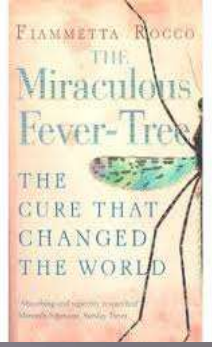
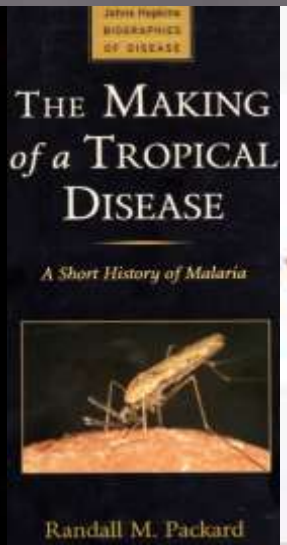


"MALÁRIA: PERSPECTIVA HISTÓRIA"

José M. D. Poças

Médico Internista e Infecciologista

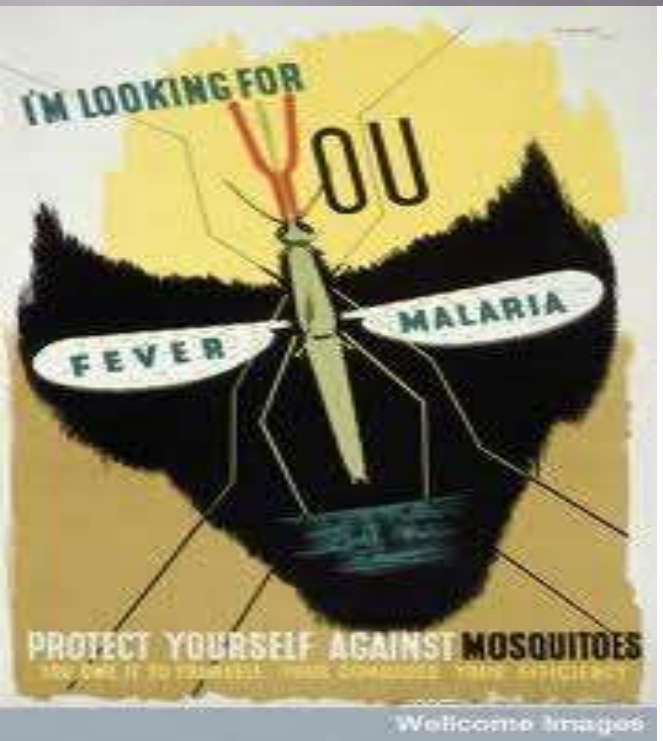



MAKE MALARIA
HISTORY
A United Methodist Campaign


PRESENTING
"THE 4 FREEDOMS FROM MALARIA"
Prevent MALARIA! Shorten THE WAR

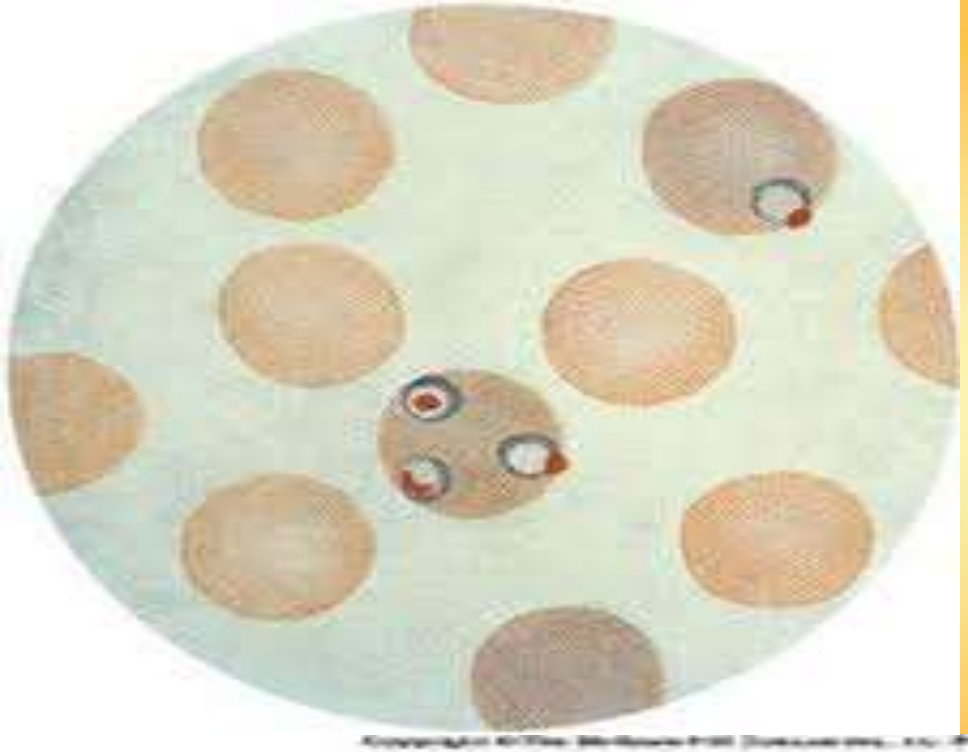

DRIVE
AGAINST
MALARIA

INTRODUÇÃO

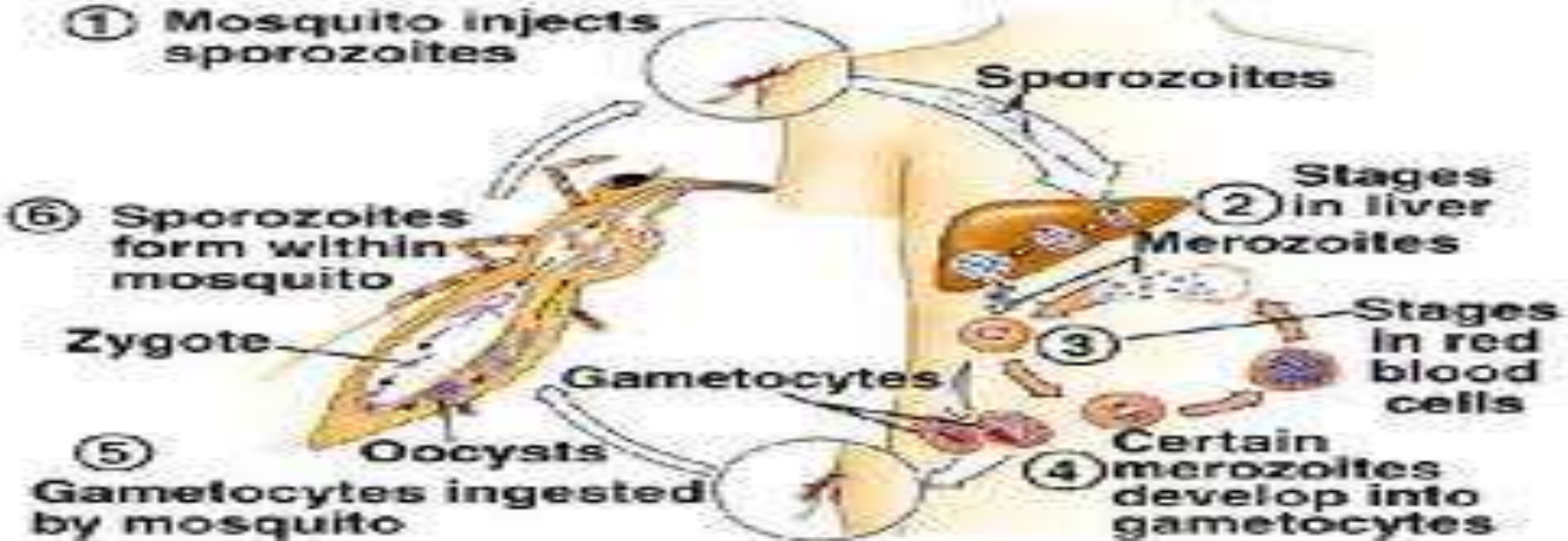

I'M LOOKING FOR
YOU
FEVER
MALARIA
PROTECT YOURSELF AGAINST MOSQUITOES
Wellcome Images


UNITED
AGAINST
MALARIA

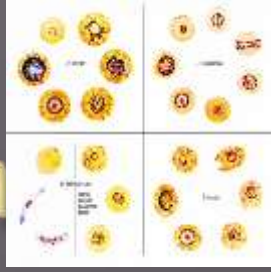

No Mosquitoes
No Malaria



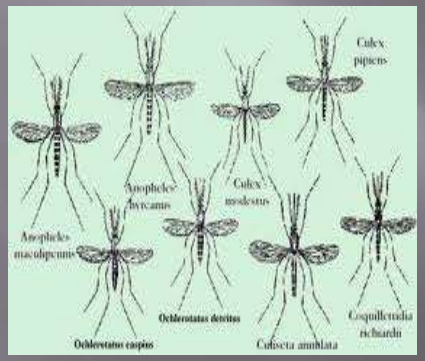
Life Cycle of *Plasmodium*



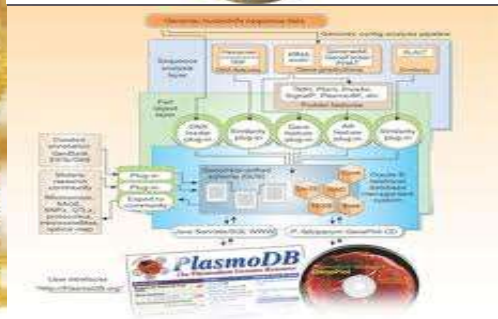
Anopheles e Plasmodium



- *Anopheles*
  - *460 espécies*
    - *100 são transmissoras de Plasmodium aos Humanos*
    - *125 demonstraram resistência aos insecticidas*
    - *7 Espécies existem nos Países Mediterrâneos*
      - *A. Maculapennis*
        - *A. Atroparvus,*
        - *A. Claviger*
        - *A. Labranchiae*
        - *A. Messeae*
        - *A. Sacharovi*
        - *A. Hispaniola*
        - *A. Superpictus*
  - *Mosquitos dos Géneros*
    - *Aedes*
    - *Culex*
    - *Culiseta*
    - *Mansonia*
    - *Teobaldia*
  - *podem também transmitir Plasmódium a outros animais, mas não aos Seres Humanos*
    - *Mamíferos*
    - *Aves*
    - *Répteis*
  - *Condições Climatéricas*
    - *-40º a 55º*

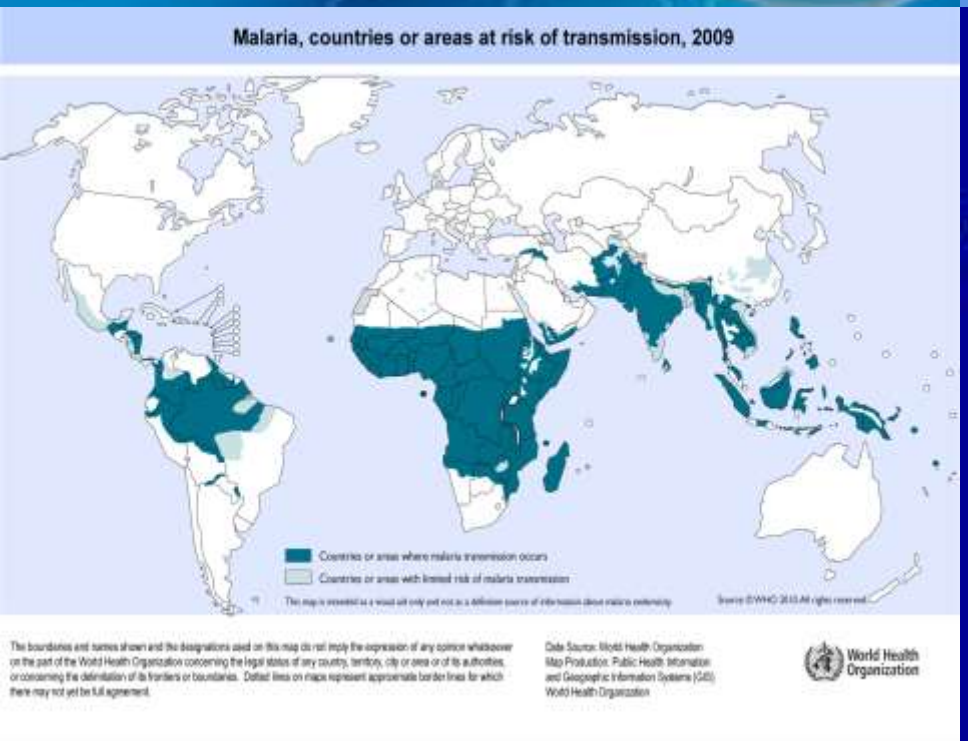


- *Plasmodium*
  - *> de 200 espécies descritas*
  - *Cerca de 14 espécies podem infectar os Seres Humanos*
    - *P. falciparum*
    - *P. vivax*
    - *P. ovale curtisi e P. ovale wallikeri*
    - *P. malariae*
    - *P. knowlesi*
    - *P. brasilianum*
    - *P. cynomolgi e P. cynomolgi bastianelli*
    - *P. inui*
    - *P. rhodiani*
    - *P. schwetzi*
    - *P. semiovale*

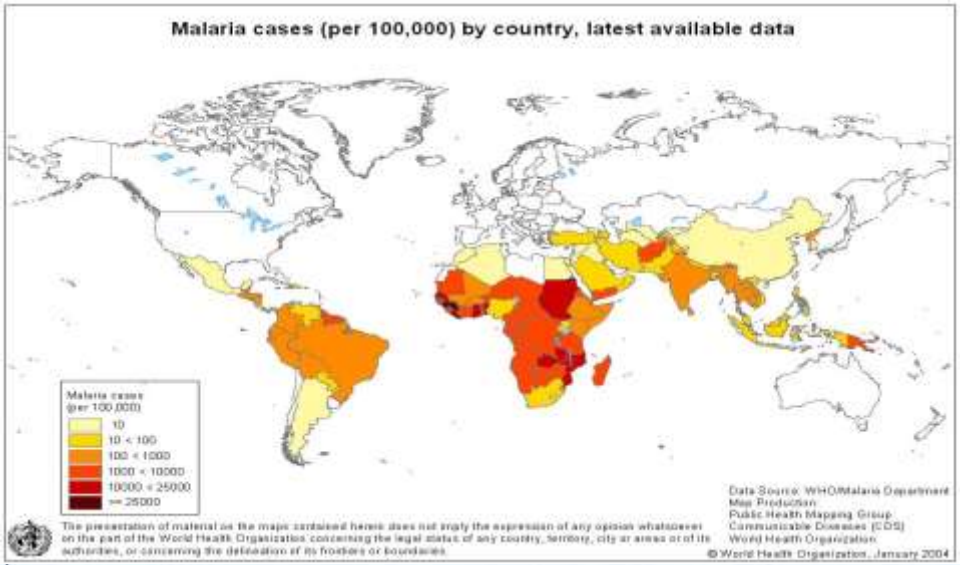


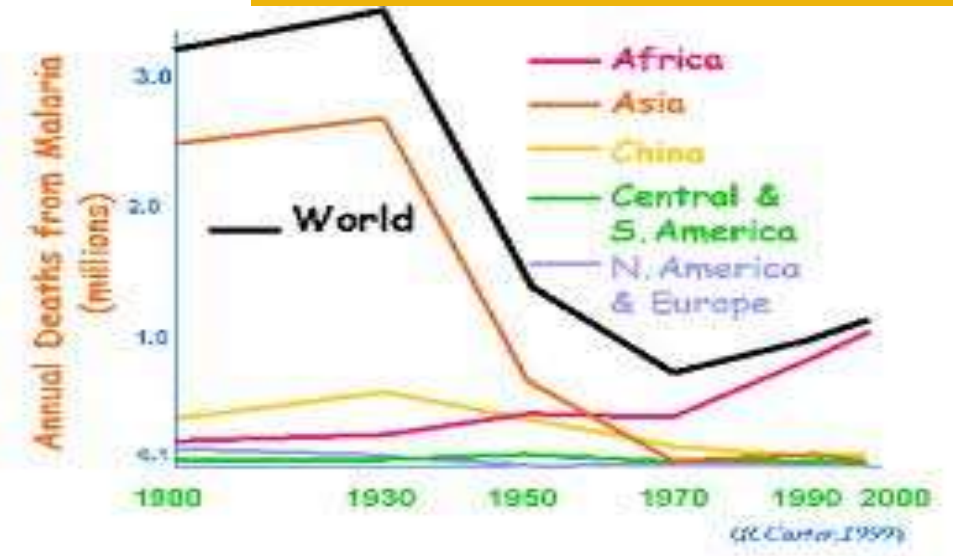

WORLD
MALARIA
REPORT
2010
World Health Organization


MALARIA ENVOY


Malaria, countries or areas at risk of transmission, 2009
Countries or areas where malaria transmission occurs
Countries or areas with limited risk of malaria transmission
The boundaries and names shown and the designations used on this map do not imply the expression of any opinion whatsoever on the part of the World Health Organization concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted lines on maps represent approximate border lines for which there may not yet be full agreement.
Data Source: World Health Organization
Map Production: Public Health Information and Geographic Information Systems (GIS)
World Health Organization
World Health Organization

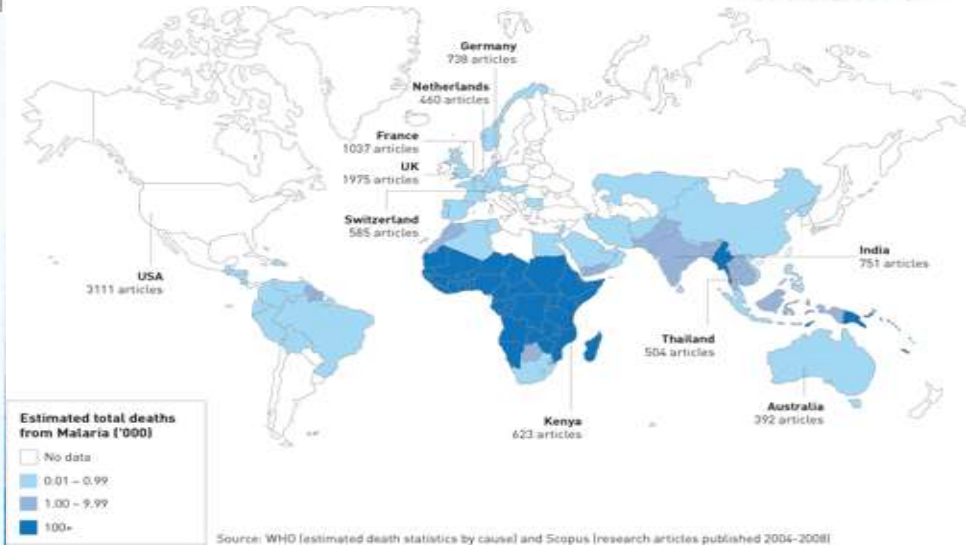

Malaria Endemic Areas
Chloroquine Sensitive Malaria
Chloroquine Resistant Malaria
Multi-Resistant Malaria





	P falciparum	*P vivax*	*P malariae*	*P ovale*
Distribution	Global tropics	Global tropics and some temperate zones	Global tropics	Africa, southeast Asia, Oceania
Disease burden (number of people infected)	400 million	80–400 million	Minor	Probably minor
Number of people at risk	5 billion	3 billion	Unknown	Unknown
Type of malaria				
Asexual blood				
Asymptomatic	Many endemic settings	Many endemic settings	Almost always	Unknown
Therapies	Many	Many	Many	Many
Sexual blood				
Asymptomatic	Always	Always	Always	Always
Therapies	Primaquine, single dose	Primaquine, hypnozoitocide	Primaquine, single dose	Primaquine, hypnozoitocide
Asexual liver				
Asymptomatic	Always	Always	Always	Always
Therapies	Not indicated	Primaquine, 14 daily doses	Not indicated	Primaquine, 14 daily doses

Table: Species of *Plasmodium* that cause malaria



Global malaria mortality between 1980 and 2010: a systematic analysis

Christopher J L Murray, Lisa C Rosenfeld, Stephen S Lim, Kathryn G Andrews, Kyle J Foreman, Diana Haring, Nancy Fullman, Mohsen Naghavi, Rafael Lozano, Alan D Lopez

Summary

Background During the past decade, renewed global and national efforts to combat malaria have led to ambitious goals. We aimed to provide an accurate assessment of the levels and time trends in malaria mortality to aid assessment of progress towards these goals and the focusing of future efforts.

Methods We systematically collected all available data for malaria mortality for the period 1980–2010, correcting for misclassification bias. We developed a range of predictive models, including ensemble models, to estimate malaria mortality with uncertainty by age, sex, country, and year. We used key predictors of malaria mortality such as *Plasmodium falciparum* parasite prevalence, first-line antimalarial drug resistance, and vector control. We used out-of-sample predictive validity to select the final model.

Findings Global malaria deaths increased from 995 000 (95% uncertainty interval 711 000–1 412 000) in 1980 to a peak of 1 817 000 (1 430 000–2 366 000) in 2004, decreasing to 1 238 000 (929 000–1 685 000) in 2010. In Africa, malaria deaths increased from 493 000 (290 000–747 000) in 1980 to 1 613 000 (1 243 000–2 145 000) in 2004, decreasing by about 30% to 1 133 000 (848 000–1 591 000) in 2010. Outside of Africa, malaria deaths have steadily decreased from 502 000 (322 000–833 000) in 1980 to 104 000 (45 000–191 000) in 2010. We estimated more deaths in individuals aged 5 years or older than has been estimated in previous studies: 435 000 (307 000–658 000) deaths in Africa and 89 000 (33 000–177 000) deaths outside of Africa in 2010.

Interpretation Our findings show that the malaria mortality burden is larger than previously estimated, especially in adults. There has been a rapid decrease in malaria mortality in Africa because of the scaling up of control activities supported by international donors. Donor support, however, needs to be increased if malaria elimination and eradication and broader health and development goals are to be met.

Lancet 2012; 379: 413–31

See Editorial page 385

Institute for Health Metrics and Evaluation, University of Washington, Seattle, WA, USA (Prof C J L Murray MD, L C Rosenfeld AB, S S Lim PhD, K G Andrews AB, K J Foreman MPH, D Haring BSc, N Fullman MPH, M Naghavi MD, Prof R Lozano MD); and University of Queensland, School of Population Health, Herston, QLD, Australia (Prof A D Lopez PhD)

Correspondence to: Prof Christopher J L Murray, Institute for Health Metrics and Evaluation, 2301 Fifth Avenue, Suite 600, Seattle, WA 98121, USA
cjlm@u.washington.edu

	1980–89	1990–99	2000–10	Total
Vital registration (national)	262	340	313	915
Vital registration (subnational)	15	7	2	24
Verbal autopsy (national)	0	2	12	14
Verbal autopsy (subnational)	41	44	64	149
Other	0	27	21	48

Table 1: Site-years of data, by decade

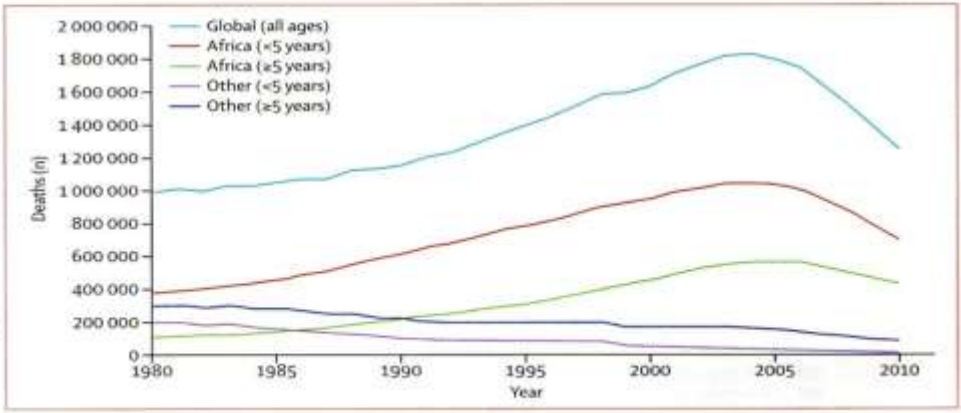


Figure 2: Trends in global malaria deaths by age and geographical region, 1980 to 2010

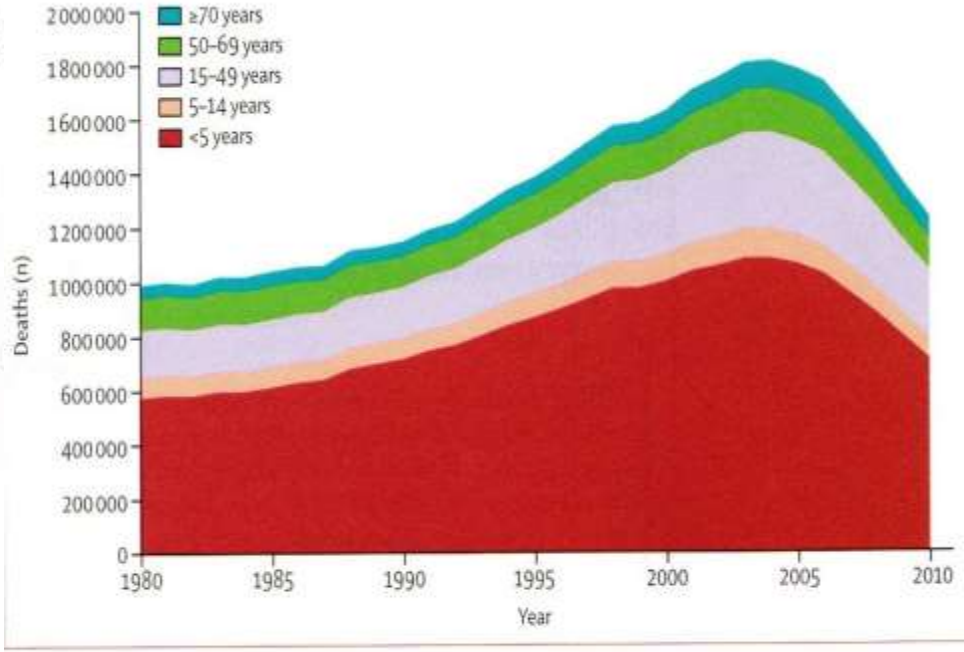


Figure 6: Malaria deaths by age, 1980 to 2010

The Intolerable Burden of Malaria: A New Look at the Numbers

Supplement to Volume 64(1) of the *American Journal of Tropical Medicine and Hygiene*

Edited by Joel G Breman, Andréa Egan, and Gerald T Keusch.

Fogarty International Center, National Institutes of Health, Bethesda, Maryland; Multilateral Initiative on Malaria, Fogarty International Center, National Institutes of Health, Bethesda, Maryland

Northbrook (IL): American Society of Tropical Medicine and Hygiene; January 2001.

The Economic Burden of Malaria

John Luke Gallup* and Jeffrey D. Sachs.

Center for International Development, Harvard University, Cambridge, Massachusetts

Abstract

Malaria and poverty are intimately connected. Controlling for factors such as tropical location, colonial history, and geographical isolation, countries with intensive malaria had income levels in 1995 of only 33% that of countries without malaria, whether or not the countries were in Africa. The high levels of malaria in poor countries are not mainly a consequence of poverty. Malaria is geographically specific. The ecological conditions that support the more efficient malaria mosquito vectors primarily determine the distribution and intensity of the disease. Intensive efforts to eliminate malaria in the most severely affected tropical countries have been largely ineffective. Countries that have eliminated malaria in the past half century have all been either subtropical or islands. These countries' economic growth in the 5 years after eliminating malaria has usually been substantially higher than growth in the neighboring countries. Cross-country regressions for the 1965–1990 period confirm the relationship between malaria and economic growth. Taking into account initial poverty, economic policy, tropical location, and life expectancy, among other factors, countries with intensive malaria grew 1.3% less per person per year, and a 10% reduction in malaria was associated with 0.3% higher growth. Controlling for many other tropical diseases does not change the correlation of malaria with economic growth, and these diseases are not themselves significantly negatively correlated with economic growth. A second independent measure of malaria has a slightly higher correlation with economic growth in the 1980–1996 period. We speculate about the mechanisms that could cause malaria to have such a large impact on the economy, such as foreign investment and economic networks within the country.

The Intolerable Burden of Malaria: A New Look at the Numbers

Joel G. Breman, Andréa Egan, and Gerald T. Keusch.

Fogarty International Center, National Institutes of Health, Bethesda, Maryland; Multilateral Initiative on Malaria, Fogarty International Center, National Institutes of Health, Bethesda, Maryland

"When you cannot measure it, when you cannot express it in numbers, you have scarcely . . . advanced to the stage of Science, whatever the matter may be."

William Thomson, Lord Kelvin, 1824–1907

THE GLOBAL MALARIA BUSINESS PLAN

(Executive Summary)

OF THE

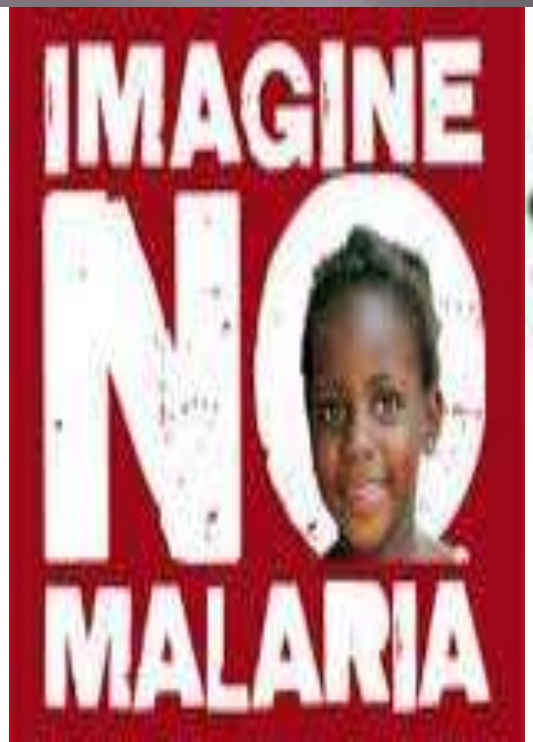
RBM

ROLL BACK MALARIA PARTNERSHIP

MAY 5, 2008

PRELIMINARY DRAFT FOR DISCUSSION

ASPECTOS GERAIS DA EVOLUÇÃO HISTÓRICA NO MUNDO



Time Line For Origin of Malaria

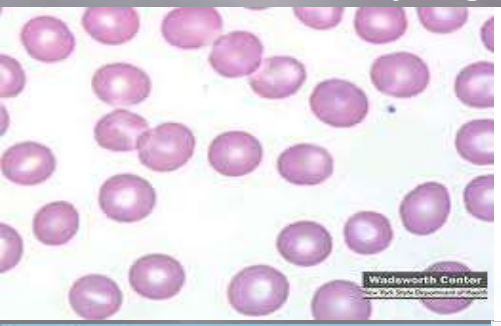
Half a billion years ago	Existence of pre-parasitic ancestor
150 million to 200 million years ago	Early Dipterans, ancestors of mosquitoes, appear
130 million years ago	Two-host life cycle in Dipterans and vertebrates evolves
130 million years ago	Divergence of the bird and mammalian malaria parasites
100 million years ago	Lineage of *P. malariae*, *P. ovale*, and *P. vivax* diverges
~5 million years ago	*P. falciparum* evolves
2-3 million years ago	Divergence of *P. vivax* from *P. cynomolgi*
4000-10000 years ago	Lethal strain of *P. falciparum* appears
4000-5000 years ago	*Anophelines* in Africa develop highly anthropophilic habits

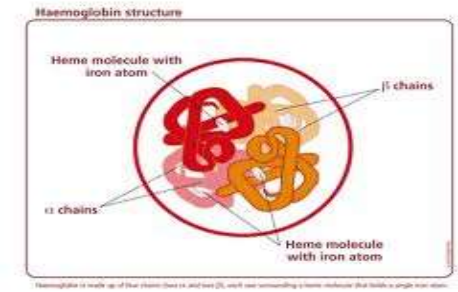
Time Line For Spread of Malaria

>10000 years ago	Malaria in Africa
10000-5000 years ago	Mesopotamia, the Indian peninsula and South-East Asia
5000 years ago	Malaria in China
3000 years ago	*P. falciparum* reaches India
2,500 - 2,000 years ago	Malaria reaches the Mediterranean shores
1000-500 years ago	Malaria reaches northern Europe
End of 15th century AD	Malaria reaches New World
Mid 18th century AD	Malaria spreads across North America
19th Century AD	Malaria almost all over the globe
Early 20th Century AD	Millions die of malaria almost all over the world
Early 1950s	Malaria almost disappears from North America and from almost all of Europe; deaths mainly in Africa

Evolução das Hemoglobinopatias (10.000 – 20.000 anos)

- Mutações "Protectoras"
  - Talassémias
  - G6PH (deficiência em)
  - Drepanocitose
  - Hemoglobina C
  - Hemoglobina E
  - Ovalovitose
- Outros Factores
  - Grupos Sanguíneos (DuffyNegativo)





CLINICAL MICROBIOLOGY REVIEWS, Oct. 2002, p. 564–594 Vol. 15, No. 4
0893-8512/02/$04.00+0 DOI: 10.1128/CMR.15.4.564–594.2002

Evolutionary and Historical Aspects of the Burden of Malaria

Richard Carter[1]* and Kamini N. Mendis[2]

University of Edinburgh, Division of Biological Sciences, ICAPB, Ashworth Laboratories, Edinburgh EH9 3JT, United Kingdom,[1] and Roll Back Malaria Project, World Health Organization, Geneva 27, Switzerland[2]

Malaria and the Red Cell

David J. Weatherall, Louis H. Miller, Dror I. Baruch, Kevin Marsh, Ogobara K. Doumbo, Climent Casals-Pascual, and David J. Roberts

Because of the breakdown of malaria control programs, the constant emergence of drug resistant parasites, and, possibly, climatic changes malaria poses a major problem for the developing countries. In addition, because of the speed of international travel it is being seen with increasing frequency as an imported disease in non-tropical countries. This update explores recent information about the pathophysiology of the disease, its protean hematological manifestations, and how carrier frequencies for the common hemoglobin disorders have been maintained by relative resistance to the malarial parasite.

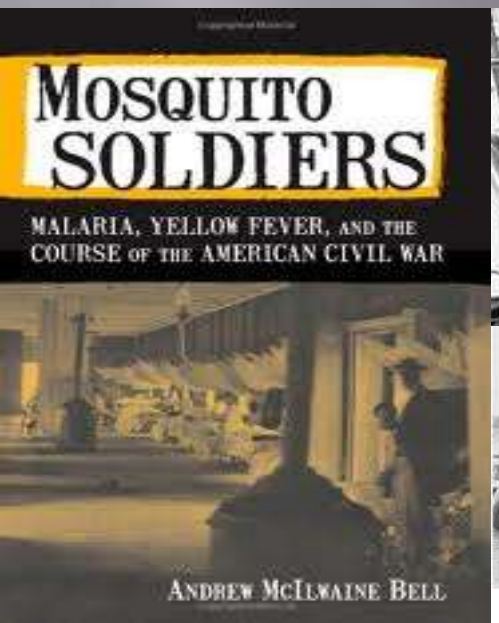
In Section I, Dr. Louis Miller and colleagues consider recent information about the pathophysiology of malarial infection, including new information about interactions between the malarial parasite and vascular endothelium.

In Section II, Dr. David Roberts discusses what is known about the complex interactions between red cell production and destruction that characterize the anemia of malaria, one of the commonest causes of anemia in tropical countries.

In Section III, Dr. David Weatherall reviews recent studies on how the high gene frequencies of the thalassemias and hemoglobin variants have been maintained by heterozygote advantage against malaria and how malaria has shaped the genetic structure of human populations.

PALUDISMO / MALÁRIA

- **Sinónimos**
  - Sezão (Séc XIII)
    - Sezonismo (Ricardo Jorge: 1901)
  - Malária (G. Risori)
    - "Mau ar" (Itália Séc. XVIII)
    - "Mãe das Febres"
  - Paludismo (E. Marchiafava e A. Celli)
    - "Paul, Palude" (Itália Séc. XIX)
    - Febre Palustre



- **Guerras**
  - Guerra Civil dos EUA
    - 1.316.000 casos
    - 10.000 mortos
  - I Guerra Mundial
    - Tropas Inglesas
      - 124.000 casos
      - 23.762 mortos
  - II Guerra Mundial
    - Tropas Americanas
      - 60.000 mortos
  - Guerra da Coreia
    - Tropas Americanas
      - 3.000 casos
      - 629 mortos
  - Guerra do Vietnam
    - Tropas Americanas
      - 40.000 casos
      - 78 mortes

Os que Adoeceram

Algumas Personagens Importantes

1. Reis e Imperadores (Belisarius, Kangxi, Luisa Maria, Jaime I, Carlos II, Carlos V, Hannibal, Isabel, Filipe II, Filipe IV, Filipe V, Fernando VI
2. Presidentes dos EUA (George Washington, James Monroe, Andrew Jackson, Ulysses Grant, James Garfield, Theodore Roosevelt, John Kennedy)
3. Outros (Homero, Hipocrates, Cristovão Colombo, Albert Durer, william shakespeare, Sir Arthur Conan Doyle, Alfred Russell Wallace, Meriwether Lewis, Morton Stanley, Jefferson Davis, Lucretia Garfield, George Mcclellan, Ho chi minh, jesse james, john pershing, mahatma gandhi, ernest hemingway, lord nelson, leon trotsky, eugene o´neill, sir harry secombe, ross kemp, santa teresa de jesus, hernan cortés, don adams, errol flynn, peta wilson, carol landis, raymond burr, aidie murphy, michael caine, christopher lee, michael didikoff, jeremy piven, Al johnson, jane goodall, davy crockett, steve reeves, chris matthews, anderson cooper, wilson kipeter, yakubu aiyegbeni, dikembe mutamboi, ezekiel kemboi, madre teresa de calcutá, leander paes, etc)

Os que Morreram

ALGUMAS PERSONAGENS IMPORTANTES

- Santos (Santo Agostinho)
- Reis e Imperadores (, Cesar Augustus , Alexandre da Macedónia; Alarico, Otão I e Otão II; Frederico I e Frederico IV; Andronicus Palaeopologus Henrique do Luxemburgo, Genghis Khan, Sultão Muhammed Tughluk, Eduardo VI, Minas, Mongkut)
- Guerreiros e Militares(Atila, Belisarius, Francis Ona, Comodoro Olivier Hazard Perry)
- Nobres (Richard of Cornwall, Cesare Borgia)
- Papas (Alexandre VI; Gregorio V, Damasus II, Leão X, Sistus V, Urbano VII, Gregorio XV)
- Escritores e Artistas (Petrarca, Dante, Caravaggio, Guido Cavalcanti, Lord Byron, Amrish Puri)
- Exploradores (Alvaro Mendana, David Livingstone)
- Inventores (Josep Ressel)
- Atletas (Rebka Chenashu, Didier Zohora)

History of Malaria Parasite and its Global Spread

Time Line for Origin of Malaria

Half a billion years ago
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150 million to 200 million years ago
Early Dipterans, ancestors of mosquitoes, appear
130 million years ago
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Anophelines in Africa develop highly anthropophilic habits

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Malaria almost all over the globe
Early 20th Century AD
Millions die of malaria almost all over the world
Early 1950s

Malaria almost disappears from North America and from almost all of Europe; deaths mainly in Africa

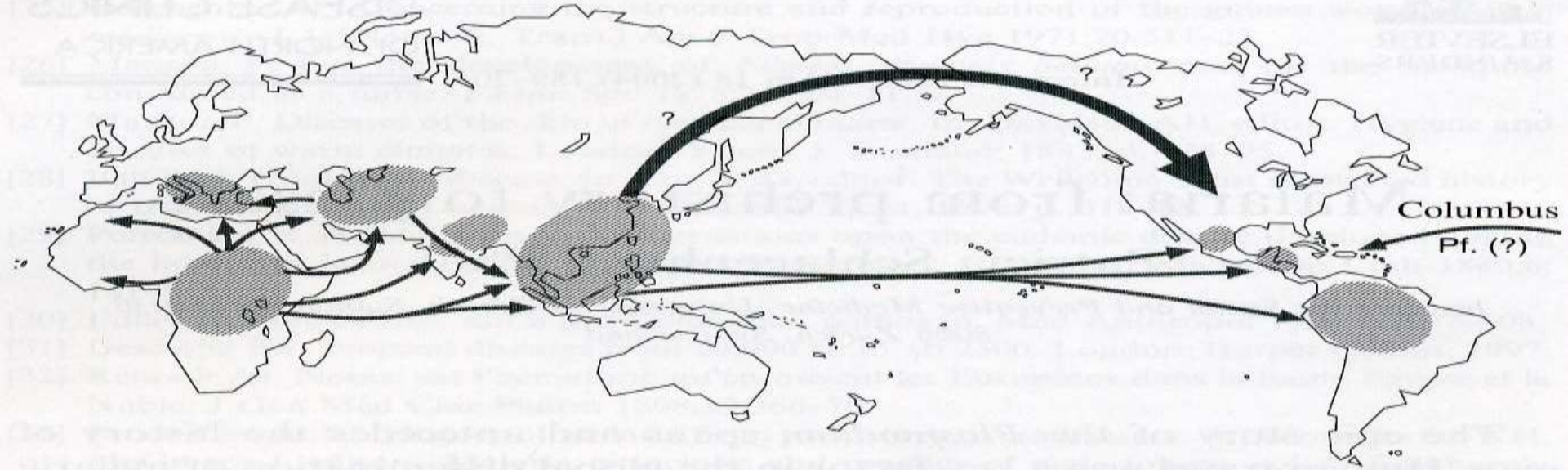


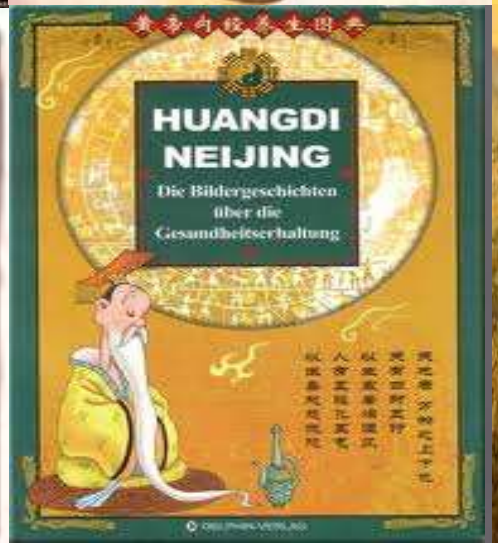
Fig. 1. Probable routes of the spread of malaria in prehistoric and early historic times. (*Adapted from* Bruce-Chwatt LJ. Paleogenesis and paleo-epidemiology of primate malaria. Bull World Health Organ 1965;2:363–87; with permission.)

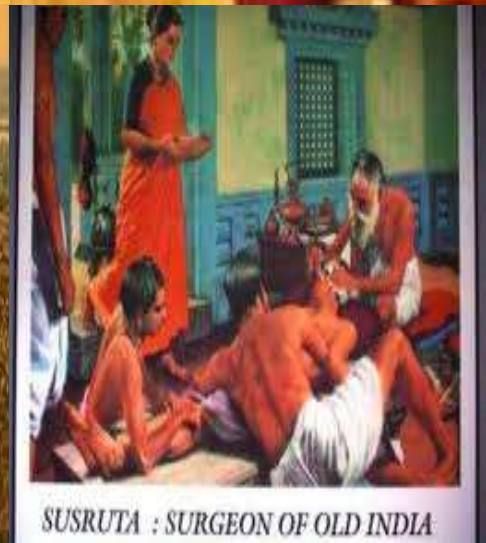



History of Malaria: Scientific Discoveries

Time Line For Scientific Discoveries
Ancient Times
Early man attributed the fevers to evil spirits, angered deities, demons, or the black magic of sorcerers
Severel thousand years ago
Babylonian cuneiform script attributes malaria to a god, pictured as a mosquito-like insect
800 BC
Indian sage Dhanvantari wrote that bites of mosquitoes could causes diseases, fever, shivering etc.
400 BC
Hippocrates described the various malaria fevers of man; distinguished the intermittent malarial fever from the other continuous fevers; noted the daily, every-other-day, and every-third-day temperature rise; mentioned about splenic change in malaria; attributed malaria to ingestion of stagnant water; also related the fever to the time of the year and to where the patients lived.
300 BC
Charaka Samhita in India classifies the fevers into five different categories, namely continuous, remittent, quotidian, tertian and quartan fevers.
100 BC
Susruta Samhita in India associates fevers with the bites of the insects
First Century BC
Roman agriculturist Collumella suggested that the diseases are caused by animals that breed in the marshes
First Century AD
Roman scholar Marcus Terentius Varro suggested that the grave maladies are caused by inhalation of certain animalcula that breed in the swamps
30 AD
Celsus described two types of tertian fevers
160-200 AD
Galen suggested that malaria was due to a disorder in the four humors of the body and suggested bleeding and/or purging as treatment; this view stayed for 1500 years
1696 AD
Morton presented the first detailed description of the clinical picture of malaria and its treatment with cinchona.
1712 AD
Fransesco Torti accurately described the intricate course of the disease that was curable by the cinchona
1716-1717 AD
Lancisi first described a characteristic black pigmentation of the brain and spleen in the victims of malaria. He linked malaria with poisonous vapours of swamps or stagnant water on the ground. In 1717, in his monograph titled Noxious Emanations of Swamps and Their Cure, he echoed the view that malaria was due to minute "bugs" or "worms" which entered the blood and revived the old idea that mosquitoes might play a role.
1796 AD
John Crawford, American physician contradicted the bad-air theory and suggested that the eggs, laid during a mosquito bite, hatched in the wound and migrated through the host's body, producing the manifestations of malaria
1816 AD
Giovanni Rasori doubted the "bad air" theory and suggested that a microorganism is responsible for the disease
1847 AD
German physician, Heinrich Meckel, identified round, ovoid, or spindle-shaped structures containing black pigment granules in protoplasmic masses in the blood and in the spleen; he probably saw the malaria parasites for the first time, but could not recognize the true importance of his finding


黃帝內經素問
石室藏板


HUANGDI
NEIJING
Die Bildergeschichten
über die
Gesundheitserhaltung


SUSRUTA : SURGEON OF OLD INDIA

"Should there be rivers in the land, which drain off from the ground the stagnant water and the rain water, the people will be healthy and bright. But if there be no rivers, and the water that the people drink to be marshy, stagnant, and fenny, the physique of the people must show protruding bellies and enlarged spleens."

Hippocrates

BIBLIOTECA ECONÓMICA FILOSÓFICA

AFORISMOS Y PRONÓSTICOS DE HIPÓCRATES

Antonio Zozaya

MADRID
1904

APHORISMI
HIPPOCRATIS
Accur. ut.
THEODORO JANSSONIO
ab ALMELOVEEN
Med. Doct.

AMSTELÆDAMI,
Apud HENRICUM WETSTENIUM,
CIↃ IↃC LXXXV.

ΙΠΠΟΚΡΑΤΟΥΣ
ΟΡΚΟΣ
HIPPOCRATIS
IVSIVRANDVM

Aphorismi
HIPPOCRATIS.
Græce & Latine:
JUXTA
Optimam Editionem
THEODORI JANSSONII ab
Almeloveen, Med. Doct.
Amstelodami impressam, Anno 1685.

In usum JUVENTUTIS Studiosæ.

EDINBURGI:
In Ædibus R. Fleming, Sumptibus Joannis Paton Bibliopolæ in Area Parliamentaria.
M. DCC. XLVII.

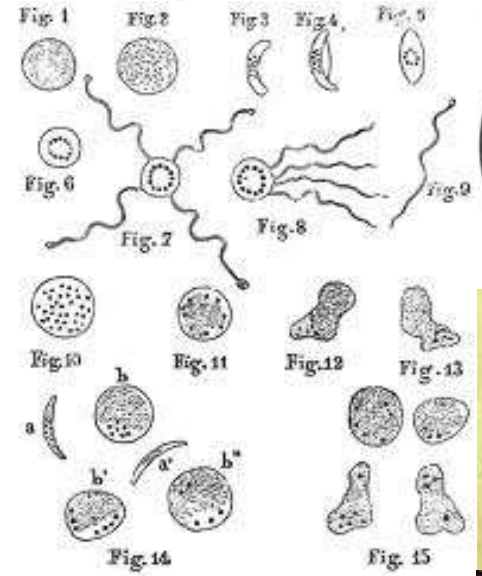
History of Malaria: Scientific Discoveries

1848-1850 AD
Schutz, Virchow and Hischl confirmed the presence of pigment with intermittent fevers.
1850 AD
American Josiah Clark Nott dismissed the miasma theory and suggested that microscopic "insects" transmitted by mosquitoes caused both malaria and yellow fever
1854 AD
Beauperthy, American naturalist, wrote that malaria and yellow fever "are produced by venomous fluid injected under the skin by mosquitoes
1878-79 AD
Edwin Klebs and Corrado Tommasi-Crudeli announced the "discovery" of Bacillus malariae, a bacteria that supposedly caused malaria
November 6, 1880
Charles Louis Alphonse Laveran, a French physician working in Algeria , found a moving object while examining a fresh blood film from a patient of malaria. He called this parasite Oscillaria malariae.
1881
George Sternberg, American bacteriologist proved that the Bacillus malariae was not responsible for malaria
1882
Albert Freeman Africanus King, a gynecologist at George Washington University, suggested that the mosquito is the real source of malaria
1884
Russian physiologist, Basil Danielewsky identified malaria parasites of in the blood of wild birds
1884
Marchiafava and Celli demonstrated active amoeboid ring in unstained blood and named it Plasmodium,
1886
Louis Pasteur, William Osler and Camillo Golgi confirm Laveran's finding
1886
Pel suggested the existence of a tissue stage of the parasite
1886
Golgi observe that the tertian and quartan forms produced differing numbers of segmentations on maturity; also demonstrated that the fever coincided with the rupture and release of merozoites into the blood stream
1891
Romanowsky described better staining methods for identifying malarial parasites
1893
Golgi suggested that malaria parasites may have an undiscovered tissue phase in endothelial cells not affected by antimalarial drugs and could be the source of relapses.
1897
William G. McCallum and Opie demonstrated the sexual process of the malaria parasite.On August 20, 1897, a tired, discouraged Ronald Ross
August 20, 1897
Ronald Ross demonstrated oocysts in the gut of anopheline mosquito at Secunderabad, India, proving that mosquito was the vector for malaria
July, 1898
Ronald Ross demonstrated the sporozoites in the salivary glands of the mosquito and then transmitted malaria to birds through infected mosquitoes.
September, 1898
Giovanni Battista Grassi transmitted vivax malaria to a human volunteer
1900
Patrick Manson transmitted malaria to volunteers in London from infected mosquitoes brought from Italy.
1911
Brown suggested the hematin origin of the 'black pigment' and suggested the action of a proteolytic enzyme on hemoglobin to be the most probable mode of elaboration of the malaria pigment
1948
Shortt & Garnham demonstrated the tissue form of P. vivax malaria
1975
William Trager cultured P. faliciparum inside red blood cells
1977
Lysenko et al. suggested latent forms of P. vivax malaria that cause relapses
1987
Dr. Manuel Elkin Patarroyo, a Colombian biochemist, developed the first synthetic Spf66 vaccine against P. falciparum
2002
The genome of *Anopheles gambiae* and *Plasmodium falciparum* sequenced
2008
The genome of *P. vivax* and *P. knowlesi* sequenced

Journal of the Royal Society of Medicine Volume 74 July 1981

Alphonse Laveran's discovery 100 years ago and today's global fight against malaria[1]

L J Bruce-Chwatt CMG OBE MD FRCP
Wellcome Museum of Medical Science, London NW1



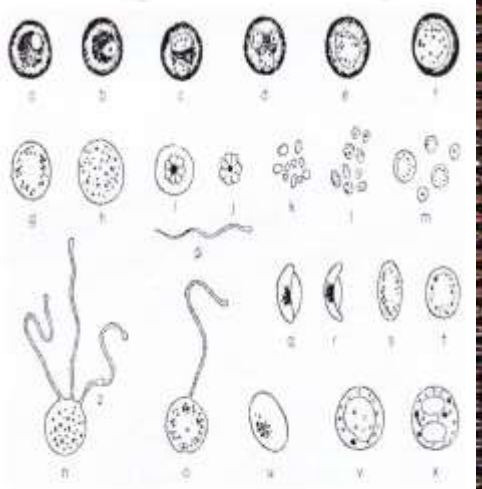
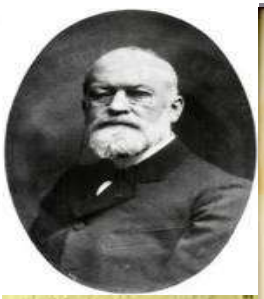
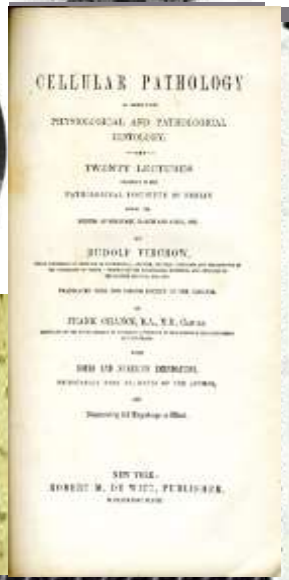
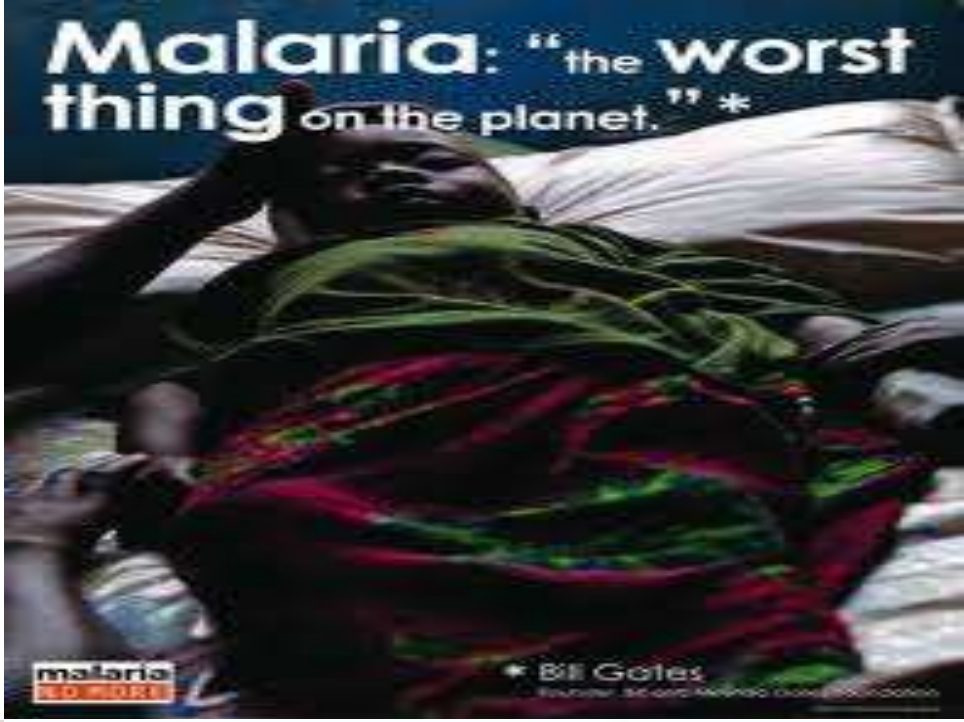


Figure 1. Malaria parasites (*Haemamoeba malariae*) observed and drawn by Alphonse Laveran; published in *Comptes Rendus de l'Academie des Sciences*, 24 October 1881. (From Sergent & Sergent 1929)






DON'T GO TO BED WITH
A MALARIA MOSQUITO
• SLEEP UNDER A NET! • KEEP IT
REPAIRED! • TUCK IT IN! •
BE SURE NO MOSQUITO IS INSIDE
WAITING FOR YOU
FIGHT THE BITE BEHIND THE LIKES


Malaria: "the worst thing on the planet." *
malaria
* Bill Gates


MALARIA THEME PARTY
MUMBAI
MOSQUITO
MENACE
IN MUMBAI

History of Malaria Treatment

Time Line For Malaria Treatment

340 AD

Anti-fever properties of *qinghao* first described by Ge Hong in China

Between 1620 and 1630 AD

Spanish Jesuit missionaries in Peru learn the healing power of a tree bark

1632

Jesuit Barnabé de Cobo takes Cinchona bark to Europe

1633

Properties of the bark in the treatment of malaria first written by Father Antanio de la Calancha

1640

Juan de Lugo first employed the tincture of the cinchona bark for treating malaria in Countess of Chinchon

1658

The first prescription of cinchona in England by Robert Brady

1670s

Robert Talbor develops an infusion of cinchona powder in white wine and uses it as a 'secret remedy'

1712

Fransesco Torti writes a book on the therapeutic properties of the bark

1742

Linnaeus, a Swedish botonist, classifies the Peruvian bark and names the tree *cinchona*

1820

French chemists Joseph Pelletier and Jean Biename Caventou isolate quinine

1844/1910

Sporadic resistance to quinine reported

1934

Resochin (chloroquine) synthesised at Bayer, Germany by Hans Andersag

1944

Proguanil or Paludrine (chlorguanide hydrochloride) developed by Curd, Davey and Rose

1945, 1950

Camoquin (amodiaquin) and Primaquine (Elderfield) developed

1952

Pyrimethamine developed

1971

The active ingredient of *qinghao* isolated by Chinese scientists

1974-75

Mefloquine jointly developed by the U.S. Army Medical Research and Development Command, World Health Organization and Hoffman-La Roche

1992 and 1998

Atovaquone becomes available in 1992; a combination of proguanil and atovaquone, called Malarone, becomes available in Australia in 1998

The English Connection
Jesuits' powder

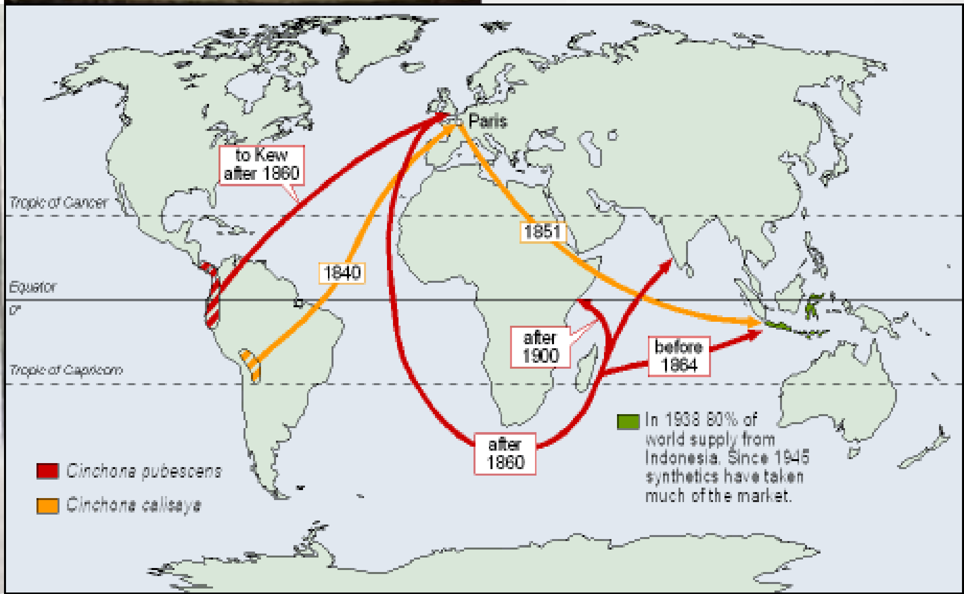
by Fr Eugene Nevins, SJ

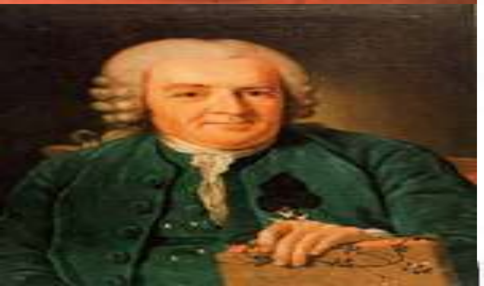
College of Phyficians, London, October 5, 1756.

We the Cenfors of the College, being informed that very large Quantities of a Bark imported from North America, have been lately fold by publick Sale at Garraway's Coffee House as Jefuits Bark, have procured Samples of it, and, calling to us the Mafter and Wardens of the Apothecaries Company, have examined it, and find, that though it has the Appearance, it has not the Tafte or Qualities of the true Jefuits or Peruvian Bark: We the Cenfors therefore, that we may not be wanting in an Affair of fuch Confequence to the Health and Lives of His Majefty's Subjects, think it our Duty to give this publick Notice to all Apothecaries, and other publick Difpenfers of Medicines, defiring them not to purchafe any Peruvian Bark without tafting and carefully examining it.

Ambrofe Dawfon.
John Thomas Batt.
Antony Afkew.
Nicolas Munckley.

London, October 12, 1756.





ANASTASIS
CORTICIS PERVVIÆ,
SEV
CHINÆ CHINÆ
DEFENSIO,
SEBASTIANI BADI GENVENSIS
Publicæ Sanitatis in Ciuitate Confultoris.
Contra
VENTILATIONES
IOANNIS IACOBI CHIFLETII,
GEMITVSQVE
VOPISCI FORTVNATI PLEMPII,
ILLVSTRISSIMO D.
IOANNI LVCÆ DVRATIO

THOMÆ SYDENHAM

Med. Doct.

METHODUS

CURANDI FEBRES

Propriis Obſervationibus
Superſtructa.

Editio Secunda, priori multò auctior ac emendatior; cui etiam acceſſit Sectio Quinta de *Peſte* ſive *Febre Peſtilentiali*.

Multa egerunt qui ante nos fuerunt, ſed non peregerunt: multum adhuc reſtat operæ, multumque reſtabit: neque ulli nato poſt mille ſæcula præcidetur occaſio aliquid adhuc adjiciendi. Seneca.

LONDINI,

Impenſis *J. Crook*, apud quem veneunt in Vico vocato *Duck*-lane propè *Little Brittain*, MDCLXVIII.

Thomas Sydenham (1624-1689) - o

"Experiências Chymicas, sobre a Quina do Rio de Janeiro Comparada com Outras", escrita em 1811 por José Bonifácio, Sebastião Francisco de Mendo Trigoso, João Croft e **Bernardino Antonio Gomes**, com a participação de Alexandre Vandelli"
(REVISTA TRIPLOV
de Artes, Religiões e Ciências
Nova Série | 2010 | Número 05)

EXPERIENCIAS CHYMICAS,

Sobre a Quina do Rio de Janeiro comparada com outras.

PELA Secretaria de Estado dos Negocios da Guerra e da Marinha, foi commettida ao Exame da Academia Real das Sciencias de Lisboa a Analyse de huma porção de Casca amargosa, com o nome de Quina, que do Rio de Janeiro havia sido mandada ao Fysico Mór do Exercito; para que achando-se que continha os principios, e virtudes das Quinas officinaes, se fizesse uso della, principalmente nos Hospitaes Militares.

Em consequencia, nomeou a Academia huma Commissão, composta de quatro dos seus Membros, e pedio para os seus trabalhos o Laboratorio Chymico da Casa da Moeda, que immediatamente lhe foi franqueado, com ordem para que nelle se aprontasse tudo, quanto fosse necessario para aquella Analyse.

Este Laboratorio munido de todos os vazos e utencilios, que lhe são proprios; tinha comtudo falta de muitos reagentes, principalmente d'aquelles que mais se alterão, os quaes seriamos obrigados a preparar; a não ser a franqueza do Sr. Alexandre Antonio Vandelli, que além de nos ajudar com o seu trabalho, nos forneceo os que nos forão necessarios, e ainda outros de que carecia o sobredito Estabelecimento.

Aos 17 de Junho, o primeiro dia em que ali concorremos, houve alguns pareceres sobre o Plano que deveriamos seguir nas nossas Experiencias. O interesse do objecto, a facilidade com que podiamos dispor dos meios que se nos offereciáo; tudo nos convidava a fazer huma Analyse em toda a sua extenção: mas ao mesmo tempo, conhecendo que o nosso principal objecto era examinar aquella Casca relati-


MALARIA IS BIG PROBLEM IN AFRICA


FARMACIA
DE DESCUENTO

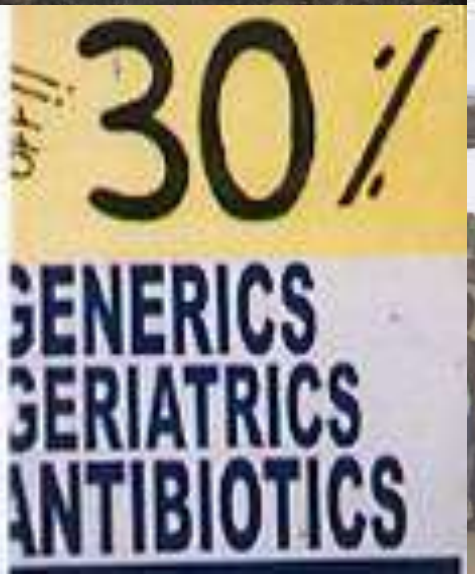

CONSULTORIO
MEDICO
URGENCIAS
24 HORAS
Dr. José Guirao López


BEWARE OF MALARIA IT KILLS
BEWARE OF HIVAIDS IT KILLS

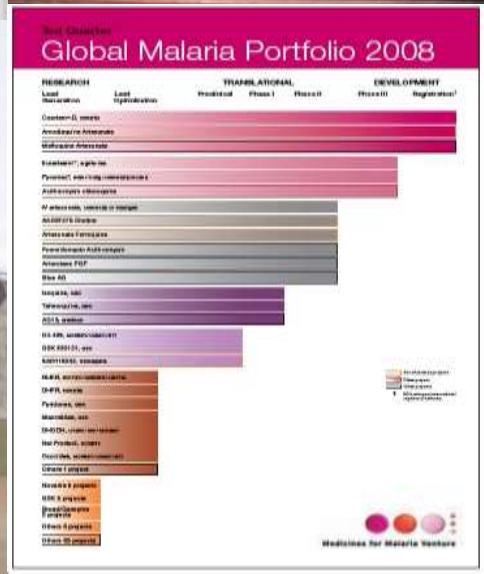

Tooth Brush Tree.
Salvadora persica
(Swahili-mswaki).
The twigs are used as
a toothbrush. Roots
and leaves used for
treatment of malaria.


FEVER TREE
Acacia xanthophlea (olerai-Masai)
The tree grows in groups in a Low lying
Swampy areas which is favourable breeding
Ground for Malarial Mosquitoes. Early Pioneers
Were convinced that the tree caused Malaria
Which is not true. Roots used for
treatment of Stomach-ache.


DISCOUNT
FARMACY
• GENERICS
• GERIATRICS
• ANTIBIOTICS

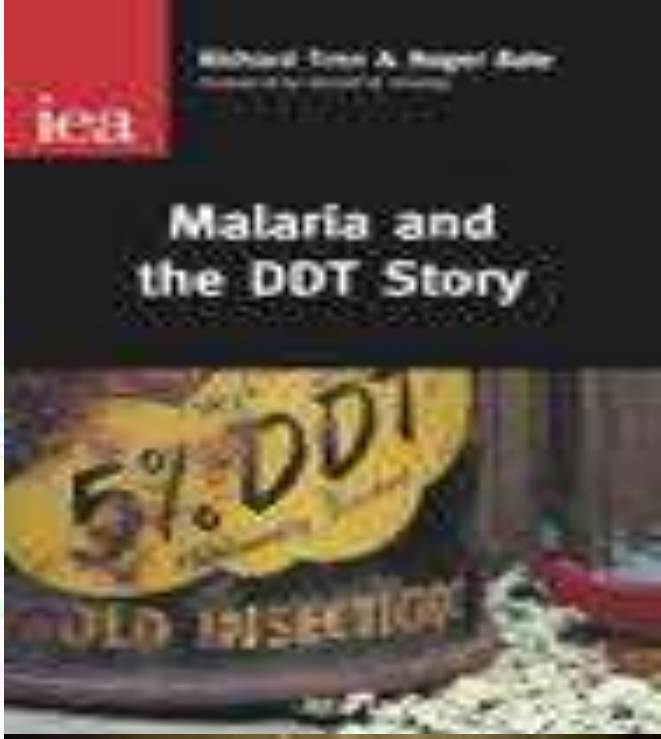

UP TO
30%
GENERICS
GERIATRICS
ANTIBIOTICS

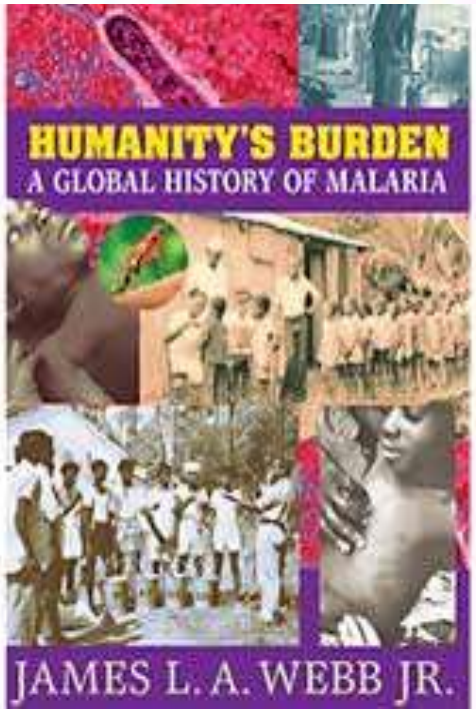

DOCTOR-TRADICIONAL
TRATA-SE TRADICIONAL-
MENTE E ESPIRITUALMENTE
FEBRE AMARELA - MALUCU
CHUCHA GRANDE - DOR DE DENTE
MULHER OU HOMEM MUNGATEZ
CRIANÇA QUE TEM PEDRA
FALUDISMO - MAKULU
TROMBOSE - ANGINA
PESSOAS QUE DES MAIA
VIA BERTA - PESSOA QUE AJUSTA TODO
HORA - DOR DE BARRIGA
DOR DE BEXIGA - INFIMAÇÃO NA
XIGA - TUBERCULOSE - LUKINA
HEMORROIDE - APENDECITE
ASMA - DIABETA - ESCANDIA
TO - MICROBIO - FORCA SEXUEL
MESTRUAÇÃO NÃO APARECE
QUE TEM QUALQUER PROBLEMA -
RESOLVE-SE - LAVAGEM DE BARRIGA
HERNIA UMBILICAL EXTERNA - GOTA
DOR DE COSTELA - REUMATISMO

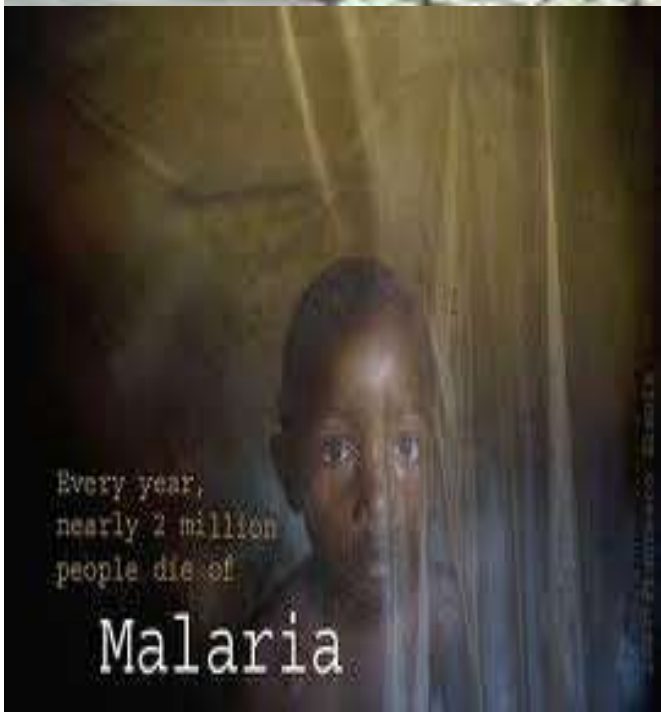

Global Malaria Portfolio 2008
RESEARCH
TRANSLATIONAL
DEVELOPMENT
Medicines for Malaria Venture


MALARIA
KILLS
3000
CHILDREN
EVERYDAY
IN AFRICA. PLEASE HELP
HTTP://MALARIANOMORE.ORG


AGAINST
MALARIA
FOUNDATION


iea
Malaria and
the DDT Story
5% DDT


HUMANITY'S BURDEN
A GLOBAL HISTORY OF MALARIA
JAMES L. A. WEBB JR.


Every year,
nearly 2 million
people die of
Malaria

History of Malaria Control

Time Line For Malaria Control

Ancient Times

Early man attributed the fevers to evil spirits, angered deities, demons, or the black magic of sorcerers

Severel thousand years ago

Babylonian cuneiform script attributes malaria to a god, pictured as a mosquito-like insect

800 BC

Indian sage Dhanvantari wrote that bites of mosquitoes could causes diseases, fever, shivering etc.

400 BC

Hippocrates attributed malaria to ingestion of stagnant water; also related the fever to the time of the year and to where the patients lived.

100 BC

Susruta Samhita in India associates fevers with the bites of the insects

Early Civilizations

Use of mosquito nets recorded; Cleopatra reportedly used them

Early Civilizations

Ancient Romans practiced drainage of swamps to prevent malaria

11 Century AD

Rice plantation prohibited near human dwellings

1717 AD

Lancisi linked malaria with poisonous vapours of swamps or stagnant water on the ground and revived the old idea that mosquitoes might play a role; proposed the draining of marshes to eradicate malaria

Late 1800

Malaria declines in the United States and Europe due mainly to draining swamps and removing mill ponds; better housing and beter sanitation

1882 AD

Albert Freeman Africanus King, a US Physician, proposed to encircle the city with a wire screen as high as the Washington Monument as a method to eradicate malaria from Washington, DC.

August 20, 1897

Ronald Ross demonstrates oocysts in mosquito gut, proving the role of mosquito in malaria transmission

1899

Ross attempted to eradicate malaria from England by forming 'mosquito brigades' to eliminate mosquito larvae from stagnant pools and marshes; organised a sanitation drive at Freetown, Sierra Leone with limited success

1901

William Gorgas of the US Army leads a successful anti mosquito drive in Havana, Cuba; pyrethrum used for the first time

1902

Ronald Ross invited to Ismailia by the Suez Canal Company to control malaria, which he does successfully.

1905-1910

Malaria controlled in Panama Canal site under the leadership of Ronald Ross and William Gorgas

1920

Paris Green first used in malaria control

1921-22

Larvivorous fish *Gambusia affinis* or mosquitofish used in the control of mosquitoes in California

1939

Malaria control drive conducted in Brazil under the leadership of Fred Sopper with great success

1955

The Global Malaria Eradication Programme launched by WHO with emphasis on vector control with DDT residual spraying

1965

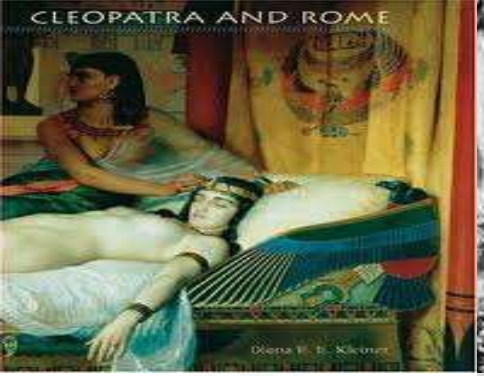
The Global Malaria Eradication Programme proved successful in Europe, but cases re-emerge in Asia

1969

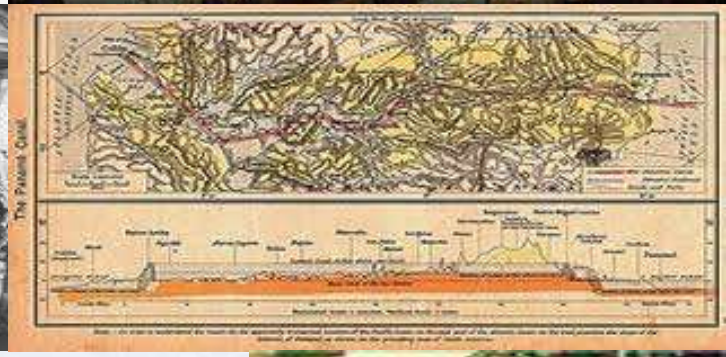
The Global Malaria Eradication Programme abandoned

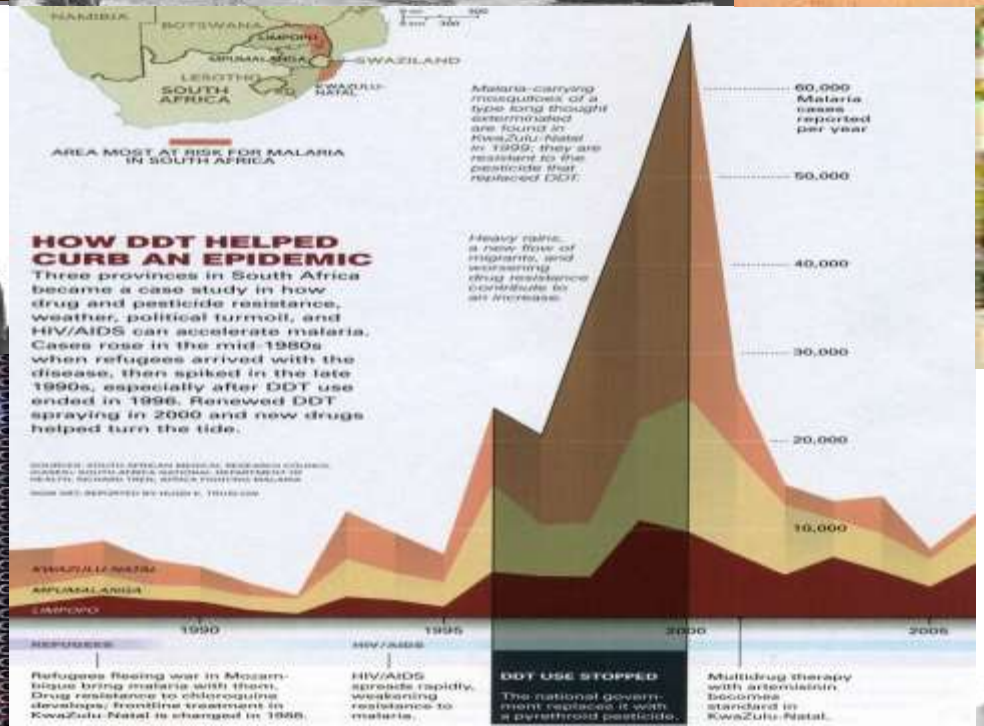
1998

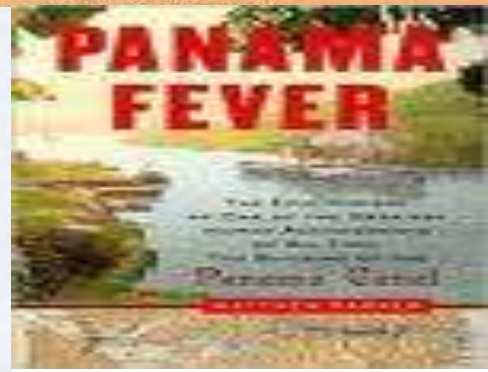
Roll Back Malaria Campaign launched


CLEOPATRA AND ROME


ATLANTIC OCEAN
PACIFIC OCEAN
PANAMA
GATUN LAKE

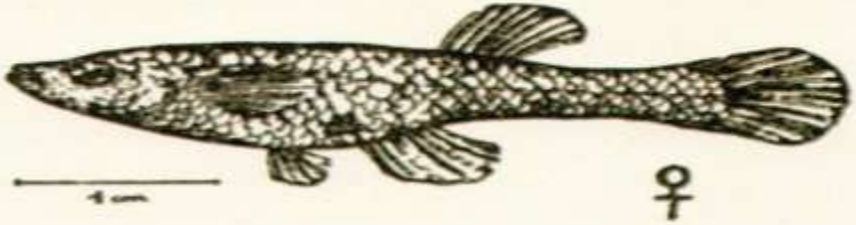



NAMIBIA
BOTSWANA
LIMPOPO
MPUMALANGA
SWAZILAND
LESOTHO
SOUTH AFRICA
KWAZULU-NATAL
AREA MOST AT RISK FOR MALARIA IN SOUTH AFRICA
Malaria-carrying mosquitoes of a type long thought exterminated are found in KwaZulu-Natal in 1999; they are resistant to the pesticide that replaced DDT.
HOW DDT HELPED CURB AN EPIDEMIC
Three provinces in South Africa became a case study in how drug and pesticide resistance, weather, political turmoil, and HIV/AIDS can accelerate malaria. Cases rose in the mid-1980s when refugees arrived with the disease, then spiked in the late 1990s, especially after DDT use ended in 1996. Renewed DDT spraying in 2000 and new drugs helped turn the tide.
Heavy rains, a new flow of migrants, and worsening drug resistance contribute to an increase.
60,000 Malaria cases reported per year
50,000
40,000
30,000
20,000
10,000
KWAZULU-NATAL
MPUMALANGA
LIMPOPO
1990
1995
2000
2005
REFUGEES
Refugees fleeing war in Mozambique bring malaria with them. Drug resistance to chloroquine develops; frontline treatment in KwaZulu-Natal is changed in 1988.
HIV/AIDS
HIV/AIDS spreads rapidly, weakening resistance to malaria.
DDT USE STOPPED
The national government replaces it with a pyrethroid pesticide.
Multidrug therapy with artemisinin becomes standard in KwaZulu-Natal.

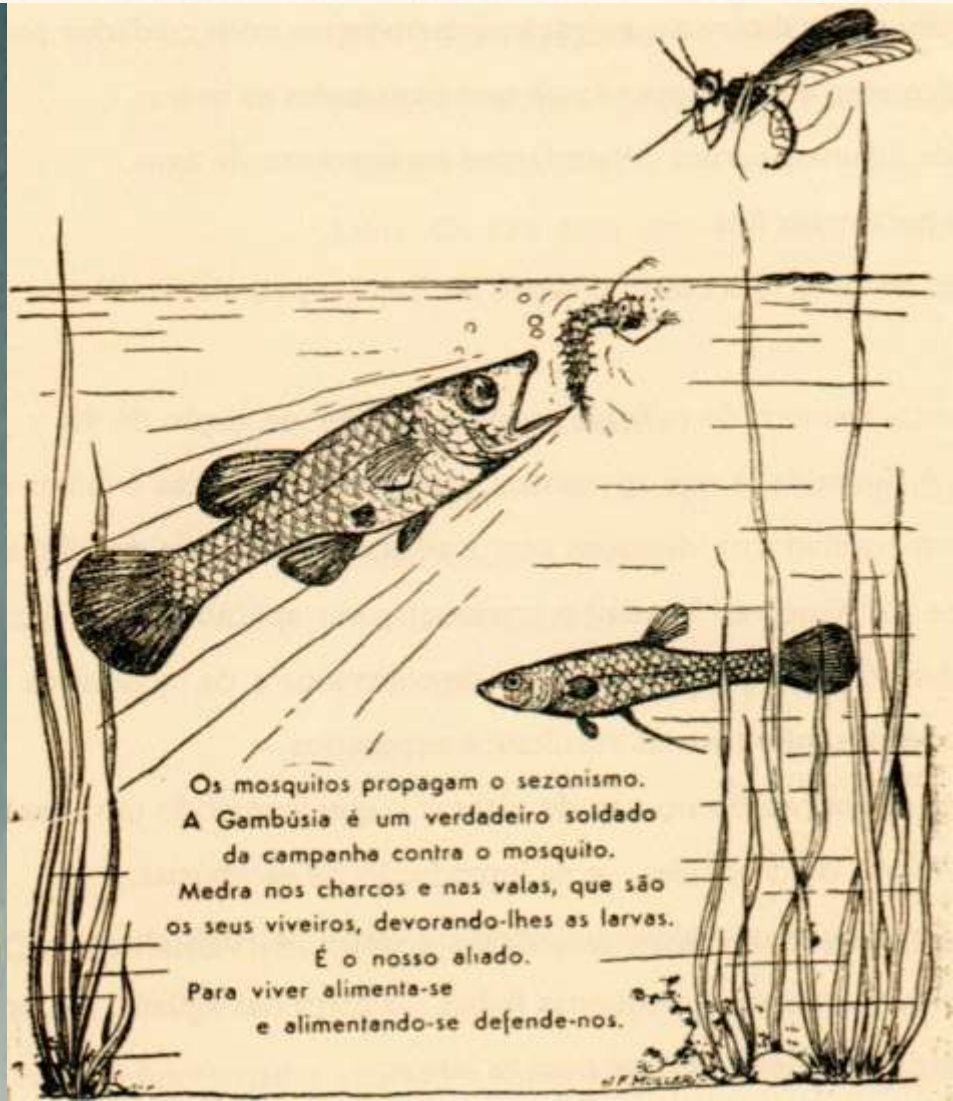

PANAMA FEVER


GRENADA
GRENADINES
$1
Paul Müller (Switzerland)
Physiology or Medicine, 1948

Gambouse mâle
Gr. nat.



Gambouse femelle
Gr. nat.



Os mosquitos propagam o sezonismo.
A Gambúsia é um verdadeiro soldado
da campanha contra o mosquito.
Medra nos charcos e nas valas, que são
os seus viveiros, devorando-lhes as larvas.
É o nosso aliado.
Para viver alimenta-se
e alimentando-se defende-nos.

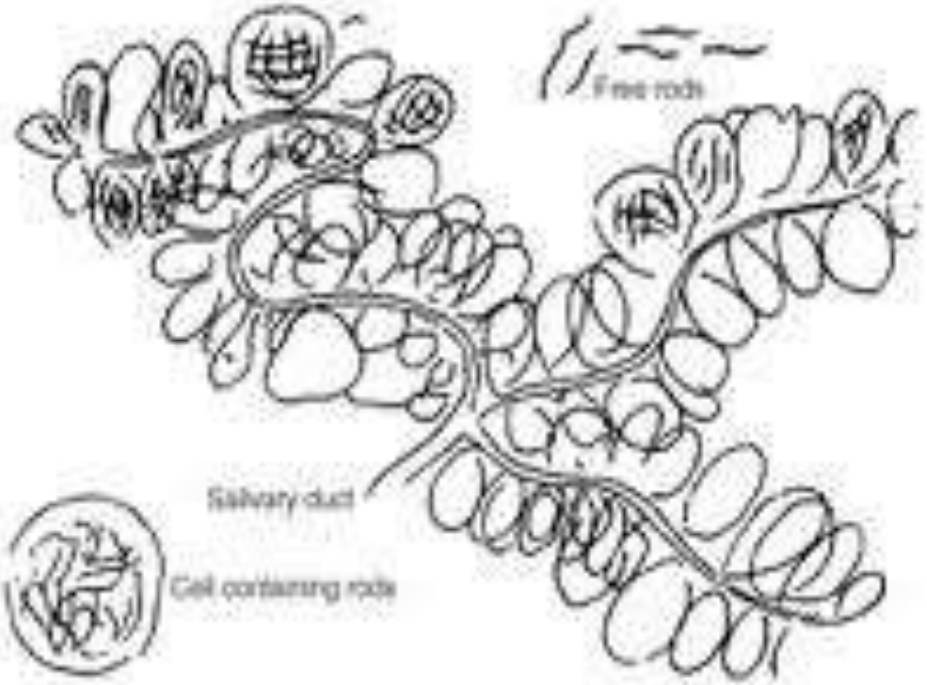
PLATE XI.

(From a Mauritian Newspaper, 1908.)

On His Majesty's Service.

CARICATURES OF R. ROSS.

Figure 2. Alphonse Laveran's fight against malaria. Cartoon by B Moloch, published in *Chanteclair* (1908)



Science News

Share Blog Cite

First Malaria-Proof Mosquito: Genetic Manipulation Renders Them Completely Immune to the Parasite

Genetically Modified Mosquito May End Malaria

Jul 16, 2010 9:05 AM CDT

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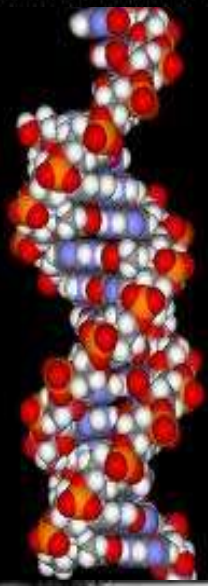
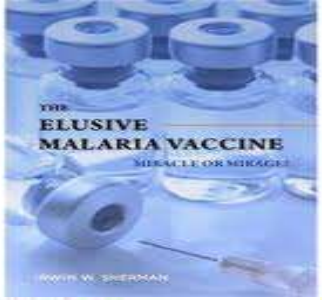
THE AMERICAN JOURNAL OF *Tropical Medicine and Hygiene*



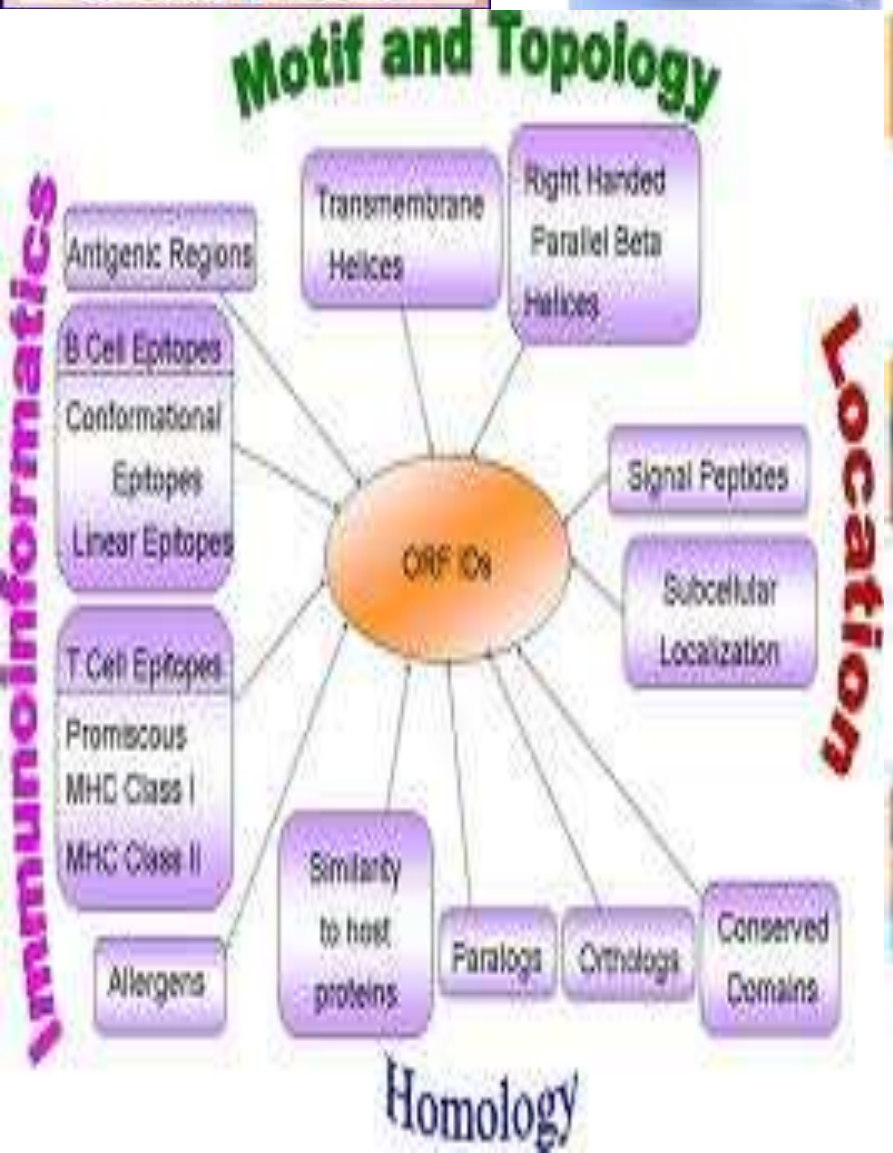
Genetics Modified Insects

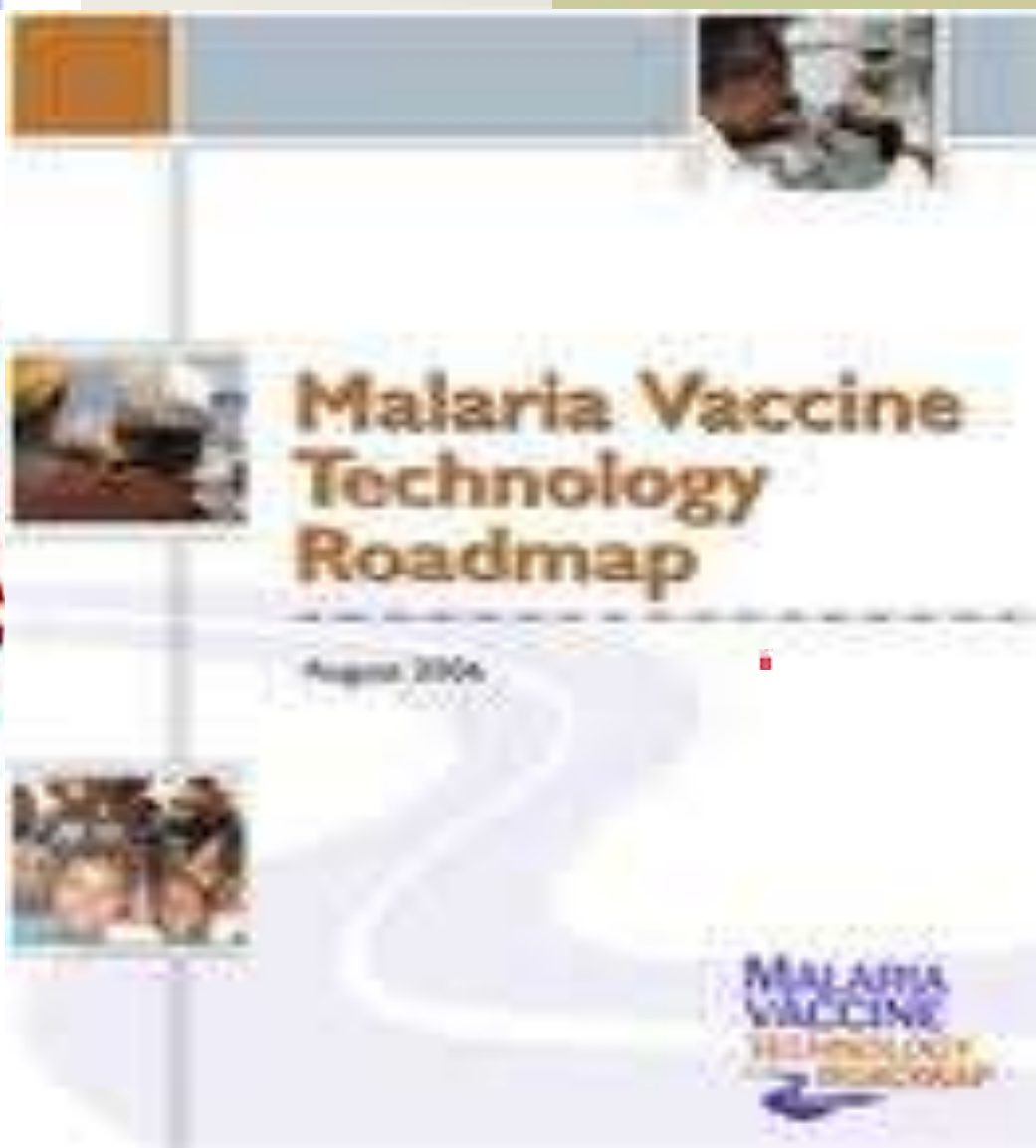

Spotlight on Science
Towards a malaria vaccine: plasmodium surface proteins

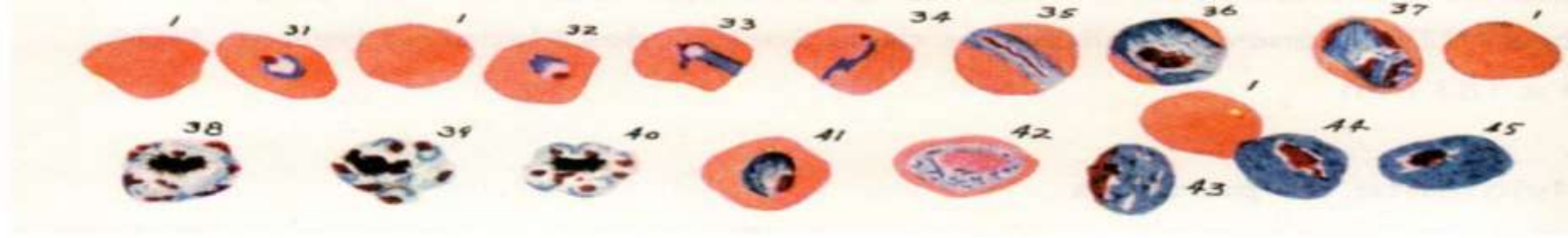

THE
ELUSIVE
MALARIA VACCINE
MIRACLE OR MIRAGE?


MVT
MALARIA
VACCINE TRIALS

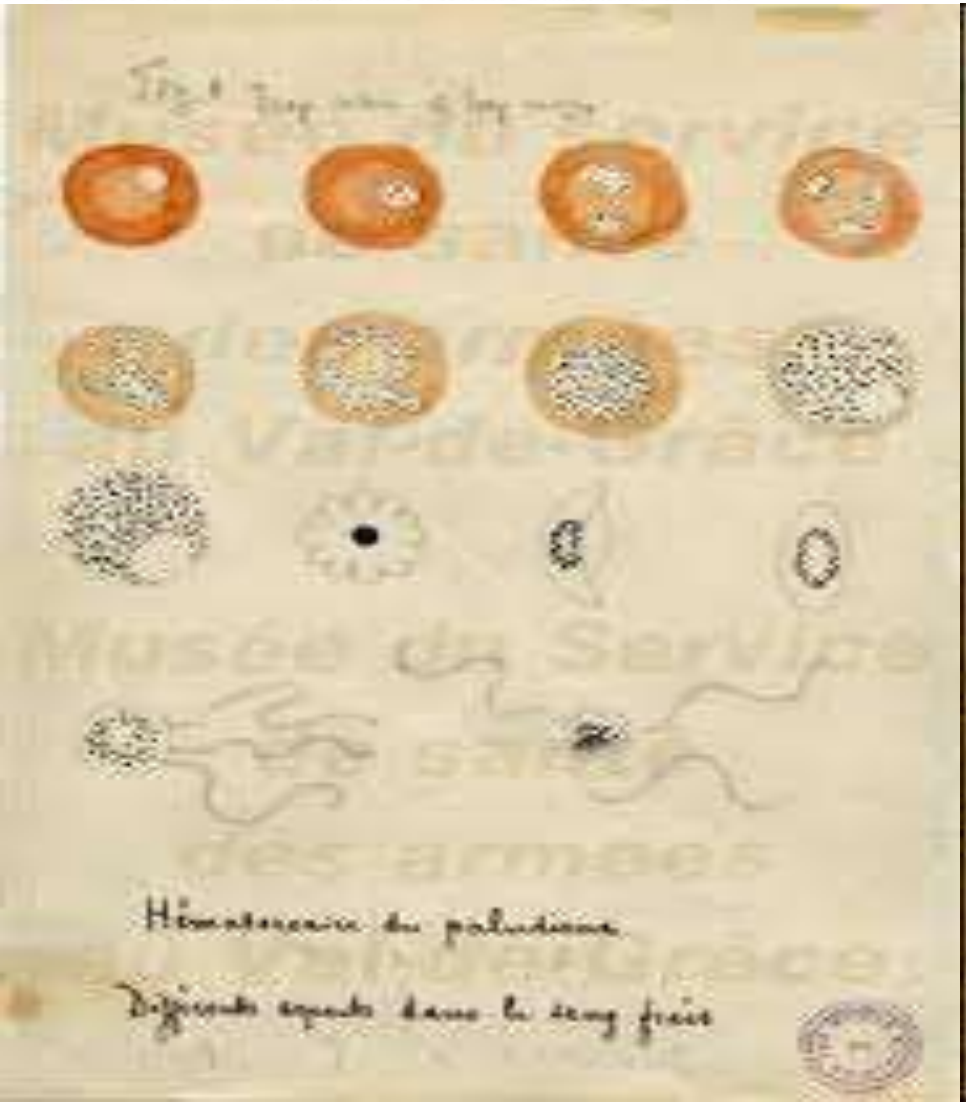

mvi
malaria vaccine initiative


Motif and Topology
Transmembrane Helices
Right Handed Parallel Beta Helices
Antigenic Regions
B Cell Epitopes
Conformational Epitopes
Linear Epitopes
Signal Peptides
ORF IDs
Subcellular Localization
T Cell Epitopes
Promiscous
MHC Class I
MHC Class II
Allergens
Similarity to host proteins
Paralogs
Orthologs
Conserved Domains
Immunoinformatics
Location
Homology


Malaria Vaccine Technology Roadmap
August 2006
MALARIA VACCINE



Plasmodium malariae (Laveran, 1881)

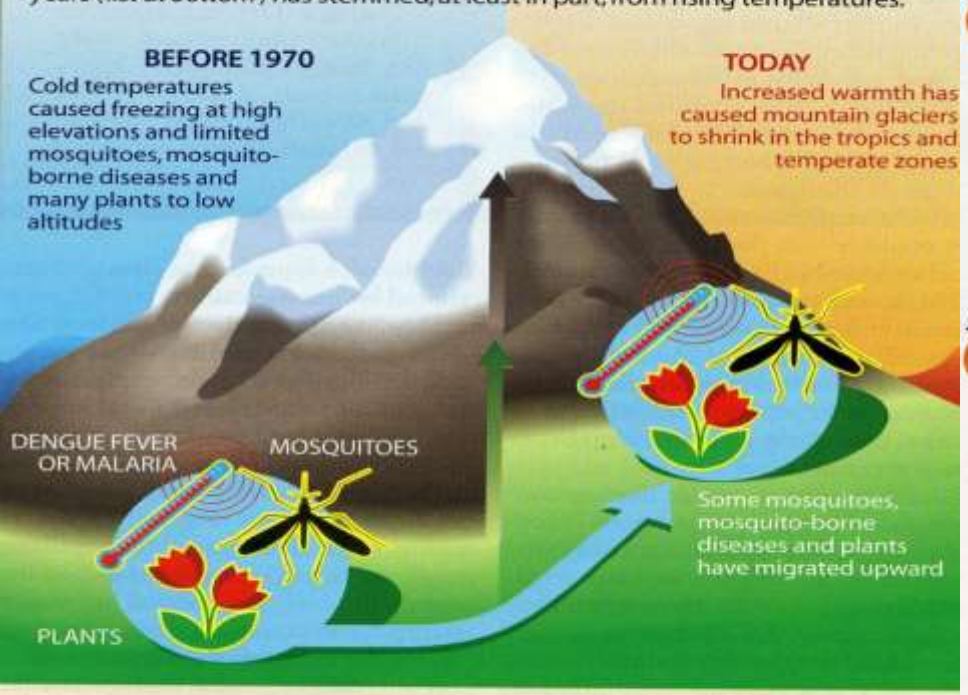


MALARIA...WEST NILE VIRUS...HANTAVIRUS...DENGUE...CHOLERA...

Global Warming: The Hidden Health Risk

Changes Are Already Under Way

Computer models have predicted that global warming would produce several changes in the highlands: summit glaciers (like North Polar sea ice) would begin to melt, and plants, mosquitoes and mosquito-borne diseases would migrate upward into regions formerly too cold for them (*diagram*). All these predictions are coming true. This convergence strongly suggests that the upward expansion of mosquitoes and mosquito-borne diseases documented in the past 15 years (*list at bottom*) has stemmed, at least in part, from rising temperatures.



WHERE DISEASES OR THEIR CARRIERS HAVE REACHED HIGHER ELEVATIONS

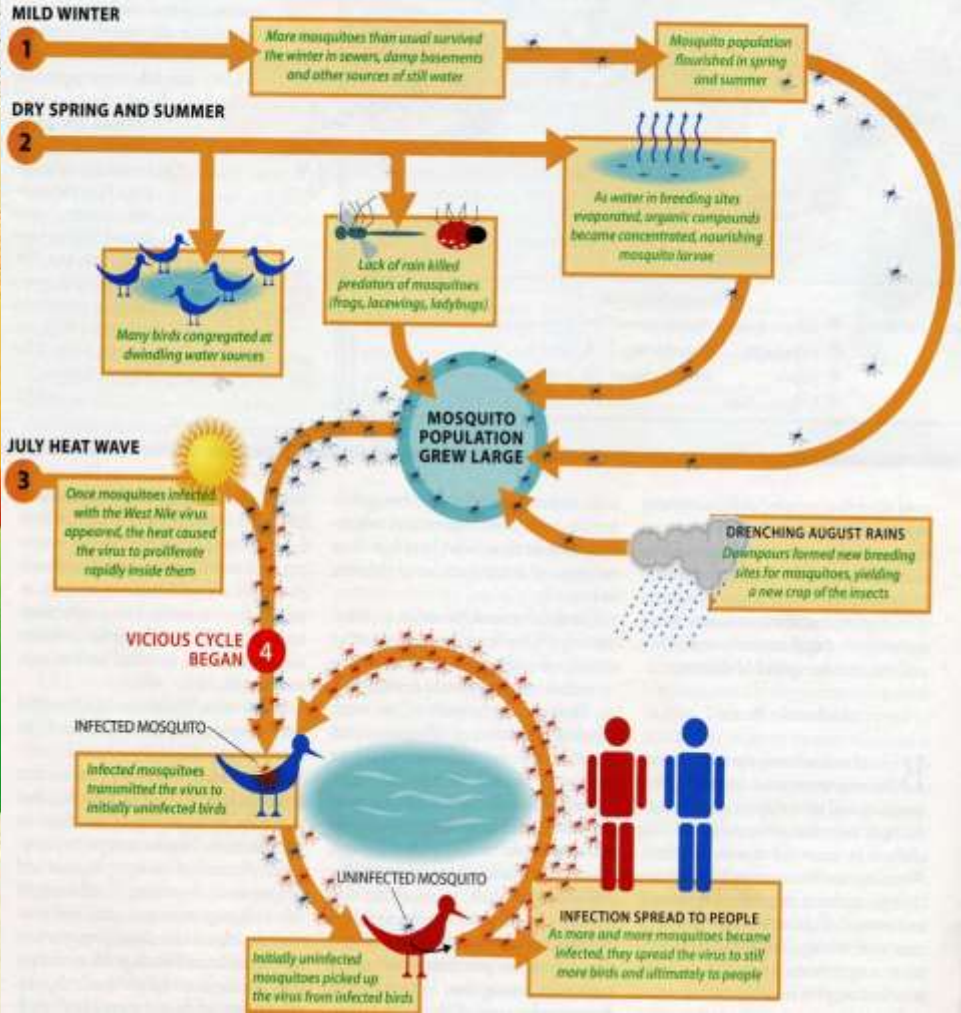
Malaria
Highlands of Ethiopia, Rwanda, Uganda and Zimbabwe
Usamabara Mountains, Tanzania
Highlands of Papua New Guinea and West Papua (Irian Jaya)

Dengue fever
San Jose, Costa Rica
Taxco, Mexico

***Aedes aegypti* mosquitoes**
(can spread dengue fever and yellow fever)
Eastern Andes Mountains, Colombia
Northern highlands of India

Weather and the West Nile Virus

This diagram offers a possible explanation for how a warming trend and sequential weather extremes helped the West Nile virus to establish itself in the New York City area in 1999. Whether the virus entered the U.S. via mosquitoes, birds or people is unknown. But once it arrived, interactions between mosquitoes and birds amplified its proliferation.



Malaria Journal

BioMed Central

Review

Open Access

Global warming and malaria: knowing the horse before hitching the cart

Paul Reiter

Address: Insects and Infectious Disease Unit, Institut Pasteur, 25-28 rue du Dr Roux, 75724 Paris, France

Email: Paul Reiter - paul.reiter@pasteur.fr

Published: 11 December 2008

Malaria Journal 2008, 7(Suppl 1):S3 doi:10.1186/1475-2875-7-S1-S3

This article is available from: http://www.malariajournal.com/content/7/S1/S3

Abstract

Speculations on the potential impact of climate change on human health frequently focus on malaria. Predictions are common that in the coming decades, tens – even hundreds – of millions more cases will occur in regions where the disease is already present, and that transmission will extend to higher latitudes and altitudes. Such predictions, sometimes supported by simple models, are persuasive because they are intuitive, but they sidestep factors that are key to the transmission and epidemiology of the disease: the ecology and behaviour of both humans and vectors, and the immunity of the human population. A holistic view of the natural history of the disease, in the context of these factors and in the precise setting where it is transmitted, is the only valid starting point for assessing the likely significance of future changes in climate.

2. Will malaria return to North-West Europe?

Willem Takken, Piet A. Kager and Jan Peter Verhave

Abstract

Historically, malaria was widespread in Europe, reaching as far north as the United Kingdom, the Netherlands and even Sweden and Finland. In southern Europe, malaria was caused by *Plasmodium falciparum*, *P. vivax* and *P. malariae*, but further north only the latter two parasite species were found. The main vector species was *Anopheles atroparvus* Van Thiel, although *An. messeae* Falleroni was suspected to be a vector in Central Europe and Scandinavia. The disease was eradicated from Europe in the second half of the 20th century with DDT and modern drugs. In spite of a near-constant and large number of cases of imported malaria, as well as the proven presence of anopheline vectors, the return of local malaria transmission has not been observed, presumably because of a lack of a sufficiently dense cluster of parasite carriers and an efficient health care system that is able to diagnose and treat malaria patients successfully. It is considered whether climate change might alter this situation, allowing for higher mosquito densities and more favourable environmental conditions for *Plasmodium* development in the mosquito vectors. We argue that under climate change, causing higher temperatures and intensified precipitation, conditions for local malaria transmission will improve, but that the public health measures will preclude the building up of an infectious parasite reservoir. So people might be exposed to more mosquito bites, but the chance of such mosquitoes becoming infected with malaria parasites will not alter significantly compared to the current situation. Therefore, climate change is unlikely to affect the malaria-free state of North-West Europe.

Table 2. Anopheles species recorded from Europe, their status as malaria vector and geographic distribution.

Species	Status as malaria vector	Geographic distribution
Anopheles algeriensis Theobald	+	Mediterranean countries
Anopheles claviger (Meigen)	+	all of Europe
Anopheles hyrcanus (Pallas)	??	along Mediterranean coast
Anopheles maculipennis complex:		
An. maculipennis s.s. Meigen	??	temperate regions of Europe
An. atroparvus van Thiel	++	temperate regions of Europe, including Iberian peninsula
An. beklemishevi Stegnii & Kabanova	??	Sweden, Finland, Russia (Siberia)
An. daciae Linton, Nicolescu & Harbach	??	Romania, UK, other countries??
An. labranchiae Falleroni	+++	Southern Italy, Sardinia, Sicily, Corsica, Dalmatia coast
An. melanoon Hackett		Mediterranean coast
An. messeae Falleroni	??	all of Europe except Iberian peninsula, Southern Italy and Balkans/Greece
An. sacharovi Favre	+++	Southern Italy, Sardinia, Sicily, Corsica, Balkan, Greece, Turkey
An. superpictus Grassi	??	Corsica, Italy, Balkans, Greece
Anopheles petragnani del Vecchio	??	along Mediterranean coast
Anopheles plumbeus Stephens	??	temperate regions
Anopheles sergentii (Theobald)	+++	Sicily

+,++,+++Proven malaria vecors, in ascending importance; ??Malaria vector status uncertain.

MALARIA JOURNAL

RESEARCH Open Access

Malaria resurgence risk in southern Europe: climate assessment in an historically endemic area of rice fields at the Mediterranean shore of Spain

Sandra Sainz-Elipe[1], Jose Manuel Latorre[1], Raul Escosa[2], Montserrat Masià[2], Marius Vicent Fuentes[1], Santiago Mas-Coma[1], Maria Dolores Bargues[1*]

Abstract

Background: International travel and immigration have been related with an increase of imported malaria cases. This fact and climate change, prolonging the period favouring vector development, require an analysis of the malaria transmission resurgence risk in areas of southern Europe. Such a study is made for the first time in Spain. The Ebro Delta historically endemic area was selected due to its rice field landscape, the presence of only one vector, *Anopheles atroparvus*, with densities similar to those it presented when malaria was present, in a situation which pronouncedly differs from already assessed potential resurgence areas in other Mediterranean countries, such as France and Italy, where many different *Anopheles* species coexist and a different vector species dominates.

Methods: The transmission risk was assessed analysing: 1) climate diagrams including the minimum temperature for *Plasmodium falciparum* and *Plasmodium vivax* development; 2) monthly evolution of the Gradient Model Risk (GMR) index, specifying transmission risk period and number of potential *Plasmodium* generations; 3) ecological characteristics using remote sensing images with the Eurasia Land Cover characteristics database and the monthly evolution of the Normalized Difference Vegetation Index (NDVI); 4) evaluation of *A. atroparvus* population dynamics.

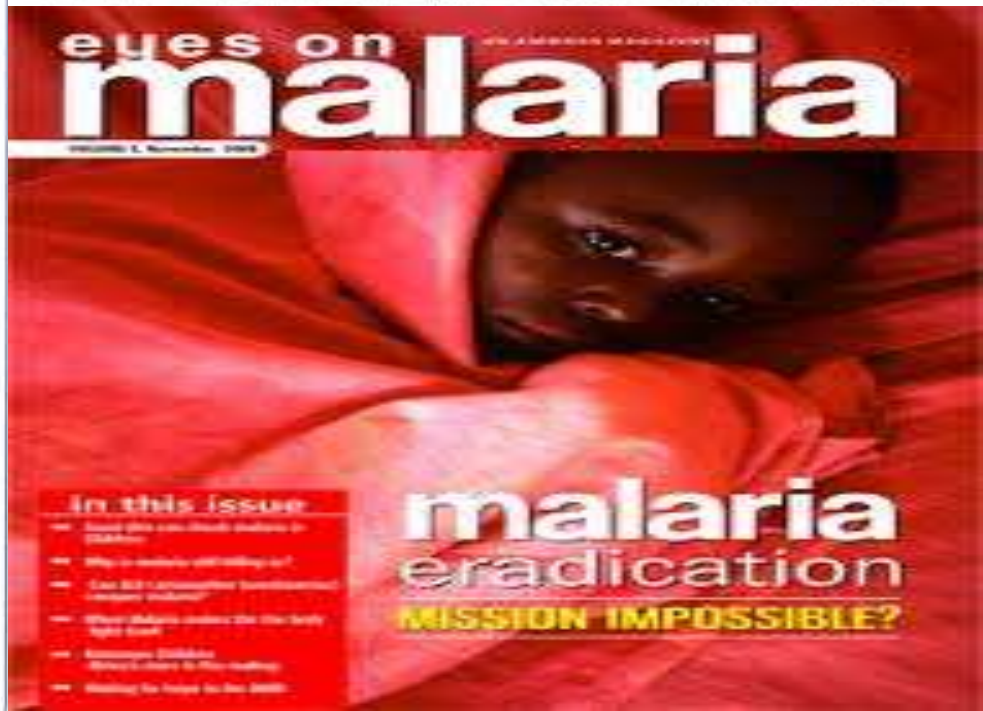
Results: Climatological analyses and GMR index show that a transmission risk presently exists, lasting from May until September for *P. falciparum*, and from May until October for *P. vivax*. The GMR index shows that the temperature increase does not actually mean a transmission risk increase if accompanied by a precipitation decrease reducing the number of parasite generations and transmission period. Nevertheless, this limitation is offset by the artificial flooding of the rice fields. Maximum NDVI values and *A. atroparvus* maximum abundance correspond to months with maximum growth of the rice fields.

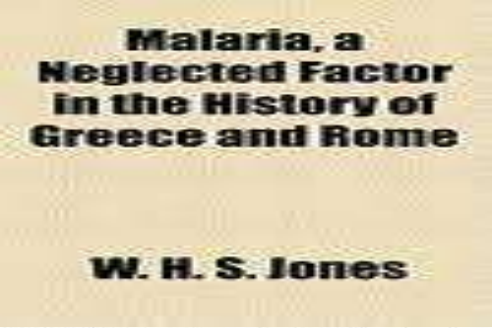
Conclusions: The Ebro Delta presents the ecological characteristics that favour transmission. The temperature increase has favoured a widening of the monthly potential transmission window with respect to when malaria was endemic. The combined application of modified climate diagrams and GMR index, together with spatial characterization conforms a useful tool for assessing potential areas at risk of malaria resurgence. NDVI is a good marker when dealing with a rice field area.

Airport malaria: a review

M. Isaäcson[1]

Cases of malaria occasionally arise among individuals who have never visited a malarious area. Such patients, who also lack a history of blood transfusions or intravenous drug abuse, are usually shown to have "airport malaria". Most reports of airport malaria consist of case histories, although some epidemiological reviews have also appeared. The clinical and epidemiological features of 29 cases of airport malaria that were reported in Europe from 1969 to 1988 are reviewed here. Although airport malaria is rare, the apparent absence of risk factors for the disease in a patient's history can result in delays in diagnosis and appropriate treatment. Tests to exclude malaria should therefore be carried out on patients who work at or live near an international airport and who present with acute febrile illnesses.



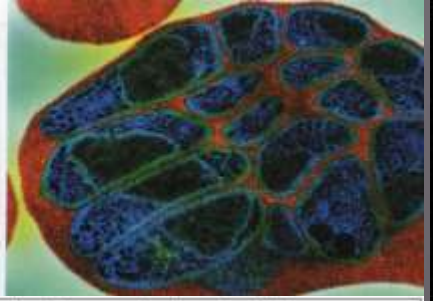


Εικόνα 1. Τόπος κατοικίας ασθενών με ελονοσία χωρίς ιστορικό ταξιδιού σε ενδημική χώρα. Ελλάδα, περίοδος 2011 (έως 16.09.2011)

Πίνακας 1. Τόπος κατοικίας ασθενών με ελονοσία χωρίς ιστορικό ταξιδιού σε ενδημική χώρα σε Έλληνες ασθενείς. Ελλάδα, περίοδος 2011 (έως 16.09.2011)

Περιφερειακή Ενότητα κατοικίας	Αριθμός ασθενών	Ασθενείς ανά 100.000 πληθυσμού*
Λακωνίας	10	8,61
Δήμος Ευρώτα	10	50,50
Ευβοίας	2	0,97
Βοιωτίας	1	0,80
Ανατολικής Αττικής	2	0,50
Λάρισας	1	0,35
Σύνολο χώρας	**16**	**0,14**

*Υπολογίστηκε με βάση στοιχεία πληθυσμού από την Ελληνική Στατιστική Αρχή (εκτιμήσεις 2008).



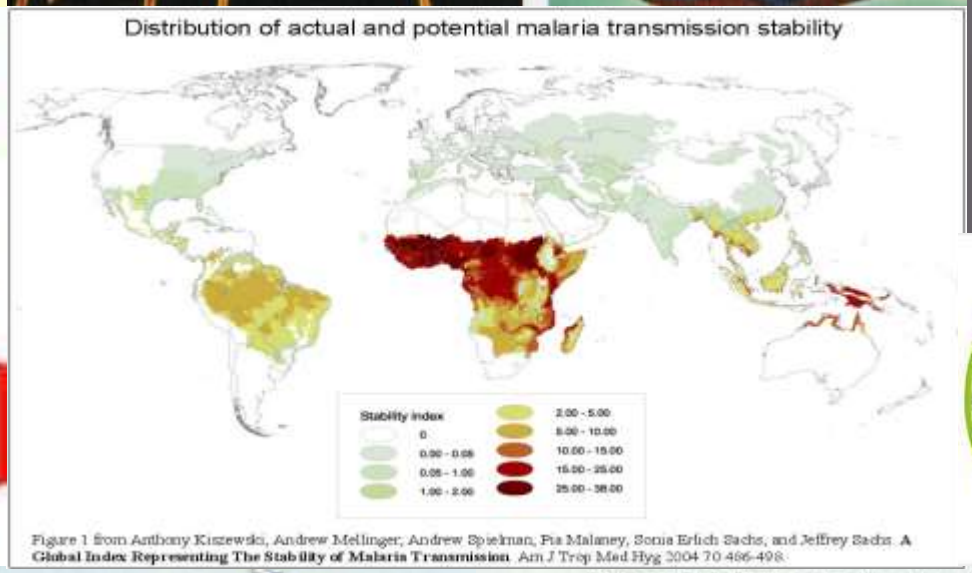
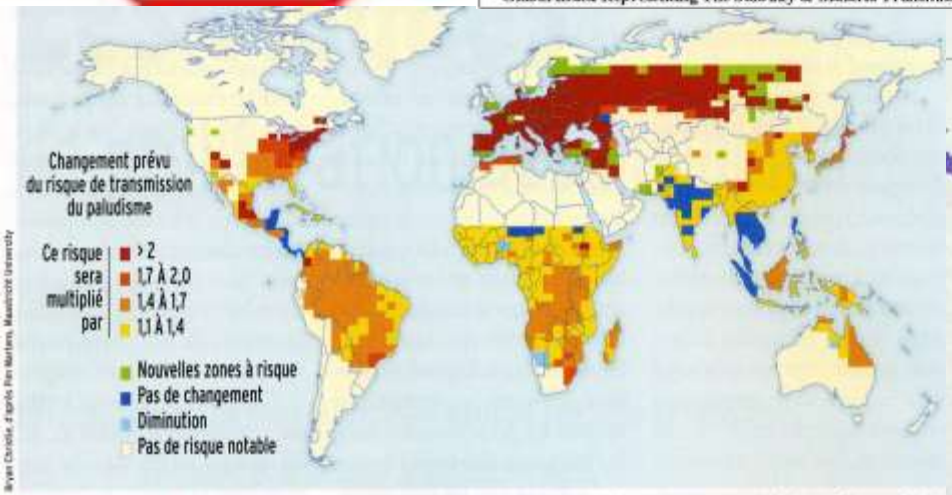
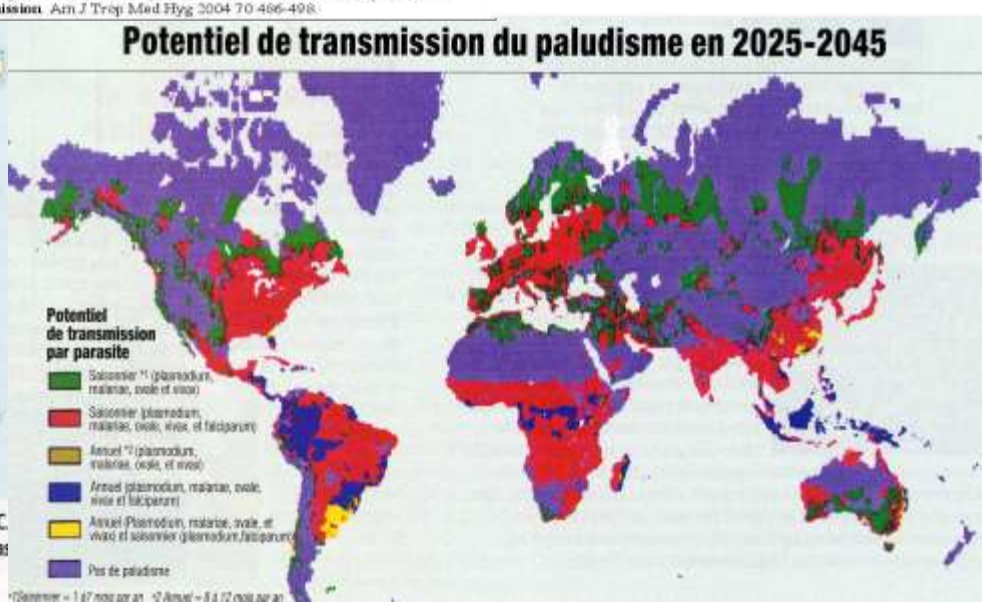


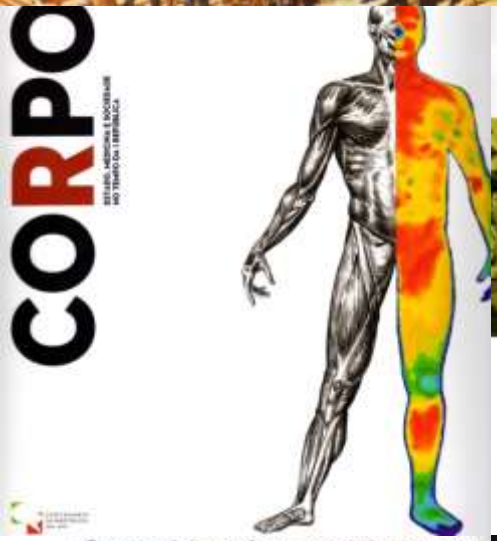
Figure 1 from Anthony Kiszewski, Andrew Mellinger, Andrew Spielman, Pia Malaney, Sonia Ehrlich Sachs, and Jeffrey Sachs A Global Index Representing The Stability of Malaria Transmission. Am J Trop Med Hyg 2004 70 486-498





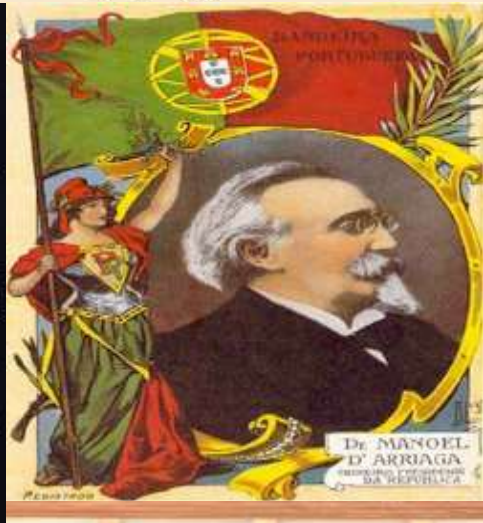
2. LE RISQUE DE TRANSMISSION DU PALUDISME aux alentours de 2020 aura augmenté dans de nombreuses parties du monde (en comparaison avec le risque moyen dans les années 1961 à 1990), selon des projections fondées sur un accroissement de la température de 1 °C. L'analyse ne tient compte que de la variation de température et pas des autres facteurs qui agiraient sur l'extension du paludisme.

A MALÁRIA EM PORTUGAL CONTINENTAL


CORPO


INSTITUTO
PASTEUR
DE LISBOA
soros
vacinas
análises
clínicas


Entre 1900 e 1930, em média, 38,3% dos óbitos eram de causa desconhecida
N.º DE ÓBITOS ANUAIS*
TUBERCULOSE 8980 PNEUMONIA 3849 CANCRO 1777
TOSSE CONVULSA 703 CIRROSE DO FÍGADO 671 DIFTERIA 563
TIFO EXANTEMÁTICO 334 SEZONISMO 229 ESCARLATINA 30
destruir os pelos e matar o tifo

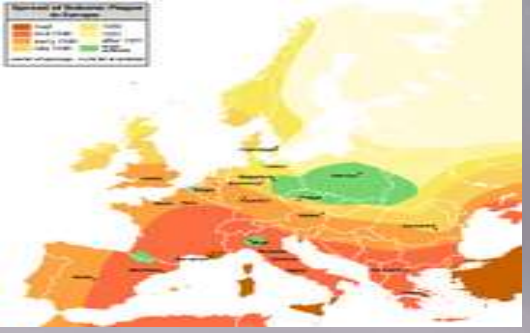

Dr. MANOEL D'ARRIAGA


Portugal é o país em que há mais raiva
RAIVA
3153
PESSOAS
TRATADAS
1918


1892
INSTITUTO
CÂMARA
PESTANA
PREPARAÇÃO
DE SOROS TERAPÊUTICOS
498 409


MORTALIDADE
DOENÇA
INFECTO-CONTAGIOSA
TUBERCULOS
grippe pneumónica
26,4


5-10-910

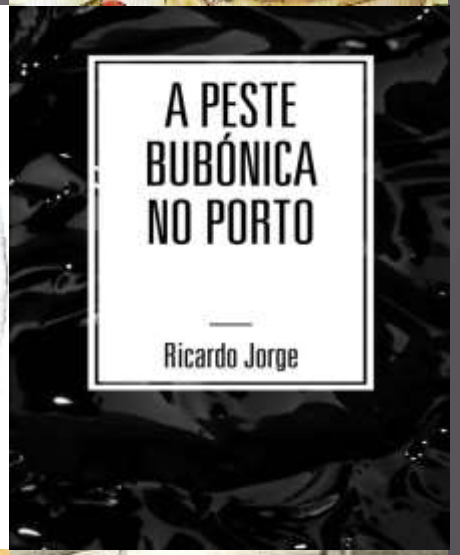


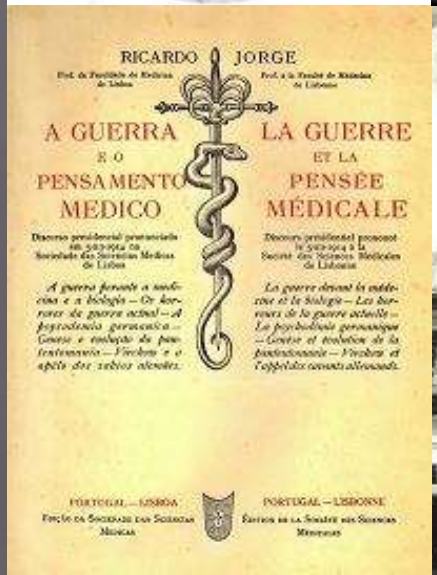
Ricardo Jorge

SOBRE A SAÚDE PÚBLICA …

Figura 3 – O Professor Ricardo Jorge e a Peste Bubónica no Porto. Caricatura de Manuel Monterroso (1876-1968).

"… o formigueiro humano germina em si próprio o veneno das sua destruição …há um estendal de vergonhas, de males e incúrias … é forçoso lavrar um protesto contra tanto desleixo, contra tanta inépcia, contra tanta loucura criminosa … não são só as revoadas de contágio que desafiam a debelação, mas também as endemias tenazes … tal como o sezonismo que estende pelo País largas manchas … há mais de 20 anos que as estâncias de saúde se preocupam com o estudo e combate do flagelo sem colher a realização dos seus propósitos … hoje basta dizer que somos o único país da Europa sem guerra organizada contra o sezonismo … <u>*esta é, como poucas, uma questão patriótica*</u> *… não será temeridade afirmar-se que a infecção sezonal avulta entre as piores pragas colectivas que flagelam a população portuguesa …contra o flagelo da tuberculose inaugurou-se, mas não se activou o combate … contra as moléstias venéreas, não há um único serviço de dispensário montado, como hoje o mandam os mais elementares princípios …" (sic.)*





PROPHYLAXIA INDIVIDUAL

DO

PALUDISMO

(BREVE ESTUDO)

DISSERTAÇÃO INAUGURAL

APRESENTADA Á

ESCÓLA MEDICO-CIRURGICA DO PORTO

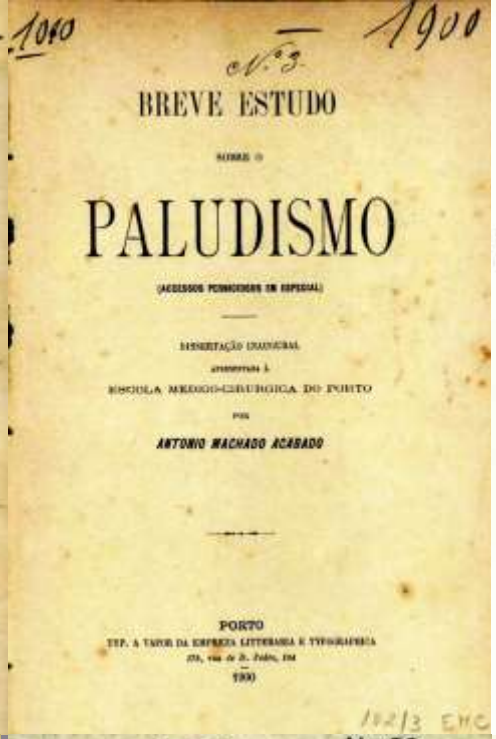
POR

Sebastião Edoardo Cezar de Sá

PORTO

Officinas do «Commercio do Porto»

1902



BREVE ESTUDO

SOBRE O

PALUDISMO

(ACCESSOS PERNICIOSOS EM ESPECIAL)

DISSERTAÇÃO INAUGURAL

APRESENTADA Á

ESCOLA MEDICO-CIRURGICA DO PORTO

POR

ANTONIO MACHADO ACABADO

PORTO

TYP. A VAPOR DA EMPREZA LITTERARIA E TYPOGRAPHICA

1900

BREVE ESTUDO

SOBRE

ETIOLOGIA E PROPHYLAXIA

DO

PALUDISMO

DISSERTAÇÃO INAUGURAL

APRESENTADA Á

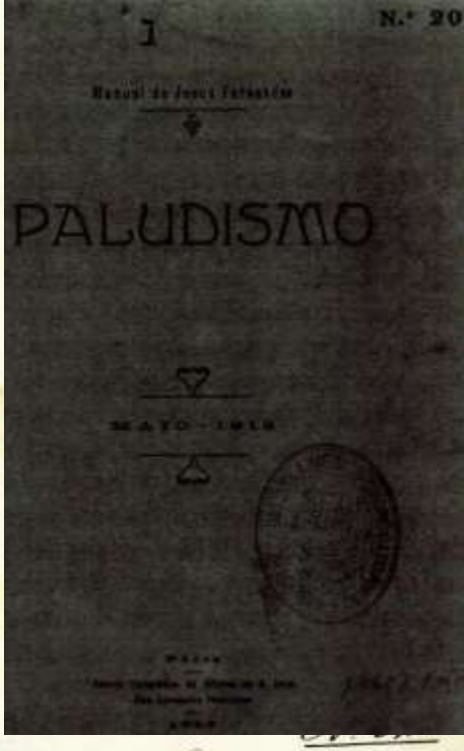
ESCOLA MEDICO-CIRURGICA DO PORTO

POR

Antonio Louzeiro Dias

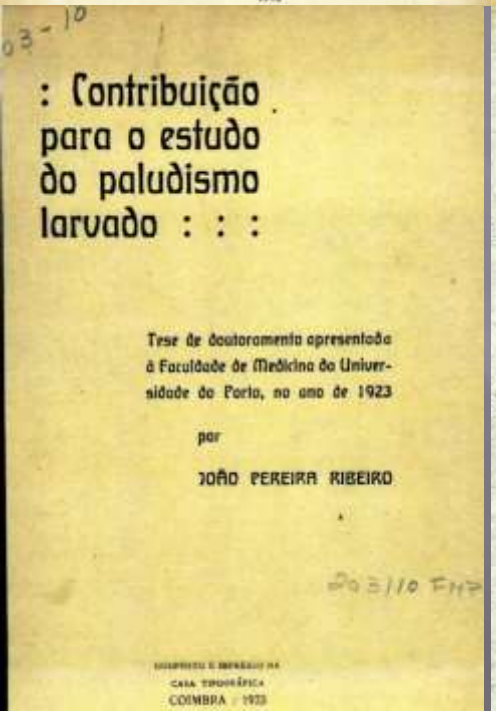
PORTO

1901



PALUDISMO

MAIO - 1918



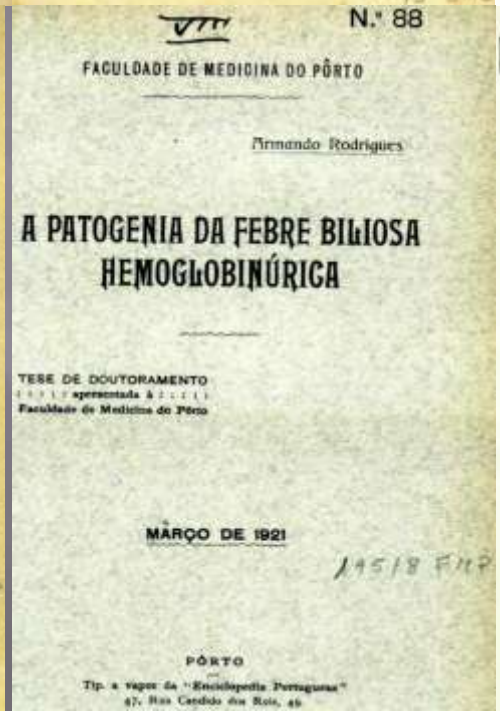
: Contribuição para o estudo do paludismo larvado : : :

Tese de doutoramento apresentada à Faculdade de Medicina da Universidade do Porto, no ano de 1923

por

JOÃO PEREIRA RIBEIRO

COIMBRA — 1923



N.º 88

FACULDADE DE MEDICINA DO PÔRTO

Armando Rodrigues

A PATOGENIA DA FEBRE BILIOSA HEMOGLOBINÚRICA

TESE DE DOUTORAMENTO

apresentada à

Faculdade de Medicina do Pôrto

MÀRÇO DE 1921

PÔRTO

Tip. a vapor da "Encyclopedia Portuguesa"

J. CONDILLAC PINTO

ESTUDO

SOBRE A ETIOLOGIA E A PROPHYLAXIA

DA

MALARIA

DISSERTAÇÃO INAUGURAL

APRESENTADA Á

ESCÓLA MEDICO-CIRURGICA DO PORTO

PORTO

Officinas do «Commercio do Porto»

1904

PROPHYLAXIA

DA

INFECÇÃO PALUSTRE

Dissertação inaugural para acto grande, segundo as novas proposições, e apresentada á Escholo Medico-Cirurgica do Porto

PARA SER DEFENDIDA

POR

MATHEUS AUGUSTO RIBEIRO DE SAMPAIO

SOB A PRESIDENCIA DO EXM.º SNR.

ILLIDIO ATRES PEREIRA DO VALLE

PORTO

Imprensa Portugueza

1879

INDALENCIO FROILANO DE MELLO

Introducção ao Estudo

DAS

FEBRES DE GÔA

(Uma pagina de Pathologia Colonial)

DISSERTAÇÃO INAUGURAL

APRESENTADA Á

ESCOLA MEDICO-CIRURGICA DO PORTO

PORTO

Typ. a vapor da "Encyclopedia Portugueza Illustrada,"

Rua Nova D. Amelia, 47 a 49

1910

Eduardo Alberto Ferreira d'Almeida

BREVE ESTUDO

SOBRE A

Endemo-epidemia palustre

DISSERTAÇÃO INAUGURAL

apresentada á

Faculdade de medicina do Porto

JULHO DE 1912

Imp. e Lith. do PAP. E TYP. AZEVEDO

de AZEVEDO & FILHO — Largo dos Loyos, 16

PORTO — 1912

Antonio de Mattos Pinto d'Azevedo

PROPHYLAXIA

DAS

Doenças endemicas dos paizes quentes

Dissertação inaugural

apresentada á

Escola Medico-Cirurgica do Porto

PORTO

Typ. a vapor da "Encyclopedia Portugueza Illustrada,"

Rua Nova D. Amelia, 47

1907

José de Paiva Gomes

O Paludismo e o Arrhenal

(ALGUMAS OBSERVAÇÕES)

Dissertação inaugural

apresentada á

Escola Medico-Cirurgica do Porto

PORTO

Cooperativa Gregoriana

M. Estephania, 58

1906

JOSÉ RODRIGUES DE CARVALHO

CHOROGRAPHIA PALUSTRE

DE

PORTUGAL

DISSERTAÇÃO INAUGURAL

APRESENTADA Á

ESCÓLA MEDICO-CIRURGICA DO PORTO

PORTO

TYP. A VAPOR DA REAL OFFICINA DE S. JOSÉ

Rua Alexandre Herculano

1899

Paludismo em Portugal: Breve Resenha Histórica I

- 1844: Escola Médica de Goa
- 1959: Comissão Nacional para analisar a relação entre a orizicultura e a Malária
- 1860: Publicação do Relatório da Comissão
- 1881: Inauguração do Laboratório Municipal de Higiene de Lisboa
- 1882: Inauguração do Gabinete de Microbiologia de Coimbra e Laboratório Municipal de Higiene do Porto
- 1887: Ensino da Medicina Tropical na Escola Naval
- 1888: 1º Artigo publicado por José Joyce "Das Formas Larvares do Impaludismo" (Medicina Contemporânea, Hospital da Marinha)
- 1892: Criados os Institutos Bacteriológicos de Lisboa e Porto
- 1895: Inauguração da Escola de Medicina Tropical (futuro IHMT)
- 1900: Inauguração do Instituto Câmara Pestana e realização do 1º Inquérito Nacional do Impaludismo
- 1901: Ricardo Jorge elabora o "Regulamento Geral dos Serviços de Saúde e Beneficência Pública" e cria-se o Instituto Central de Higiene (futuro INSA); Nomeada uma Comissão para Estudo e Combate ao Paludismo cujas recomendações são discutidas na Sociedade de Ciências de Lisboa
- 1901: 1ª Missão de Combate á Tripanosomose em Angola
- 1904: Primeiro estudo sobre o Anopheles em Portugal
- 1906: Realização em Lisboa do Congresso Internacional de Medicina
- 1911- Criação da Comissão Nacional de Defesa Anti-Sezonática
- 1920 – 1942: Intensificação da orizicultura em Portugal e Missão de Combate e Estudo da Malária na Aldeia Galega (Montijo)
- 1926: Reorganização geral dos Serviços Nacionais de Saúde Pública
- 1929: Assistentes do Instituto Câmara Pestana frequentam Curso Internacional de Malariologia organizado pela Sociedade das Nações; Início do combate ao Sezonismo, e Início do Ensino das Visitadoras Sanitária

Paludismo em Portugal: Breve Resenha Histórica II

- 1930 Abertura da Estação Experimental de combate ao Sezonismo em Benavente
- 1932: Abre a 1ª Estação Anti-Sezonática (A. Sal) e estabelece-se o 1º contacto entre o Governo Português e a Fundação Rockfeller
- 1933: Chegada dos 1ºs Estagiários Portugueses à John´s Hopkins School of Hygiene e realização do 1º Inquérito Nacional, publicação do 1º Relatório Nacional (F. Cambournac), e Organização dos Serviços Anti-Sezonáticos
- 1934: Constituída a Comissão Reguladora do Comércio de Arroz e início das actividades da Estação Anti-Sezonátrica de A. Moura (futuro Instituto de Malariologia, com fins de Combate, Investigação e Formação de Técnicos); Início da taxação do Comércio do Arroz c/ finalidade de subsidiar o Combate ao Sezonismo; Criação dos Centros de Saúde
- 1937: Início da actividade das Ambulâncias - Laboratórios
- 1943: Início da publicação dos Anais do IHMT
- 1939: O Sezonismo é considerado DDO, e F. Cambornac é nomeado Director do Instituto de A. Moura, altura em que este é doado pela F. Rockfeller ao Estado Português
- 1940: Introdução infrutífera de Estírpes de Mosquitos incapases de transmitir Plasmodium em Canha, e início da utilização do DDT
- 1941: Inauguração de uma pequena Enfermaria no I. de A. Moura
- 1946: F. Cambournac representa Portugal na Reunião inaugural da OMS
- 1953: Relatório sobre a Malária em S. Tomé e Príncipe
- 1954: Realização dos 1ºs Cursos Internacionais de Malariologia da iniciativa da OMS e dirigidos por F. Cambournac
- 1958: Malária endémica é erradicada de Portugal Continental
- 1959: Celebração do Acordo de Coordenação Anti-Palúdica Ibérico
- 1971: O Instituto de Malariologia é integrado no INSA
- 1973: O Instituto de A. Moura passa a dedicar-se ao estudo das Zoonoses e a Europa é declarada Região não Endémica de Malária pela OMS
- 1975: 1 caso de transmissão autóctone descrito no Distrito de Beja
- 1993: O Instituto de A. Moura passa a designar-se CEVDI

MINISTÉRIO DO INTERIOR

Direcção Geral de Saúde

- Repartição de Saúde
- Parque Sanitário

Comissão Reguladora do Comércio do Arroz ➡ **DIRECÇÃO DE SERVIÇOS ANTI-SEZONÁTICOS** ⬅ Fundação Rockefeller

INSTITUTO DE MALARIOLOGIA

- Secção Administrativa
  - Secretaria
    - Expediente e Arquivo
  - Contabilidade
  - Armazém - depósito
  - Transportes
- Secção de Publicidade e Propaganda
  - Biblioteca
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  - Cartazes, Fotografia
- Secção de Engenharia
  - Bonifica Hidraulica
  - Habitações e Saneamento
  - Protecção Mecânica
- Secção Científica
  - Ensino
  - Investigação

SECÇÃO TÉCNICA DE LUTA ANTI-SEZONÁTICA

ESTAÇÕES

Montemor-O-Velho

Dispensários: (1)	Consultas Ambulantes:
Oliveira do Bairro Louriçal	Tentugal Arazede Vila Verde Fója Rol S. Silvestre

Benavente

Dispensários:	Consultas Ambulantes:
Coruche Vendas Novas Águas de Moura	Samora Correia Santo Estevão Salvaterra de Magos Marinhais Muge

Idanha-A-Nova

Dispensários:	Consultas Ambulantes:
Monfortinho	Ladoeiro Medelim Monsanto Proença-A-Velha Zebreira

Alcácer do Sal

Dispensários:	Consultas Ambulantes:
Comporta Aljezur Quarteira	Santa Suzana Grândola D. Rodrigo Torrão Palma Parchanas

POSTOS

Pocinho	Soure	Ponte de Sôr	Azambuja
Consultas Ambulantes:	**Consultas Ambulantes:**	**Consultas Ambulantes:**	**Consultas Ambulantes:**
Muxagata Touça Freixo de Numão Junqueira Horta da Vilariça	Pombal Vila Nova de Anços Sebal Grande Ameal	Galveias Montargil Bemposta Longomel	Carregado Vila Franca de Xira Cartaxo Valada Vale de Santarém Ota

(1) **Dispensário**: Chamava-se dispensário ao destacamento duma visitadora sanitária ou dum auxiliar de laboratório para uma localidade onde actua, sob a direcção da Estação respectiva.

INSTITUTO DE MALARIOLOGIA
ÁGUAS DE MOURA — PORTUGAL

Temos o prazer de anunciar que, com a autorização de Sua Excelência o Ministro do Interior, e da Direcção Geral de Saúde Pública, o Doutor Francisco José C. Cambournac foi nomeado Director do Instituto de Malariologia, e tomará posse do novo cargo no dia 2 do próximo mês de Dezembro.

We are pleased to announce that Doctor Francisco José C. Cambournac has been appointed Director of the Malaria Institute, as of December 2, 1939.

ÁGUAS DE MOURA
November 15, 1939.

Dr. Rickie H. Hall
Retiring Director

La Malaria
EN
PORTUGAL
Premiers résultats d'une enquête

Estação para o Estudo do Sezonismo. Águas de Moura

República Portuguesa
Ministério das Colónias

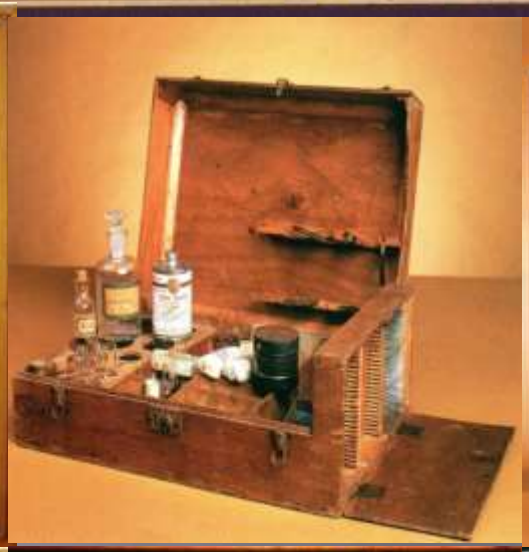
O SEZONISMO
EM
PORTUGAL

Curso Internacional de Malariologia para Médicos, 1952
António Levy Mendes (Portugal), Claude Vermeil (França), Guy Houel (Argélia), J. Fernandez Maruto (Espanha), Branimir Richter (Jugoslávia), Luis Contreras Poza (Espanha), Prof. F. Cambournac, Anastassius Marinos (Grécia), L. Saadat (Irão), George Fameliaris (Grécia), Etienne Noel (França), L. Andarelli (Argélia), Vamona Sinari (Portugal), Jean Deniaud (França), Hector Meyus (Bélgica), Luis Meira (Portugal)

Inauguração do Instituto de Malariologia de Águas de Moura
Fotografia de Américo Ribeiro - Arquivo Municipal de Palmela

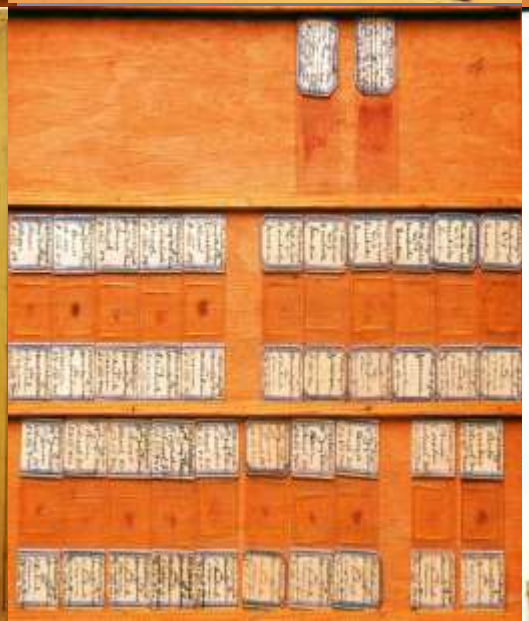

MINISTERIO DO INTERIOR
DIRECÇÃO GERAL DE SAÚDE
SERVIÇOS ANTI SOLÚVEIS
D. G. S.
OBRA DE DEFESA MECÂNICA
REDES METÁLICAS
EXECUTADA PELO ESTADO

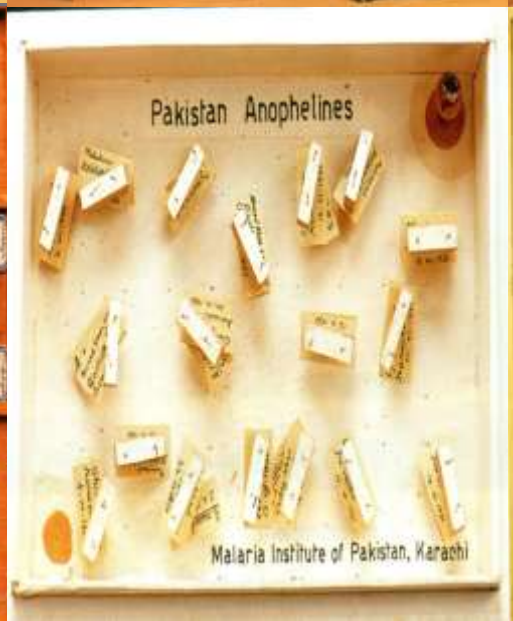

INSTITUTO DE MALARIOLOGIA
UM BOM MOSQUITEIRO EVITARÁ QUE OS MOSQUITOS PIQUEM AS CREANÇAS ENQUANTO DORMEM E LHES TRANSMITAM AS SEZÕES



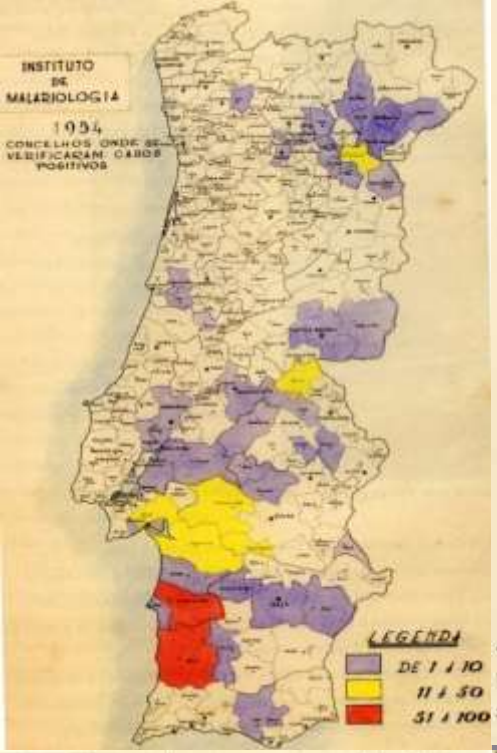

INSTITUTO DE MALARIOLOGIA
CASA MAL PROTEGIDA NÃO EVITA QUE OS MOSQUITOS TRANSMITAM AS SEZÕES ÁS PESSOAS QUE LÁ DORMEM

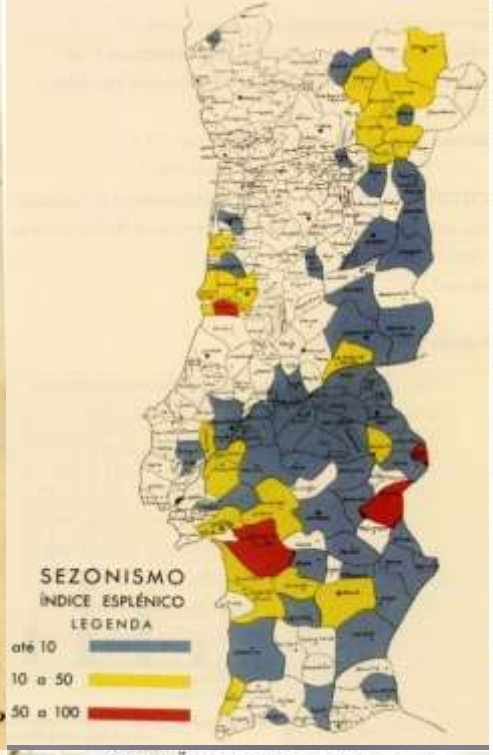

INSTITUTO DE MALARIOLOGIA
UM MOSQUITEIRO RÔTO DE POUCO VALE. OS MOSQUITOS ENTRAM E TEEM DIFICULDADE EM SAÍR




Pakistan Anophelines
Malaria Institute of Pakistan, Karachi


INSTITUTO DE MALARIOLOGIA
CUIDA DA PROTECÇÃO DA TUA CASA SE QUERES EVITAR AS SEZÕES





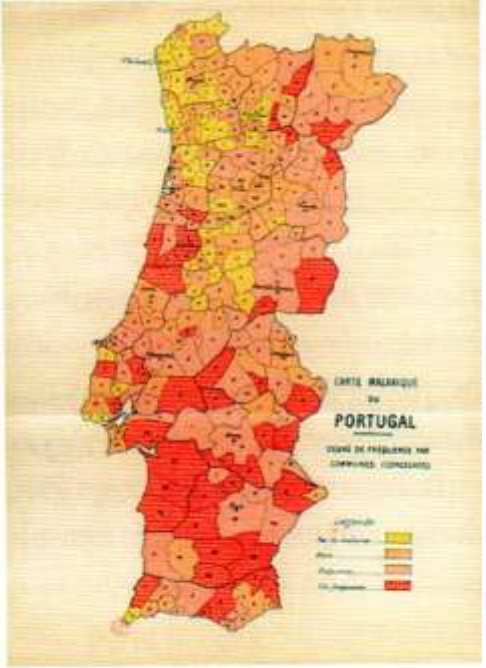


Figura 2 – Carta de sezonismo

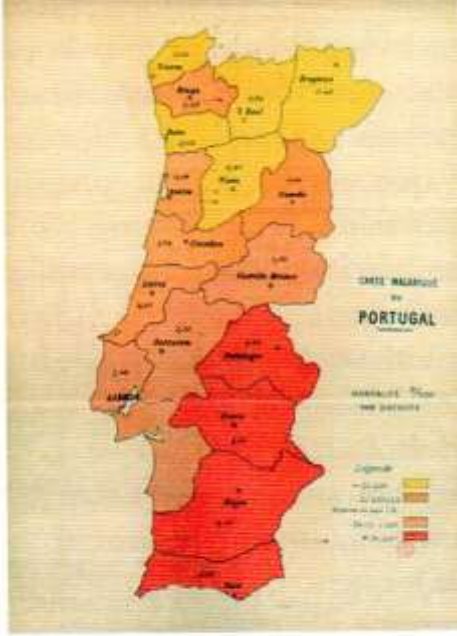
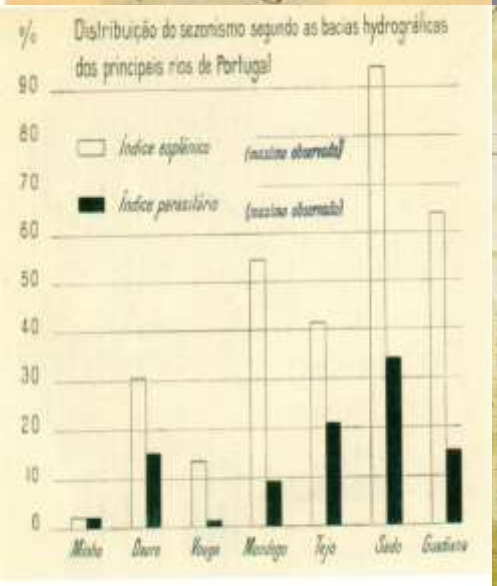
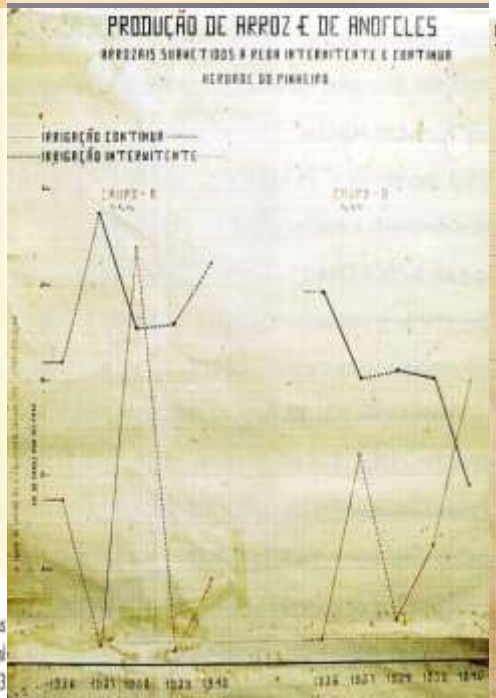


Figura 4 – Carta de mortalidade por malária, por distritos



Distribuição do Sezonismo segundo as bacias hidrográficas dos principais rios de Portugal
in CAMBOURNAC, Francisco e LANDEIRO, Fausto - O Sezonismo em Portugal. 1933



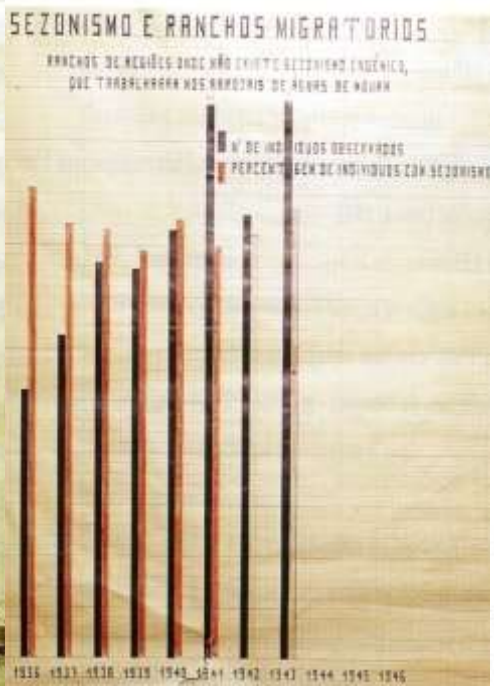


Figura 3 – A distribuição dos vectores da malária em Portugal – Carta de Anophelismo

ESTUDOS NACIONAIS RECENTES NOS DOMÍNIOS DA HISTÓRIA, GEOGRAFIA, ANTROPOLOGIA, EPIDEMIOLOGIA E DA ENTOMOLOGIA

VIAGENS | E MISSÕES CIENTÍFICAS NOS | TRÓPICOS

1883 | 2010

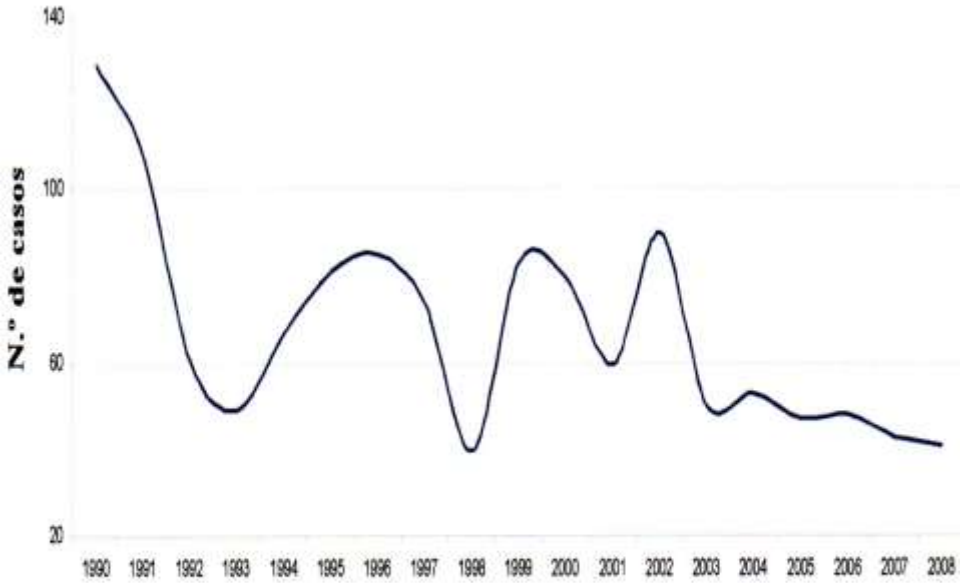


Figura 3.4 – Casos importados de malária em Portugal Continental (1990-2008) (fonte dos dados: WHO, 2009)

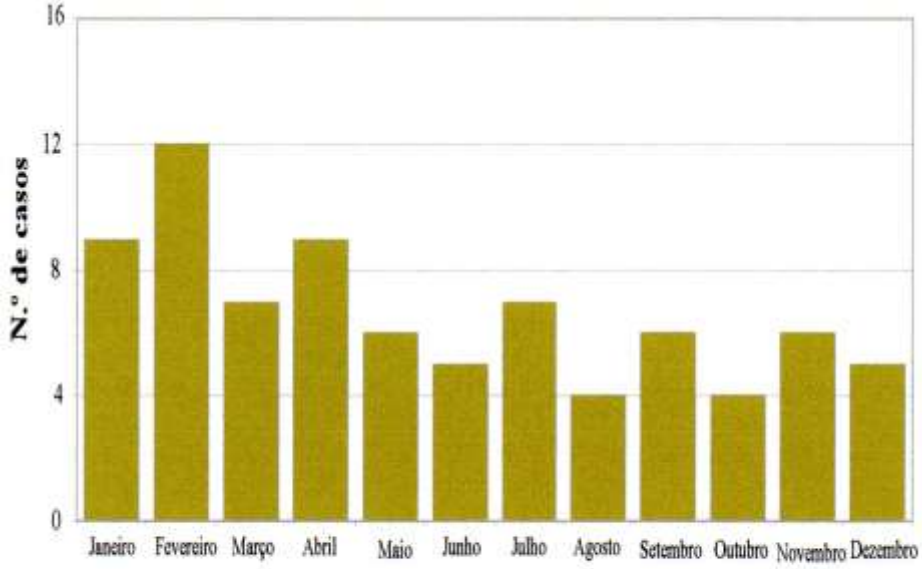


Figura 3.12 – Casos notificados de malária em Portugal Continental, por mês, no ano 2000 (fonte dos dados: DGS, 2001)

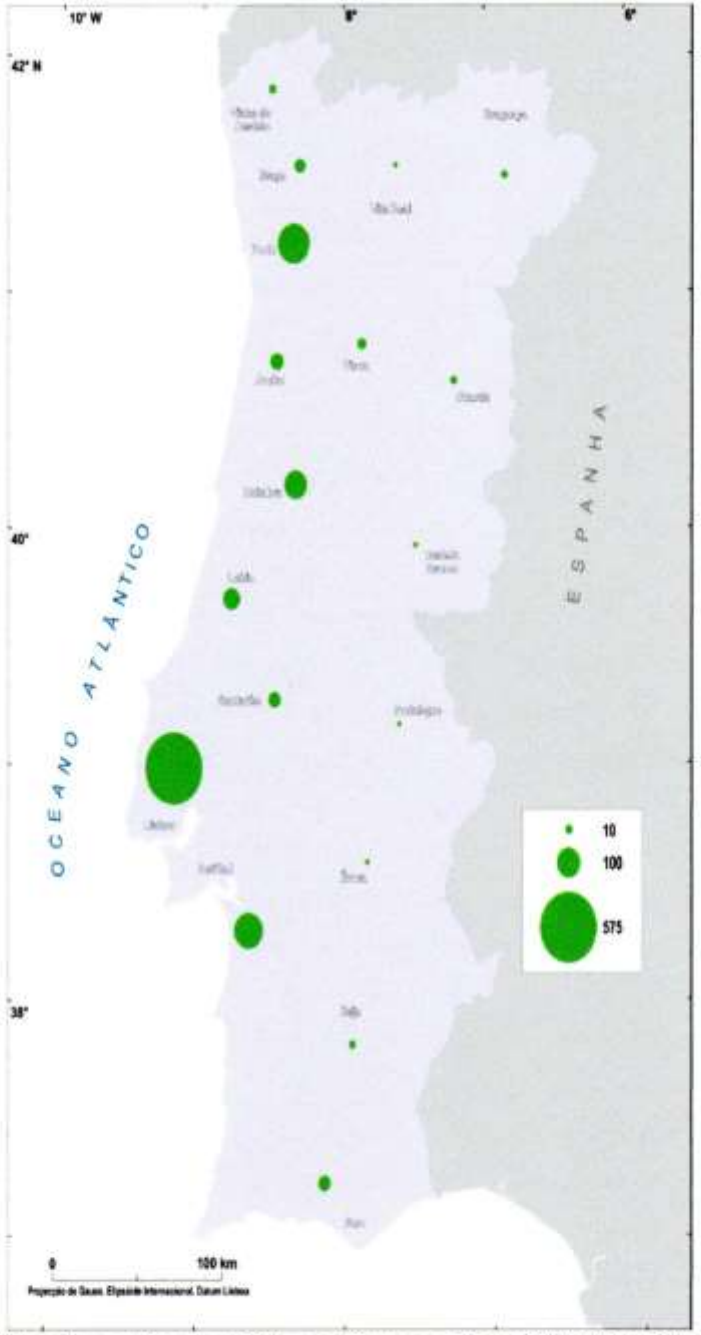


Figura 3.5 – Casos importados de malária, por distrito, em Portugal Continental (total de 1990 a 2006) (fonte dos dados: INE, 1991; INE, 1992; INE, 1993; INE, 1994; INE, 1995; INE, 1996; DGS, 2001; DGS, 2002; DGS, 2003; DGS, 2004; DGS, 2007; DGS, 2009)

Universidade de Lisboa

Instituto de Ciências Sociais

"Uma Questão Nacional"

Enredos da malária em Portugal, séculos XIX e XX

Mónica Alexandra de Almeida Monteiro Saavedra

Doutoramento em Ciências Sociais
Especialidade: Antropologia Social e Cultural

2010

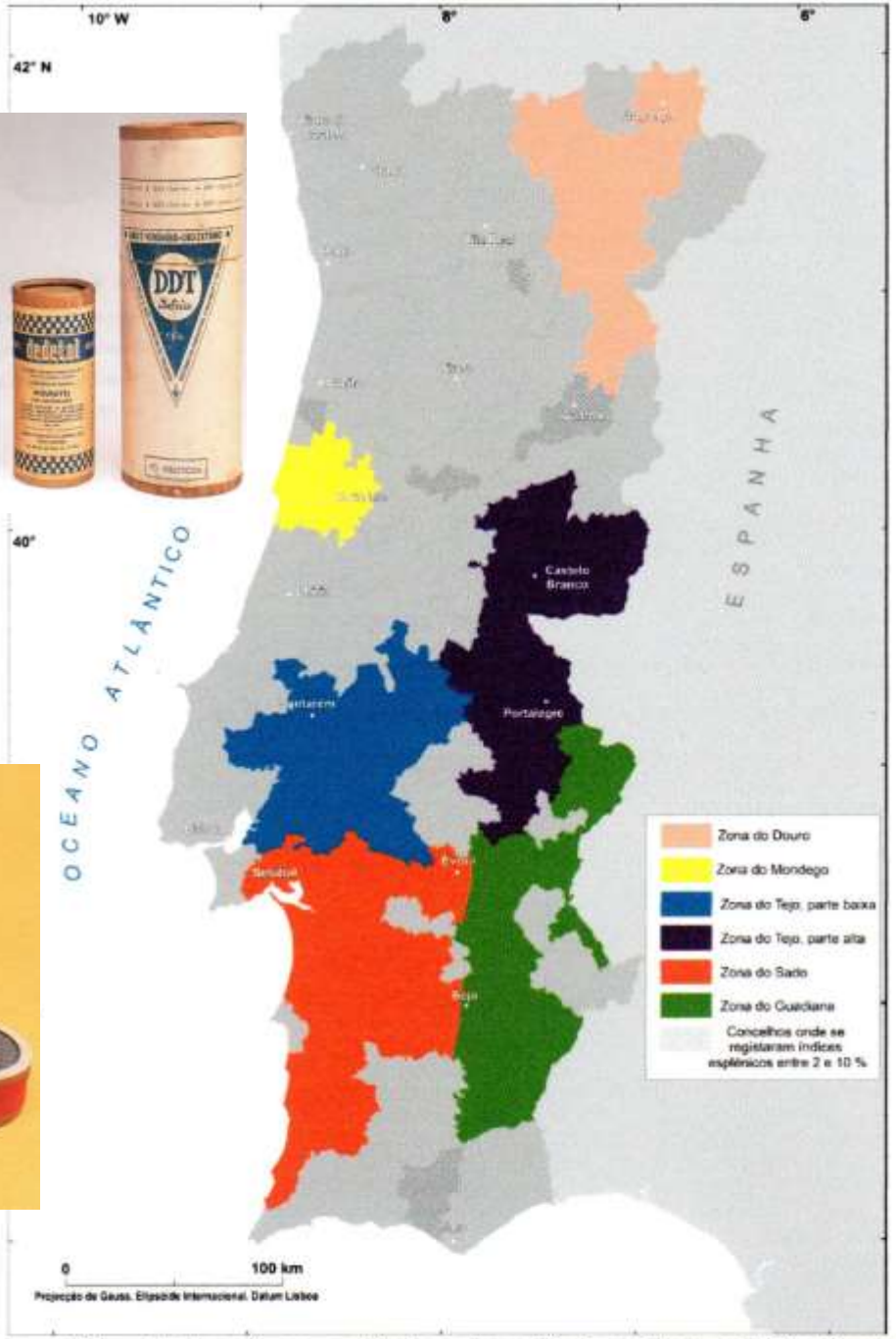


Figura 3.3 – Antigas áreas endémicas de malária em Portugal Continental (adaptado de Cambournac, 1942)

Aquilo, na parte da manhã tava que era uma beleza; tomava o pequeno-almoço, começava a trabalhar, em chegando aí para as onze horas, meio-dia, caía-se um frio comigo, e depois, no fim de resto, um calor... quarenta e não sei quantos graus de febre (Domingos, Azambuja, 2006).

D – Aquela febre, aquela febre que se tinha, o corpo tremia todo.
M – É que a gente queria suster a tremura e não era capaz; batia mesmo o queixo com a febre (Domingos e Matilde, Azambuja, 2006).

A gente ia para o trabalho [...] ao fim de uma hora ou coisa assim começavam a... em pleno Verão! a tremer todos com um frio terrível e a lançar fora; perdia a força, tínhamos que ir embora para casa (Dâmaso, Vale de Guizo, 2006).

[...] a primeira coisa que aparecia era o frio. Era tremer, não havia roupa que fosse capaz de tapar aquele frio. Depois de passar aquele frio, então é que era largar suor por todo o lado... pronto. E depois, isto era 2-3 dias, ao fim de dois ou três... umas febres de quarenta, quarenta e tal graus sempre que aquilo dava (João, Rio de Moinhos, 2006).

[...] sentia logo aquele frio, aquele frio, aquele frio... e depois passava, depois vinha a febre, começava a ter os lábios tudo arrebentado, tudo da febre... bom, no outro dia já a gente sabia, pois passava; aquilo então, passa... tira a vontade de comer mas dura, dura aí uns tantos tempos (João, Rio de Moinhos, 2006).

Aquela sezão era assim: a gente de manhã levantava-se parecia que era capaz de romper Tróia. Quando era daí a bocadinho... ai que malandrice!!! Aquilo não apetecia fazer nada!!! (Francisco, Alcácer do Sal, 2006).
Aquilo durava um dia; no outro dia a gente levantávamos, andávamos... as quartãs era dia sim, dia não; era dia sim, dia não, que era com mais força. E as sezões dava-nos todos os dias; a gente às vezes até nem ia trabalhar (Maria, Vale de Guizo, 2006).

R – [...] havia as sezões, que era dia sim, dia não ou havia as quartãs, que essas eram... as quartãs era quê? de 2 em 2 dias?
D - As quartãs era de 2 em 2 dias mas as sezões... (Rita e Domingas, Benavente, 2005).

Mas é que hoje andávamos boas, a graça era essa, é que hoje andávamos boas e amanhã tavamos com a sezão; e depois era 3 e 4 dias com a sezão; mas quando era os acréscimos era hoje temos amanhã não temos. Chamavam acréscimos: hoje temos, amanhã não temos; no outro dia temos outra vez (Elvira, Benavente, 2005).

M – No outro dia a mema... aquilo era a quase sempre à mema hora
D – Era todos os dias; chegava ali àquela hora, pronto...
M – Chegava ali àquela hora começava a ter febre (Matilde e Domingos, Azambuja, 2006).

UNIVERSIDADE DE LISBOA

FACULDADE DE LETRAS

Departamento de História

Benavente: O seu papel no Combate ao Paludismo em Portugal

PALUDISMO BENAVENTE :: 1931-1934

Dissertação de mestrado orientada por:

Professor Doutor António Ventura

Professor Doutor João Cosme

Sandra José Ricardo Ferreira

MESTRADO em HISTÓRIA REGIONAL E LOCAL

2008

Direcção Geral de Saúde

ESTAÇÃO EXPERIMENTAL DE COMBATE AO SEZONISMO DE BENAVENTE

MANDAMENTOS DA LUTA CONTRA AS SEZÕES

Estes dez mandamentos resumem-se em dois:

Tomar regularmente a quinino e seguir fielmente os conselhos do médico.

Doc. 1

Prospecto de Propaganda, 1931

Mapa 1

Localização geográfica do município de Benavente com indicação das respectivas freguesias (2008)

A APLICAÇÃO DE SISTEMAS DE INFORMAÇÃO GEOGRÁFICA NA MODELAÇÃO DA DISTRIBUIÇÃO DE VECTORES DE DOENÇAS: O MOSQUITO VECTOR DA MALÁRIA *ANOPHELES ATROPARVUS* EM PORTUGAL CONTINENTAL

César Capinha[1]; Eduardo Gomes[2]; Eusébio Reis[1];Jorge Rocha[1]; Carla A. Sousa[2]; Virgílio E. do Rosário[3]; A. Paulo G. Almeida[2]

[1] Centro de Estudos Geográficos – Universidade de Lisboa, Alameda da Universidade, 1600-214 Lisboa
[2] Unidade de Entomologia Médica – Instituto de Higiene e Medicina Tropical – Universidade Nova de Lisboa, Rua da Junqueira, 96, 1349-008 Lisboa
[3] CMDT-LA – Instituto de Higiene e Medicina Tropical – Universidade Nova de Lisboa, Rua da Junqueira, 96, 1349-008 Lisboa

(cesarcapinha@hotmail.com; eduardojonas@gmail.com; jrocha@fl.ul.pt; eusebioreis@campus.ul.pt; casousa@ihmt.unl.pt; virgilio.rosario@ihmt.unl.pt; palmeida@ihmt.unl.pt)

RESUMO

A malária constituiu um dos principais problemas de saúde pública da primeira metade do séc. XX em Portugal. Actualmente, embora não se registem casos autóctones, a ocorrência constante de casos importados, associados a uma potencial capacidade de transmissão dos seus agentes infecciosos (plasmódios) pelo mosquito *Anopheles atroparvus*, mantém presente o risco de futuras infecções endémicas. No sentido de melhor se conhecer a distribuição desta espécie em Portugal Continental foram efectuados diversos modelos de distribuição potencial desta espécie vectora. Com base em vários levantamentos de campo referentes à presença de espécies do complexo *Anopheles maculipennis* e diversos factores ambientais considerados influentes na sua distribuição, foram utilizados cinco métodos correlativos distintos: distância de Mahalanobis; rede neuronal artificial; regressão logística binária; máxima entropia e algoritmo genético. A validação efectuada através do índice *kappa* permitiu identificar os modelos provenientes da regressão logística binária e máxima entropia como os de melhor desempenho preditivo. Com vista à redução da incerteza, os cinco modelos foram posteriormente combinados sob a forma de mapas binários. O seu resultado foi confrontado com as principais áreas de incidência de malária em Portugal na primeira metade do séc. XX, tendo-se verificado uma elevada concordância espacial entre as duas representações.

UNIVERSIDADE DE LISBOA
FACULDADE DE LETRAS
DEPARTAMENTO DE GEOGRAFIA

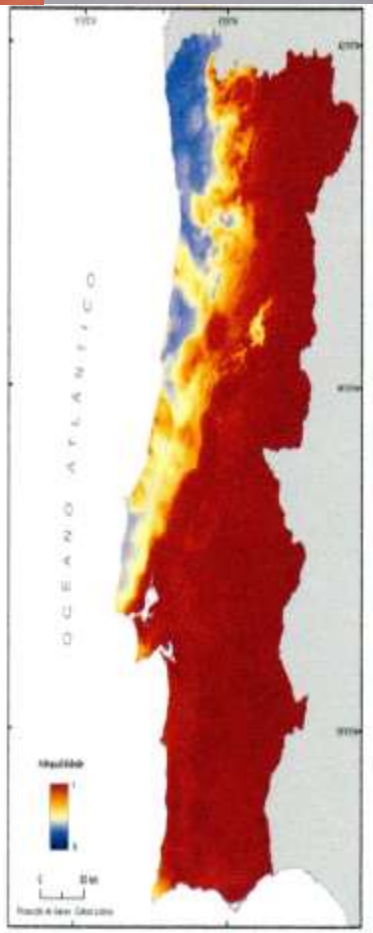
O MOSQUITO VECTOR DA MALÁRIA *ANOPHELES ATROPARVUS*, VAN THIEL, 1927: ADEQUABILIDADE DE *HABITAT* EM PORTUGAL CONTINENTAL E POTENCIAIS ALTERAÇÕES FUTURAS DO SEU ESPAÇO CLIMÁTICO

César Dinis Santos Capinha

Mestrado em Sistemas de Informação Geográfica e Modelação Territorial Aplicados ao Ordenamento

2009

A Importância determinante Factores Meteriologicos



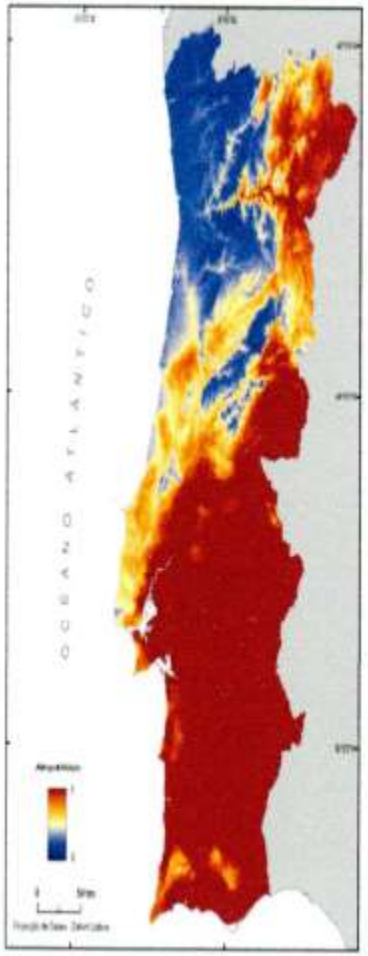
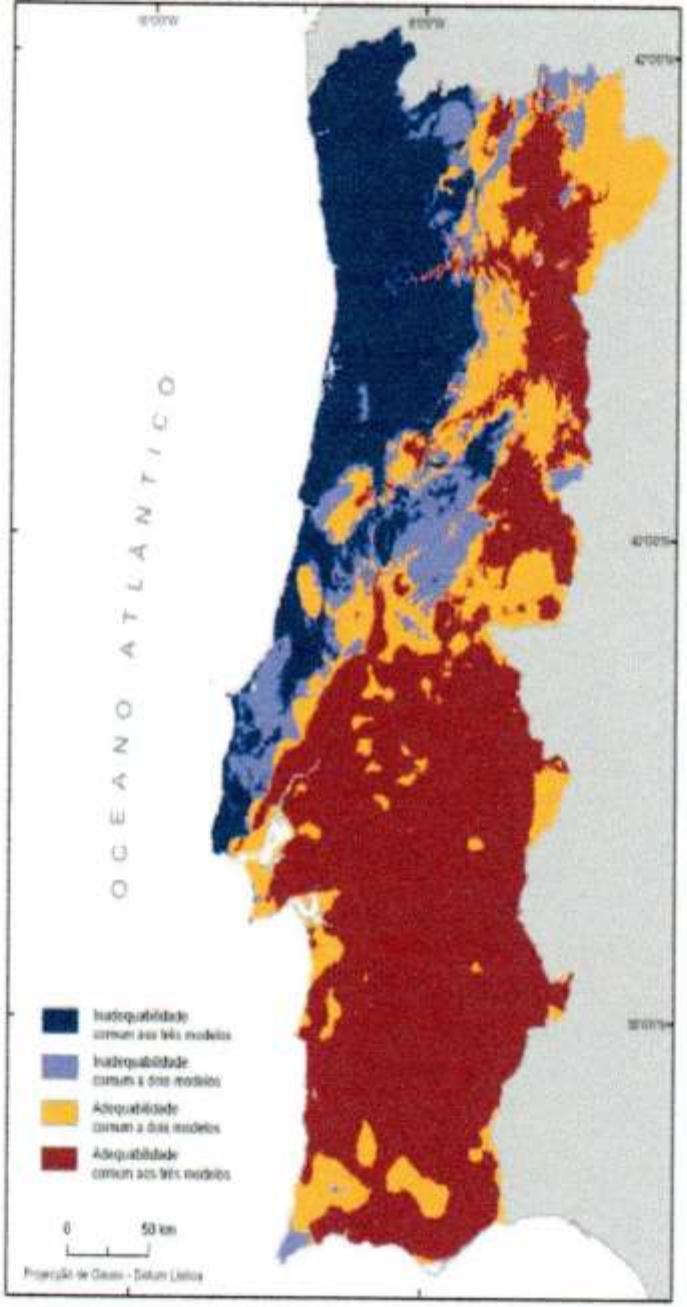


Figura 5 – Adequabilidade de *habitat* para *Anopheles atroparvus* com base na regressão logística binária Figura 6 – Adequabilidade de *habitat* para *Anopheles atroparvus* com base em redes neuronais artificiais



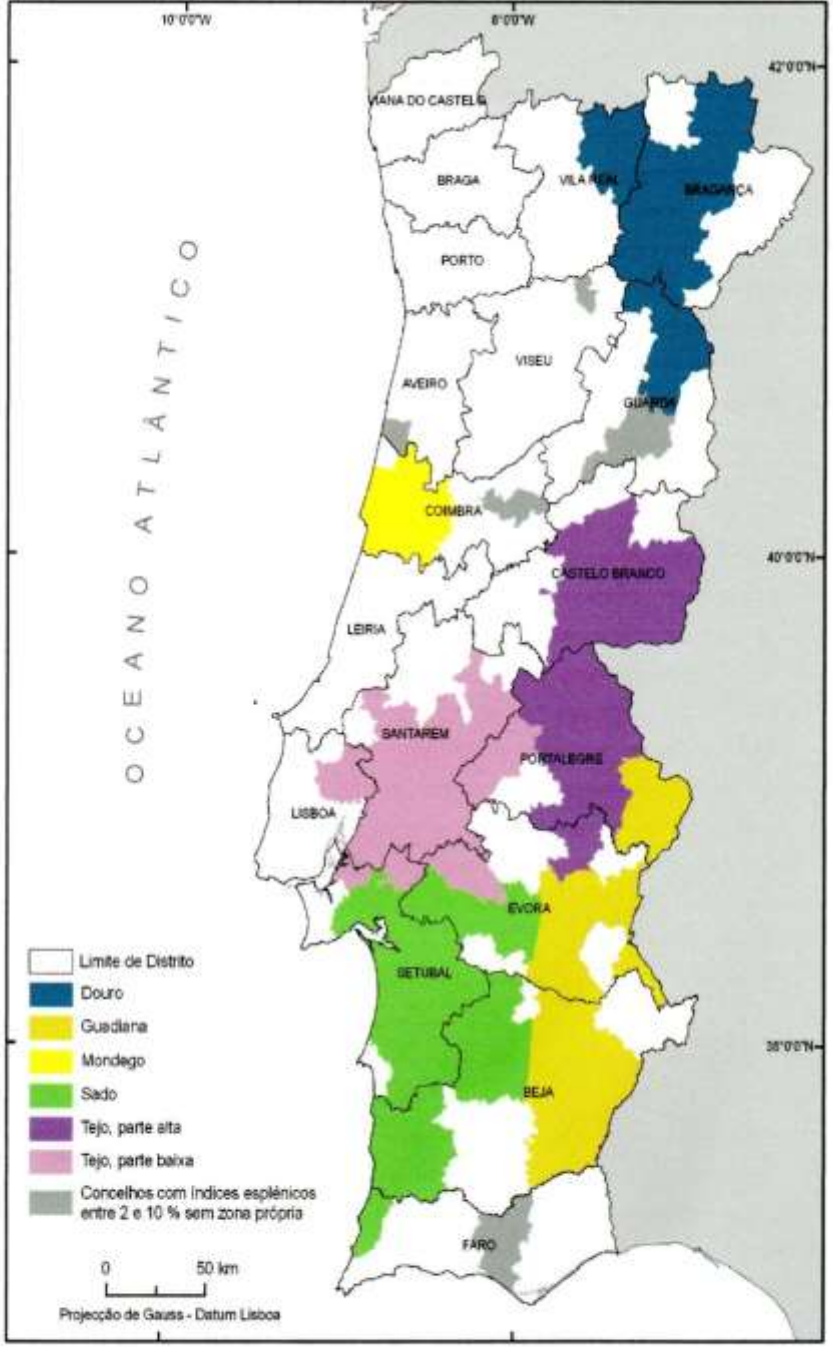


Figura 7 – Combinação de modelos binários de adequabilidade

Figura 6a - Zonas de malária em Portugal na primeira metade do séc. XX (adaptado de Cambournac, 1942)

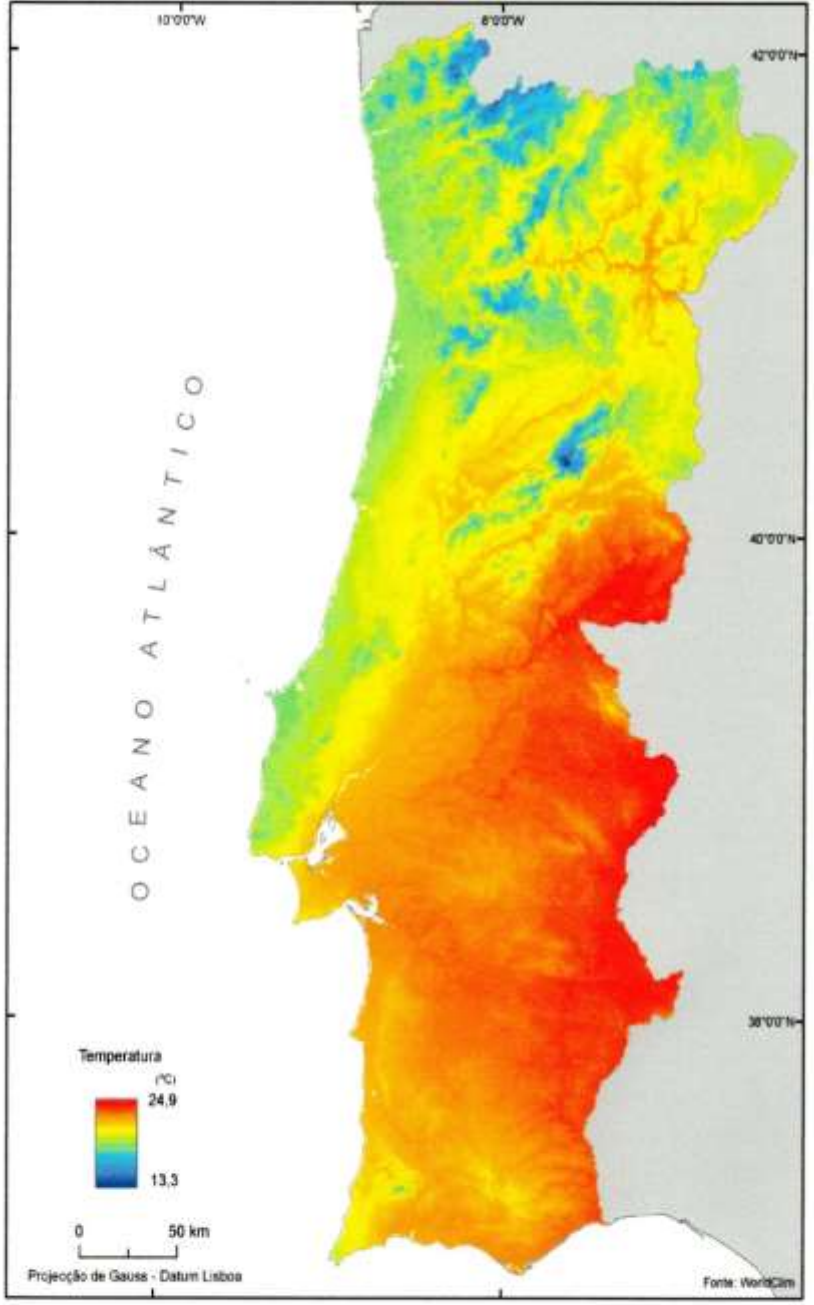


Figura 1a – Temperatura média do trimestre mais quente em Portugal Continental para o período 1950-2000 (Fonte: Projecto WorldClim)

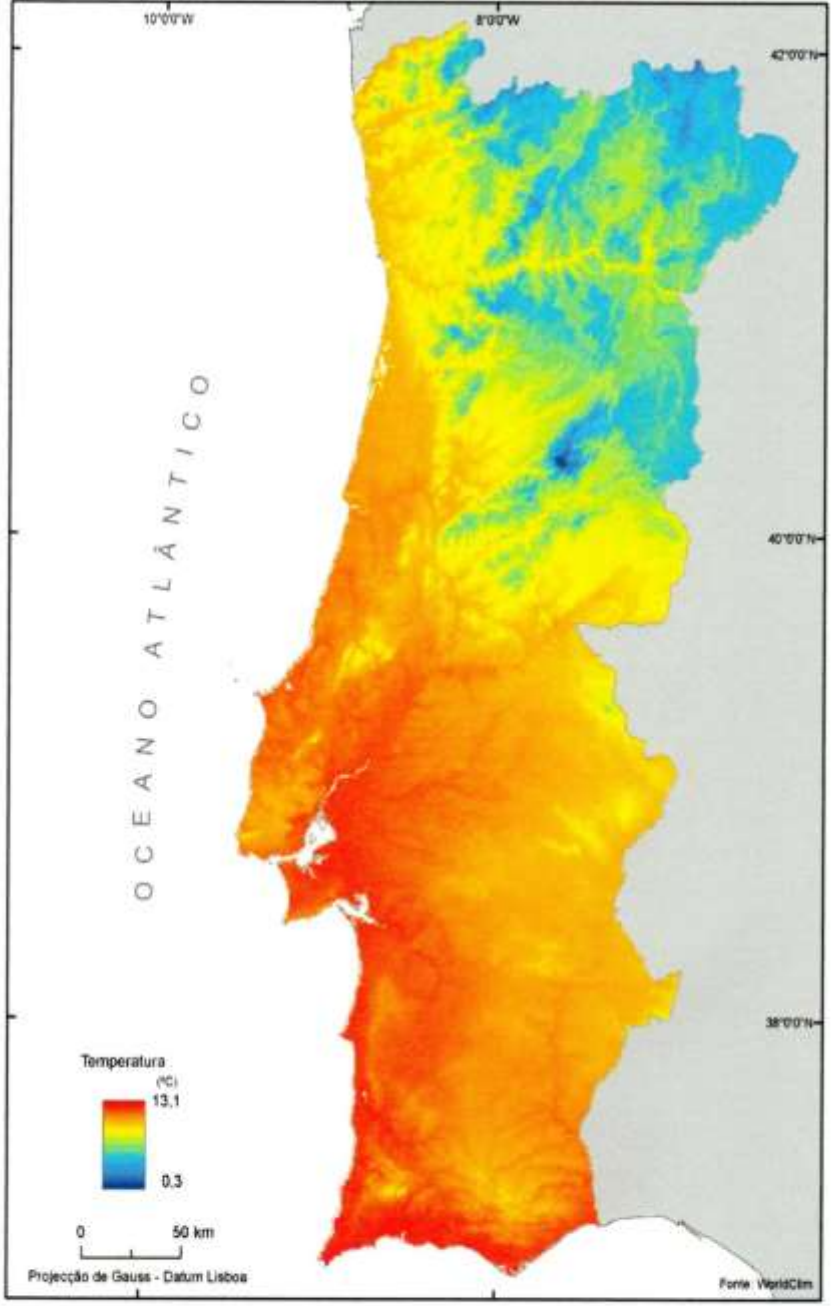


Figura 2a – Temperatura média do trimestre mais frio em Portugal Continental para o período 1950-2000 (Fonte: Projecto WorldClim)

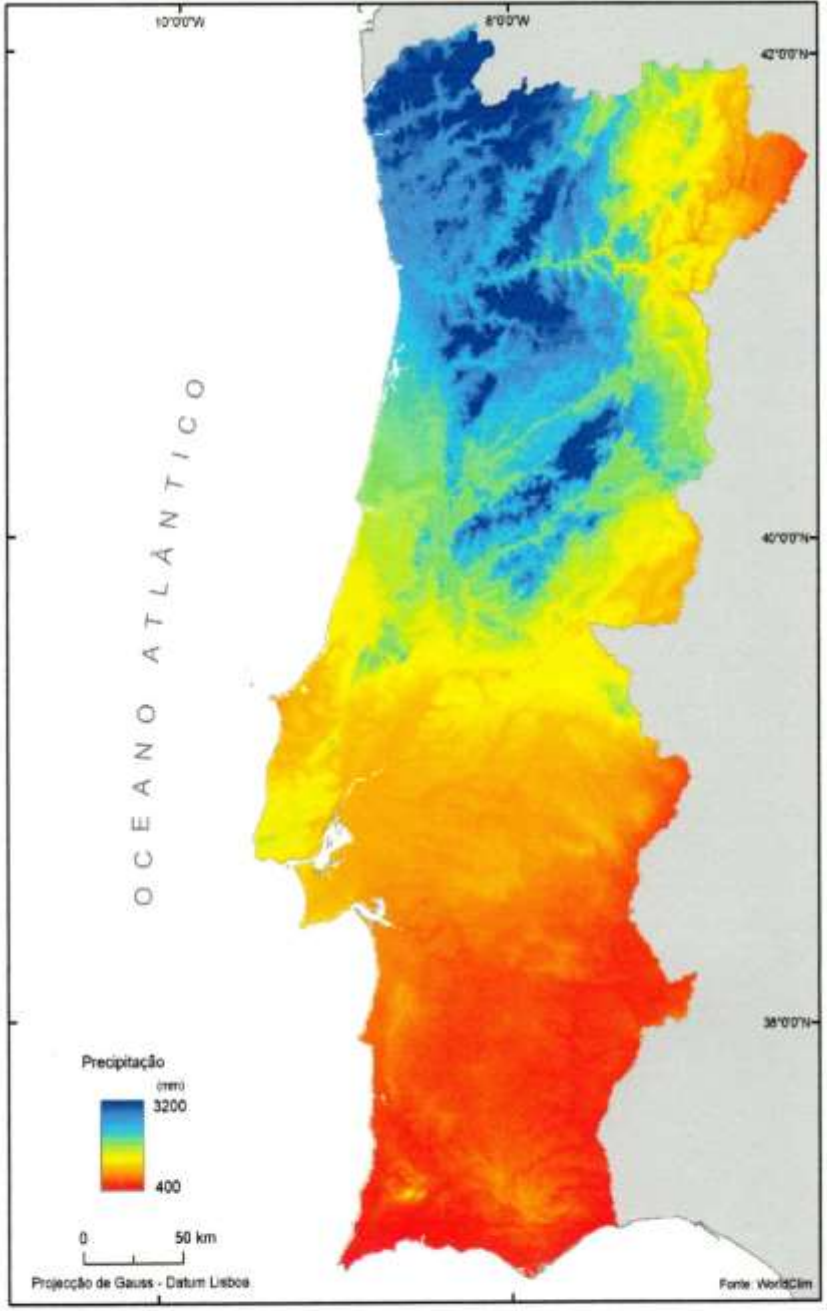


Figura 3a – Precipitação anual média em Portugal Continental para o período 1950-2000 (Fonte: Projecto WorldClim)

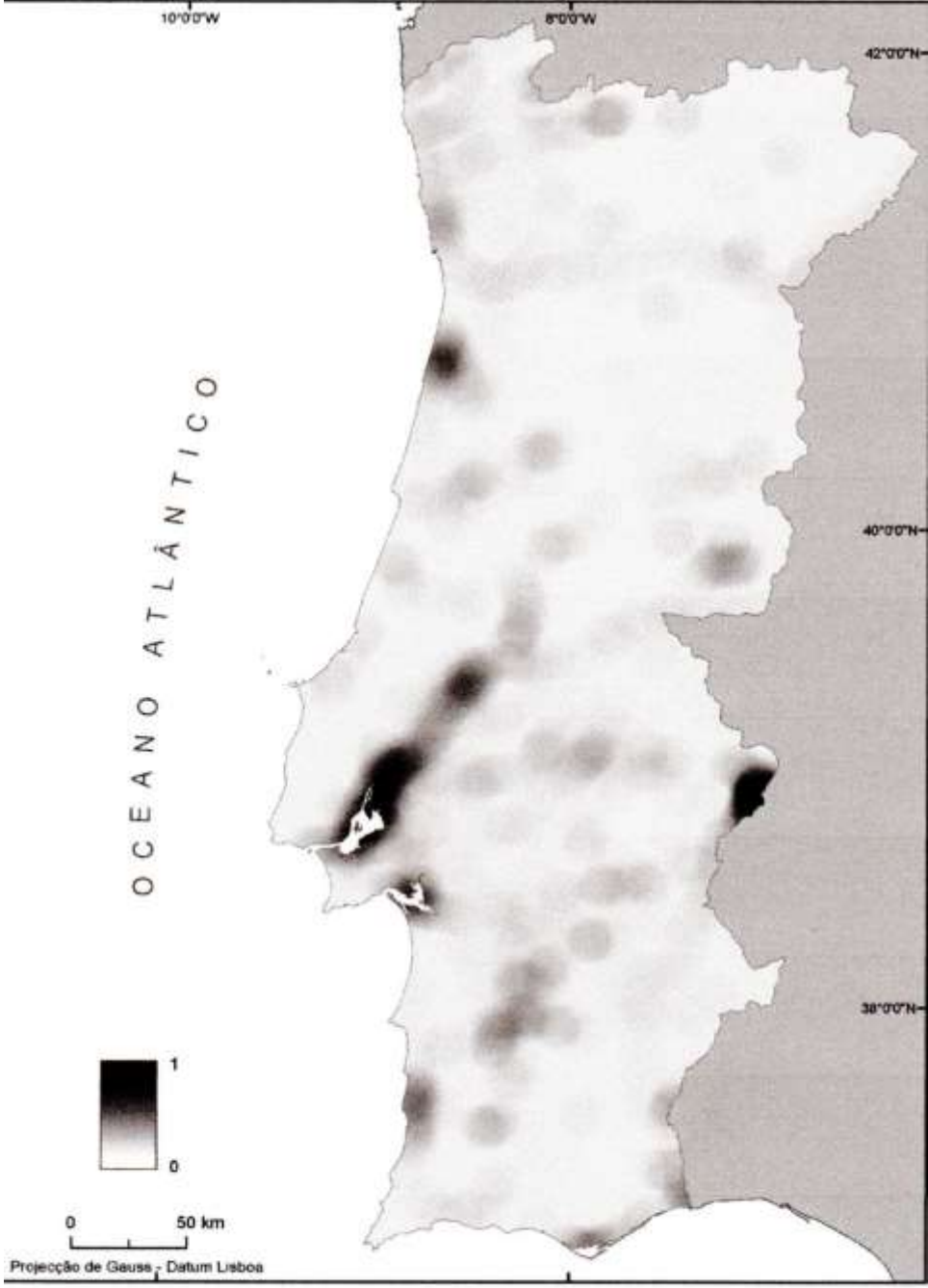


Figura 4a – Índice de disponibilidade e adequabilidade de zonas húmidas

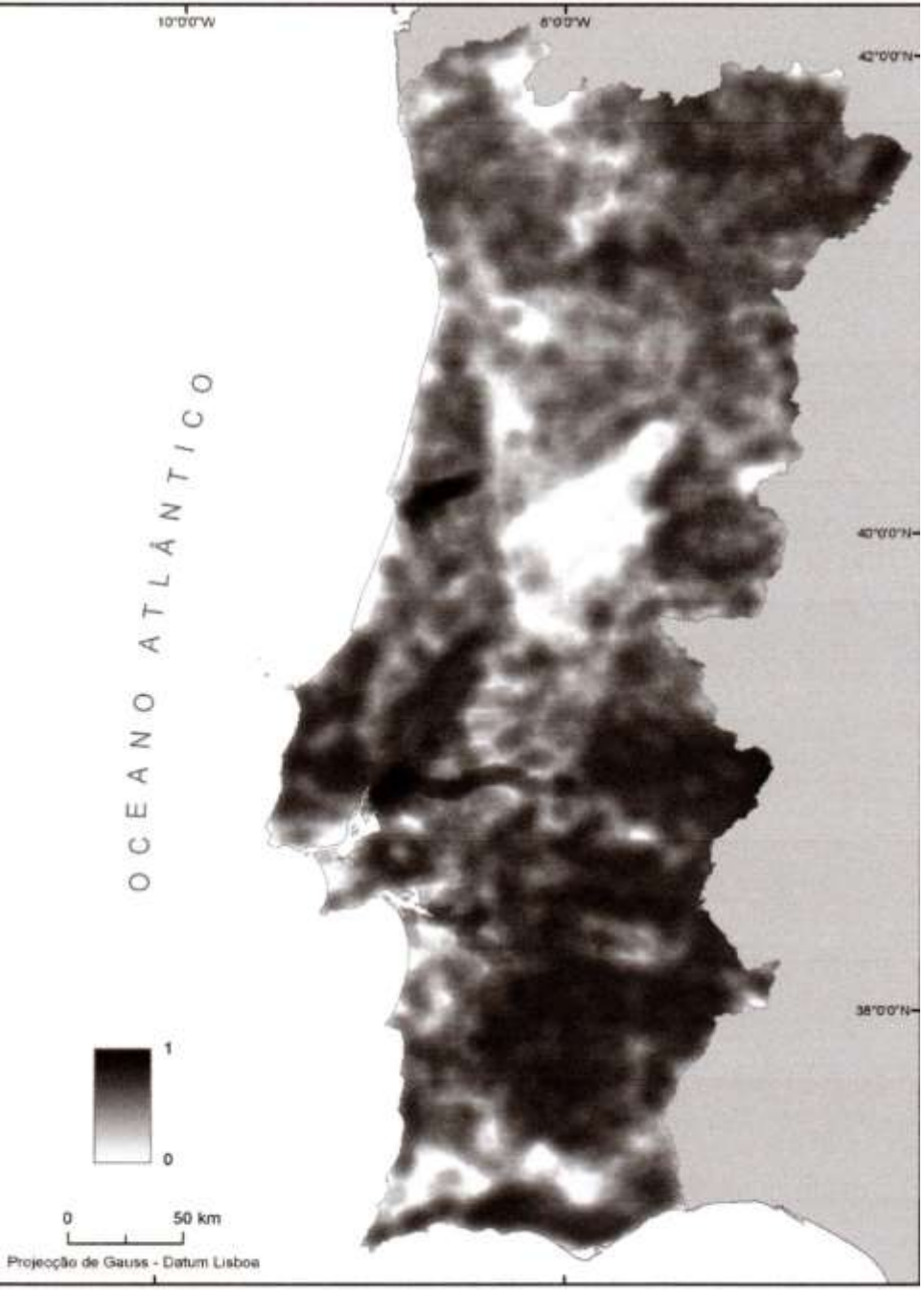


Figura 5a – Índice de disponibilidade e adequabilidade de uso de solo agrícola

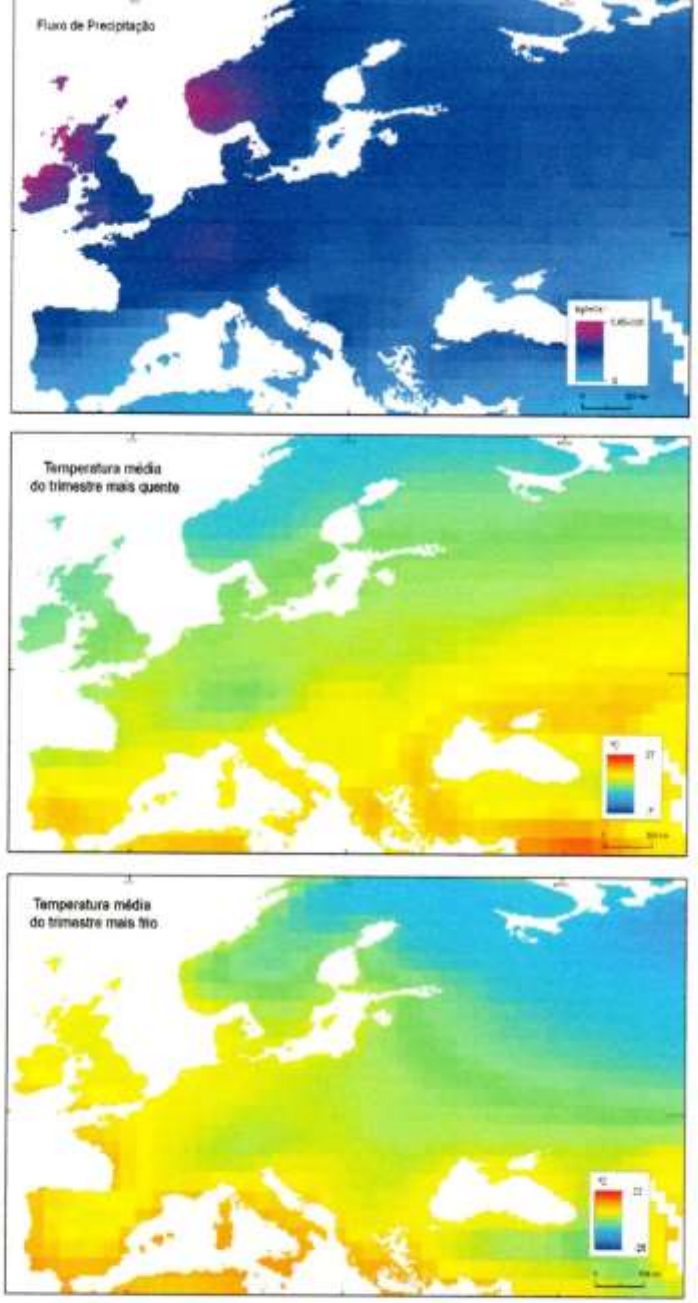
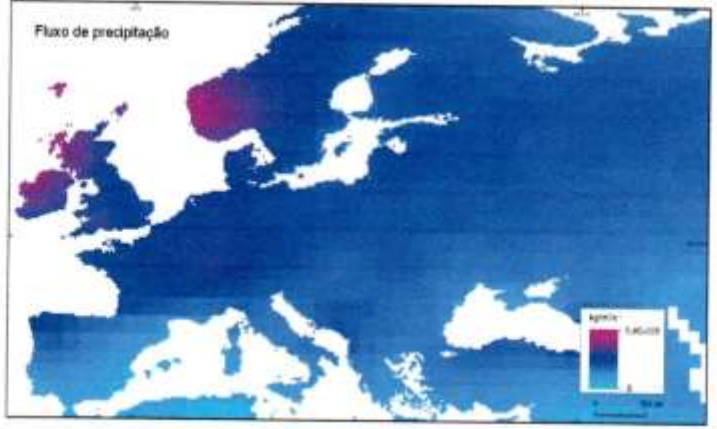
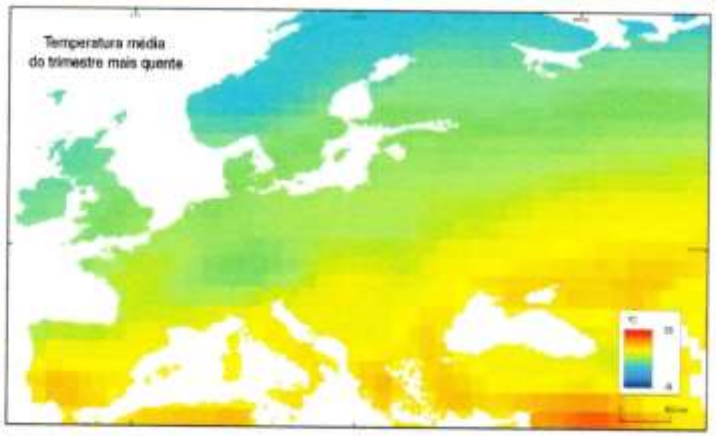


Figura 7a – Precipitação e temperatura da média de experimentações *20th Century Experiment* do modelo CCSM-3 para o período 1970-2000





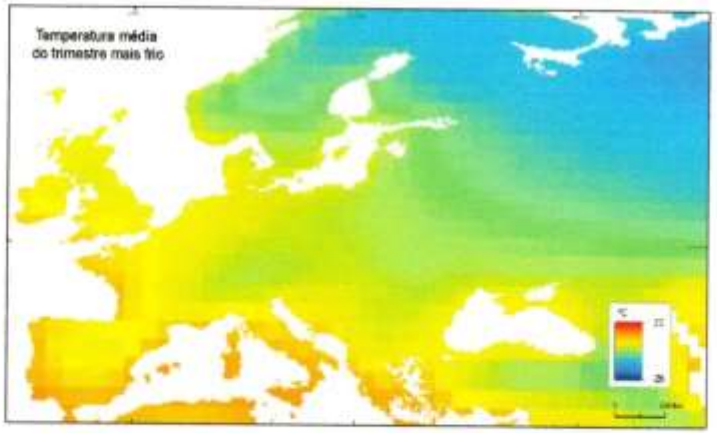
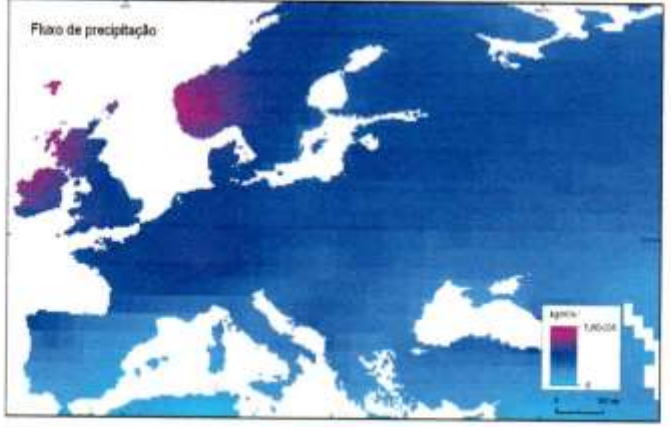
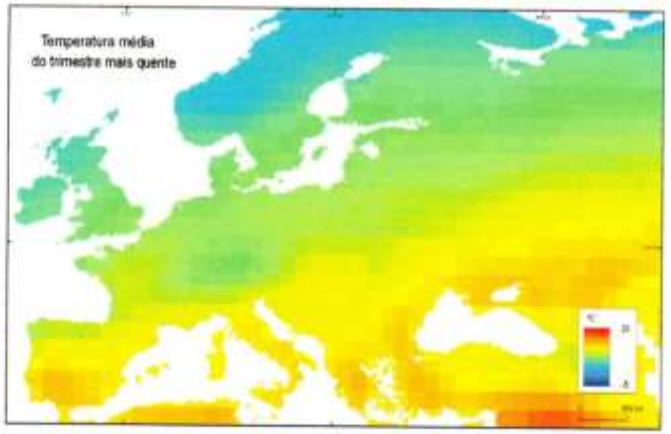


Figura 8a – Precipitação e temperatura da média de experimentações *Climate Change Commitment* do modelo CCSM-3 para o período 2040-2070





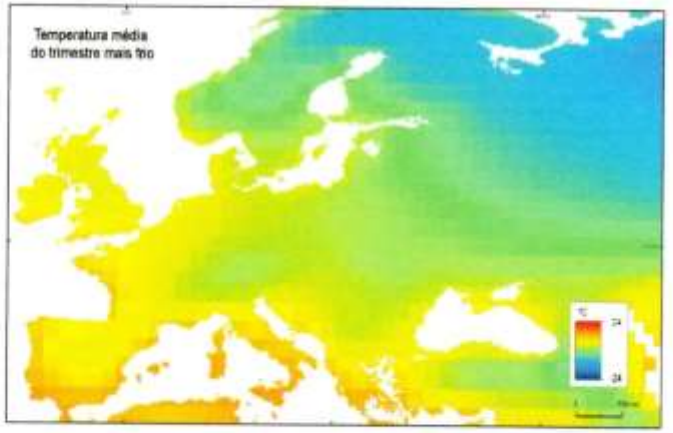
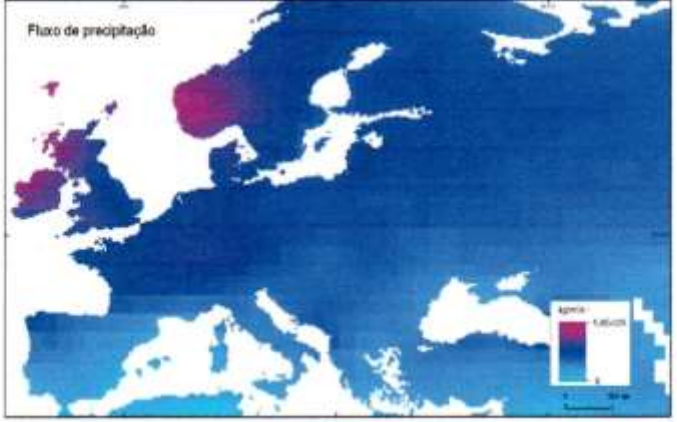
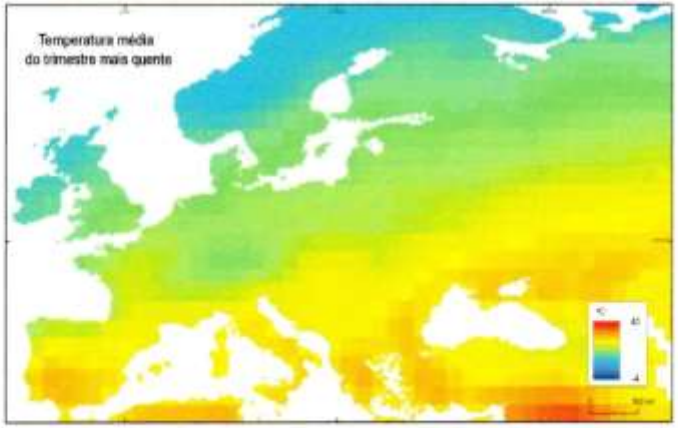


Figura 9a – Precipitação e temperatura da média de experimentações do cenário B1 do modelo CCSM-3 para o período 2040-2070





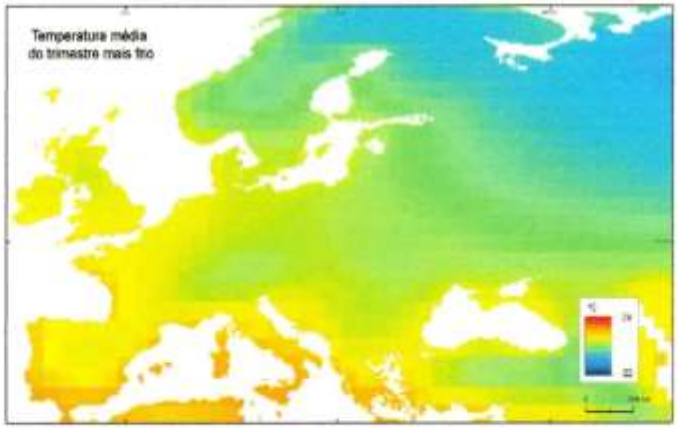
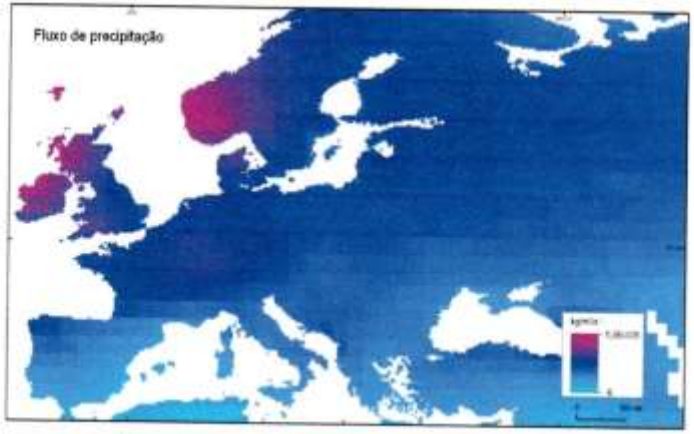
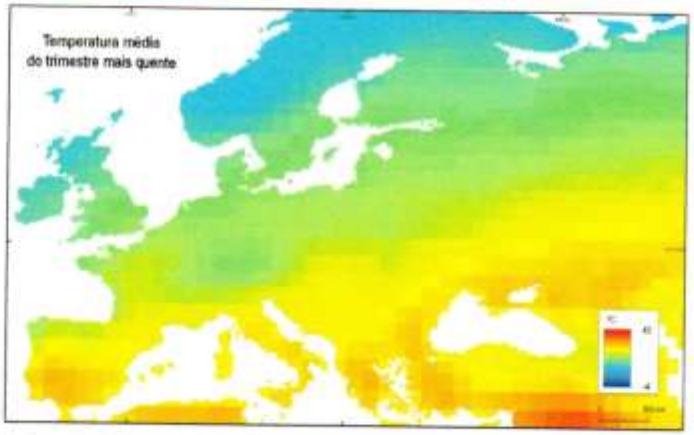


Figura 10a – Precipitação e temperatura da média de experimentações do cenário A1B do modelo CCSM-3 para o período 2040-2070





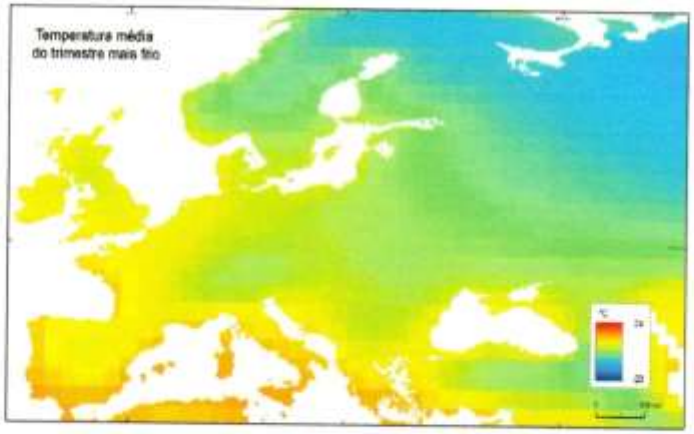


Figura 11a – Precipitação e temperatura da média de experimentações do cenário A2 do modelo CCSM-3 para o período 2040-2070

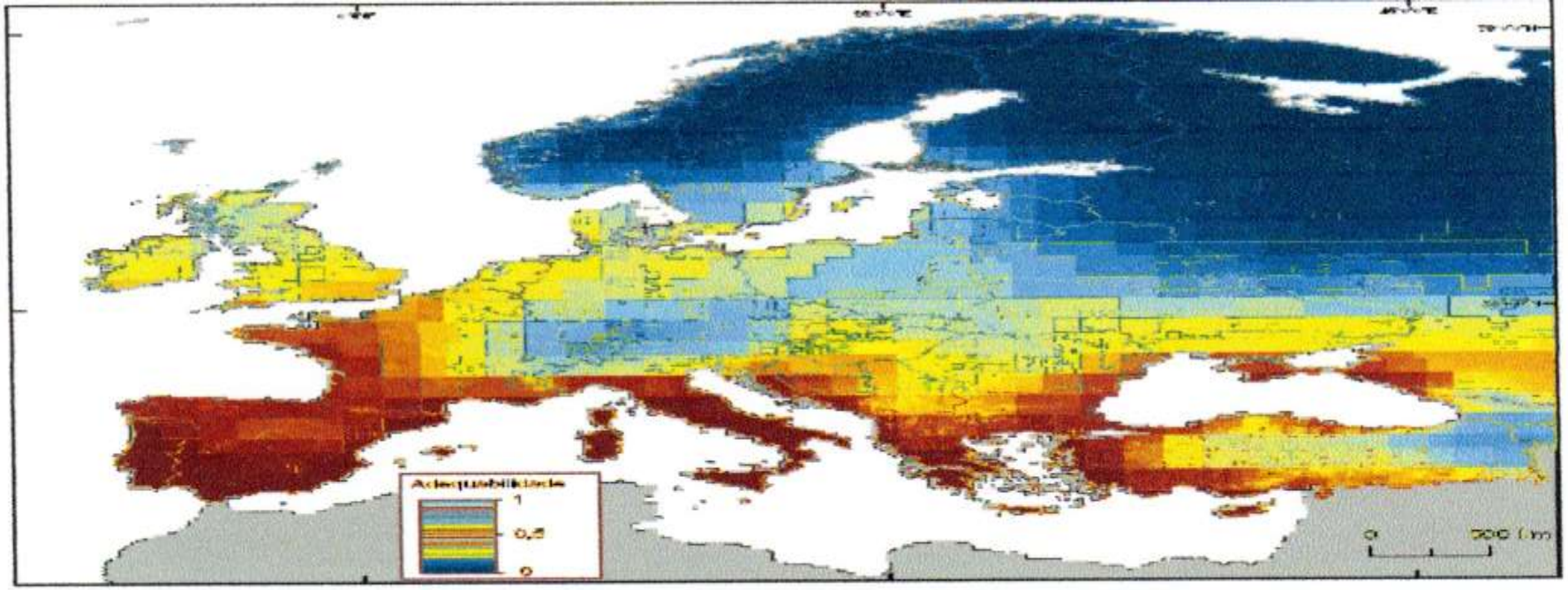


Figura 12 – Modelo de espaço climático actual para *Anopheles atroparvus*

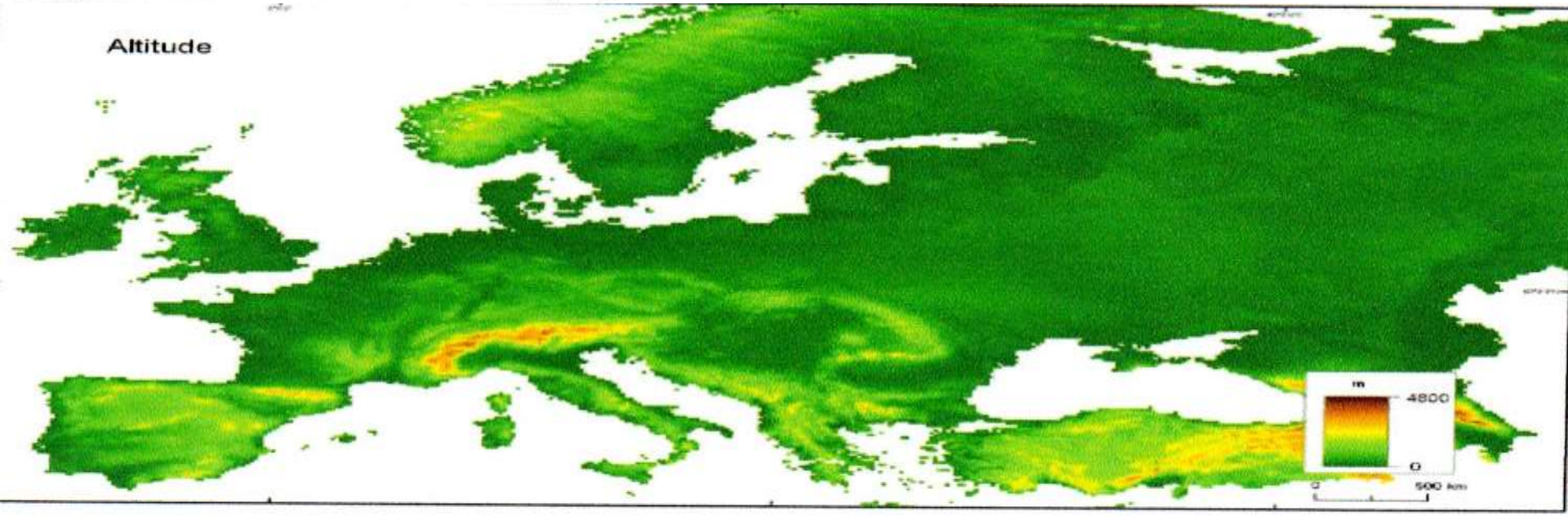


Figura 12a – Modelo de altitudes para o continente Europeu

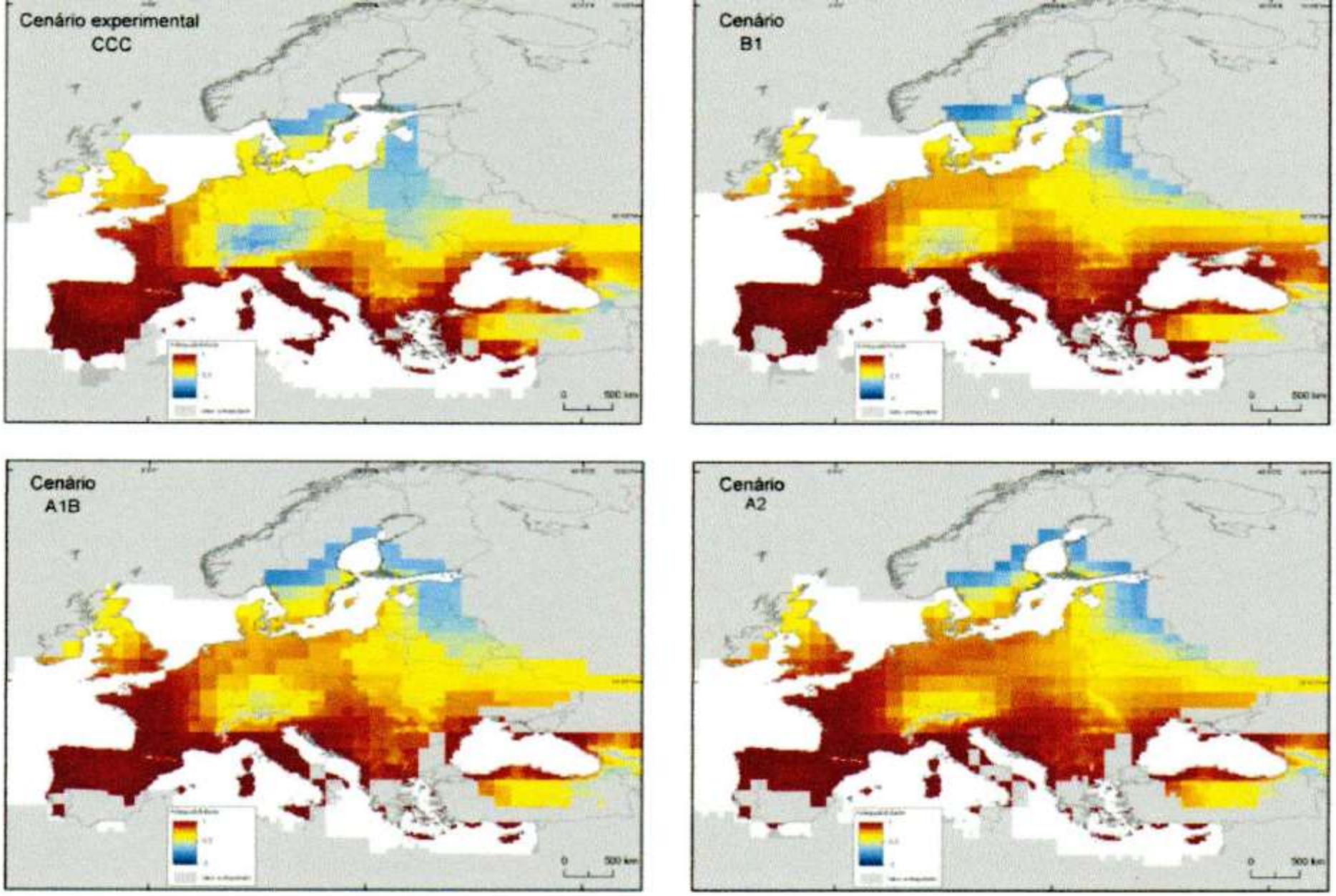


Figura 13 – Espaços climáticos de *Anopheles atroparvus* com base em cenários climáticos futuros para o período 2040 - 2070

RISCO POTENCIAL DE TRANSMISSÃO DE MALÁRIA EM PORTUGAL CONTINENTAL

Eduardo Jonas da Costa Gomes

Dissertação de Mestrado em Gestão do Território – Área de Especialização em Detecção Remota e Sistemas de Informação Geográfica

JANEIRO, 2010

FCSH
Faculdade de Ciências Sociais e Humanas
Universidade Nova de Lisboa

Criança de 3 anos, Águas de Moura
Infecção de *Pl. vivax* - Baço 4 da escala de Boyd

Cabanas de trabalhadores, Zambujal, c. 1935

Figura 2.1 – Presenças e ausências de *Anopheles atroparvus* em Portugal Continental

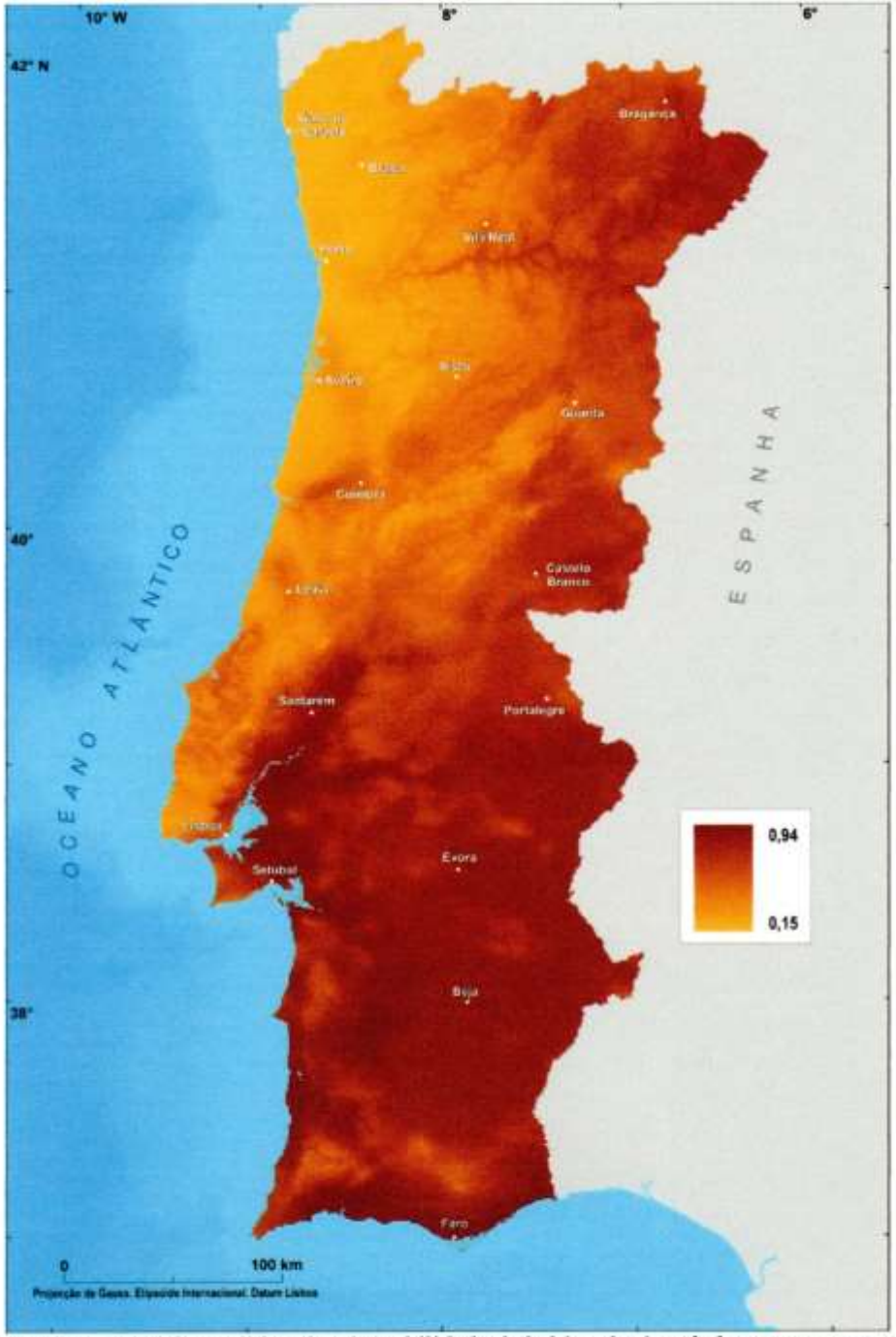


Figura 2.5 – Modelo preditivo de adequabilidade de habitat de *Anopheles atroparvus* para Portugal Continental

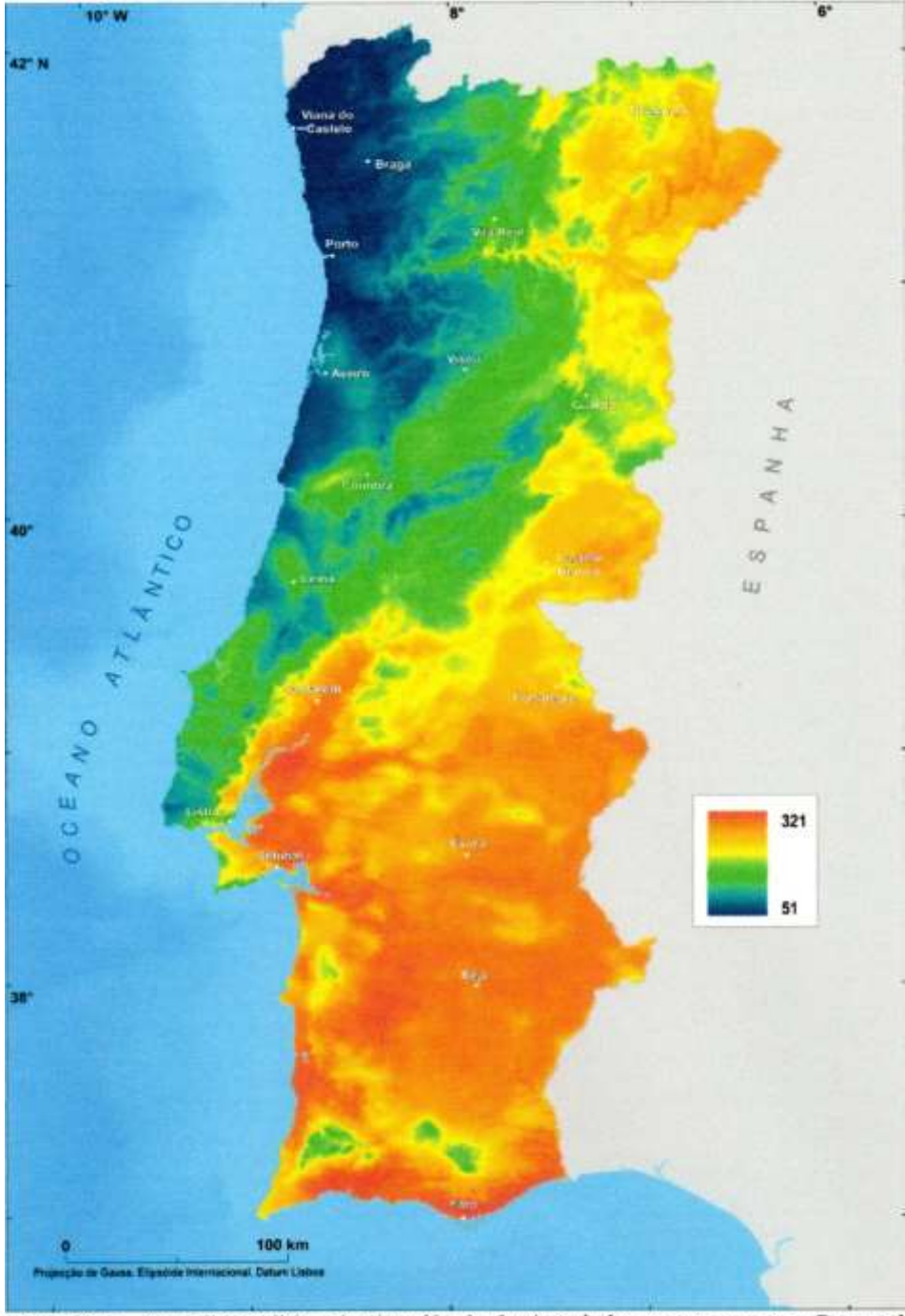


Figura 2.7 – Modelo preditivo da abundância de *Anopheles atroparvus* para Portugal Continental

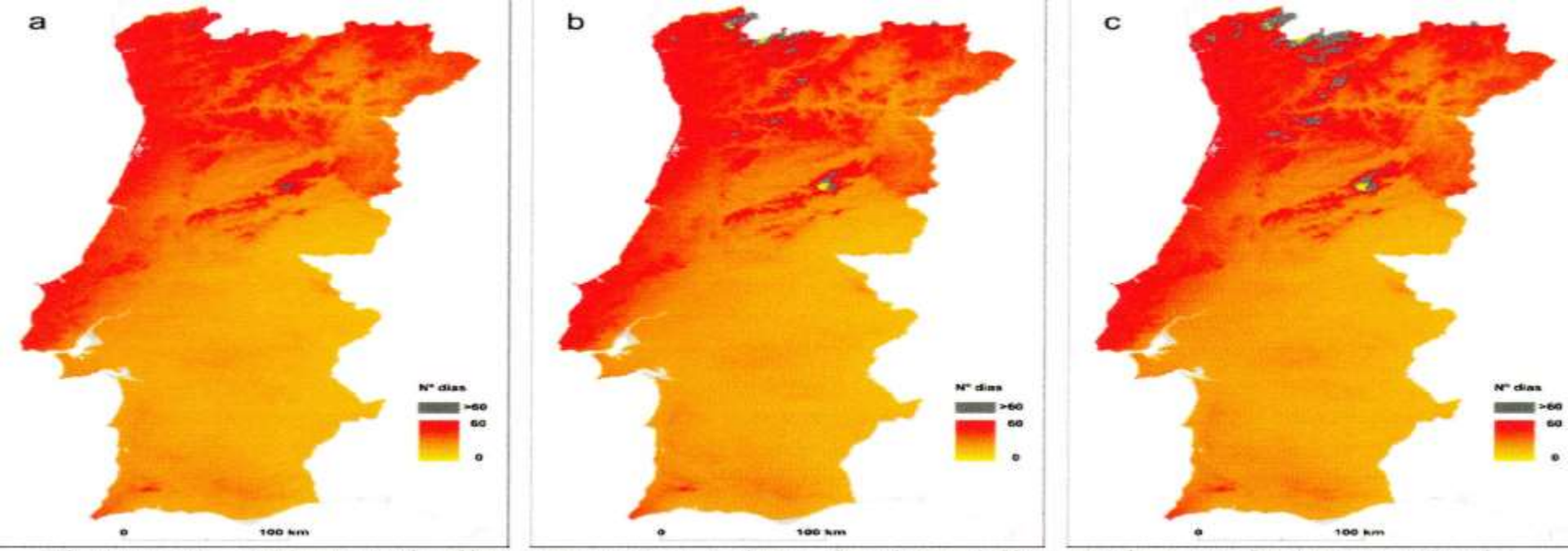


Figura 3.9 – Número de dias em que os 3 tipos de plasmódios se desenvolvem no mês de Agosto: *Plasmodium vivax* (a); *Plasmodium falciparum* (b) e *Plasmodium malariae* (c)

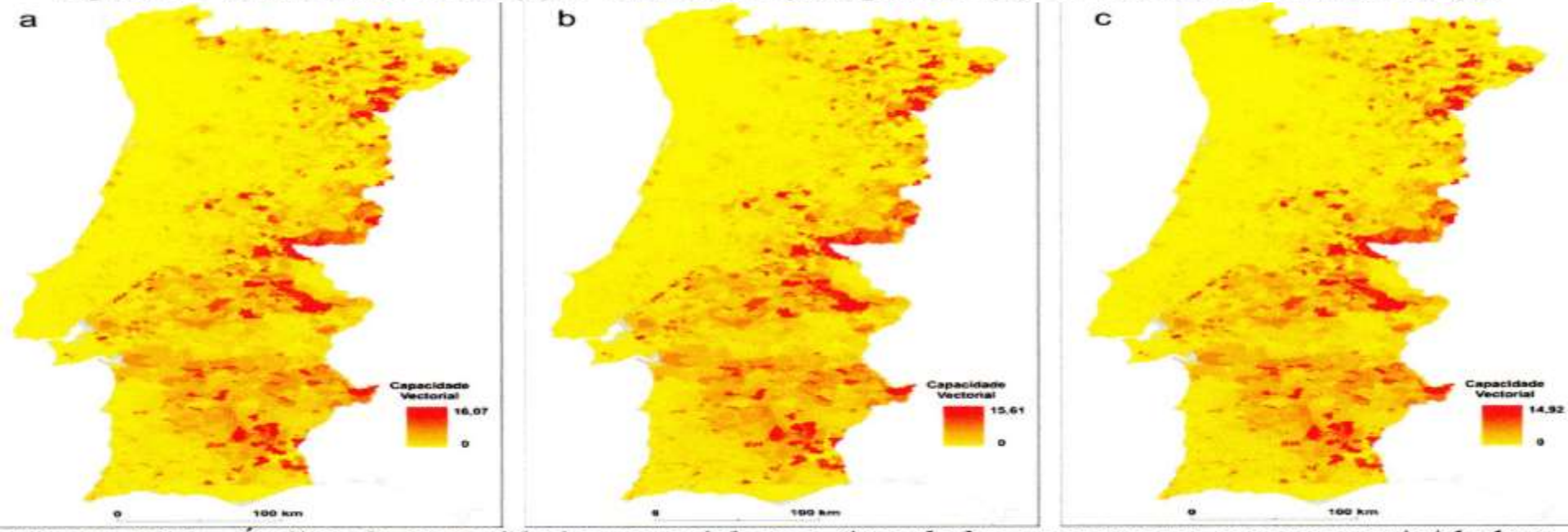


Figura 3.10 – Índice de capacidade vectorial para *Anopheles atroparvus*, com receptividade a *Plasmodium vivax* (a); *Plasmodium falciparum* (b) e *Plasmodium malariae* (c)

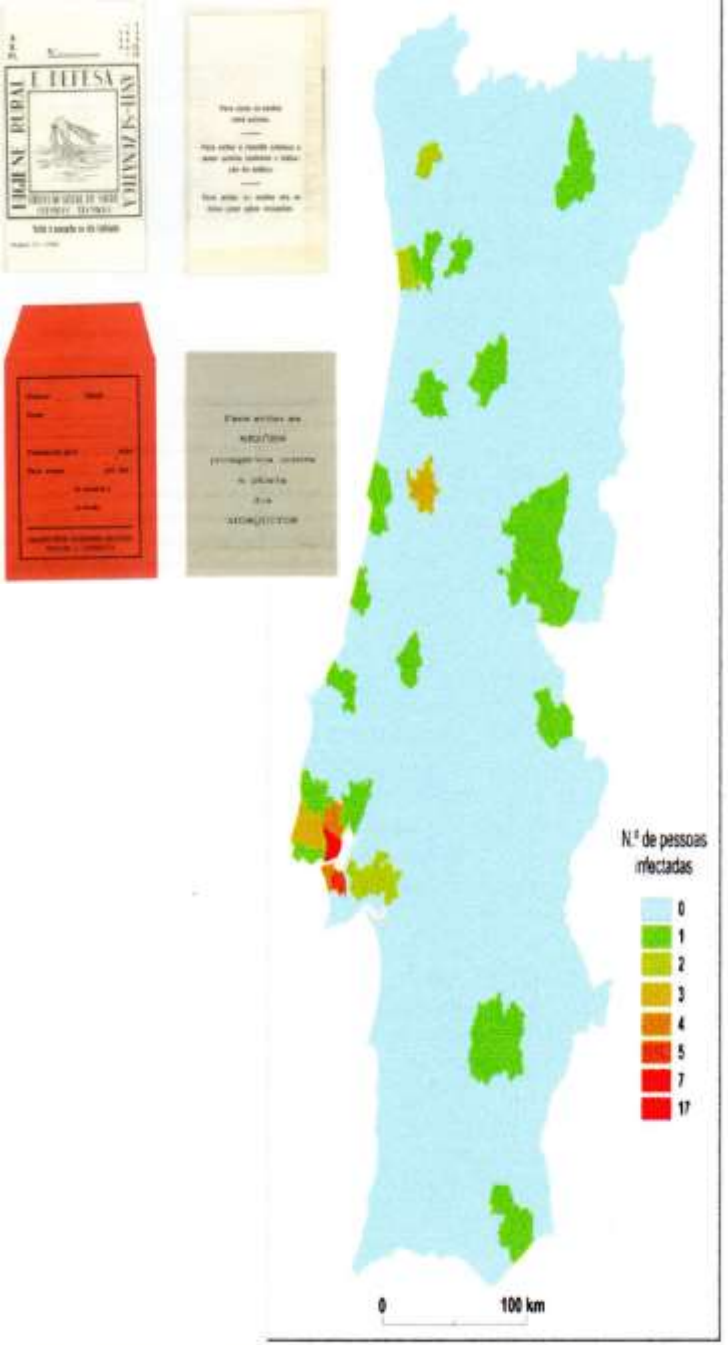
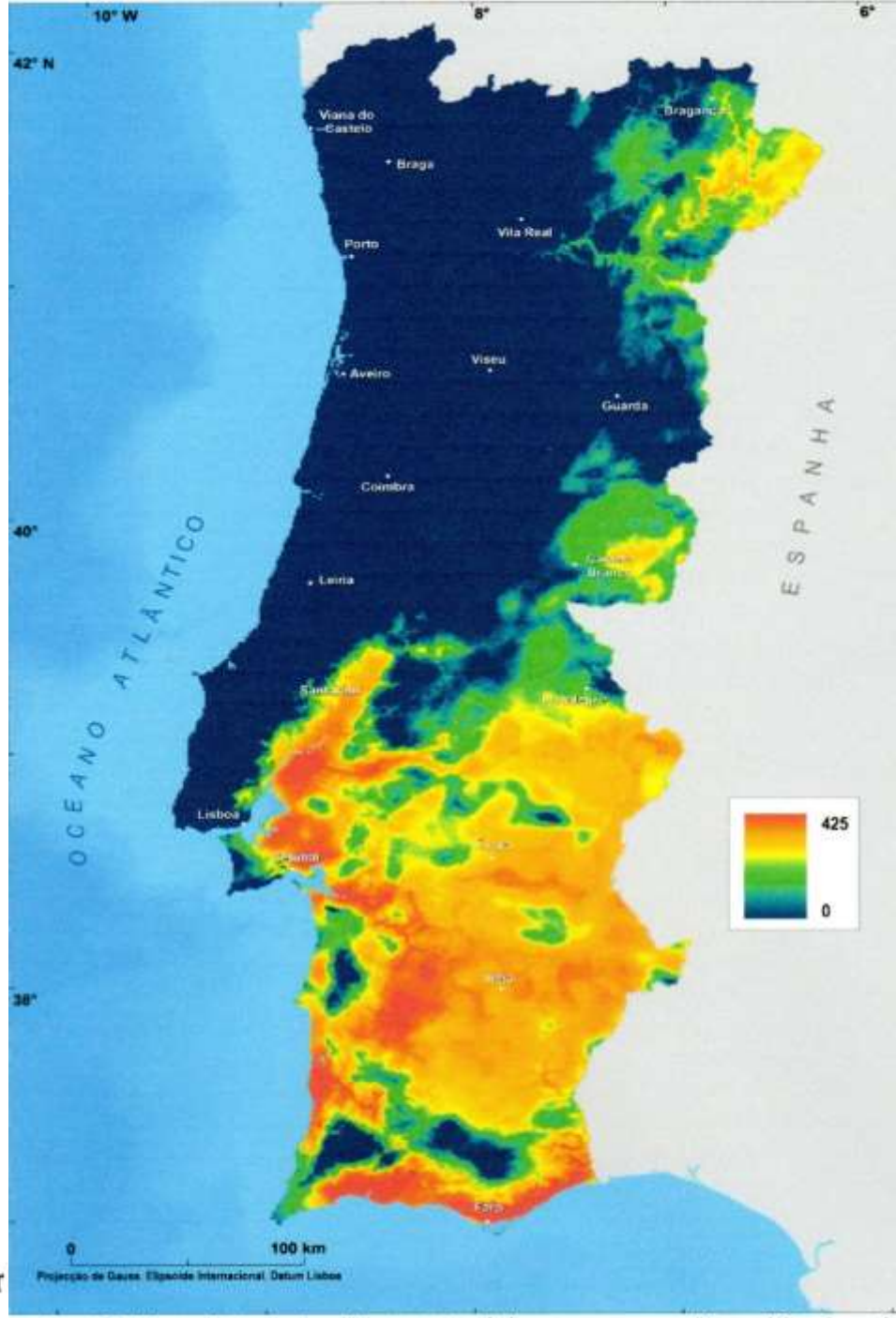


Figura 3.11 – Pessoas infectadas com malária (casos importados) em Portugal Continental, por concelho, no ano 2000 (fonte dos dados: DGS, 2001)



A.1 – Modelo preditivo de abundância de *Anopheles atroparvus* para Portugal Continental

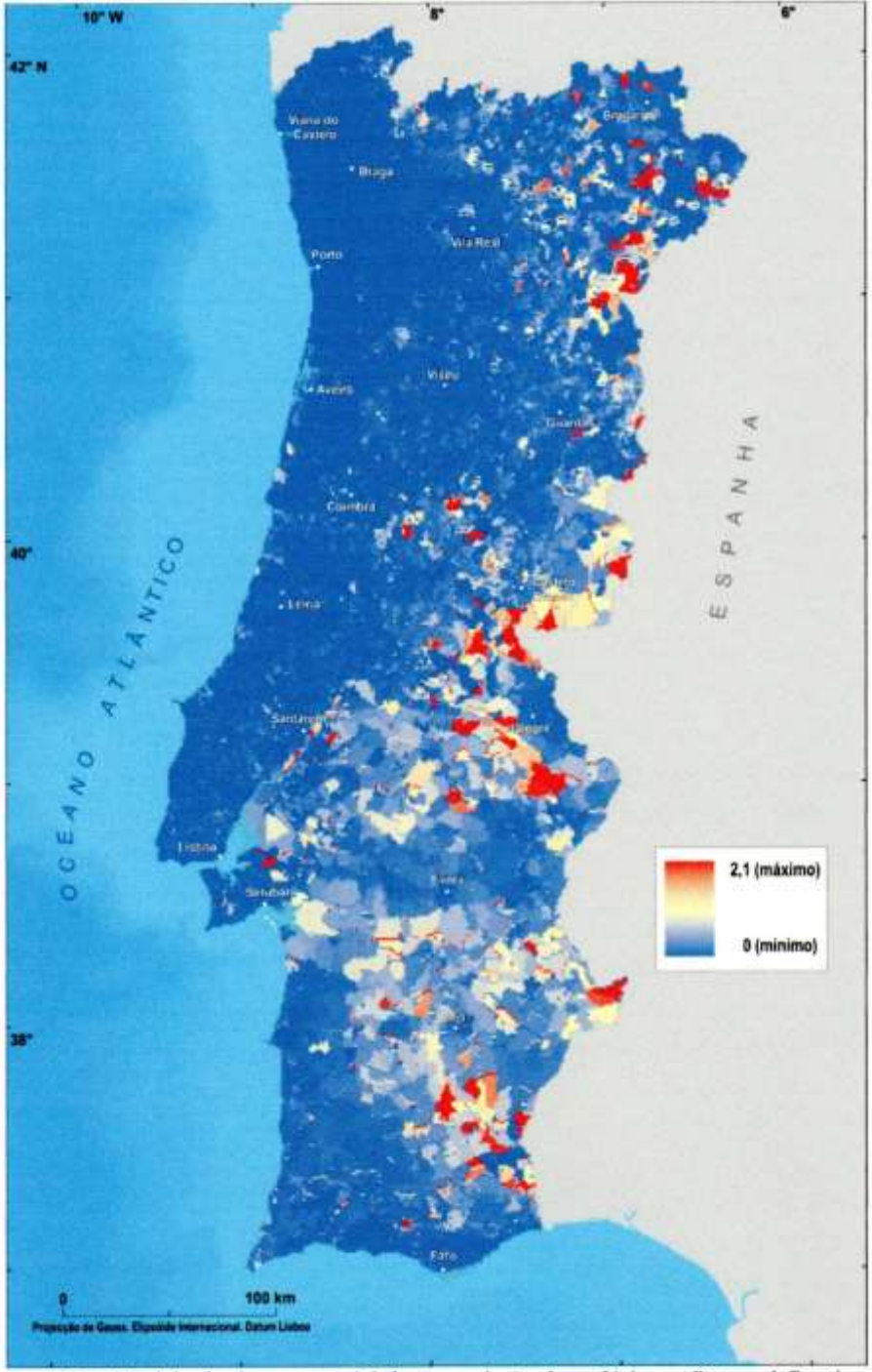
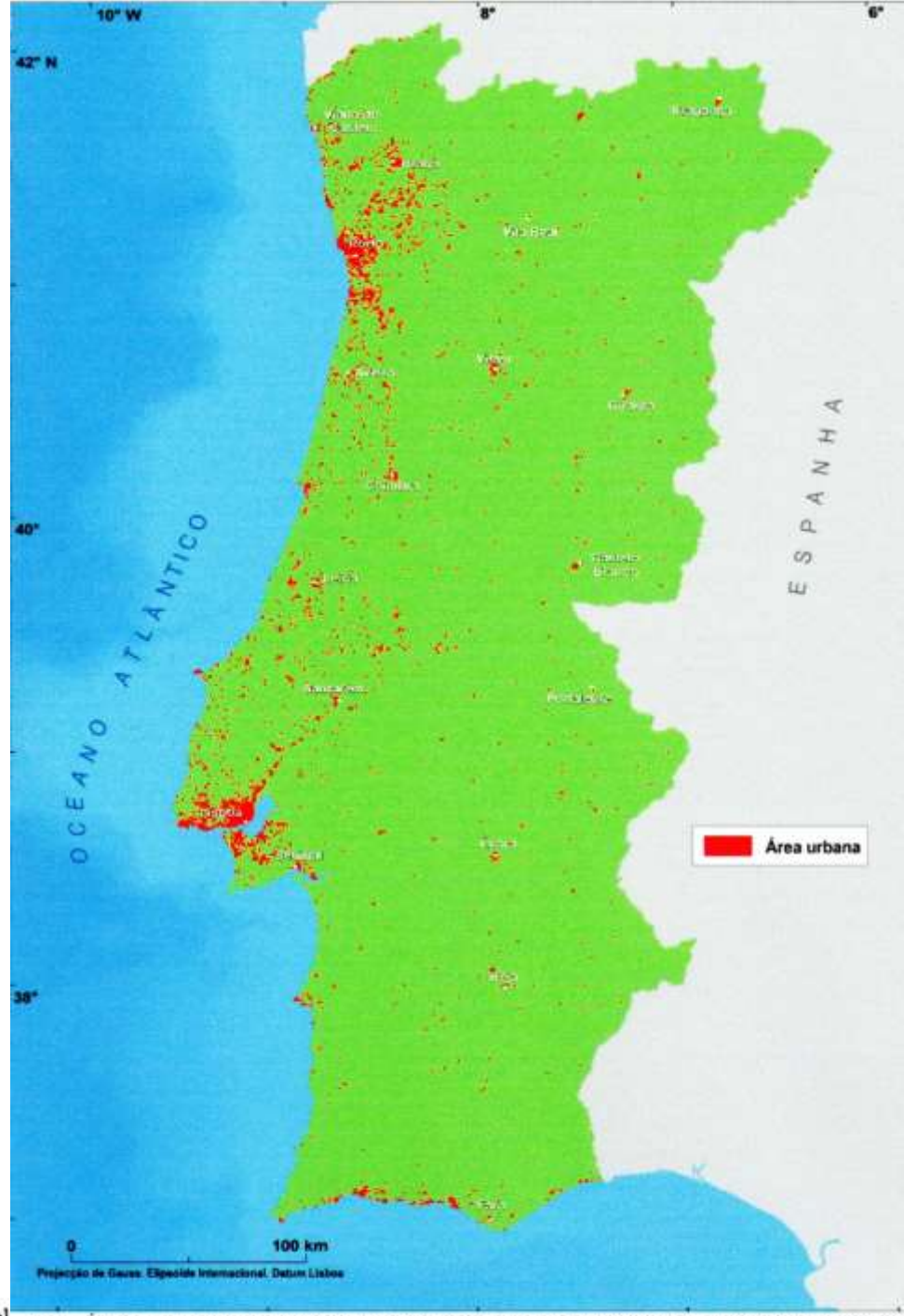
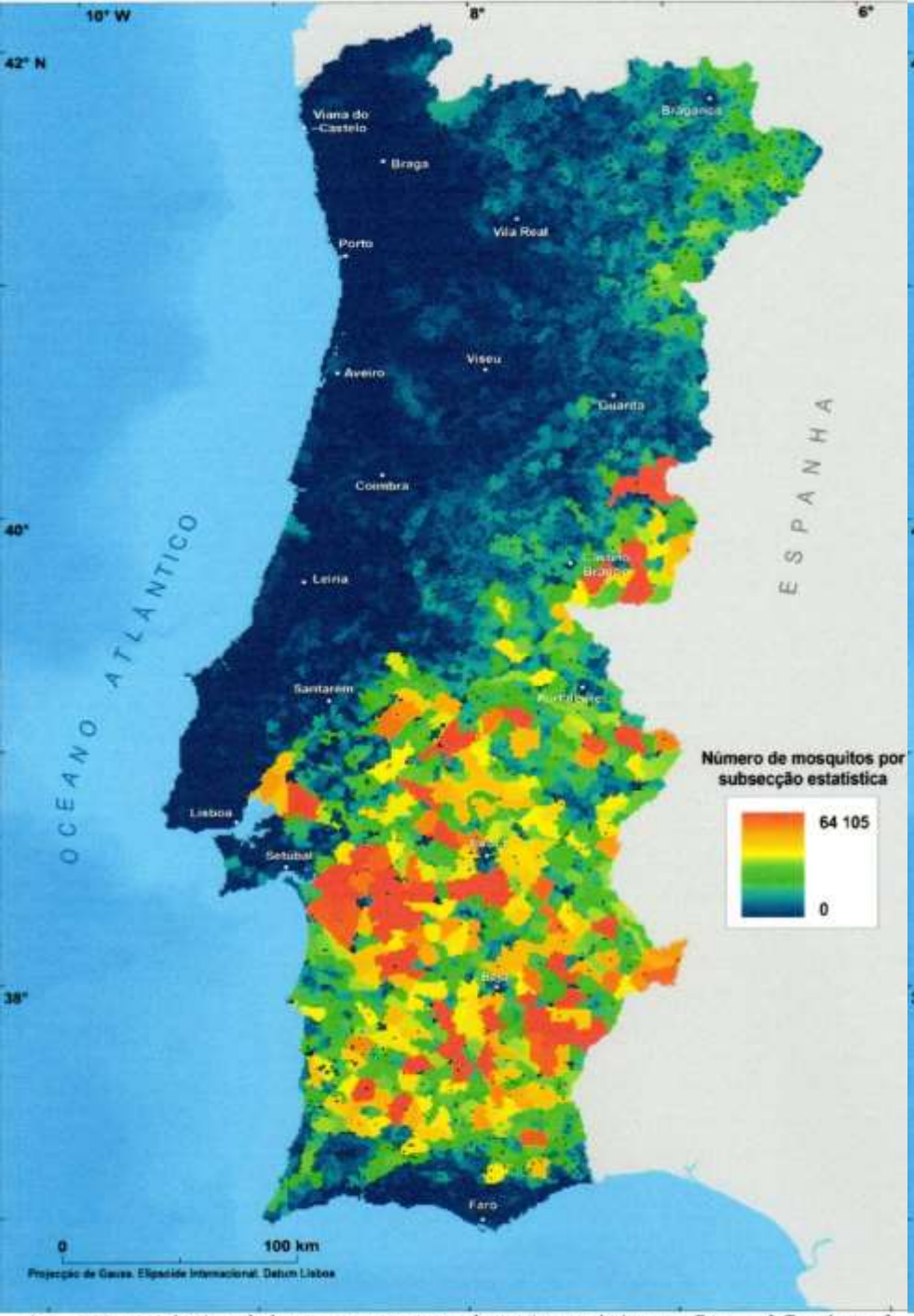


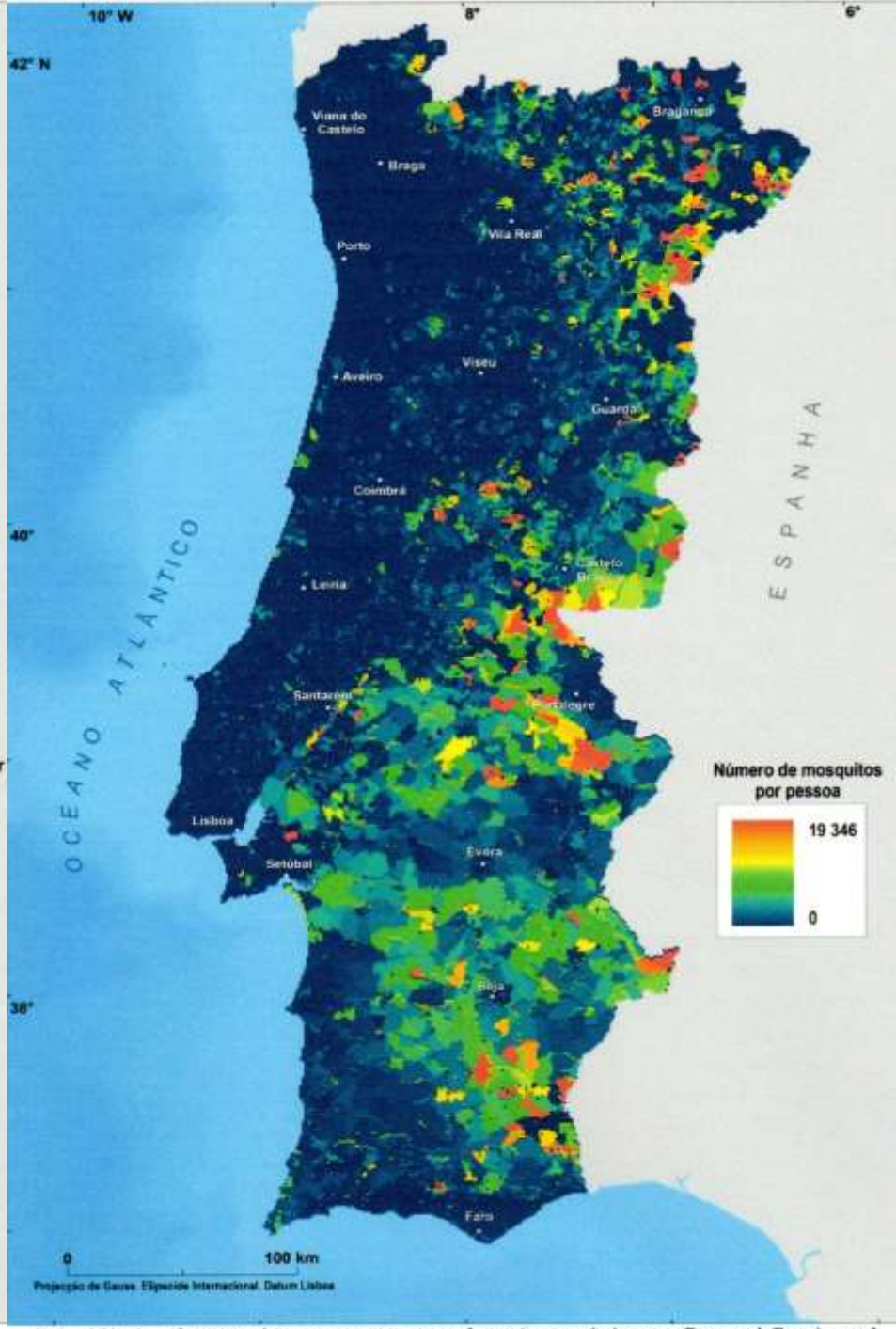
Figura 3.15 – Modelo de risco potencial de transmissão de malária em Portugal Continental



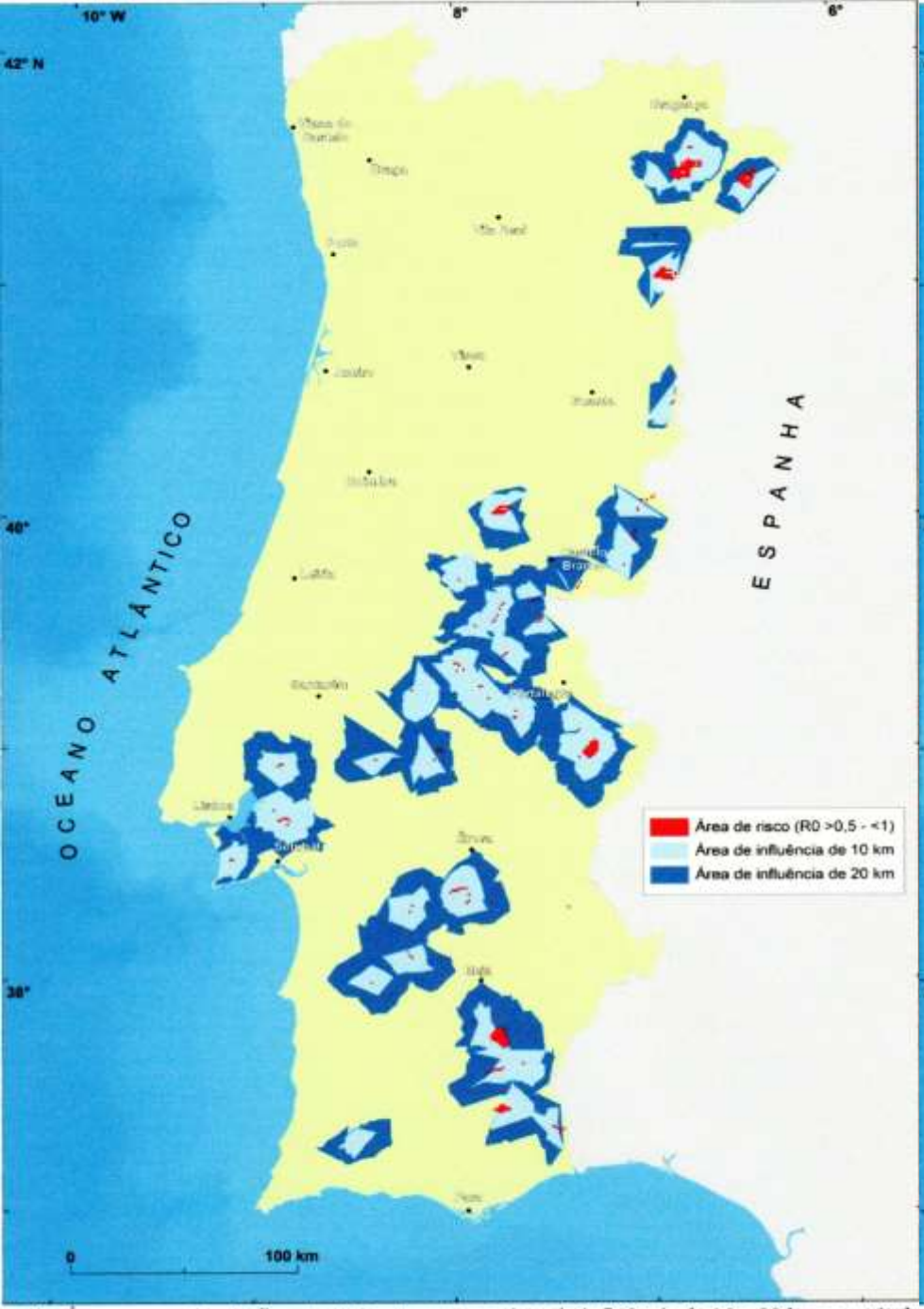
A.2 – Áreas urbanas integrantes do modelo preditivo de abundância de *Anopheles atroparvu*



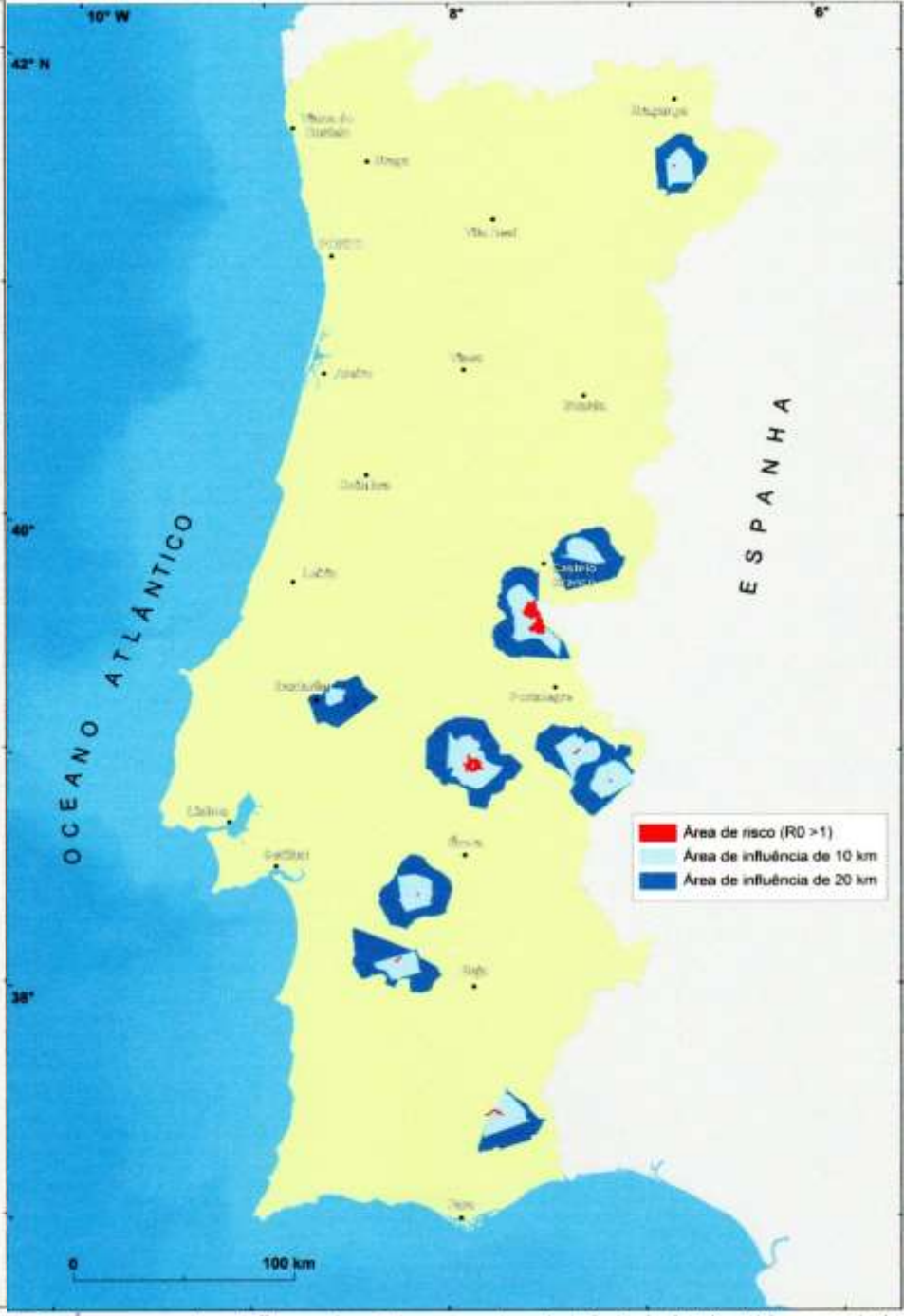
A.3 – Número de *Anopheles atroparvus*, por subsecção estatística, em Portugal Continental



A.5 – Número de mosquitos por pessoa, por subsecção estatística, em Portugal Continental



A.8 – Áreas com valor de R_0 entre 0,5 e 1, com uma área de influência de 10 e 20 km a partir da rede viária



A.9 – Áreas com valor de R_0 superior a 1, com uma área de influência de 10 e 20 km a partir da rede viária

Conclusão … " … não é completamente impossível que …"

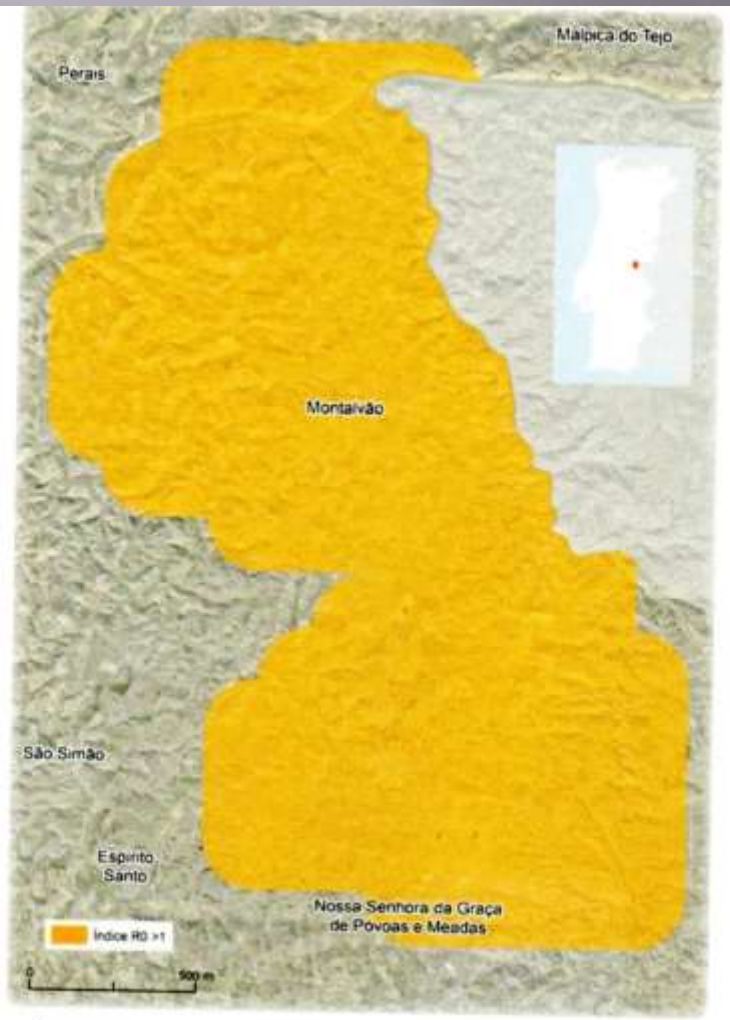


Figura 3.14 – Área de risco máximo de transmissão de malária (freguesia de Montalvão, concelho de Nisa)

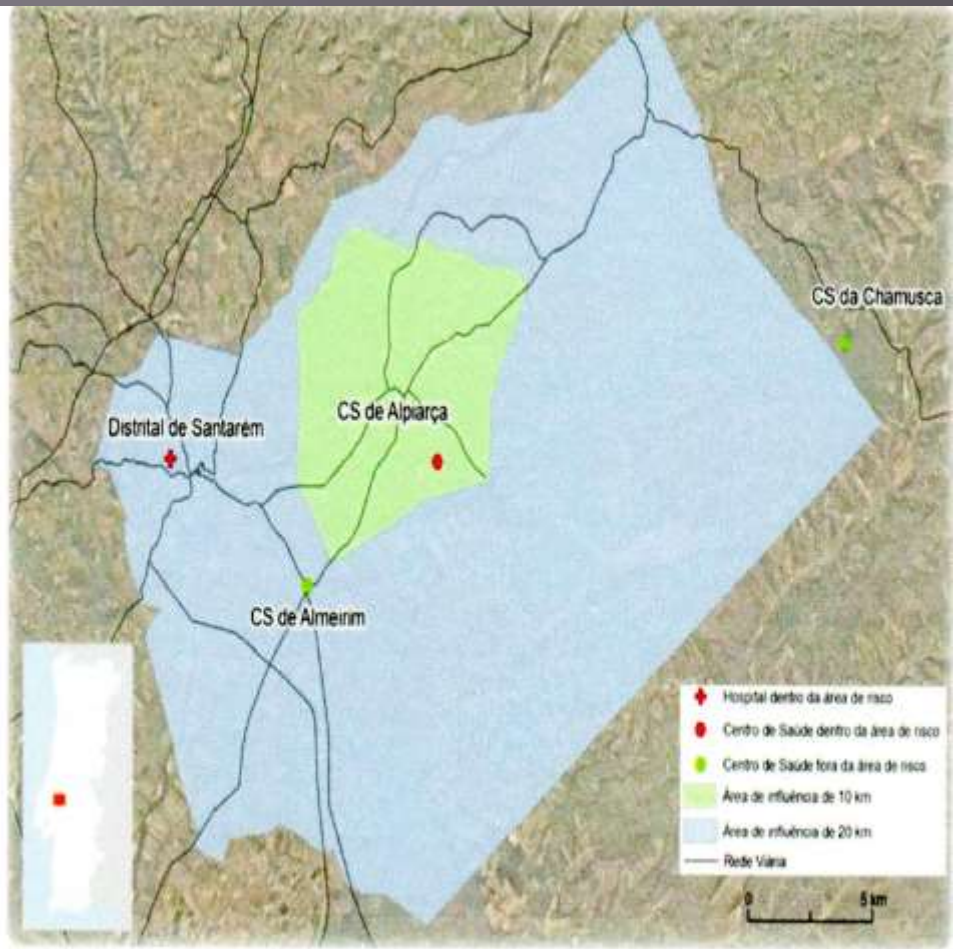
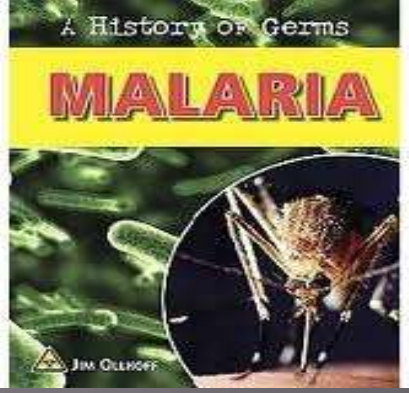
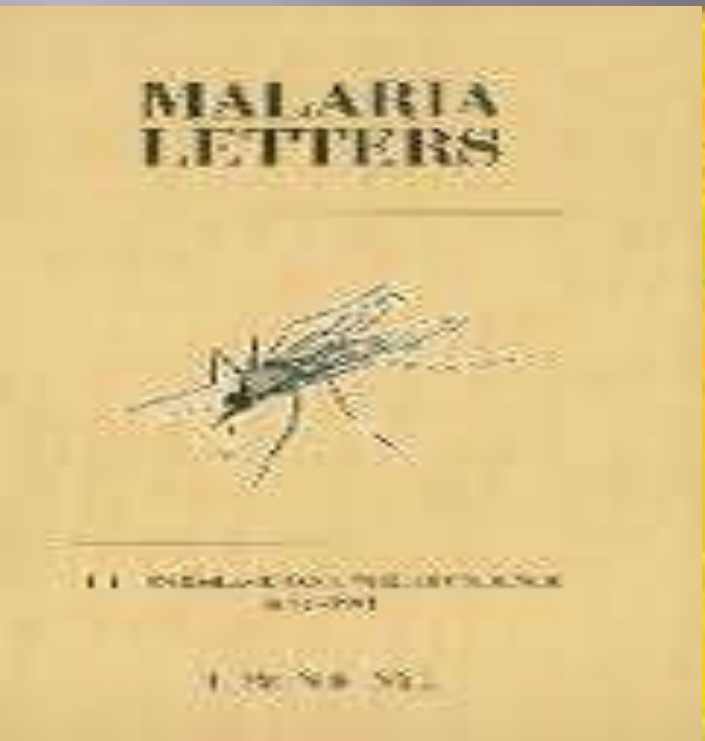
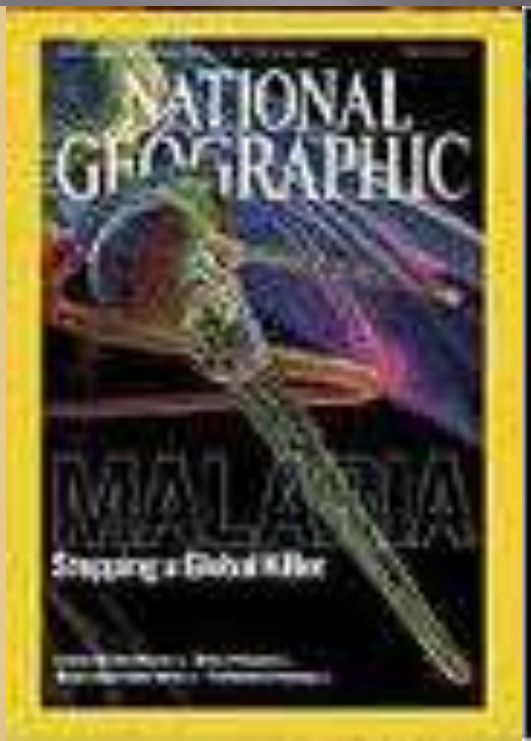


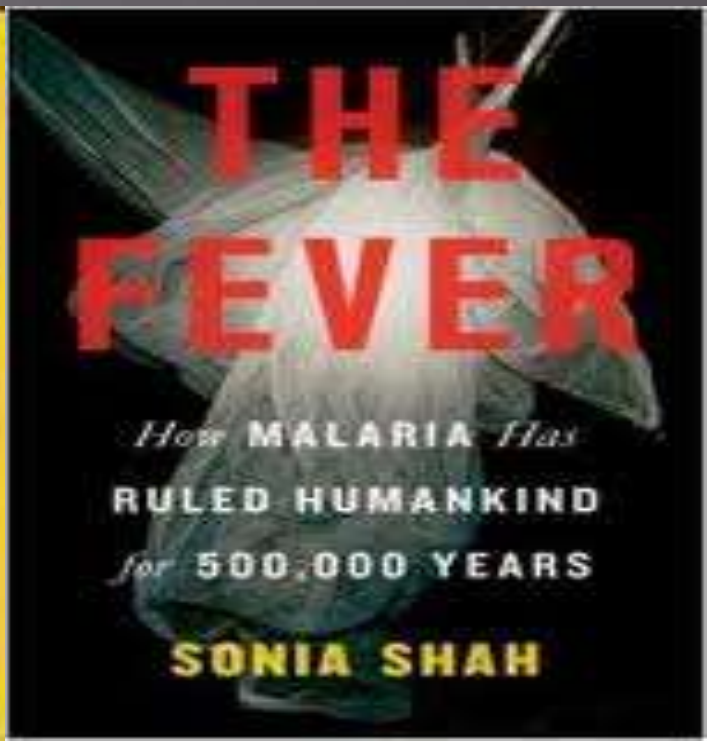
Figura 4.2 – Exemplo de identificação de hospitais e centros de saúde nas áreas de maior risco de transmissão de malária em Portugal Continental



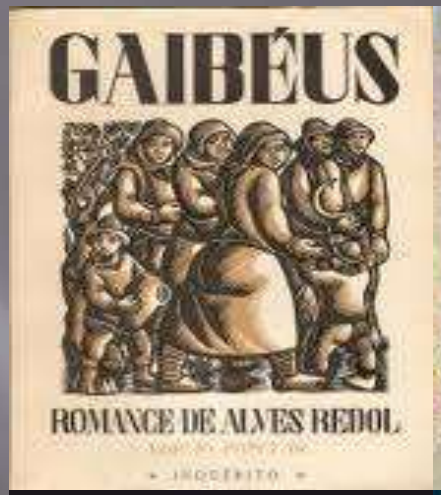
CONTROVÉRSIAS E CURIOSIDADES DA HISTÓRIA: O CONTRIBUTO PORTUGUÊS

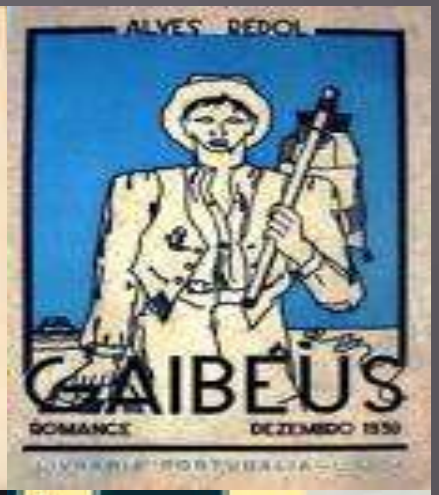


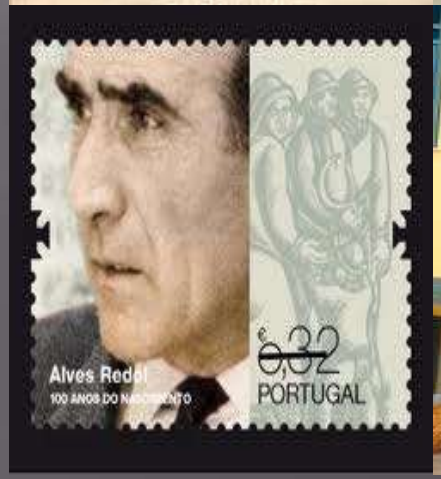




- *"... cada homem na eira não passa de um volante, uma correia ou um braço da ciranda. Quando o apito soar, o volante achará os raios, a correia e o braço da ciranda adormecerão. Os homens irão ajudar à carga e pensar na vida. Nos corpos de alguns correrá o frio das sezões; e os cérebros, libertos da vertigem comunicativa das máquinas, encontrarão pensamentos. Mas os pensamentos não sabem ainda acalentar fadigas. Nas poisadas, a vida torna-se mais negra..."(sic.)*





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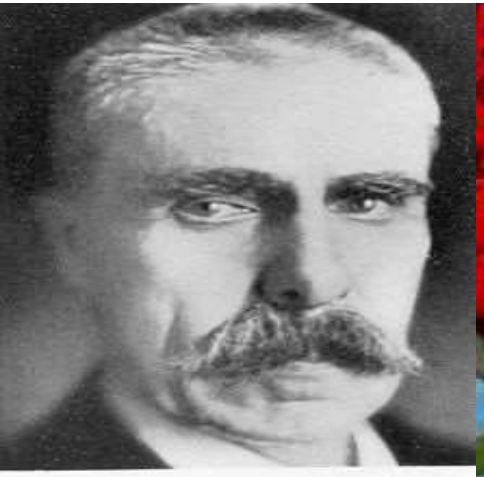
MUSEU
DO NEO-REALISMO

The Nobel Prize in Physiology or Medicine 1927
Julius Wagner-Jauregg

The Nobel Prize in Physiology or Medicine 1927

Julius Wagner-Jauregg

Biography



Wagner-Jauregg

The Nobel Prize in Physiology or Medicine 1927
Julius Wagner-Jauregg

The Nobel Prize in Physiology or Medicine 1927

Julius Wagner-Jauregg

Biography

The History of Malariotherapy for Neurosyphilis

Modern Parallels

Stephanie C. Austin, Paul D. Stolley, MD, MPH, Tamar Lasky, PhD

Table 2.—Results of Malariotherapy for Neurosyphilis*

Name of Author	Year Published	No. of Cases	% Remission	% Improved	% Unimproved	% Died
Gerhumann (Austria)	1905	400	33.0	14.0		
Von Ravin (Germany)	1926	30	50.0	25.0		
Asegaard (Finland)	1927	197	40.0	10.0	19.0	25.0
Bunker and Kirby (United States)	1928	156		50.0		12.5
Matz (United States)	1928	346	24.0	41.0	31.5	3.5
Mayer (Germany)	1929	270	17.7	15.5	36.6	30.3
Bouman (Holland)	1929	126		53.0	37.5	9.5
Holmes (United States)	1930	58	5.0	57.0	36.3	1.7
Van Meter (United States)	1930	234	29.0	25.0	17.0	29.0
Gugenheim (Germany)	1931	50	60.0	28.0	12.0	0.0
Walther (Switzerland)	1931	33	42.0	40.0	9.0	9.0
Stoney (United States)	1932	161	28.7	8.3		
Pauian (France)	1935	1070	37.5	42.0	14.5	6.0
Cheney (United States)	1935	410	18.3	32.5	19.8	29.5
Bubis (Russia)	1936	353	53.0	19.5	17.3	10.2
Bohls (United States)	1937	62	30.6	37.9	24.2	8.7
Kupper (United States)	1938	190	31.5	23.1	19.5	26.7

Table 1.—Wagner-Jauregg's Results of Comparative Treatment With Malaria and Malaria Combined With Neosalvarsan*

	Malaria, %	Malaria and Neosalvarsan, %
Full remission	25.0	48.5
Rapid deterioration	22.0	6.7
Death	18.7	12.0

*Source of data is reference 5. He does not report on all of the cases, so percentages do not add to 100%

Bull. Org. mond. Santé
Bull. Wld Hlth Org. } 1974, **50**, 165-167

Applications actuelles de la malariathérapie*

G. LUPASCU [1]

Après un bref rappel historique et l'évocation des résultats obtenus dans les centres d'impaludation thérapeutique, dont certains ont eu une importance décisive pour l'étude du paludisme, l'auteur expose la situation actuelle et les perspectives en matière de malariathérapie.

Procedure and clinical assessments of malariotherapy: recent experience in 20 HIV patients

CHEN Xiaoping 陈小平, XIAO Binquan 肖斌权, XU Huifang 徐慧芳, SHI Wenjun 施文钧, GAO Kai 高 凯 and RAO Jili 饶纪礼

Keywords: *malariotherapy* · *human immunodeficiency virus* · *acquired immunodeficiency syndrome* · *side effect*

Objective To demonstrate the side effects of malariotherapy and to explore safe procedures in conduct of malariotherapy for human immunodeficiency virus (HIV) infected patients.

Methods Twenty HIV/ acquired immunodeficiency syndrome (AIDS) patients were selected for the study of malariotherapy and were intravenously infected with Plasmodia vivax to induce therapeutic malaria. Malaria was terminated with chloroquine after 10 – 20 malarial febrile episodes. Clinical assessments were made before (baseline), during (malarial phase) and after (post) termination of malaria. The density of Plasmodia in peripheral blood from the HIV/AIDS patients were compared to that from HIV-negative naturally infected malarial patients who donated the blood for the therapeutically induced malaria. CD_4 cell baseline levels were correlated to the severity of malarial symptoms and parasitemia.

Results There were no significant differences of Plasmodium density between the HIV/AIDS patients injected with P. vivax and the HIV-negative blood donors. However, it was found that the HIV-positive patients had milder malarial symptoms and parasitemia with progressively lower CD_4 cell baseline levels. All patients developed every day or every other day fever episodes with headache and shaking chill. These symptoms were well tolerated with the aid of anti-pyretic medications. Spleen and liver enlargement were seen in 15 of 20 and 4 of 20 patients respectively. Transitory liver effects with increase of serum glutamic-pyruvic transaminase were seen in 2 of 20 during malarial phase. Most patients experienced mild to medium anemia and 6 of 20 patients developed thrombocytopenia during malarial phase. All these side effects disappeared after termination of malaria or within one month thereafter. No complications occurred in these patients.

Conclusions Therapeutically induced acute vivax malaria was well tolerated in 20 HIV-positive subjects who represented a range of CD_4 cell levels from 1868/μl to 15/μl. Malariotherapy did not induce complications while increasing CD_4 cell levels in most treated HIV/AIDS patients (results published elsewhere).

Malariotherapy and cancer.

MedLine Citation: PMID: 7010092 Owner: NLM Status: MEDLINE

Abstract/OtherAbstract: Malariotherapy merits a clinical trial as an adjuvant to conventional cancer therapy. This particular modality of treatment is a most potent stimulus of macrophage activity. These scavenger cells are widely believed to be an essential arm in the host's immune defenses against malignant disease, both as regards the processing of antigens and as killers of tumor cells. Significant too, malariotherapy, as formerly used to effectively treat some 16,000 patients with paretic neurosyphilis in one institution alone, before the advent of the penicillin age, has proved to be a particularly safe modality of treatment.

Authors: L B Greentree

CDC | CDC Home | Search | Health Topics A-Z

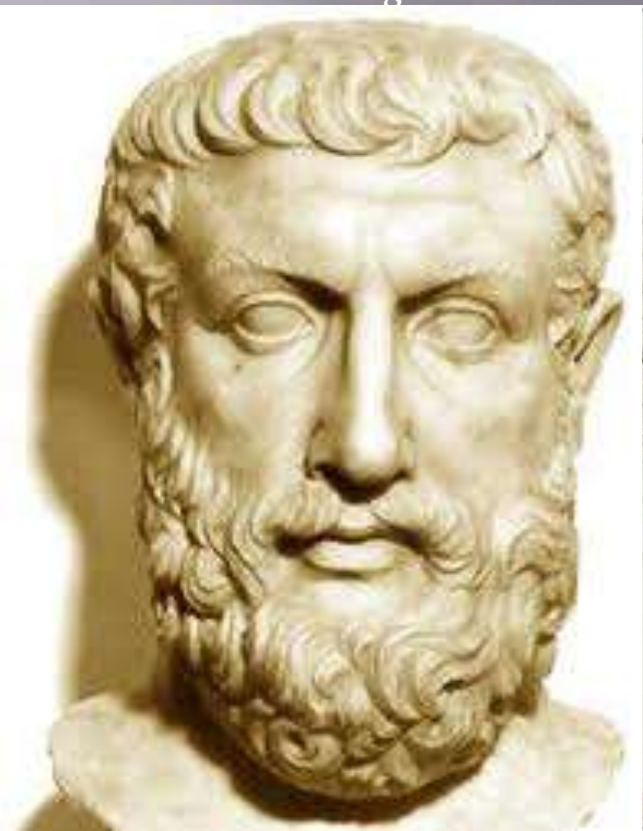
MMWR Weekly

October 04, 1991 / 40(39);665-666

Update: Self-Induced Malaria Associated with Malariotherapy for Lyme Disease -- Texas

A Febre como Arma Terapêutica I

- **Parmenides (540-480 AC)**
  - *"... give me the the power to induce fever, and I cure all the diseases..."*
- **Thomas Sydenham (1624-1689)**
  - *"... a Febre é um instrumento da Natureza para que o Homem possa combater os seus inimigos ..."*



A Febre como Arma Terapêutica II

- Antoine Didier (1725)
  - Neoplasias em doentes c/ Sífilis tinham mais probabilidade de cura
  - Prostitutas tinham menor incidência de neoplasias
- W. Bucsh (1868)
  - Foi o 1º a utilizar a hipertermia induzida na terapêutica oncológica a partir de infecções provocadas p/ S. pyogenes
- Frederick Fehleisen (1882) e P. Bruns (1887)
  - Induziram remissão em vários doentes c/ neoplasias provocando iatrogenicamente uma erisipela p/ S. pyogenes
- E. Lambote (1896)
  - Constatou que os doentes que tinham tido erisipela mais raramente desenvolviam neoplasias
- William Cooley (1862-1936) (NY Hospital e Memorial Sloan-Kettering Cancer Center – USA)
  - Foi o 1º a estudar este fenómeno de forma sistemática através da utilização de uma Toxina (Streptococos e Serratia)
- P. Engel (1934-1935) e F. Sinek (1936)
  - Constaram que doentes que nunca tinham tido acessos febris tinha maior probabilidade de virem futuramente a desenvolver neoplasias
- R. Virchow (1863)
  - Estabeleceu a relação entre a infecção p/ S. Haematobium e o carcinoma da Bexiga
- M. Askanazy (1911)
  - Estabeleceu a relação entre a infecção p/ O. Felineus e o Carcinoma do Fígado

NeuroImmunoModulation

Review

Neuroimmunomodulation 2001;9:55–64

Received: December 29, 2000
Accepted after revision: May 9, 2001

Fever, Cancer Incidence and Spontaneous Remissions

Ralf Kleef[a] Wayne B. Jonas[b] Wolfgang Knogler[c] Werner Stenzinger[d]

[a]Office of Complementary and Alternative Medicine, NIH, [b]Samueli Institute for Information Biology and Uniformed Services University of the Health Sciences, Bethesda, Md., USA, [c]Menox Ambulatorien, Vienna, Austria, [d]Odenwaldklinik, Bad König, Germany

Table 1. References reporting infection and/or fever in association with spontaneous remission of neoplastic diseases

Tumor types	References
Bone tumors	112, 144–148
Burkitt's lymphoma	151
Brain tumors	122, 149–150
Colorectal cancer	123–124
Gastric cancer	152–153
Gynecological	154–155
Head and neck cancer	156–157
Hepatocellular cancer	158–161
Leukemia: AML, ALL, CML, CLL	115–117, 121, 125, 162–182
Lung cancer	119–120, 182–184
Lymphoma and non-Hodgkin lymphoma	151, 185–196
Melanoma	126, 197–202
Multiple myeloma	203
Prostate cancer	204
Renal cell cancer	205–207
Retinoblastoma	208–211
Sarcoma	95, 211–217

AML = Acute myeloic leukemia; ALL = acute lymphatic leukemia; CML = chronic myeloic leukemia; CLL = chronic lymphatic leukemia.

Cancer Immunol Immunother (2001) 50: 391–396
DOI 10.1007/s002620100216

REVIEW

Uwe Hobohm

Fever and cancer in perspective

Received: 22 March 2001 / Accepted: 5 July 2001 / Published online: 22 August 2001

Study	Treatment	Outcome	Remark	Ref.	Year
71 patients with inoperable metastatic neoplasms of different kinds, with different prior treatment by chemotherapy and radiation; 37 treated with CT vs. 34 with typhoid vaccine (control)	Coley's toxin	9 responses in CT, including 3 cures (no sign of residual tumor);1 slight response in control	Doses were increased in both groups until 102F was achieved; at least 10 injections were given; patients had different history of chemotherapy and radiation	[20]	1962
93 patients with inoperable metastatic neoplasms of different kinds, all treated by CT	Coley's toxin	18 responses including 1 cure	Doses were increased in both groups until 102°F was achieved; at least 10 injections were given; patients had different history of chemotherapy and radiation	[21]	1962


State of Florida
Hillsborough County

On this the 13th day of June A.D. 1963 Personally appeared before me E. A. Clarke Judge of Probate in and for the aforesaid County and State Donald McKay one of the Witnesses of the Last Will and Testament of William Cooley deceased Who under oath says that the foregoing a Paper Exhibited by Brewster Matthews Executor of the deceased is the true and only Last Will and Testament of the said William Cooley deceased

Donald McKay

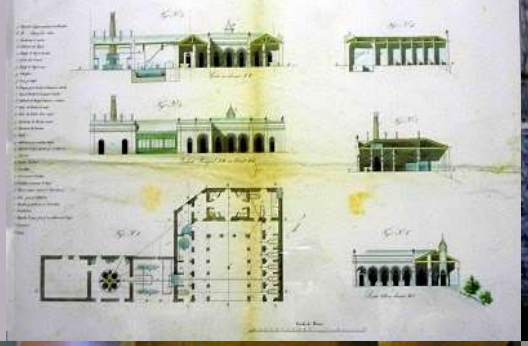
Sworn to and subscribed before me this 13 Day of June A.D. 1963

E. A. Clarke
Judge of Probate

República dos Corvos

O Pavilhão de Segurança está em risco

O hospital Miguel Bombarda vai desaparecer do mapas. Um dos únicos edifícios panópticos do mundo pode esfumar-se com ele.




PAVILHÃO
DE
SEGURANÇA


GATAFUNHOS
E
OUTRAS ARTES


CASA DE BANHO


GLORIA A
ALTURI
TERRA ABONHON
VONTADE

4.2. Malarioterapia

Operação que visa tratar e curar enfermidades nervosas por introdução do *plasmodium vivax*, do hematozoário de Laveran no organismo humano. Desde 1917 que a malarioterapia foi aplicada em paralíticos gerais e associada ao tratamento da sífilis precoce. Foi o psiquiatra austríaco Julius Warner-Jauregg (1857-1949) que descobriu a importância terapêutica da inoculação de malária no tratamento da paralisia demencial, o que lhe valeu o Prémio Nobel da Medicina em 1927.

Em Águas de Moura realizaram-se trabalhos de malária experimental em articulação com o Hospital Miguel Bombarda. Estas experiências decorreram a partir de 1937, destinados ao tratamento de casos de sífilis cerebral. A documentação existente refere-se ao período 1937-1942.

Em 1953 há ainda referência ao prosseguimento de malarização com espécimes do Instituto.

1. A malarioterápia na cura da paralisia geral sifilítica / J. Menezes de Almeida. Porto : Lopes da Silva - Editora, 1950.

Adicionar à lista

2. Luta anti-malarica e malarioterapia : relatório duma viagem de estudo : 1932 / José Chaves Ferreira, Francisco Cambournac. [S.l. : s.n.], 1935.

Adicionar à lista

3. Nota de um clínico geral sobre a malarioterapia / por J. Gouveia Monteiro. [S.l. : s.n.], 1954.

Adicionar à lista

4. XXV Concurso Hípico Internacional Oficial. [S.l. : s.n.], 1938.

Adicionar à lista

Bull. Org. mond. Santé
Bull. Wld Hlth Org. } 1968, 38, 61-67

Parasitological and Clinical Investigations on Infections with the VS Romanian Strain of *Plasmodium malariae* Transmitted by *Anopheles labranchiae atroparvus* *

G. LUPASCU,[1] P. CONSTANTINESCU,[2] E. NEGULICI,[2] P. G. SHUTE [3] & M. E. MARYON [3]

In order to contribute to knowledge of the sporogonic cycle of malaria parasites, 3 batches of Anopheles labranchiae atroparvus *were infected with the VS Romanian strain of* Plasmodium malariae *by feeding them on 2 patients undergoing malariotherapy in Romania. Of the 310 infected mosquitos 59 were dissected for ookinetes, oocysts and sporozoites, and the rest were used for further clinical trials in England. Mature ookinetes were observed 18 hours after infection, and sporozoites were first observed in the salivary glands 19 days after infection.*

One of the main characteristics of the VS strain of P. malariae *observed in Romania was the relatively large number of gametocytes and subsequent heavy infections it could produce. However, gametocytes were found only in the heart blood of 1 of the 4 subjects infected in England (on autopsy after accidental death);* post mortem *examination of the liver of the same subject failed to show exo-erythrocytic schizonts. None of the other 3 subjects showed gametocytes or infected mosquitos. On the basis of clinical symptoms, the incubation period of* P. malariae *in these subjects was found to be 18–19 days.*

FRANCISCO CAMBOURNAC

Médico epidemiologista e tropicalista, Francisco Jo Cambournac (1903-1994) destacou-se sobretudo Malariologia, área em que deu um grande contrib portuguesa. Além de membro-fundador e director Malariologia de Águas de Moura (1939-1954), Francisco ainda director da Organização Mundial da Saúde para durante dez anos (OMS África), tendo recebido o Prém (1978).

Licenciado em Medicina pela Faculdade de Medicina da Lisboa, Francisco Cambournac fez a sua formação hosp sua carreira clínica no Hospital de Santa Marta, e posteriormente concluído o curso da antiga Escola de Me

Decidido a especializar-se em doenças tropicais, em particular na área de Malariolo curso de Malariologia da Faculdade de Medicina de Paris, fez estágios prático Jugoslávia, nomeadamente na Escola Superior de Malariologia e na Estação Exp luta anti-malária de Roma, e no Instituto de Higiene de Skoplje. Frequentou a Higiene e Medicina Tropical no Instituto de Medicina Tropical de Hamburgo e rea Instituto Pasteur de Paris, no Instituto Colonial de Amesterdão, na Escola de Hi Tropical de Londres, no Ross Institute e na Secção de Malarioterapia do Horton M Epsom.

BILHETE POSTAL

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DIRECTOR-PROFESSOR EGAS MONIZ

Hospital de Santa Marta

LISBOA

Hospital do Conde de Ferreira

DIRECÇÃO CLÍNICA

PORTO

Nº 282

Exmº Snr. Director do Instituto de Malariologia

ÁGUAS DE MOURA

Exmº Snr.:

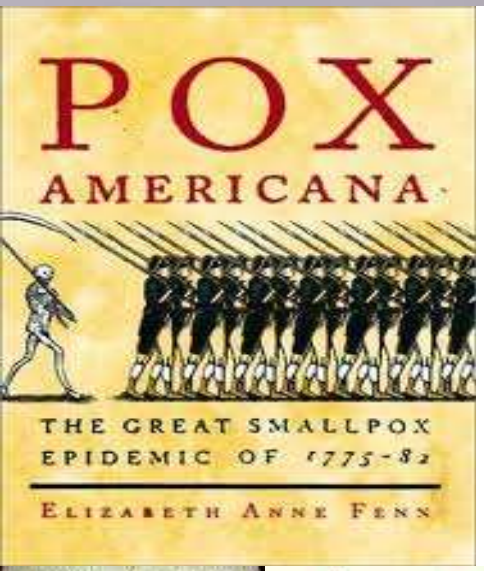
Com os meus gratos agradecimentos, tenho a honra de enviar a V.Exª os gráficos dos 4 doentes inoculados em 25 de Abril p.p. pelos anofeles enviados por êsse Instituto. Dos doentes Arnaldo J.M. e Manuel A. foi possível organisar o gráfico desde o dia da inoculação, por estarem internados, mas o mesmo não aconteceu com os doentes Emílio A.S.A. e Serafim B. que frequentavam a Consulta Externa e só foram hospitalizados quando apresentaram os primeiros sintomas dos acessos.

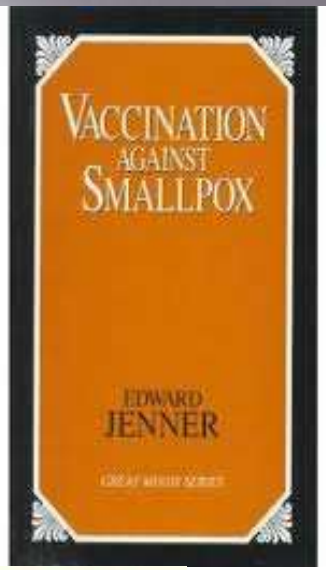
Êste último doente, Serafim B., como se tivesse mostrado refratário à 1ª inoculação, foi reinoculado no dia 17 de Maio, por passagem do doente Emílio A.S.A. com acessos típicos, em dias alternos, de 41º e alguns décimos e que, desde o dia da reinoculação, passaram a ser diários.

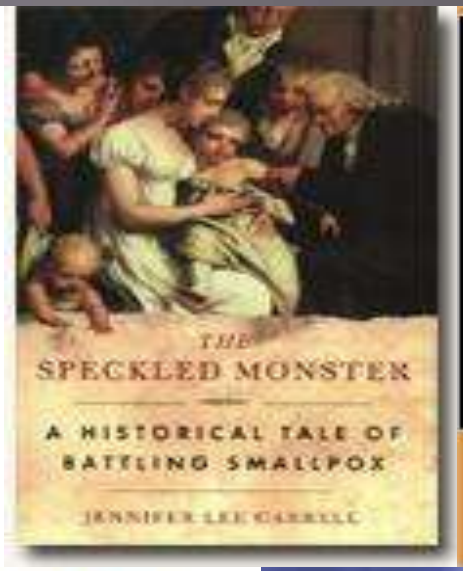
Pôrto e Hospital do Conde de Ferreira, 2 de Junho de 1941.

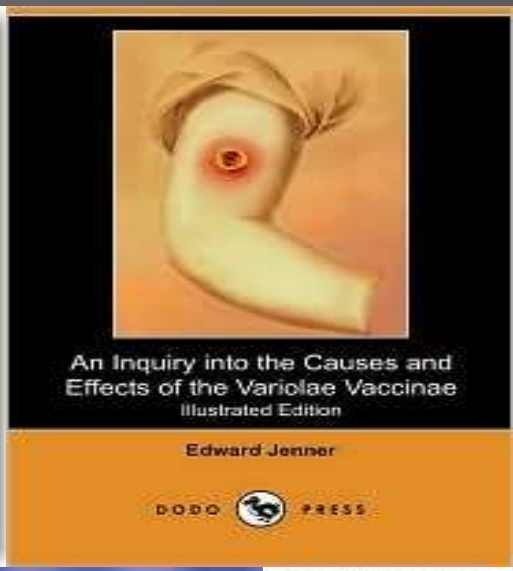
O Director,

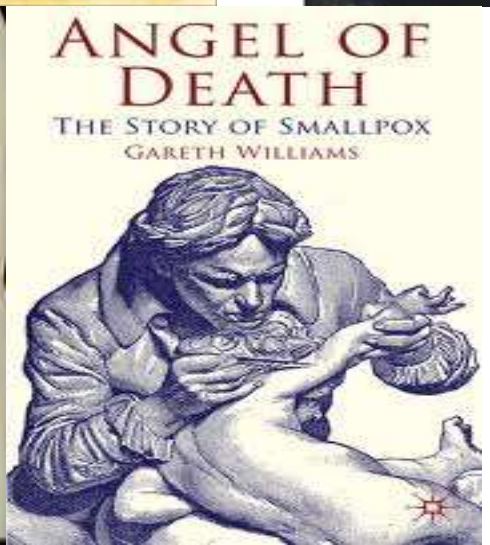
Varíola: A 1ª Doença Erradicada pela Vacinação (História de um Contributo Esquecido)

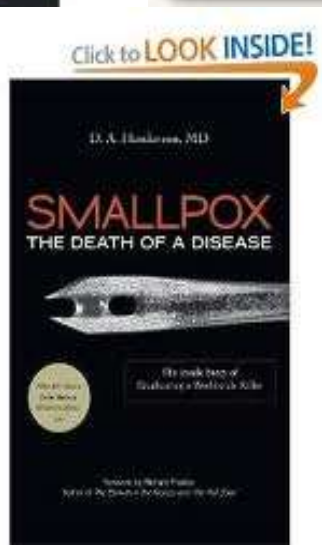


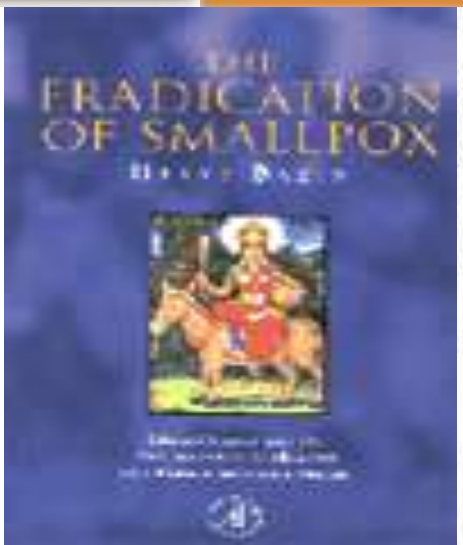












La croisade antivariolique

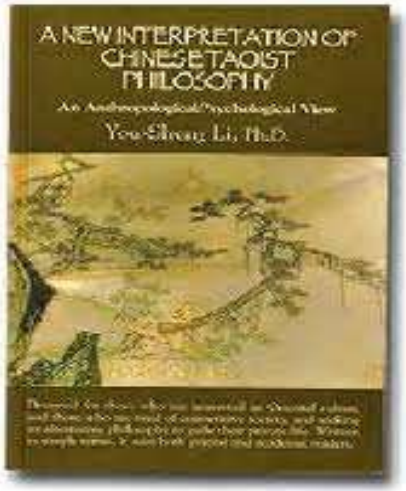
par Pierre Darmon

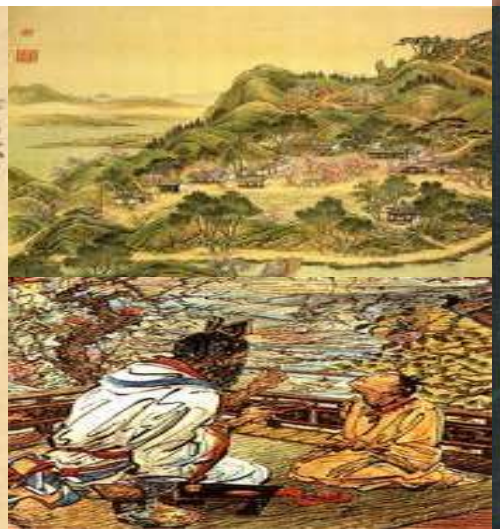
Il a fallu un siècle pour vaincre les craintes des Français devant une vaccination antivariolique qui n'était d'ailleurs pas sans risques.

Table 6.1. Important events in the history of smallpox control, from ancient times to 1900

Variolation	Vaccination	Isolation and quarantine
10th century		
Variolation first reported in China, by insufflation, as a secret rite. Probably also practised in India at this time, by cutaneous inoculation.		Hospitals for smallpox established in Japan (Ishinfo, 982).
13th century		
Variolation by cutaneous route introduced into Egypt by Mamelukes.		
17th century		
Variolation more widely used in China. K'ang Hsi (1661–1722) variolated his soldiers and his children.		Quarantine introduced to control entry of smallpox into North American ports (Boston, New York, Philadelphia; 1650). Mandatory isolation of smallpox cases at home (Virginia 1667).
18th century		
Papers on variolation published by Royal Society of London (Chinese method, 1700; Turkish method: Timoni, 1714; Pylarini, 1716). Cotton Mather told of variolation by his African slaves (Boston, 1706). Variolation by cutaneous route carried out in Great Britain (Sloane, 1721), Bohemia (Reiman, 1721) and Boston, USA (Boylston, 1721). Variolation popularized in England by the Suttons (1726). Dimsdale variolates Catherine the Great and variolation accepted in Russia (1768). Louis XV dies of smallpox and variolation accepted in France (1774). Washington orders variolation of the Continental army (1777).	Publication of Jenner's *Inquiry* (1798).	London Small-Pox and Inoculation Hospital established (1746). Eradication of smallpox by systematic variolation of population and isolation of cases suggested by Haygarth (1793) and Carl (1799).
19th century		
Variolation banned in Russia (1805), Prussia (1835), Great Britain (1840) and British India (1870), but still widely practised in Afghanistan, China and many parts of Africa.	*Inquiry* translated into several European languages (1800–1802). Vaccination adopted in most European countries and in the U.S.A. (1800–1803). Vaccine sent successfully to Bombay (de Carro, 1802) and to South and Central America, the Philippines and Macao (Balmis-Salvany Expedition, 1803–1806). Primary vaccination of infants made compulsory in Bavaria (1807), Denmark (1810), Norway (1811), Bohemia and Russia (1812), Sweden (1816), Hanover (1821) and Great Britain (1853). Revaccination introduced into Württemberg (1829). Vaccination compulsory in Prussian army (1833). Vaccine produced in calves (Italy, 1805, 1810). Vaccine passaged in calves for production (Negri, 1840). Production in calves adopted in France (1864), Belgium (1865), Great Britain (1881) and Germany (1884). Use of glycerol as diluent introduced in Italy (Negri, 1840). Glycerolated vaccine popularized by Copeman (1892). Jenner's arm-to-arm vaccination banned in Great Britain (1898).	Control of smallpox by isolation of cases and quarantine of contacts ("Leicester method", 1877); reinforced by vaccination of contacts (Millard, 1914).

الحضارة الإسلامية وأثرها في الطب





The Montague Millenium

1000 years of worldwide family history

A smallpox vaccine commemoration stamp (Turkey: 1967)

Da variolização à vacína

A partir de uma doença comum em vacas, o médico Edward Jenner descobriu uma forma de inocular humanos e combater a varíola, que matou 40 milhões de pessoas em todo o mundo no século XVIII

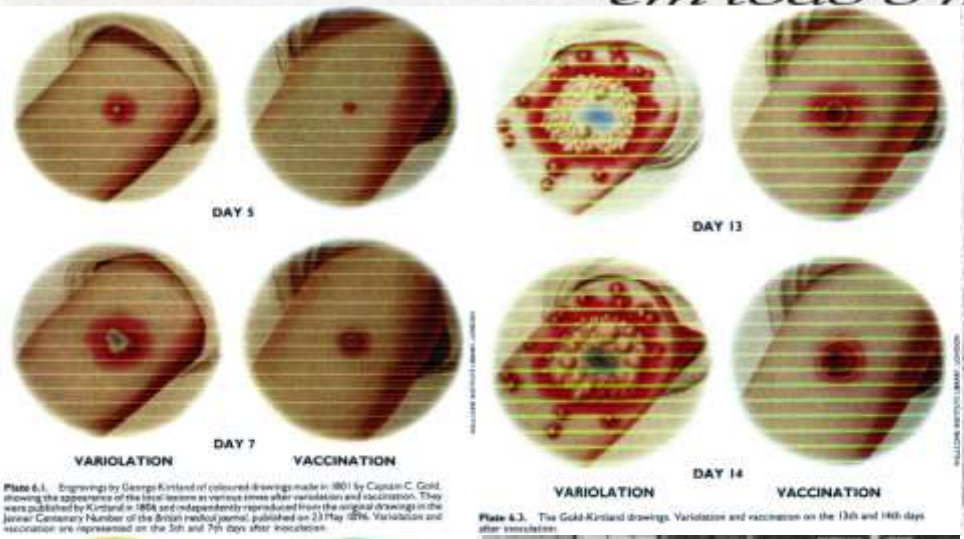


Plate 6.1. Engravings by George Kirtland of coloured drawings made in 1801 by Captain C. Gold, showing the appearance of the local lesions at various times after variolation and vaccination. They were published by Kirtland in 1806 and independently reproduced from the original drawings in the Jenner Centenary Number of the British medical journal, published on 23 May 1896. Variolation and vaccination are represented on the 5th and 7th days after inoculation.

Plate 6.3. The Gold-Kirtland drawings. Variolation and vaccination on the 13th and 14th days after inoculation.

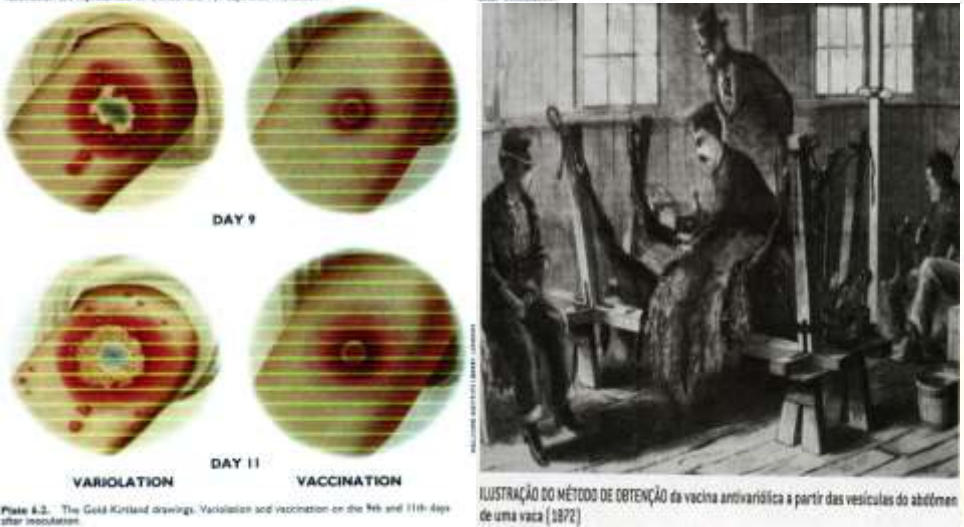
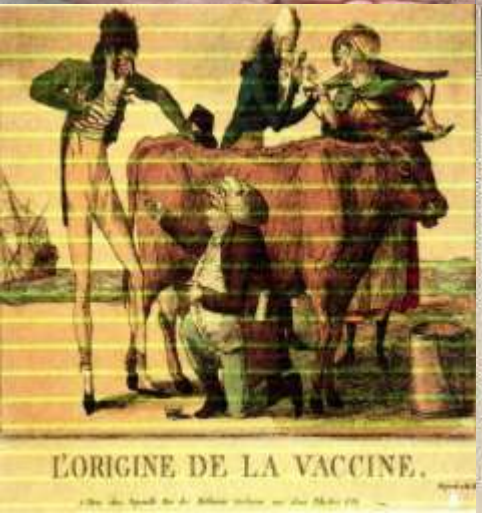
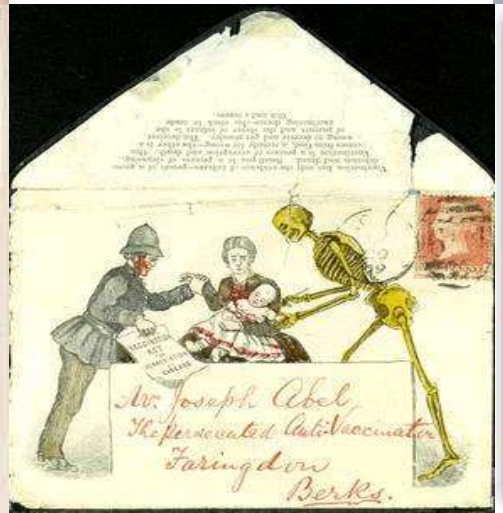


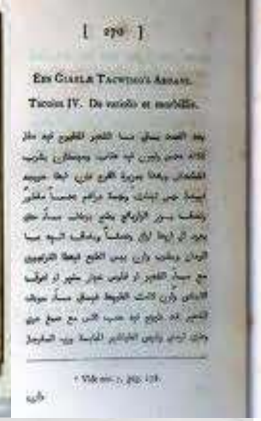
Plate 6.2. The Gold-Kirtland drawings. Variolation and vaccination on the 9th and 11th days after inoculation.

ILUSTRAÇÃO DO MÉTODO DE OBTENÇÃO da vacina antivariólica a partir das vesículas do abdómen de uma vaca (1872)






LIFE
OF
EDWARD JENNER, M.D.
BY JOHN BARON, M.D., F.R.S.
IN TWO VOLUMES
VOL. I.
LONDON
HENRY COLBURN, PUBLISHER


[270]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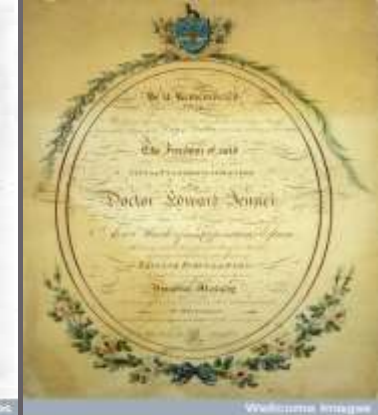
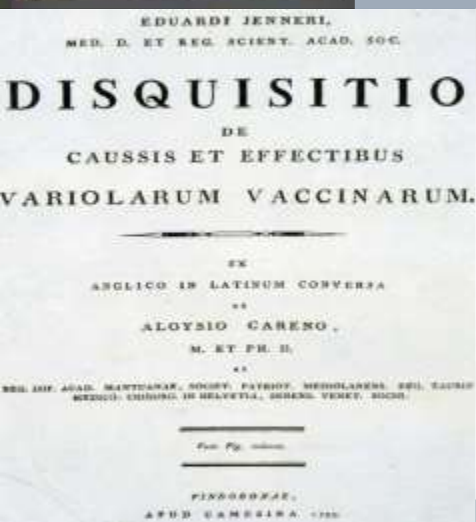
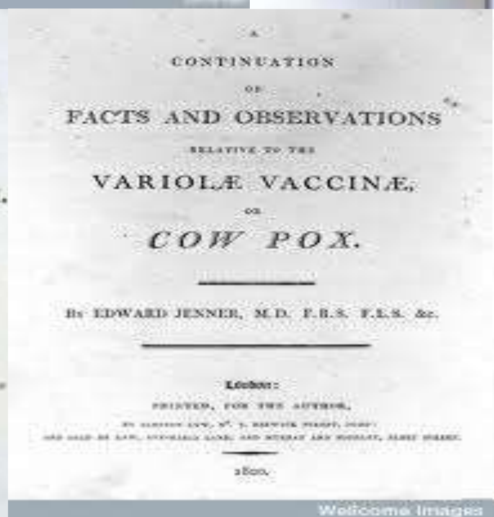
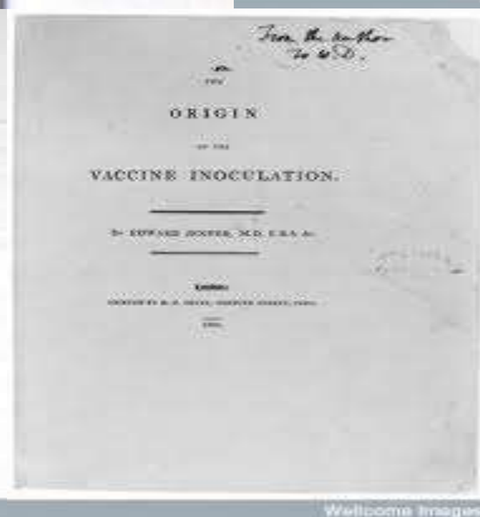
This
is to Certify that
Mr Edward Jenner


Doctor Edward Jenner


EDUARDI JENNERI,
MED. D. ET REG. SCIENT. ACAD. SOC.
DISQUISITIO
DE
CAUSSIS ET EFFECTIBUS
VARIOLARUM VACCINARUM.
EX
ANGLICO IN LATINUM CONVERSA
AB
ALOYSIO CARENO,
M. ET PH. D.


A
CONTINUATION
OF
FACTS AND OBSERVATIONS
RELATIVE TO THE
VARIOLÆ VACCINÆ,
OR
COW POX.
BY EDWARD JENNER, M.D. F.R.S. F.L.S. &c.
London:
PRINTED, FOR THE AUTHOR,
1800.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ORIGIN
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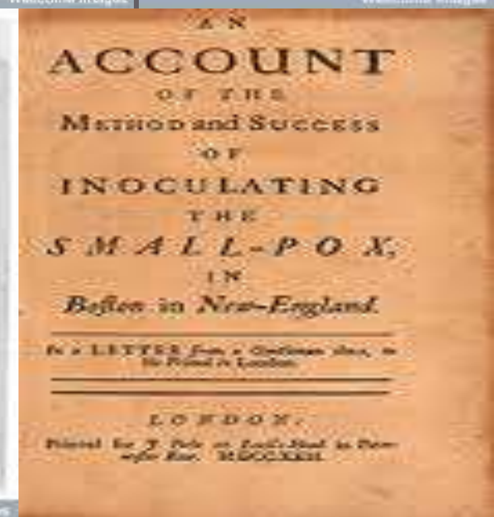
VACCINE INOCULATION.
BY EDWARD JENNER, M.D. F.R.S. &c.
London:


AN
ACCOUNT
OF THE
METHOD and SUCCESS
OF
INOCULATING
THE
SMALL-POX,
IN
Boston in New-England.
LONDON.


AN
ACCOUNT
Of the SUCCESS of
INOCULATING the SMALL-POX
In a LETTER to
Dr. WILLIAM WHITAKER.
By THO. NETTLETON, M.D.
DUBLIN:
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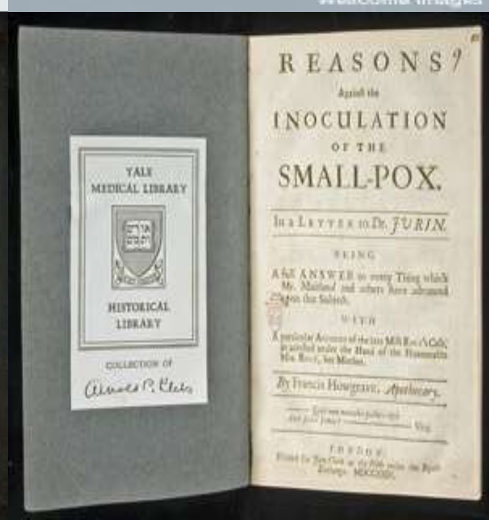
REASONS
Against the
INOCULATION
OF THE
SMALL-POX.
In a LETTER to Dr. JURIN.
By Francis Howgrave, Apothecary.
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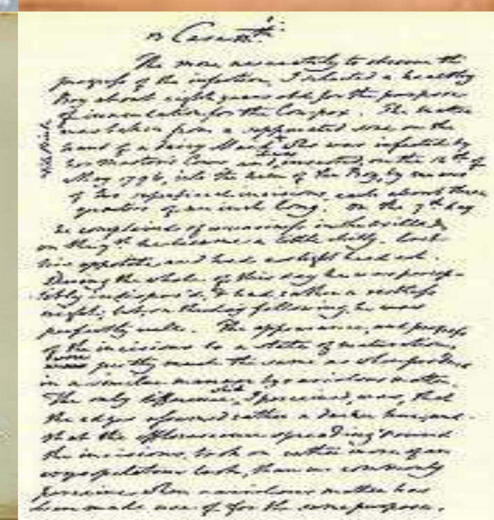
MEDICAL LIBRARY
HISTORICAL
LIBRARY


AN
INQUIRY
INTO
THE CAUSES AND EFFECTS
OF
THE VARIOLÆ VACCINÆ,
THE COW POX.
BY EDWARD JENNER, M.D. F.R.S. &c.



"A dissertation on the method of inoculating the small-pox" by *Jacob de Castro Sarmento* (1721)

DO
USO, E ABUSO
DAS MINHAS
A G O A S
DE
INGLATERRA,
OU
DIRECTORIO, E INSTRUCCAM.
PARA
Se saber seguramente, quando se deve, ou não, dar Agoas, affim nas enfermidades agudas; como nas algumas chronicas; e em casos propriamente de Cirurgia:
Pello Inventor das mesmas Agoas,
J. De CASTRO SARMENTO,
Doutor em Medicina, do Collegio Real dos Medicos de Londres, e Socio da Sociedade Real.

Impresso em Londres,
Em Casa de Guilherme Strahan,
No Anno MDCCLVI.

THE ROLL
OF THE
ROYAL COLLEGE OF PHYSICIANS
OF LONDON;
COMPRISING BIOGRAPHICAL SKETCHES
OF ALL THE EMINENT PHYSICIANS, WHOSE NAMES ARE RECORDED IN THE ANNALS, FROM THE INCORPORATION OF THE COLLEGE IN 1518 TO ITS REMOVAL IN 1825, FROM WARWICK LANE TO PALL MALL EAST.
By WILLIAM MUNK, M.D., F.S.A.,
FELLOW OF THE COLLEGE, ETC., ETC., ETC.

SECOND EDITION, REVISED AND ENLARGED.
VOL. III., 1801 TO 1825.
LONDON:
PUBLISHED BY THE COLLEGE, PALL MALL EAST.
MDCCCLXVIII.
(All Rights reserved.)

NUGÆ CHIRURGICÆ;
OR A
BIOGRAPHICAL MISCELLANY,
ILLUSTRATIVE OF A COLLECTION
OF
Professional Portraits.
By WILLIAM WADD, ESQ. F.L.S.
SURGEON EXTRAORDINARY TO THE KING,
FELLOW OF THE ROYAL COLLEGE OF SURGEONS, LONDON,
AND OF THE SOCIETY DE MÉDECINE, PARIS.
LONDON:
1824.

GRAMMATICA
LUSITANO-ANGLICA,
OU
PORTUGUEZA, E INGLEZA,
A qual serve para instruir aos Portuguezes no Idioma Inglez;
COMPOSTA
POR
JACOB DE CASTRO.
LISBOA.
Na Offic. de Manoel Coelho Amado.
ANNO M.DCC.LXXVII.
Com licença da Real Meza Censoria.

ROLL
OF THE
ROYAL COLLEGE OF PHYSICIANS
OF LONDON.

THOMAS ARCHIBALD MURRAY, M.D., was born in Norwich, and was the son of Dr. John Murray, one of the leading physicians in that city. After a good preliminary education at the grammar school of North Walsham, he commenced the study of medicine at the Norfolk and Norwich hospital, under the direction of his father, who was one of the physicians to that institution. He then passed three years at Edinburgh, where he graduated doctor of medicine 4th June, 1790 (D. M. I. de Thanomenis et Natura Morbi ex Subanresione oriundi). The ensuing winter he spent in London, attending the hospitals, and more particularly the practice of Dr. Willan at the Public dispensary. In July, 1797, he commenced business at Norwich, but in January, 1800, on the recommendation of Dr. Willan and some other friends, removed to London, and was forthwith elected physician to the Public dispensary. Dr. Murray was admitted a Licentiate of the College of Physicians 5th June, 1801. "This active, intelligent, and persuasive physician, through whose exertions, aided by the Society for bettering the Condition of the Poor, the London Fever Hospital was established, and to which he was nominated physician, was unfortunately cut off by fever, caught from the first patients admitted into the institution." Dr. Murray died at his house in Gre-
VOL. III. B

84
CASTRO, DE, SARMENTO, M. D.
Pine pinx. *Houston sc.*
He separated himself from the community of the Jews, by a letter which he wrote to the Elders of the Synagogue.
Gent. Mag. vol. xxxvi. 503.

CENE, LE, M. D.
P. M. de Cree sc.
Born at Caen, died in London 1702.

CELSUS.
Metabilis in Omnibus.
Wood cut.

CHAMBRE, JOHN, M. D.
Died 1540.
He is principally remarkable for being first named among the King's Physicians, as a petitioner for the foundation of the College of Physicians.
Hutchinson.

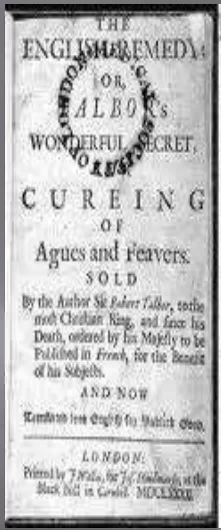
CHAMBERS, R. L.
Holbein.

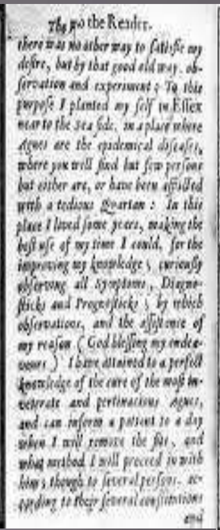
CHAMBERLIN, PAUL, M. D.
R. White del. *S. Trotter sc.*
From an Original Drawing 1653.

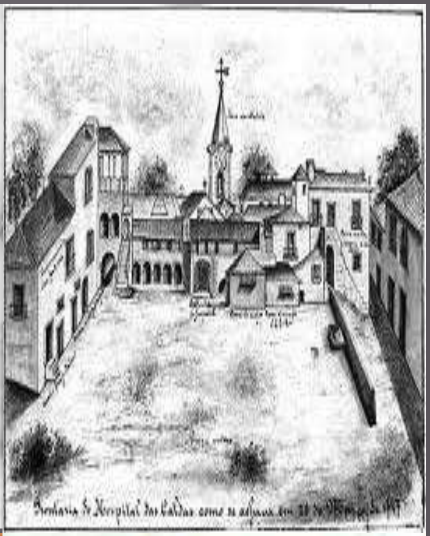
CHANSEL, CLAUDE, M. D.
P. Mariette, 1679.

A Água de Inglaterra

- "Água de Inglaterra é um dos exemplos mais marcantes dos 'remédios de segredo' muito em voga durante o século XVIII. Pelo nome de Água de Inglaterra eram conhecidos vários preparados farmacêuticos, produzidos por diferentes fabricantes desde finais do Séc. XVII a inícios do Séc. XIX e que apresentam em comum, além do nome, o facto de serem vinhos de quina. Eram utilizados para o tratamento do paludismo, que era então uma das doenças mais importantes, atingindo uma grande número de indivíduos e existindo endemicamente em várias regiões de Portugal. A importância medicinal da Água de Inglaterra reside principalmente no seu efectivo valor terapêutico, pelo facto de a quinina ser o seu princípio activo mais importante, constituindo o mais antigo quimioterápico ainda em uso. Era um medicamento popular, amplamente conhecido e divulgado, sendo frequentemente consumido por automedicação. Numa primeira fase era importada de Inglaterra, de onde Fernando Mendes (?-1724), o seu introdutor em Portugal, a enviava. Seguiu-se-lhe Castro Sarmento que montou uma verdadeira rede de distribuição da Água de Inglaterra em Portugal. A pouco e pouco foram surgindo produtores locais que foram aumentando a produção de forma a satisfazer a procura. Com o isolamento da quinina por Pelletier (1788-1842) e Caventou (1795-1877) em 1820 e a sua substituição pelo sulfato de quinina, perde a importância que teve no século XVIII." (in Instituto Camões)


THE
ENGLISH REMEDY:
OR,
TALBOR'S
WONDERFUL SECRET,
FOR
CUREING
OF
Agues and Feavers.
SOLD
By the Author Sir Robert Talbor, to the most Christian King, and since his Death, ordered by his Majesty to be Published in French, for the Benefit of his Subjects.
AND NOW
Translated into English for Publick Good.
LONDON:

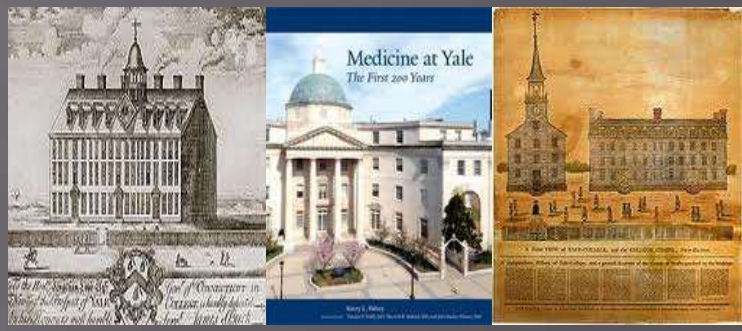

To the Reader.
there was no other way to satisfie my desire, but by that good old way, observation and experiment: To this purpose I planted my self in Essex near to the sea side, in a place where Agues are the epidemical diseases, where you will find but few persons but either are, or have been afflicted with a tedious Quartan: In this place I lived some years, making the best use of my time I could, for the improving my knowledge; curiously observing all Symptoms, Diagnosticks and Prognosticks; by which observations, and the assistance of my reason (God blessing my endeavours) I have attained to a perfect knowledge of the cure of the most inveterate and pertinacious Agues, and can inform a patient to a day when I will remove the fits, and what method I will proceed in with him, though to several persons according to their several constitutions

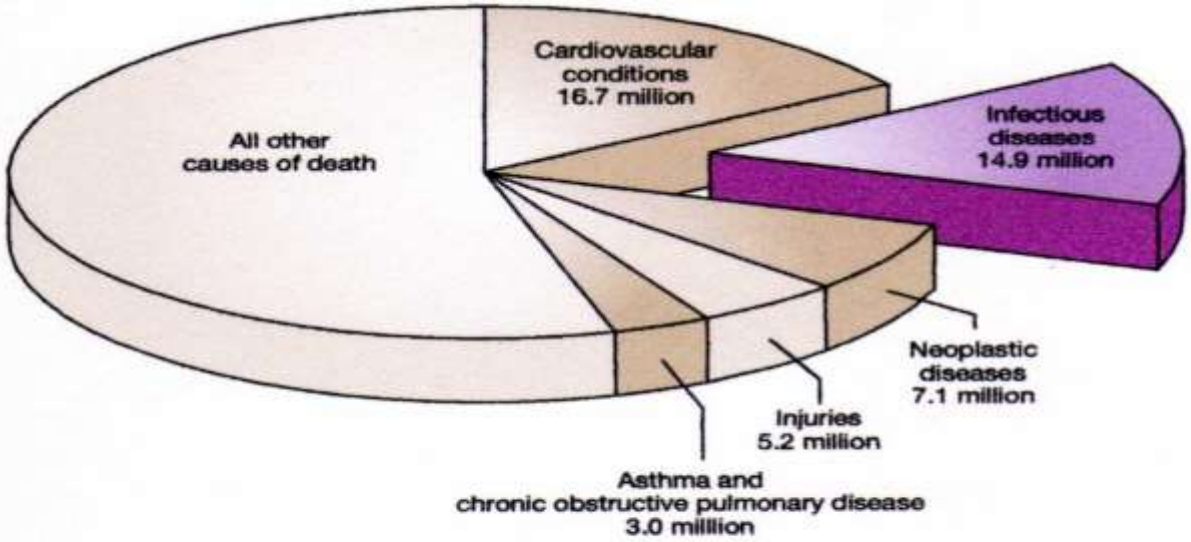


(ALGUMAS) CONCLUSÕES

Futurologia Falaciosa

- "… the war against infectious diseases is over, because we have won…" (sic.)(US Surgeon General, 1967)
- "… no new diseases are going to be discovered …" (sic.) L. Thomas Dean of Yale Medical School (1976)
- WHO (2008)
  - D. Infecciosas 15.000.000 mortes / ano
    - 2ª causa de Mortalidade Mundial
      - 1ª Causa nos Países em Desenvolvimento
  - Novos Agentes Patogénicos para a Espécie Humanas descritos nos últimos 40 anos: 50





Infectious diseases	Annual deaths (million)
Respiratory infections	3.96
HIV/AIDS	2.77
Diarrhoeal diseases	1.80
Tuberculosis	1.56
Vaccine-preventable childhood diseases	1.12
Malaria	1.27
STDs (other than HIV)	0.18
Meningitis	0.17
Hepatitis B and C	0.16
Tropical parasitic diseases	0.13
Dengue	0.02
Other infectious diseases	1.76

Figure 2 Leading causes of death worldwide. About 15 million (>25%) of 57 million annual deaths worldwide are the direct result of infectious disease. Figures published by the World Health Organization (see http://www.who.int/whr/en and ref. 7).

"...nowadays we see maladies unknown to our forefathers springing up around us".

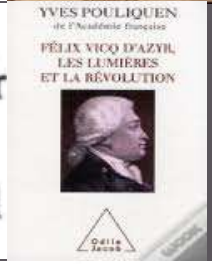
Ullrich von Hutten, 1519[36]

"After our fathers and grandfathers succumbed... dogs and vultures devoured the bodies. So it was that we became orphans, oh, my sons! So we became when we were young. All of us were thus. We were born to die!"

Cakchiquel Mayan on the hueyzahuatl epidemic of 1520–21[44]

"If there is, within medicine, any subject worthy of... investigation... it is, without doubt, epidemic pestilential diseases, obscure and hidden in their causes, rapid in their progression, frightening in their symptoms, and deadly in their consequences."

Félix Vicq-d'Azyr, 1776[51]



"France and its capital have been visited by a fearful pestilence... It comes without any known cause; it disappears without any revealed reason. The bodies of its victims are in vain examined; death is interrogated: death betrays nothing."

Louis-François Benoiston de Châteauneuf, 1834[69]

"Not a single year passes without [which]... we can tell the world: here is a new disease!"

Rudolf Virchow, 1867[1]

"The future of microbes and mankind will probably unfold as episodes of a suspense thriller that could be entitled Our wits versus their genes".

J. Lederberg, Science 2000[33]

Charles Nicolle, Prémio Nóbel da Medicina, 1933

- **"… irão haver sempre novas doenças. É um fatalidade. Uma outra fatalidade, é o facto de nós não sermos imediatamente capazes de determinar a sua etiologia. Devemo-nos pois resignar com a ignorância perante os primeiros casos. Eles serão, pelo desconhecimento, encarados como uma doença já conhecida …" sic.**

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Últimas 24h | Últimas 48h | Blogues Ciência | Arquivo

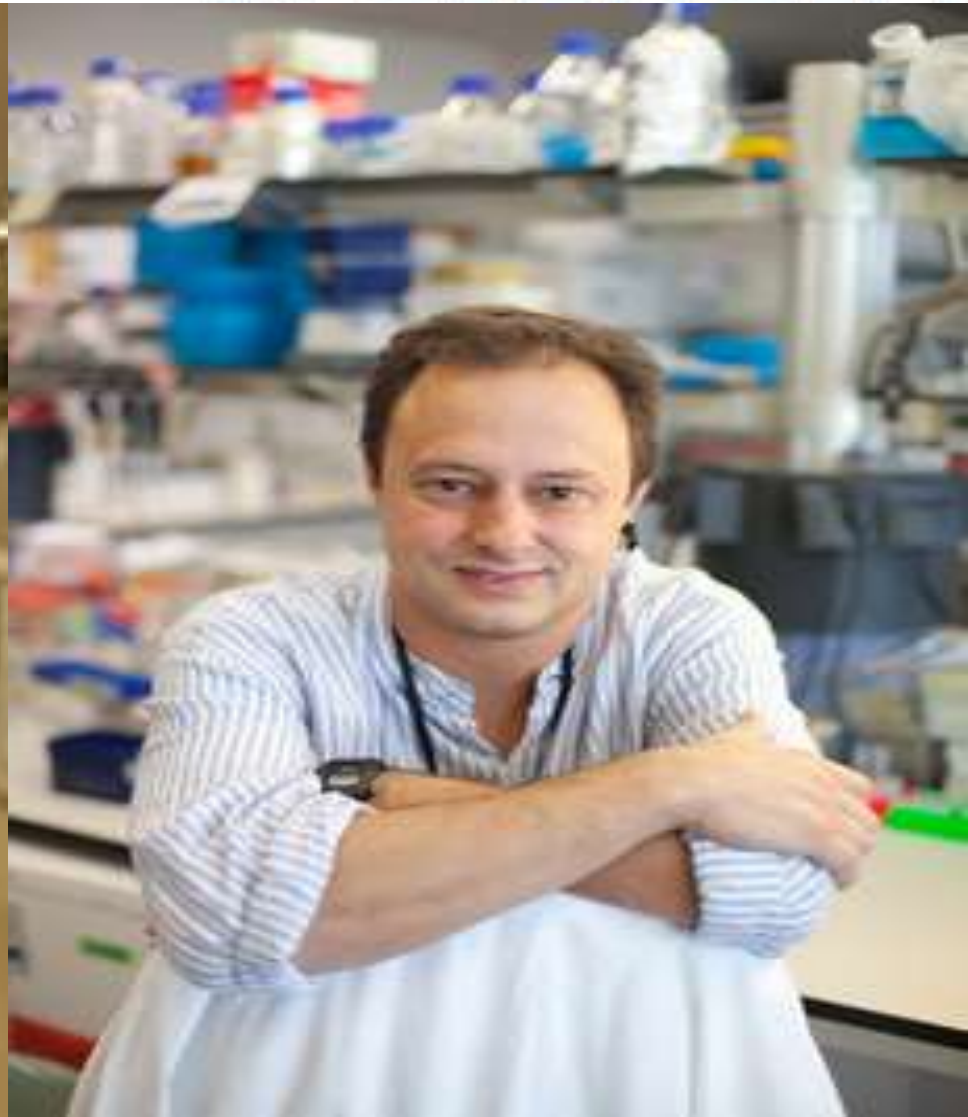
TECNOLOGIA E CIÊNCIA

Portugueses des

Portugueses desenvolvem vacina contra a malária

Fundação Melinda & Bill Gates financia pela primeira vez **projetos lusos**, que são **pioneiros** a nível mundial.

INSTITUTO GULBENKIAN de CIÊNCIA



EXPOSIÇÃO

Comissário de Honra
Armindo R. Filipe - Director do CEVDI

Organização
Câmara Municipal de Palmela
Departamento de Cultura e Desporto
Divisão de Património Cultural - Museu Municipal

Colaboração
Câmara Municipal do Montijo

Programação e Textos da Exposição
Ireneu Cruz
Isabel Lucas
Maria Teresa Rosendo

Inventariação e Selecção de espólio
Isabel Lucas e Maria Teresa Rosendo

O Simposium Doenças Infecciosas - Perspectivas no Virar do Milénio

A realização de um Simposium de homenagem aos Profs. Doutores Armindo Filipe e David Morais sobre a problemática actual e futura das Doenças Infecciosas, não faria sentido sem em simultâneo, chamar a devida atenção da sua importância histórica enquanto ex-Instituto de Malariologia e, numa derradeira tentativa, tentar contribuir para salvar o seu valiosíssimo património museológico.
A erradicação da malária no território nacional, foi uma epopeia de enorme envergadura, que encerra seguramente motivos importantes de reflexão para os responsáveis pela nossa política de saúde, dado que, não só se podem aplicar a outras (novas e velhas) doenças transmissíveis, mas também porque, segundo a previsão de alguns credenciados cientistas, esta doença poderá voltar a afectar de novo os países da orla mediterrânica.
Já é tempo de interiorizarmos definitivamente a ideia que o Fim das Doenças Infecciosas é uma mera quimera sem qualquer fundamento científico credível, e que as Doenças Emergentes, Reemergentes e de Importação constituem e constituirão cada vez mais uma ameaça quotidiana à saúde das populações de todo o nosso planeta.
Só compreendendo as lições da nossa história colectiva e respeitando os seus verdadeiros protagonistas poderemos ambicionar estar à altura destes enormes desafios.
O objectivo principal deste Simposium, bem como da realização da Exposição e da edição do seu Catálogo é pois servir esta nobilíssima causa.

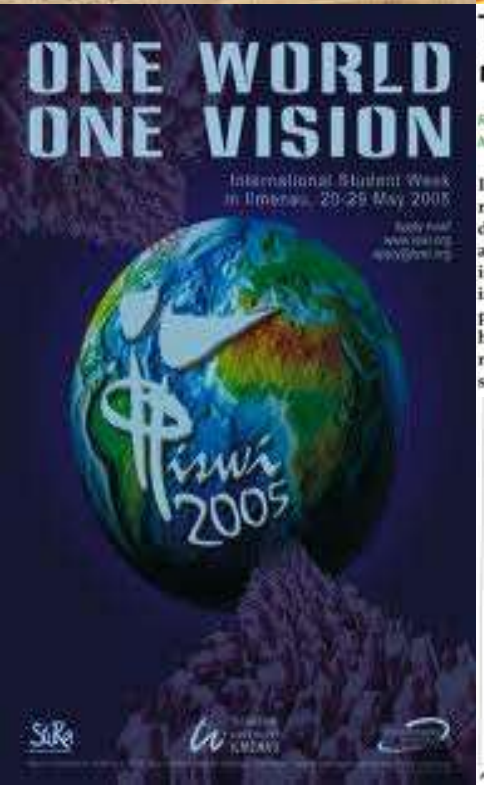
O Responsável da Comissão Organizadora do Simpósio
José Poças

Simposium
Doenças Infecciosas – Perspectivas no Virar do Milénio
Cine-Teatro S. João - Palmela, 28 de Novembro a 2 de Dezembro de 2001

Presidente: ***Prof. Doutor Armindo Filipe***
Presidente Honorário: ***Prof. Doutor David Morais***

Organização
Hospital de S. Bernardo – Valência de Doenças Infecciosas
Instituto Nacional de Saúde Dr. Ricardo Jorge – Centro de Estudos de Vectores e Doenças Infecciosas

Comissão Organizadora
José Poças (Responsável), Ireneu Cruz, Isabel Lucas, Maria Teresa Rosendo, José Barata, Eduardo Carqueijeiro, António Xavier, Fátima Bacellar, Joana Sá, Maria João Alves, Nathalie Graupner, Paula Proença, Sofia Núncio



Towards a conceptual framework to support one-health research for policy on emerging zoonoses

Richard Coker, Jonathan Rushton, Sandra Mounier-Jack, Esron Karimuribo, Pascal Lutumba, Dominic Kambarage, Dirk U Pfeiffer, Katharina Stärk, Mark Rweyemamu

In the past two decades there has been a growing realisation that the livestock sector was in a process of change, resulting from an expansion of intensive animal production systems and trade to meet a globalised world's increasing demand for livestock products. One unintended consequence has been the emergence and spread of transboundary animal diseases and, more specifically, the resurgence and emergence of zoonotic diseases. Concurrent with changes in the livestock sector, contact with wildlife has increased. This development has increased the risk of transmission of infections from wildlife to human beings and livestock. Two overarching questions arise with respect to the real and perceived threat from emerging infectious diseases: why are these problems arising with increasing frequency, and how should we manage and control them? A clear conceptual research framework can provide a guide to ensure a research strategy that coherently links to the overarching goals of policy makers. We propose such a new framework in support of a research and policy-generation strategy to help to address the challenges posed by emerging zoonoses.

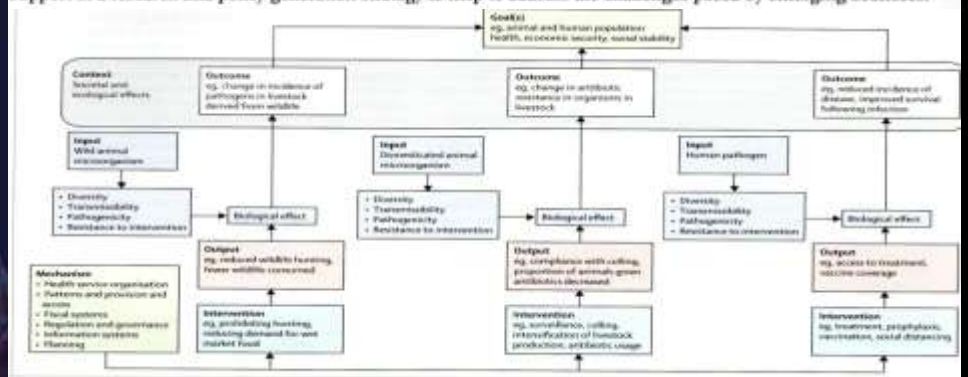
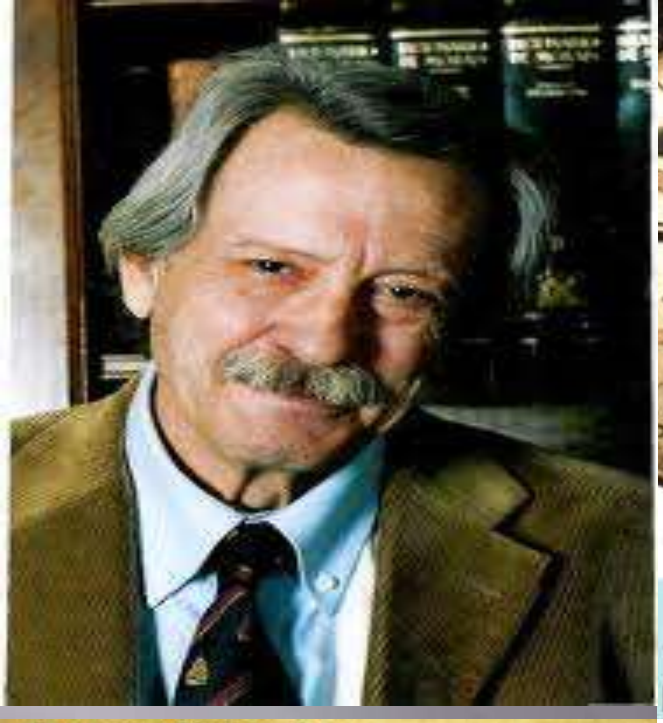
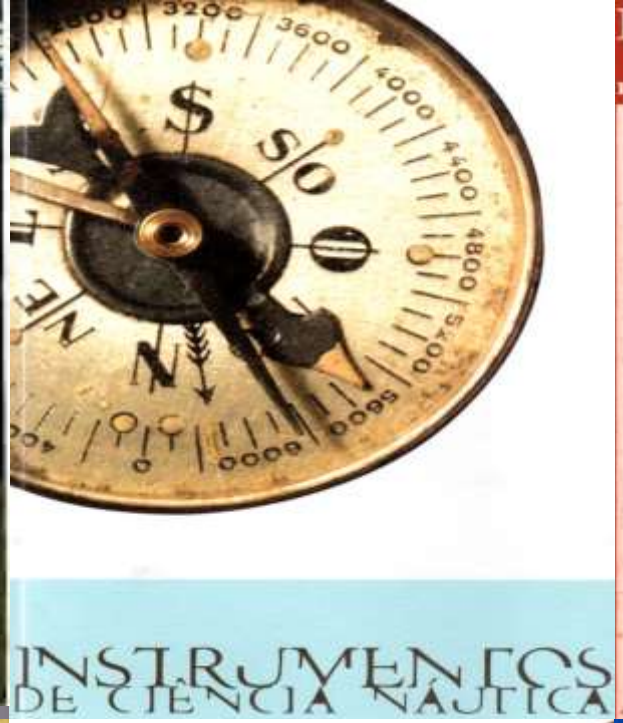


Figure: Schematic representation of a framework for research to inform one-health policy

STEPHEN MICHAEL APATOW





INSTRUMENTOS
DE CIÊNCIA NÁUTICA

HEMINGWAY o seu último legado

Ireneu Cruz

PHOTOGRAPH OF

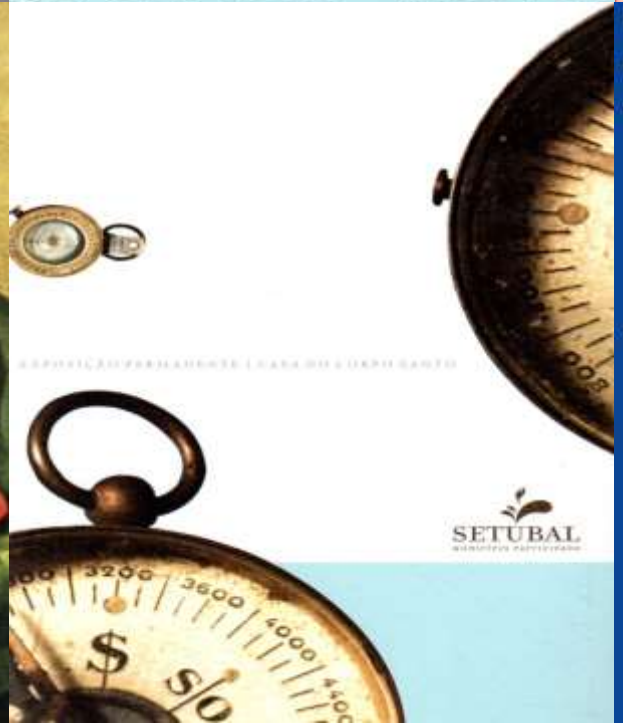
No 359666

O caso clínico de

EÇA
DE QUEIRÓS

CONSIDERAÇÕES DE UM CONTEMPORÂNEO DOENTE

Ireneu Cruz



SETUBAL

Presidente:

Presidente Honorário:

Comissão Organizadora:

Comissão de Honra:

Secretariado:

Patrocínios:

Apoios:

Simposium

Cine Teatro S. João

28, 29, 30 de Nov e
1, 2 de Dez de 2001

Palmela

Simposium Satélite

Igreja de Santiago
Palmela