



Prince Mahidol Award 2005

On the occasion of the Presentation Ceremony of the Prince Mahidol Award for the year 2005
on January 26, 2006, at the Ananda Samakhom Throne Hall



HIS ROYAL HIGHNESS PRINCE MAHIDOL OF SONGKLA

Born to make the world a better place



His Royal Highness Prince Mahidol of Songkla was born on January 1, 1892, a son of Their Majesties King Chulalongkorn and Queen Savang Vadhana. He received his education at Harrow, the renowned English public school, and then in Germany, initially at the Royal Prussian Military Preparatory College in Potsdam, which offered courses in the humanities and sciences in addition to military science. This formal liberal schooling the Prince bolstered with concerted self-education and constant trips to museums to form the intellectual and philosophical traits that henceforth marked his character.

Prince Mahidol subsequently spent two years at the Imperial Military Academy at Gross Lichterfelde in Berlin, and in 1912 entered the Nurwik Imperial German Naval Academy at Flensburg, earning a commission as a lieutenant in the Imperial German Navy. That same year His Majesty King Vajiravudh commissioned him as a lieutenant in the Royal Thai Navy. Prince Mahidol completed his naval studies

and returned to Thailand at the outbreak of World War I.

After a year of service in the Thai Navy he resigned, with the King's permission, to pursue a civilian career. It was both the decisive turning point in his personal life and a momentous national event, signalling the start of a lifetime of lasting contributions to the advancement of higher education, especially in the fields of basic sciences, public health, medicine, nursing and medical research.



The Father of Thai Modern Medicine and Public Health

Prince Mahidol had witnessed a dire need to improve the standards of medical practitioners - and public health in general - in what was then still called Siam. He strongly believed that sound public health was an essential factor in national development. One of his primary tasks was to lay a solid foundation for teaching basic sciences, which the Prince pursued through all necessary measures. These included the provision of a considerable sum of his own money to fund scholarships for six talented students to study physics, chemistry and biology in England. Upon their return, these students formed the core of the country's first qualified science teaching staff. Once this programme was well established, education in the other applied sciences was upgraded. Here, Prince Mahidol placed special emphasis on medical education, public health, nursing and medical research. His initiative and dedication had a remarkable impact on the improvement of modern medicine and public health, so much so that he was subsequently honoured with the titles "Father of Modern Medicine" and "Father of Public Health" in Thailand.



The McCormick Hospital in Chiang Mai in 1926



Part of Siriraj Hospital inaugurated by King Rama VII in 1928

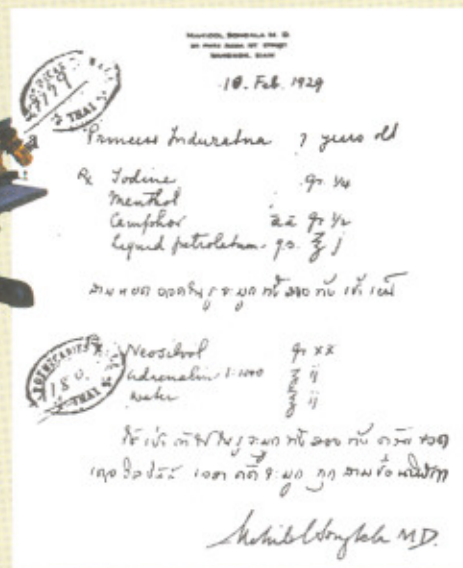
A dedicated doctor

Prince Mahidol returned from Harvard with his well-earned master's degree in 1928, and at Siriraj Medical School taught preventive and social medicine to final-year students. He was not permitted to serve an internship because of his status as a celestial Prince, but since he dearly wanted to personally help the sick and bereaved, he decided to leave his beloved Siriraj and work as a resident doctor at McCormick Hospital, an American missionary hospital in Chiang Mai. Prince Mahidol stayed with Dr. E.C. Cord, the facility's director, and performed operations alongside him. As ever, the Prince did much more than was required in attending his patients, taking care of those in need at all hours of the day and night and even, according to records, donating blood for them. In doing so he demonstrated to all the noble principle that every human being has intrinsic dignity and value, irrespective of social background, property, birth or status.

In 1929 Prince Mahidol took temporary leave to travel to Bangkok and attend the funeral of a senior member of the Royal Family. He never returned to Chiang Mai. He had been suffering from a severe kidney disease, for which he was once hospitalised while at Harvard, and had refrained from disclosing to his family that he had little time left to live. The nation mourned a great man's death at the age of just 37 years, eight months and 23 days.

In implementing his plan for institutional development in these areas, Prince Mahidol took it upon himself to study public health and medicine, and upon leaving the Royal Thai Navy in 1916, enrolled at Harvard University in the United States. He obtained his Certificate of Public Health in 1921 and a Doctorate in Medicine (cum laude) in 1928, as well as being a member of the prestigious Alpha Omega Alpha. And during his early residence at Harvard, Prince Mahidol negotiated on behalf of the Siamese government an agreement with the Rockefeller Foundation for assistance in medical and nursing education in his homeland.

In 1921 the Prince was appointed director-general of the Ministry of Education's University Department, and in that capacity he implemented the Rockefeller Foundation's aid to upgrade the teaching of biology, physics and chemistry through curricula development, the acquisition of up-to-date equipment and the construction of laboratories and classrooms. He mobilised all available resources, and even taught vertebrate anatomy himself. But it was in his additional role as chairman of a committee tasked with establishing the Siriraj School of Medicine that he demonstrated his capability and farsightedness as an educational planner, as well as his efficiency as a builder of institutions.





Prince Mahidol Award Foundation

Prince Mahidol Award Foundation was established in 1991 to commemorate the centenary of the birth of His Royal Highness Prince Mahidol of Songkla on January 1, 1992, and in recognition of his exemplary contribution to the advancement in the fields of medicine, public health and social services. The Foundation is under Royal Patronage, with Her Royal Highness Princess Maha Chakri Sirindhorn as President.

Prince Mahidol Award

Prince Mahidol Award is an international honour conferred annually on individuals or institutions in two categories who have demonstrated outstanding performance and made important contributions in the fields of medicine and public health, for the benefit and well-being of mankind. Each award comprises a medal, a certificate and the sum of US\$50,000.

Nomination

An individual, a group of individuals or an institution can be nominated by national medical or health authorities, or by an individual or group in a non-governmental capacity, as a candidate for the award. Nominations are submitted to the secretary-general of the Prince Mahidol Award Foundation before May 31 each year.

The nomination forms are forwarded to the panel of Scientific Advisors for initial screening and then to the International Award Committee, which comprises several world-renowned experts in the fields of medicine and public health, who will consider them and make recommendations to the Foundation's Board of Trustees for final approval. The Award Committee can adopt procedures of its own and will be assisted by a panel of scientific advisors.

Award ceremony

The award ceremony normally takes place in Bangkok in January each year. This year it is held on Thursday, January 26, at 5.30 pm at the Ananda Samakhom Throne Hall and is presided over by His Majesty the King. On behalf of His Majesty the King, Her Royal Highness Princess Maha Chakri Sirindhorn will host the banquet in honour of the Prince Mahidol awardees in the Throne Hall that same day at 8 pm.



Selection Procedures

Two committees are responsible for selecting candidates for the award from among the names put forward by individuals and organisations all over the world.

The Scientific Advisory Committee (SAC)

This 15-member panel searches year-round for instances of significant achievement in medicine and public health that benefit mankind substantially. Its members then focus on the key individual or individuals responsible for the achievement and encourage appropriate parties to nominate them for the award. The advisory committee meets each January, June and September, and in the last session shortlists the nominees. This list is then submitted to the IAC, together with a summary of each candidate's accomplishments. SAC members are either Thai scientists or high-ranking public-health technocrats. The panel is supported by a full-time secretariat.

The International Award Committee (IAC)

The IAC meets each November for three days to consider both the full list of nominees and the shortlist submitted by the SAC. Aiming for unanimous decisions in each case, the award committee gradually finalises the nominations of awardees in medicine and public health for scrutiny by the Board of Trustees of the Prince Mahidol Award Foundation. On the last day of its three-day gathering, the committee lists strong areas of achievement and potential high achievers to be recommended to the SAC for further research.

The IAC has 12 members – four Thais and eight foreigners. All of the foreign members are renowned scientists and public-health workers, and two are Nobel laureates.

Dr. Joshua Lederberg of Rockefeller University received the Nobel Prize in Medicine in 1958, at age 33, for discovering

genetic recombination in bacteria. Dr. Bert Sakmann of the Max Planck Institute in Heidelberg earned the same prize in 1991 for discovering how cells communicate. Two other IAC members are Prince Mahidol Award laureates. Dr. Adetokunbo Olunmida Lucas of Nigeria is the former director of the World Health Organisation's Tropical Diseases Research Programme. Sir David John Weatherall of Oxford University is a world authority on thalassemia and genetic medicine.

IAC member Dr. Nevin S Scrimshaw of the Massachusetts Institute of Technology is a recipient of the prestigious World Food Prize. Another member, Dr. Donald Ainslie Henderson of the Johns Hopkins University School of Public Health, was honoured by The Smithsonian magazine in November 2005 by being named among its "35 Who Made a Difference". Two other IAC members are world-famous immunologists. Sir Gustav Nossal, director of the Walter and Eliza Hall Institute, was named Australian of the Year in 2000. Dr. Tadamitsu Kishimoto, former president of Osaka University, discovered the interleukin-6 and interleukin-6 receptors.

The four Thai members are Dr. Aree Valyasevi, a renowned nutrition scientist who received the Ramon Magsaysay Award; Dr. Visith Sitprijia of the Queen Saovabha Memorial Institute, who is an authority on nephrology; Dr. Kraissid Tontosirin, a nutrition scientist now working with FAO; and Dr. Vicharn Panich, former director of the Thailand Research Fund, who serves as the chairman of the committee.

Final Decision of the Award

The final decision on the award is made by the Board of Trustees, which is chaired by Her Royal Highness Princess Maha Chakri Sirindhorn.



By **Prof. Dr. Vicharn Panich**,
Chairman of the International Award
Committee, Prince Mahidol Award
Foundation for the period of 2004-2006

Prince Mahidol Awardee 2005



In the field of medicine

PROFESSOR EUGENE GOLDWASSER, PhD, Professor Emeritus, Department of Biochemistry and Molecular Biology at the University of Chicago in the U.S.A.

Professor Goldwasser played a major role in the purification and characterisation of erythropoietin, which has provided an effective therapy for severe anemia in people around the world who are afflicted by kidney failure and cancer.

Professor Goldwasser had been studying the hemopoietic growth factor since 1950, drawing the conclusion that this hormone existed in the plasma and demonstrating that it was produced by the kidneys. He went on to develop the first quantitative bioassay for the hormone and in 1971 used it to purify and characterise erythropoietin (EPO) from the plasma of anemic sheep, then in 1977 did likewise with the human hormone from the urine of patients with aplastic anemia. Using this information, researchers were able to clone the human EPO gene, leading to the development of biotechnology for the large-scale production of the recombinant hormone, to be used in the treatment of millions of patients with kidney failure and anemias, such as those associated with cancer, which has proved beneficial to human health and the quality of life throughout the world.

Awards and Honours Received

- 2005** International Society of Nephrology Amgen International Prize for Therapeutic Advancement in Nephrology
- 2004** University of Chicago Alumni Association: Norman McLean Award
- 2003** French Medical Scientific Community "Tamis de Pepites Rouges"
- 1996** Karl Landsteiner Memorial Award, AABB
- 1992** Sc.D (Hon) New York Medical College
- 1991** Sixteen Annual Scientific Lectureship, AABB
Fellow American Academy of Arts & Sciences
William Simpson Award of Wayne State University
- 1988** International Society of Blood Purification Award
- 1987** Esther Langer Award in Cancer Research
- 1986** NIH MERIT Award
- 1982** Fellow AAAS
- 1966-1967** Guggenheim Fellowship Oxford University, U.K.





Prince Mahidol Awardee 2005

In the field of public health

PROFESSOR HARALD ZUR HAUSEN, MD, Professor Emeritus at the German Cancer Research Centre in Heidelberg, Germany

Professor zur Hausen played a key role in research on cervical cancer, one of the major causes of death in women. It is the third most frequent cancer in women, afflicting an estimated 500,000 each year, 80 per cent of whom are in developing countries. Since the 1970s, Professor zur Hausen has focused entirely on human papillomaviruses (HPV), which were known to cause skin warts. As early as 1976, he published the hypothesis that wart viruses play a role in the development of cervical cancer. This suspicion was proven scientifically in 1980, when Dr. zur Hausen and his co-workers were able to isolate two previously unknown virus types, HPV 16 and HPV 18, from tumour tissue.

Professor zur Hausen's breakthrough discovery has had a substantial impact on the understanding of the cause of cervical cancer, leading to improvements in its prevention and treatment and, most importantly, to the development of vaccines against high-risk HPV, which in the near future may eradicate cervical cancer altogether and prove beneficial to the health of millions of people around the world.

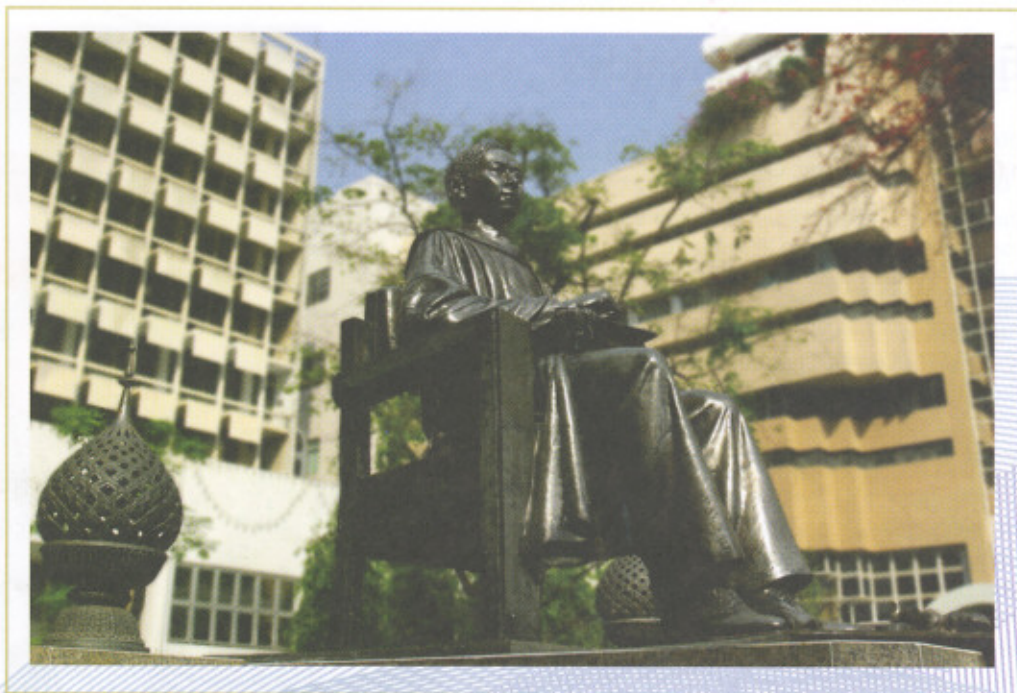


Awards and Honours Received

2004 "Großes Bundesverdienstkreuz" (Order of Merit), Berlin
2002 Gregor-Mandel Medal, University of Prague
 Honorary Senator, University of Erlangen-Nürnberg
 San Marino Prize for Medicine
2001 Thomas Parram Prize of the American Society of Sexually Transmitted Diseases
 Arthur Burkhardt-Prize, Stuttgart
2000 Honorary Degree, Doctor of Medicine, University of Helsinki, Finland
 Virchow-Medal of the Medical Faculty, University of Würzburg
1999 Charles Rodolphe Brupacher Prize for cancer, Zurich, Switzerland
1997 Honorary Degree, Doctor of Science, University of Salford, England
1996 Ernst-Jung Prize, Hamburg
1994 Honorary Degree, Doctor of Medicine, Charles University, Prague, Czech
 Paul-Ehrlich – Ludwig Darmstädter Prize, Frankfurt
 Emil-von Behring Prize and Lecture, University of Marburg

1993 Martinus-Willem Beijerinck Medal, Nederlands Academy of Sciences, Amsterdam, The Netherlands
 Federation of the European Cancer Societies, Clinical Research Award, Jerusalem, Israel
1992 Sebatia Ter Prize, Naples, Italy
1991 Honorary Degree of Doctor of Medicine, University of Umeå, Sweden
1986 Deutscher Krebspreis (German Cancer Award), German Cancer Association, Munich
 Charles S. Mott Prize, General Motors Cancer Research Foundation, Washington, D.C., USA
1985 Lila Gruber Award for Cancer Research, American Academy of Dermatology, Las Vegas, USA
1984 Honorary Degree of Doctor of Science, University of Chicago, USA
1982 Schaudinn-Hoffmann Plakette, German Dermatological Society, Vienna
1975 Robert-Koch Prize and Medal, Robert-Koch-Stiftung, Bonn
1974 Wilhelm-Warner Prize, University of Hamburg
1971 Walter Richtzenhein-Prize, University of Heidelberg





PRINCE MAHIDOL AWARD FOUNDATION

Under the Royal Patronage

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