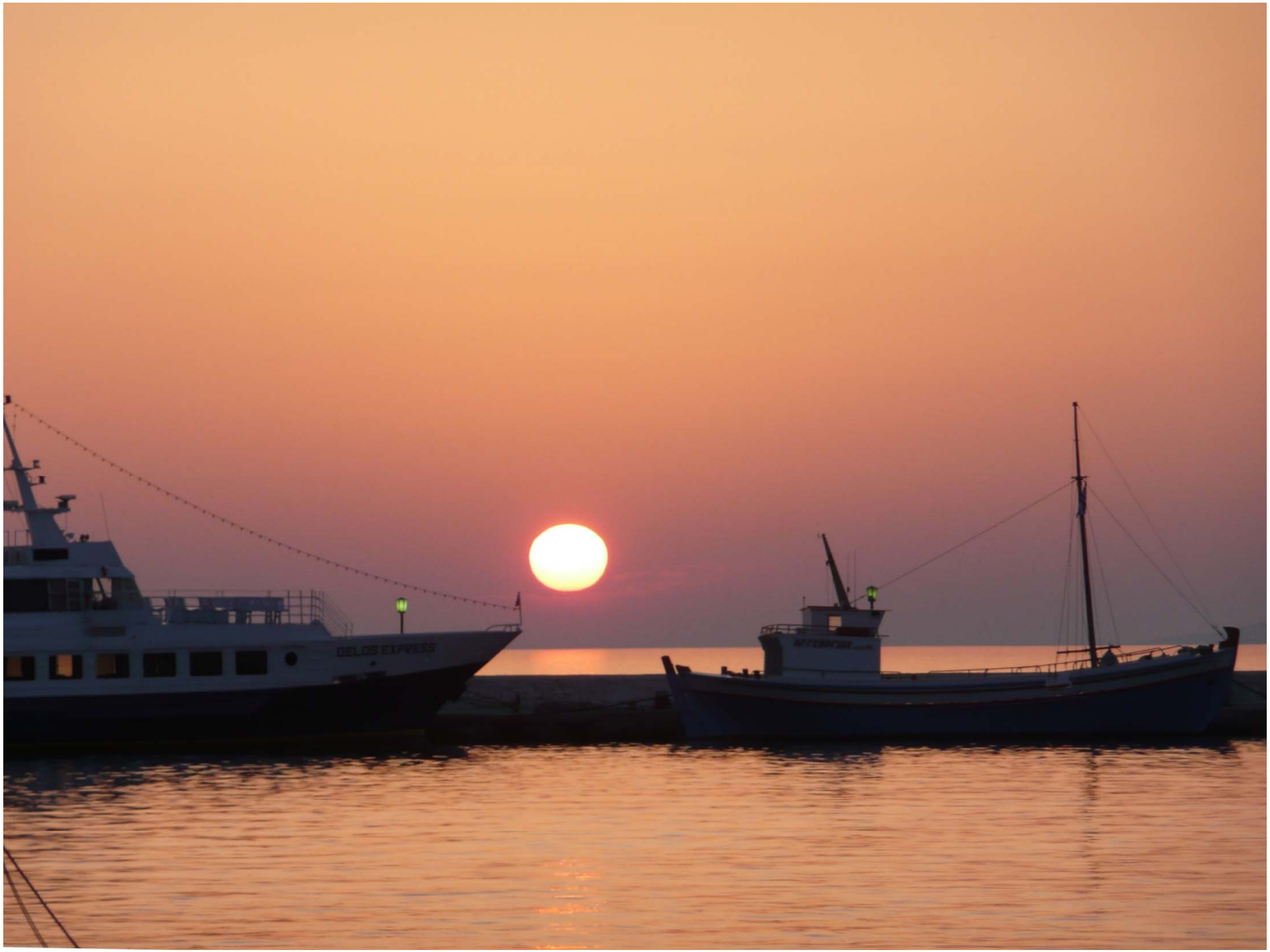
Intoxicación por fugu: Tetrodotoxina

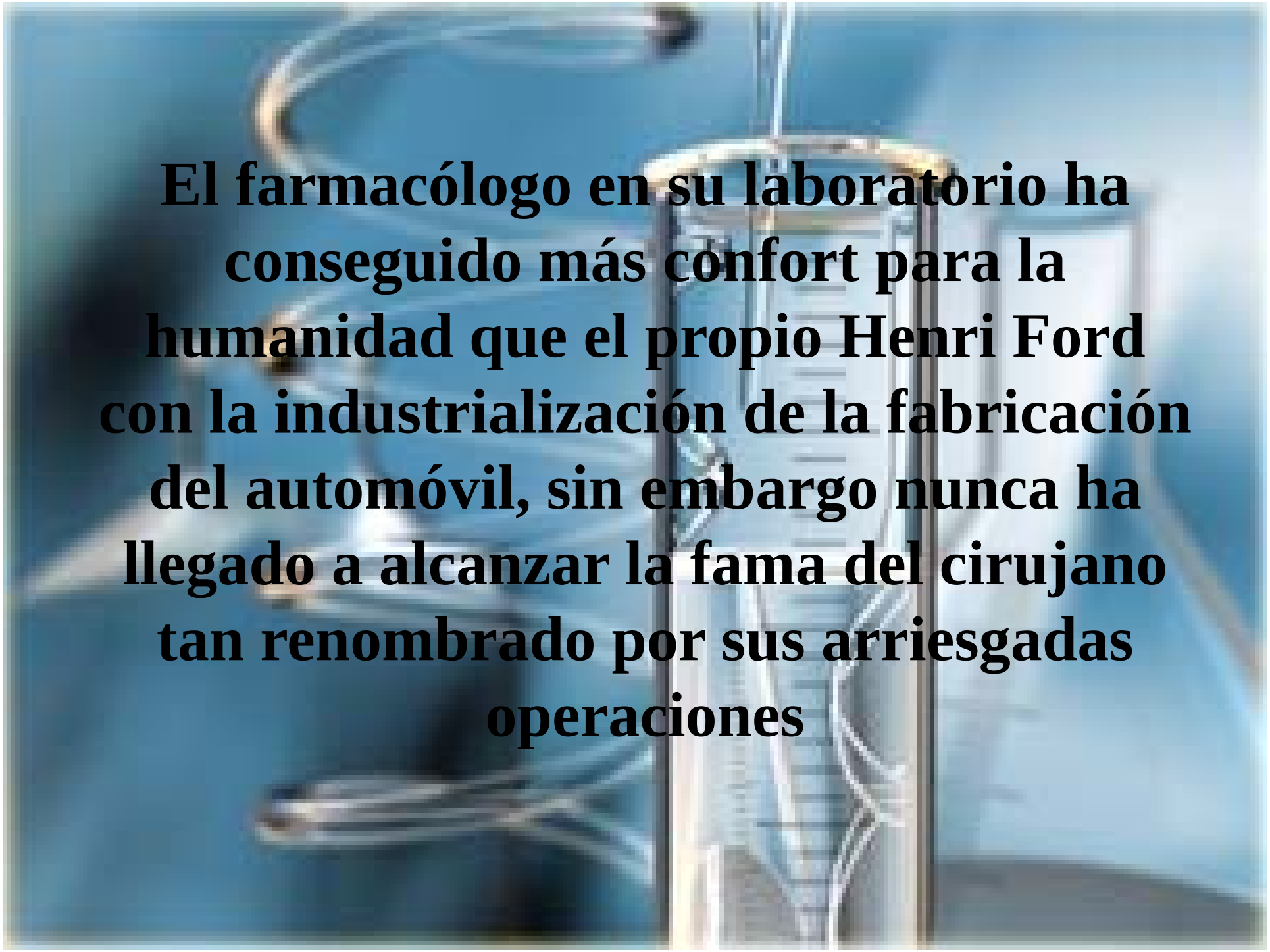




Muerte por estramonio

Perales del Río (Getafe) 28-VIII-2011, 40º C por la noche
Fiesta "*rave*" en el Monasterio de la Aldehuela, ruinas abandonadas
Ingestión de una infusión o macerado de estramonio
Bloqueo de la sudoración
Muerte por golpe de calor


DELOS EXPRESS



El farmacólogo en su laboratorio ha conseguido más confort para la humanidad que el propio Henri Ford con la industrialización de la fabricación del automóvil, sin embargo nunca ha llegado a alcanzar la fama del cirujano tan renombrado por sus arriesgadas operaciones