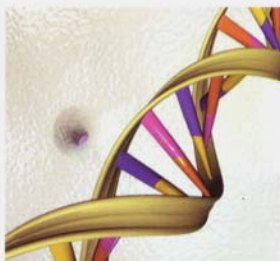
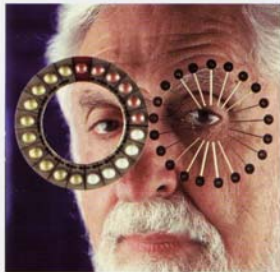
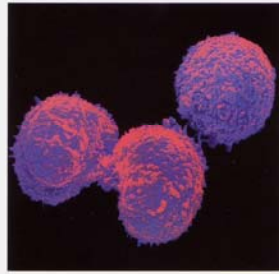
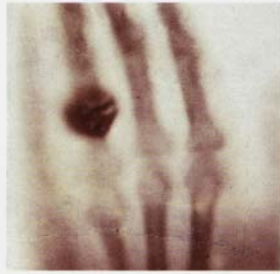
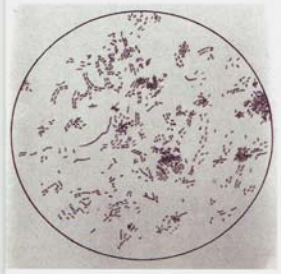
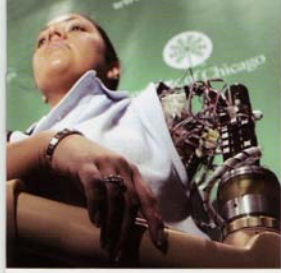
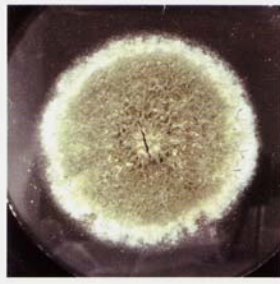


# **Academic Medicine in the 21<sup>st</sup> Century**

**Any help from Osler** 

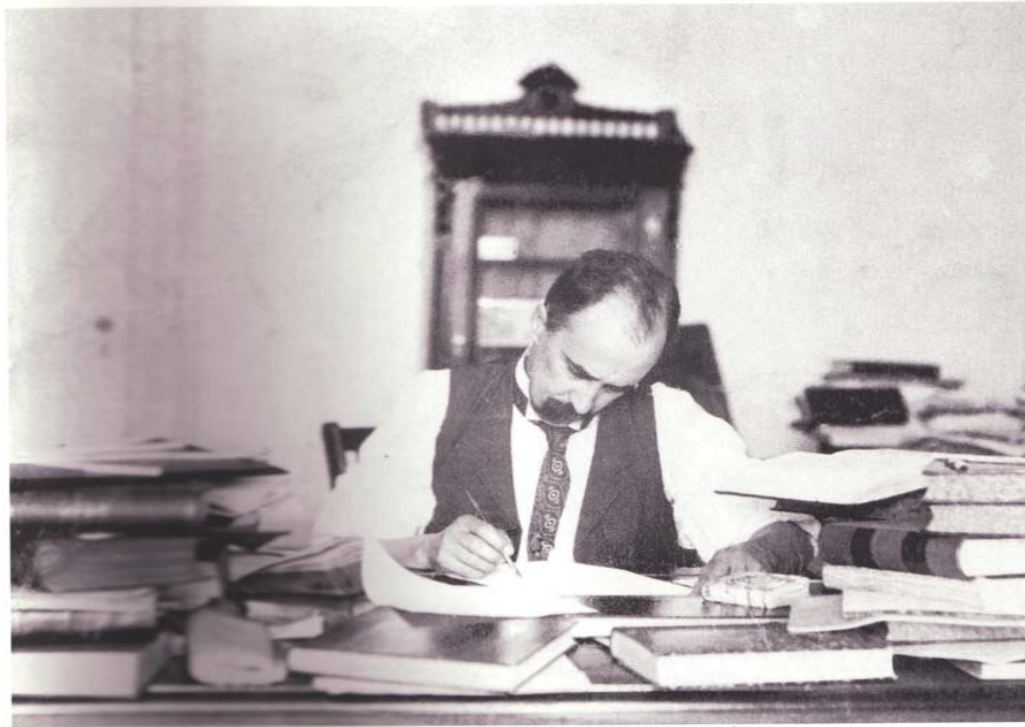


# MEDICAL MILESTONES

CELEBRATING KEY ADVANCES SINCE 1840



Yu Kai Li, L.M.C.H.K.



The Quotable  
**OSLER**



EDITED BY MARK E. SILVERMAN, MD •  
T. JOCK MURRAY, MD • CHARLES S. BRYAN, MD



*Red Memory Series, fiberglass/bronze*

# SEEING RED

Chinese artist Chen Wenling wows crowds the world over with his larger-than-life sculptures that comment on the socio-political situation of his homeland, discovers **Y-Jean Mun**.

photos courtesy of **ODE TO ART**

The background features a faint, stylized illustration of two graduates. They are wearing white academic gowns and mortarboard caps with tassels. The graduate on the left has short blonde hair, and the one on the right has long blonde hair. Their faces are simple line drawings with large eyes. The entire scene is set against a light gray background.

**650**

**A university has two purposes.**

**A great university has a dual function,  
to teach and to think**

**TEACHING AND THINKING. IN AEQUANIMITAS, 120**

**657**

**Faculties should have their ferment.**

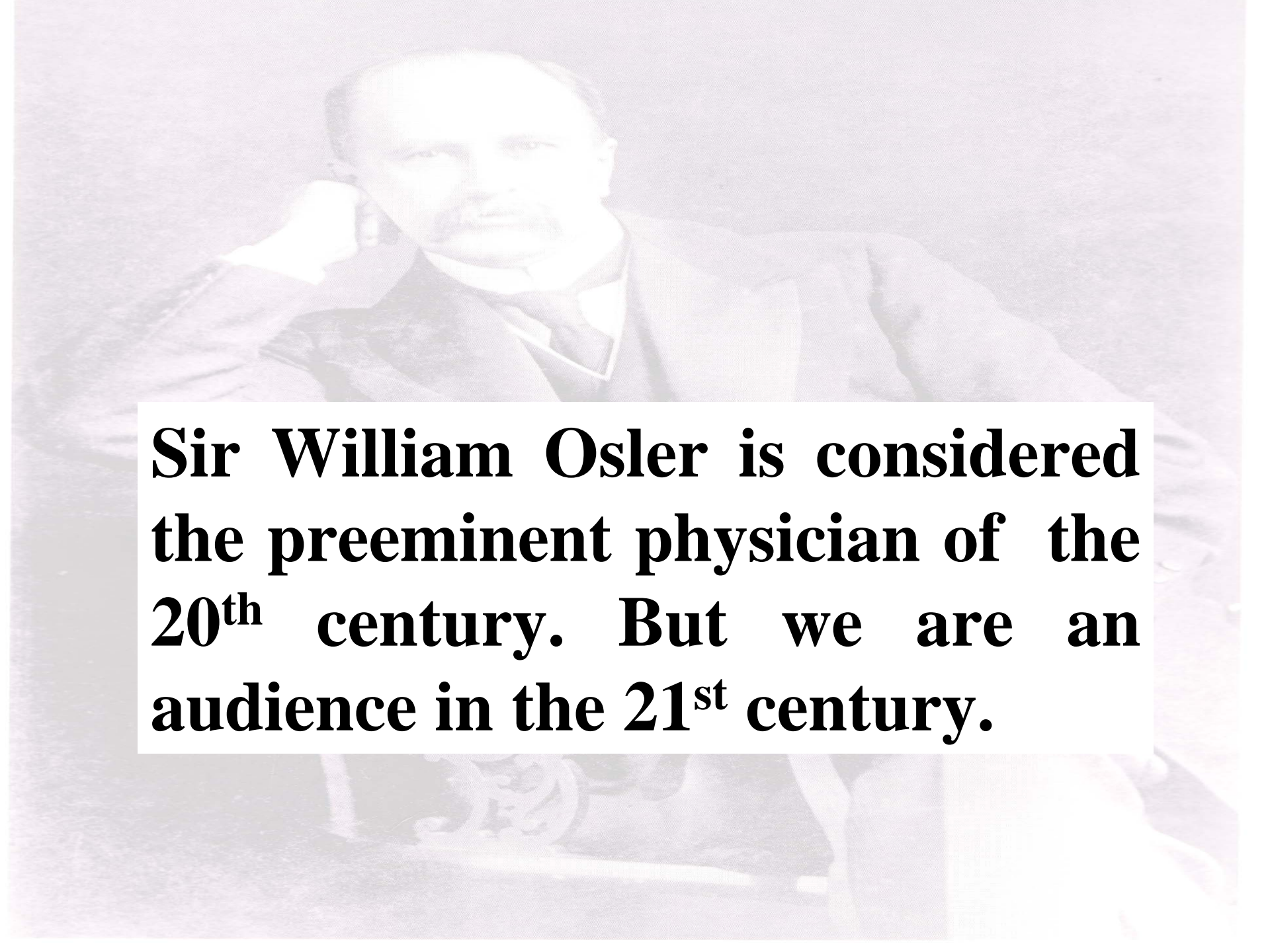
**A faculty without its troubles is always in a bad way-the water should be stirred. Some ferment should be brewing; the young men should always be asking for improvements, to which the old men would object.**

**IMPRESSIONS OF PARIS. I. TEACHERS AND STUDENTS.**

**JAMA 1909;52:701-73**







**Sir William Osler is considered the preeminent physician of the 20<sup>th</sup> century. But we are an audience in the 21<sup>st</sup> century.**



**He is regarded by many as  
the ideal medical practitioner**

- **a humanist who emphasized  
compassion for the individual**
- **a doctor whose bed side skills and manners  
were emulated by admirers and students**
- **an educator whose concepts revolutionized  
clinical teaching**



**Sir William Osler**

**Born 12 July 1849**

**Head, Ontario, Canada**

**Clergyman father**

**Studied at Trinity College Toronto**



St. Basil's Cathedral, Moscow

Albert Bruce Knapp, M.D.



**In second year, switched to medicine  
because of his keen interest in  
natural science.**

**Enrolled into Toronto Medical School  
then transferred to  
McGill University School of Medicine**

**4 year curriculum with attachment to  
Montreal General Hospital**



**1872 - he graduated as a doctor(23years old)  
wanted to do ophthalmology**

**- left for Europe visiting clinics and  
laboratories in London  
Berlin  
& Venice**

**Broad based interest in physiology  
medicine  
pathology  
surgery  
neurology  
& dermatology**

**The growth of specialty is directly linked to the advancements of medical science and the resulting improvements made in medical care delivery since the early 1900's. During this period of growth, there was no system to assure the public that a physician claiming to be a specialist was indeed qualified. Until the development of the specialty board movement, each physician was the sole assessor of their qualifications to practice a given specialty.**

**The concept of a specialty board was first proposed in 1908 by Dr Derrick T. Vail in his presidential address to the American Academy of Ophthalmology and Otolaryngology**



**After further consideration by the American Ophthalmologic Society, recommendations were made for the development of a training and examination program in ophthalmology. In 1915, a joint committee comprised of the American Ophthalmologic Society, the Section of Ophthalmology of the AMA, and the American Academy of Ophthalmology drafted a report recommending the establishment of a board “to arrange, control, and supervise examinations, to test the preparation of those who design to enter in the special or exclusive practice of ophthalmology”.**

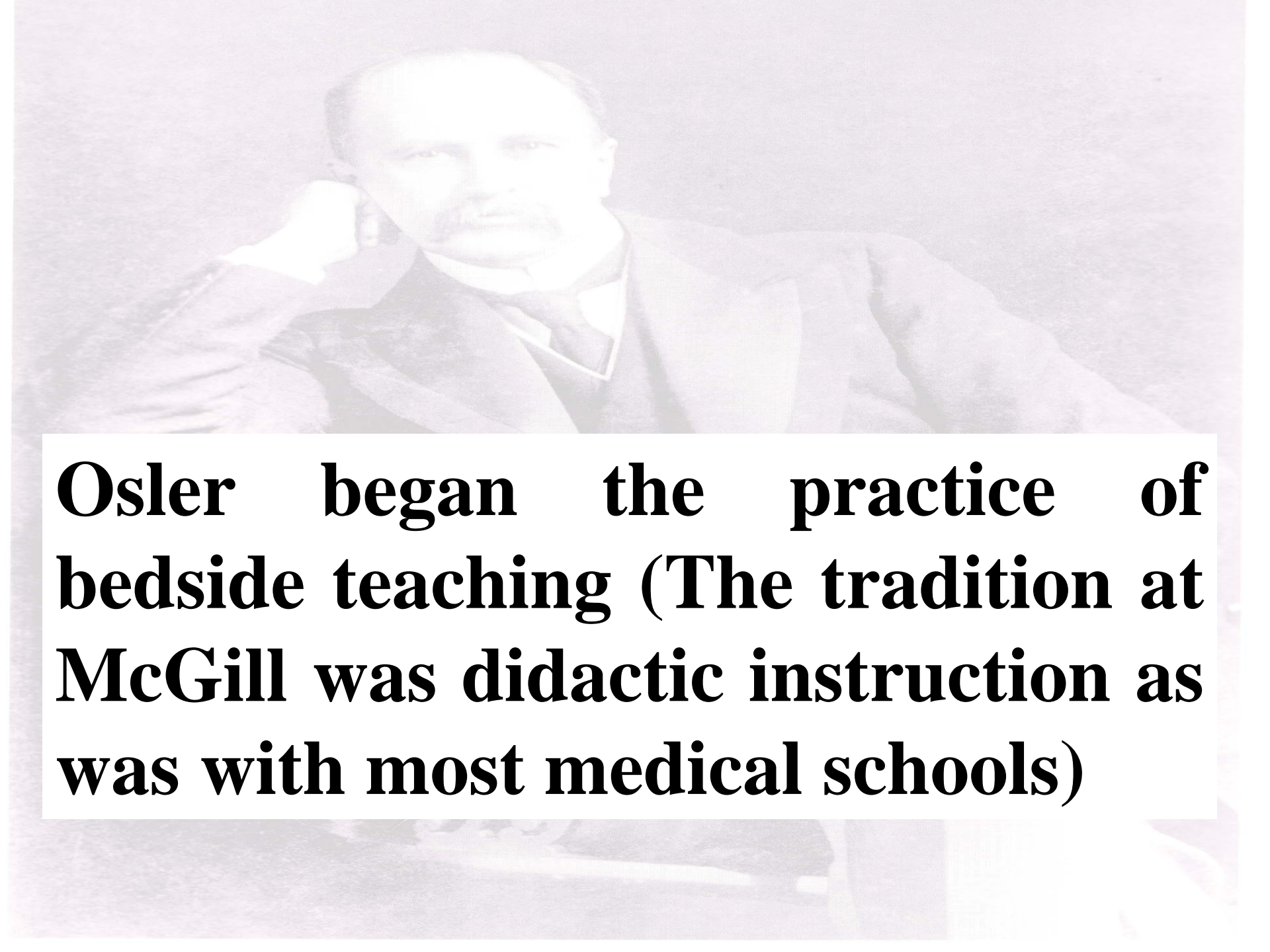


**1874 - returned to McGill University  
and established its first  
physiology laboratory**




**1875 – appointed Professor of the  
Institutes of Medicine at  
McGill University  
(26 years old)**

**1878 - appointed attending physician  
at MGH  
(29 years old)**



**Osler began the practice of bedside teaching (The tradition at McGill was didactic instruction as was with most medical schools)**



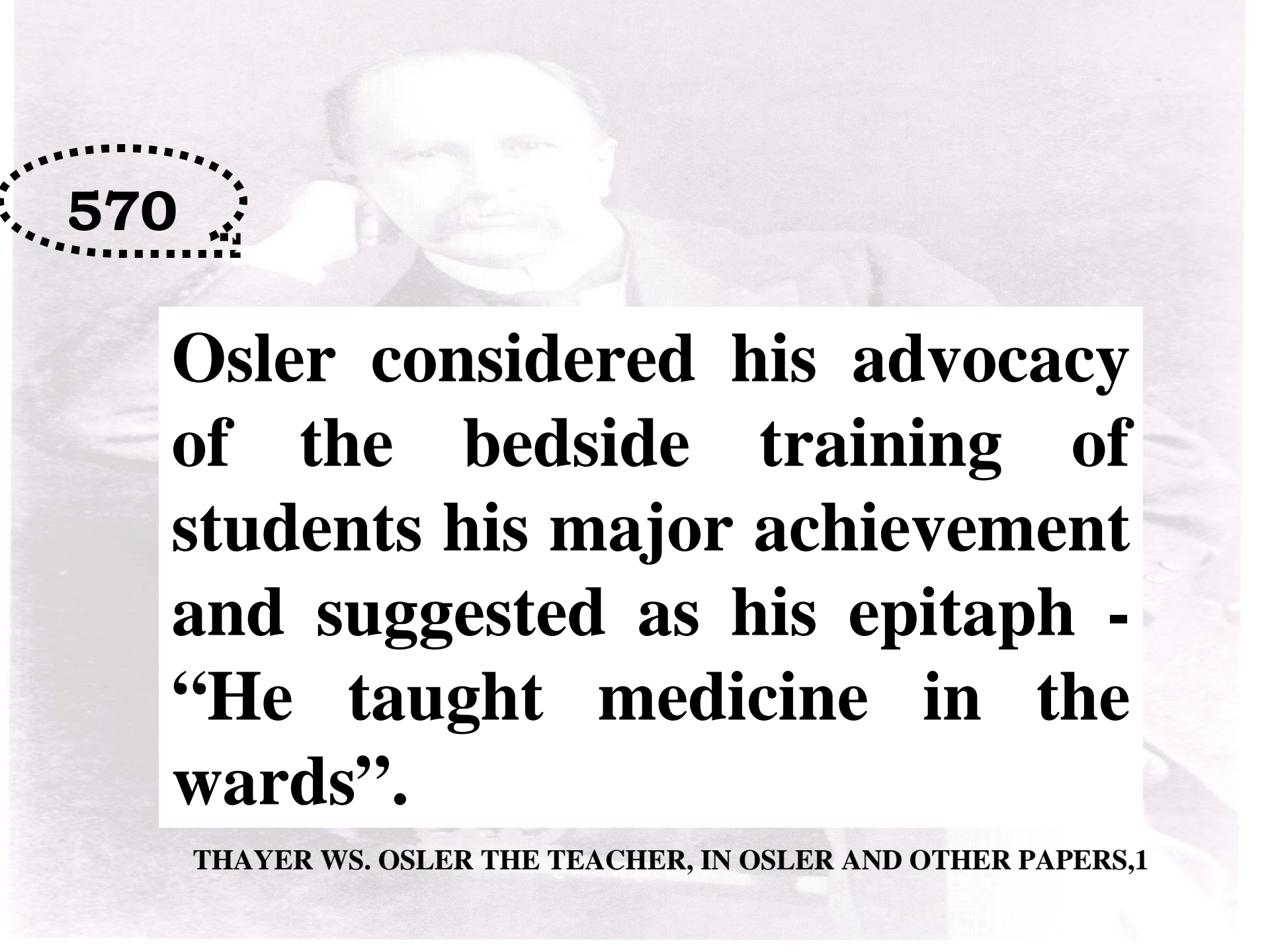
**669**

**Lectures can pain the buttocks.**

**Superfluity of lecturing causes ischial bursitis**



**BEAN WB. SIR WILLIAM OSLER: ARHORISMS, 46**

A faded, grayscale portrait of a man with a mustache, likely Osler, is visible in the background. The number 570 is enclosed in a dashed oval on the left side of the image.

**570**

**Osler considered his advocacy of the bedside training of students his major achievement and suggested as his epitaph - “He taught medicine in the wards”.**

**THAYER WS. OSLER THE TEACHER, IN OSLER AND OTHER PAPERS,1**

**670**

**Teaching on the wards is a great pleasure**

**The best life of the teacher is in  
supervising the personal daily contact  
of patient with student in the wards.**

**THE SCHOOL OF PHYSIC, DUBLIN, IN MEN AND BOOKS,29**



**1884 – Professor of Clinical Medicine  
at University of Pennsylvania,  
USA where he flourished as a  
teacher  
clinician  
and consultant  
( 35 years old )**





**1889**

- **Chairman of Department of Medicine at newly formed Johns Hopkins Hospital and Medical School**
- **established a great clinic in the German model with well organised house staff, proper laboratories and research English system of clinical clerks (40 years old)**

**At John Hopkins Hospital Osler introduced and utilised the clerkship as the means of clinical instruction and advocated that “ the natural method of teaching the student begins with the patient, continues with the patient, and ends his studies with the patient, using books and lectures as tools, as means to an end”.**

**At Hopkins, a new era of  
American Medicine was born**

**Rigorous admission requirements  
Quality of training with new standards  
comparable with venerable  
European institutions**

**Candidates were admitted after  
4 years college degree including  
2 years in premedical training  
in biology, chemistry, and  
physics and reading knowledge  
in French and German**

## Education is a life course

**“ The hardest conviction to get into the mind of a beginner is that the education upon which he is engaged is not a college course, not a medical course, but a life course, for which the work of a few years under teachers is but a preparation”.**



ST PHOTO: JOYCE FANG

## GET A LEG UP ON LIFELONG LEARNING

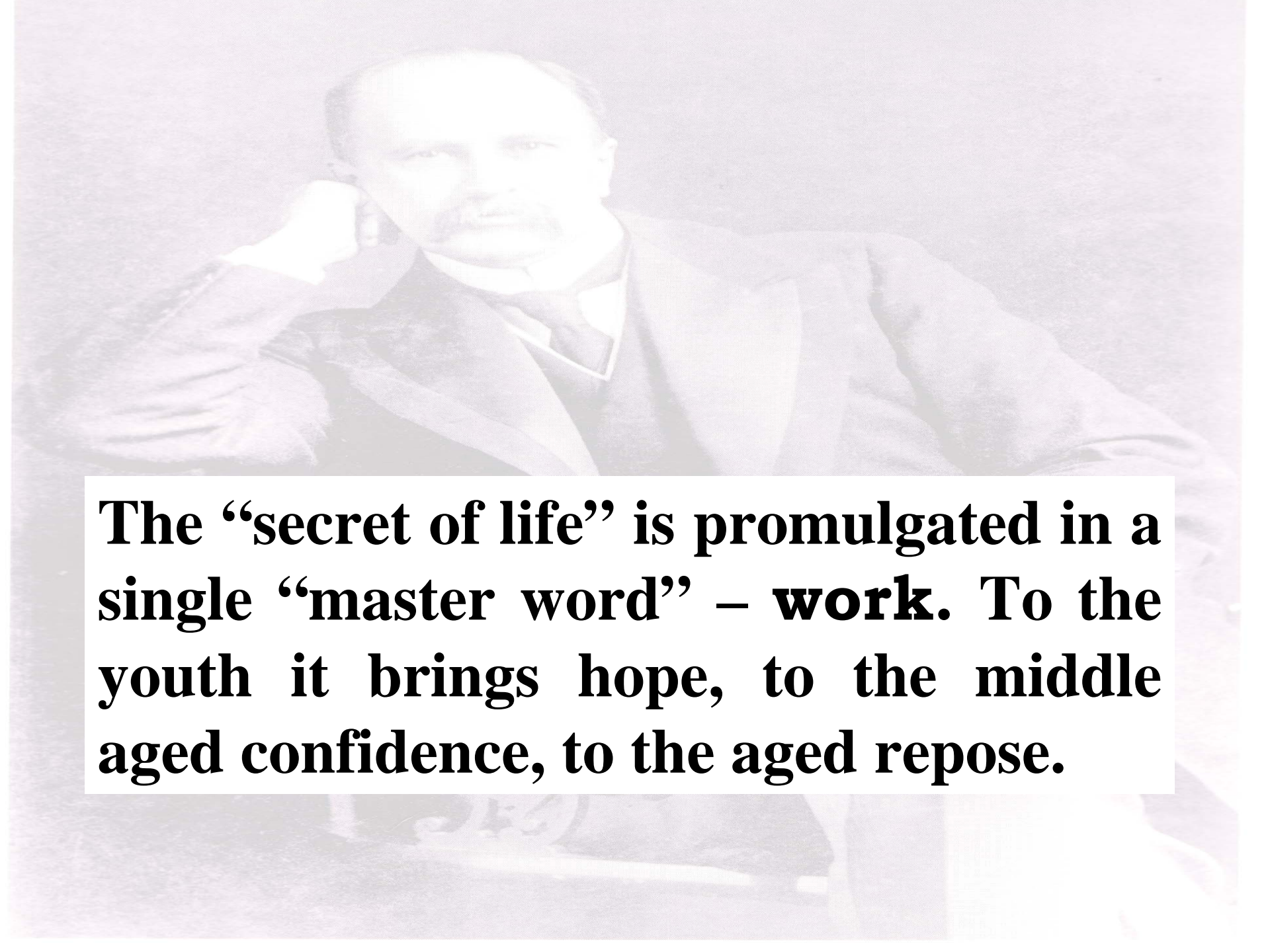
*“Executives” who do not upgrade their skills get dumped – literally – in this*

eye-catching and provocative display at the Singapore Institute of Management’s (SIM) Clementi campus.

It is part of an advertising campaign

led by SIM’s corporate training and professional training division to drive home the importance of lifelong learning – something the 450 adult learners who received their degrees at SIM University yesterday already do.

**STAR GRADUATE WAS ONCE A TEEN REBEL, HOME H10**



**The “secret of life” is promulgated in a single “master word” – **work**. To the youth it brings hope, to the middle aged confidence, to the aged repose.**

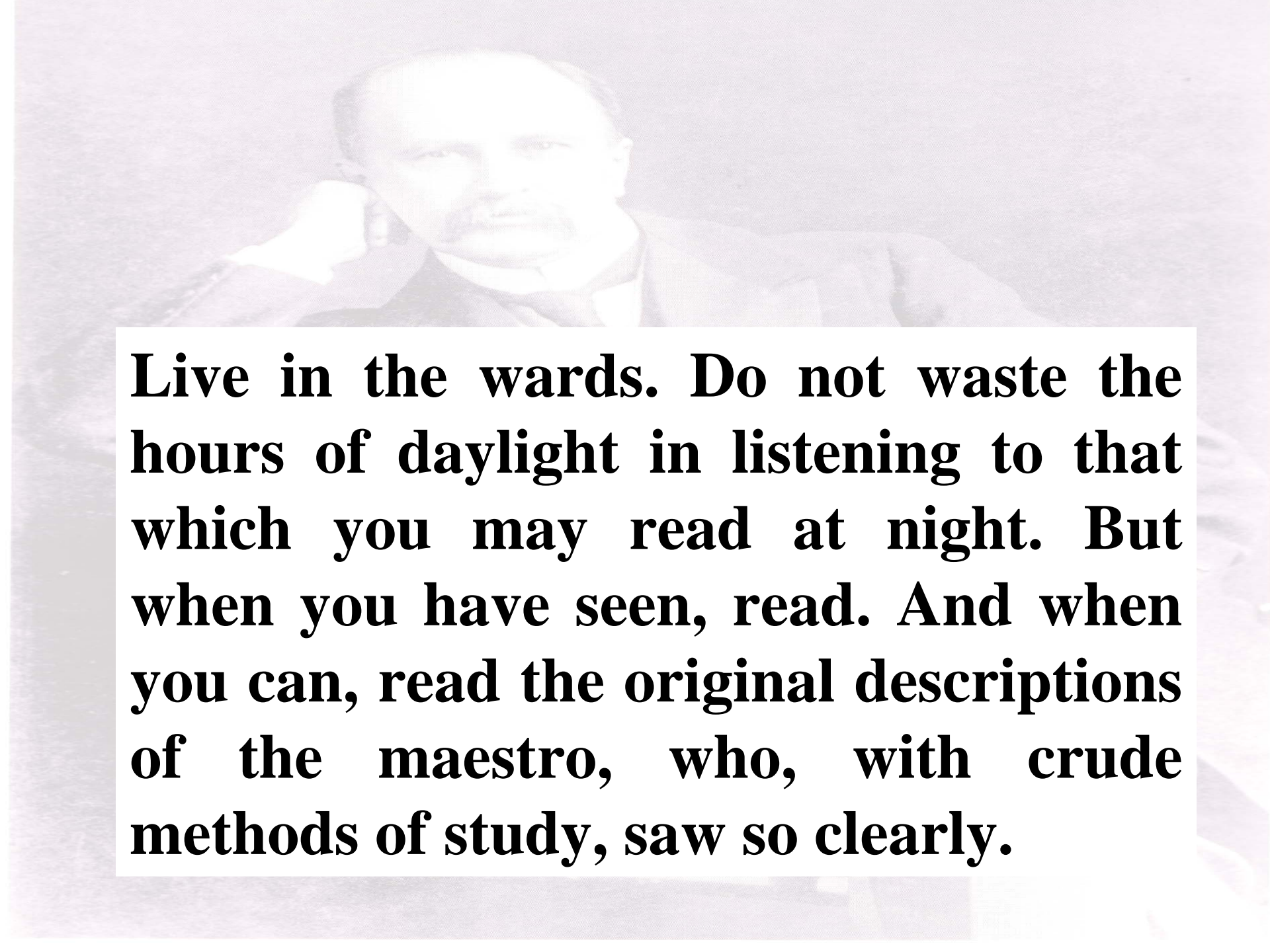




**602**

**To study the phenomena of disease without books is to sail an uncharted sea, while to study books without patients is not to go to sea at all.**

**BOOKS AND MEN, IN AEQUANIMITAS, 211**



**Live in the wards. Do not waste the hours of daylight in listening to that which you may read at night. But when you have seen, read. And when you can, read the original descriptions of the maestro, who, with crude methods of study, saw so clearly.**

**571**

**Seeing is not knowing. It is a common error to think that the more a doctor sees the greater his experience and the more he knows.**

**THE STUDENT LIFE, IN AEQUANIMITAS, 412**

**Teachers should provide students with methods and patients. A teacher of medicine should ever have two objects in view:**

**First, to give to the student, in the Art and in the Science, good methods; and**

**secondly, to enable him to follow closely and accurately as many cases of disease as possible.**

**The responsibilities of a good teacher are several.**

**Punctuality, the class first, always and at all times; the best that a man has in him, nothing less; the best the profession has on the subject, nothing less; fresh energies and enthusiasm in dealing with dry details; animated, unselfish devotion to all alike; tender consideration for his assistants – these are some of the fruits of a keen sense of responsibility in a good teacher.**

**The best teacher may not be an investigator and vice versa. Teachers who teach current knowledge are not necessarily investigators; many have not had the needful training; others have not the needful time. The very best instructor for students may have no conception of the higher lines of work in his branch, and contrariwise, how many brilliant investigators have been wretched teachers?**

The teacher's life has three periods. The teacher's life should have three periods, study until twenty-five, investigation until forty, profession until sixty, at which age I would have him retired on a double allowance.



**1891 – he wrote his Magnum opus –  
The Principles & Practice of Medicine**



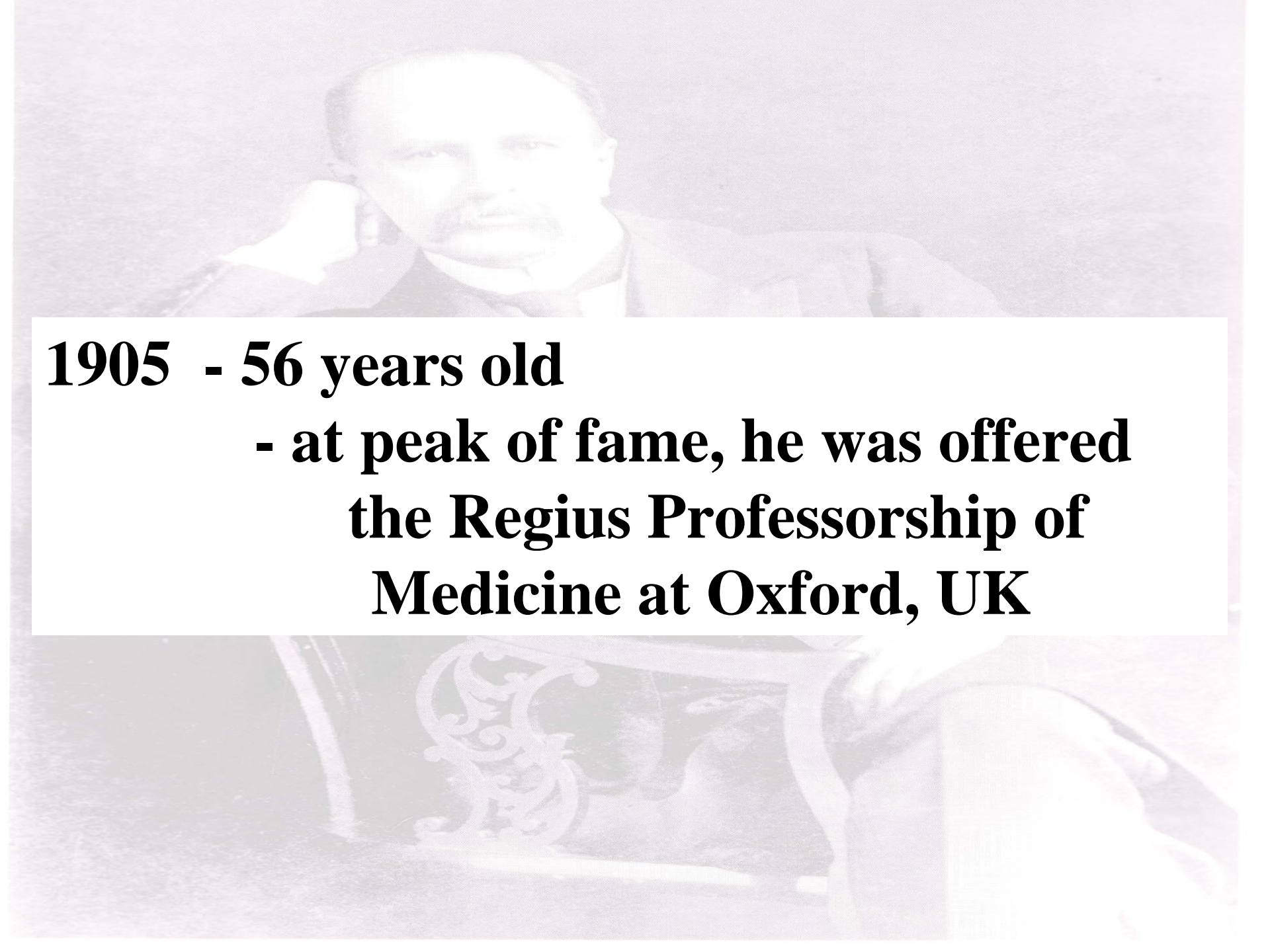


**In Osler's textbook, therapeutic information is limited. The absence of treatment for most diseases is freely admitted.**

**1897 – Frederick Gates, philanthropic assistant to John D Rockefeller read the entire book to acquaint himself with the current state of medical knowledge. Impressed with the literary quality of the book and Osler's scientific candour on medicine's inability to cure most diseases, he recommended the support of medical research to Rockefeller. From this came the establishment of the Rockefeller Institute of Medical Research.**

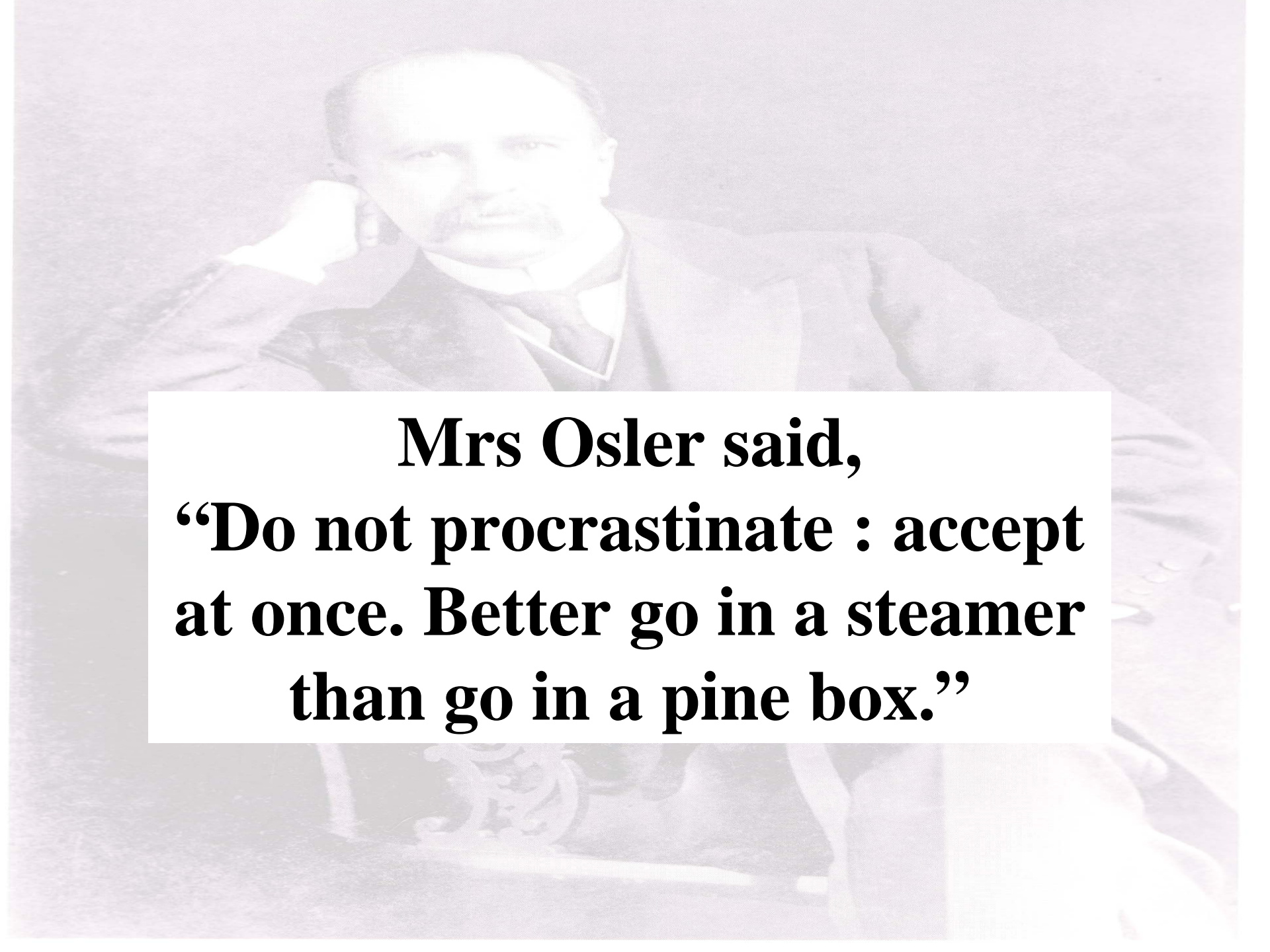
**Be ready to say “I do not know”.  
I have learned since to be a better  
student, and to be ready to say to  
my fellow students “ I do not  
know”.**

**AFTER TWENTY-FIVE YEARS, IN AEQUANIMITAS, 195**



**1905 - 56 years old**

**- at peak of fame, he was offered  
the Regius Professorship of  
Medicine at Oxford, UK**



**Mrs Osler said,  
“Do not procrastinate : accept  
at once. Better go in a steamer  
than go in a pine box.”**

**Women were admitted to the new John Hopkins Medical School on the same basis as men as a result of an endowment by Mary Garrett, an ardent feminist**

## **Women should receive the best medical education**

**How far it may be expedient to encourage women to enter the medical profession, the work of which is often disagreeable and always laborious, is a question which receives very diverse answers; but the right of women to study medicine is now granted on all sides...If any woman feels that the medical profession is her vocation, no obstacle should be placed in the way of her obtaining the best possible education, and every facility should be offered, so that, as a practitioner, she should have a fair start in the race.**

**A woman physician of greatness will arrive. Stars of the first magnitude are rare, but that such a one would arrive among women physicians I have not the slightest doubt. And let us be thankful that when she comes she will not have to waste her precious energies in the worry of a struggle for recognition.**

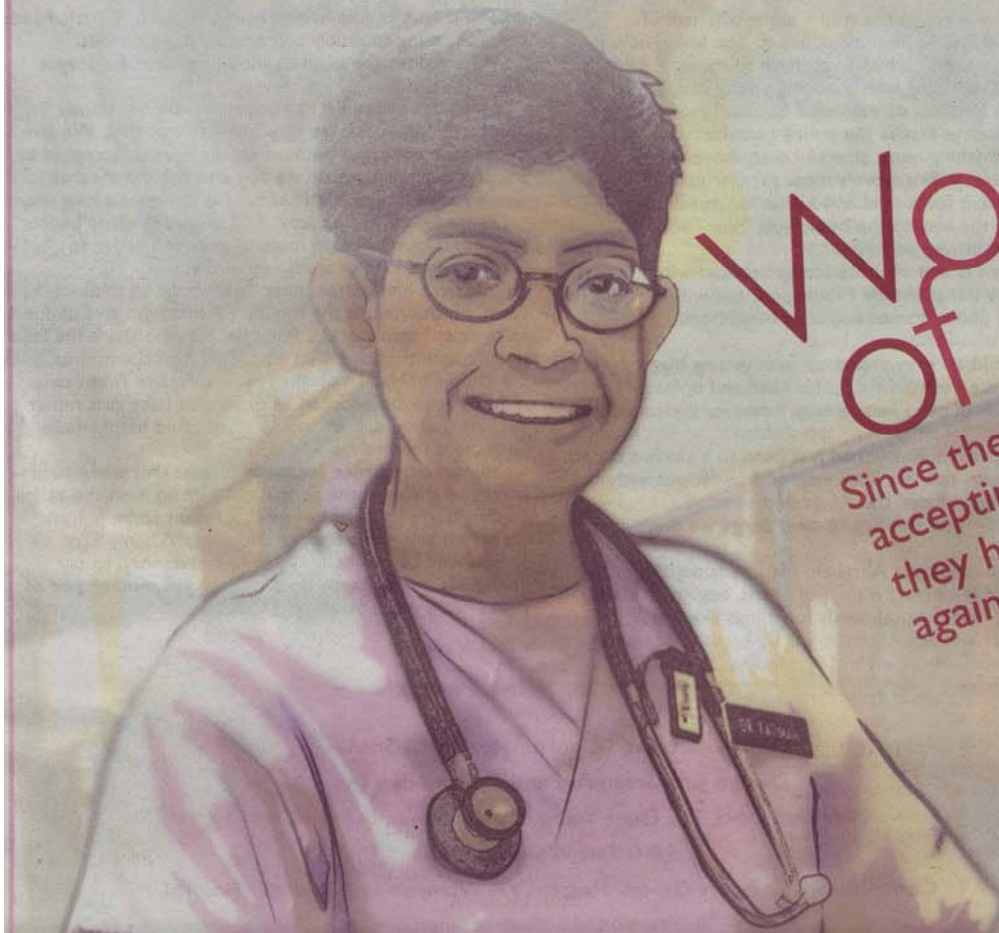


Your weekly health companion from THE STRAITS TIMES

# mind your body

September 5, 2007 • WEDNESDAY

MICA (P) 198/12/2006



## Women of Passion

Since the quota was lifted on accepting women into medical school, they have had a strong showing against the men



It's no longer true that men work and women take care of the household. As gender roles converge, women doctors are coming into their own.

"Women are able to multi-task – juggling family, extra-curricular activities and professional lives better with help and support from family and daycare centres and yes, technology," Dr Fatimah said.

"And when it comes to having

profession, Minister for Community Development, Youth and Sports Vivian Balakrishnan asked the association of women doctors two weeks ago.

Yes, said Professor Carol Black, former president of the Royal College of Physicians in Britain, who voiced concerns in 2004 that women entering the medical profession would make it less attractive to men.

But the truth is that medicine is a demanding profession and is not going to be taken over by women any time soon, even with a level playing field, said cosmetic dermatologist Dr Patricia Yuen. "Medicine is a calling, not a part time job. The balancing act is hard and given society's expectations, I feel women still have it tougher than men do," she said.

E-mail: [judith@sph.com.sg](mailto:judith@sph.com.sg)

■ **More reports next page**

*Dr Fatimah Lateef finds the pace and pressure of emergency medicine suits her working style.*



ST PHOTO: FRANCIS ONG



**There is no longer hostility to women in medicine.**

**When Mary Putnam[(1842-1906), New York physician, author, and social reformer] returned from Europe with a Paris medical degree, and a training in scientific medicine unusual at that date[1871] even among men, the status of women as doctors was still unsettled. Between the open hostility of the many and the half-hearted sympathy of the few, the position of those in the profession was a most unenviable one. That in the past quarter of a century the long battle has been won is due less to growing tolerance among physicians at large, less to the persistence with which obvious rights have been asserted, than to the presence of a few notable figures who have demonstrated the capacity of women for the highest intellectual development and who have compelled recognition by the character of work accomplished in the science and in the art of medicine.**

## **Women are better adapted to scientific work.**

**That a larger proportion of women than of men are unfit for practice, will, I think, be acknowledged;** on the other hand, a relatively larger proportion of the former are adapted to scientific work, and it is most encouraging feature to see so many women taking up laboratory life. In anatomy, the work which they are doing is everywhere attracting attention. Here they meet men as equals, since what they lack in initiative and independence is counterbalanced by a more delicate technique, a greater patience with minutiae, and a greater mastery of details. In the scientific life, too, woman escapes those little rebuffs and slights so trying to a sensitive nature, and to which it is not good for a woman to become so hardened that they do not hurt.

## **Unmarried women must channel their energies or they may be dangerous**

**I do not know at what age one dare call a woman a spinster. I will put it, perhaps rashly, **at twenty-five**. Now, at that critical period a woman who has not to work for her living, who is without urgent domestic ties, is very apt to become a dangerous element unless her energies and emotions are diverted in a proper channel.**

**702**

## **Marry the right woman**

**This well-drawn character [Tertius Lydgate, an ambitious young physician in George Eliot's *Middlemarch* (1871-72)] may be studied with advantage by the physician; one of the most important lessons to be gathered from it is – marry the right woman!**

**INTERNAL MEDICINE AS A VOCATION, IN AEQUANIMITAS, 136**

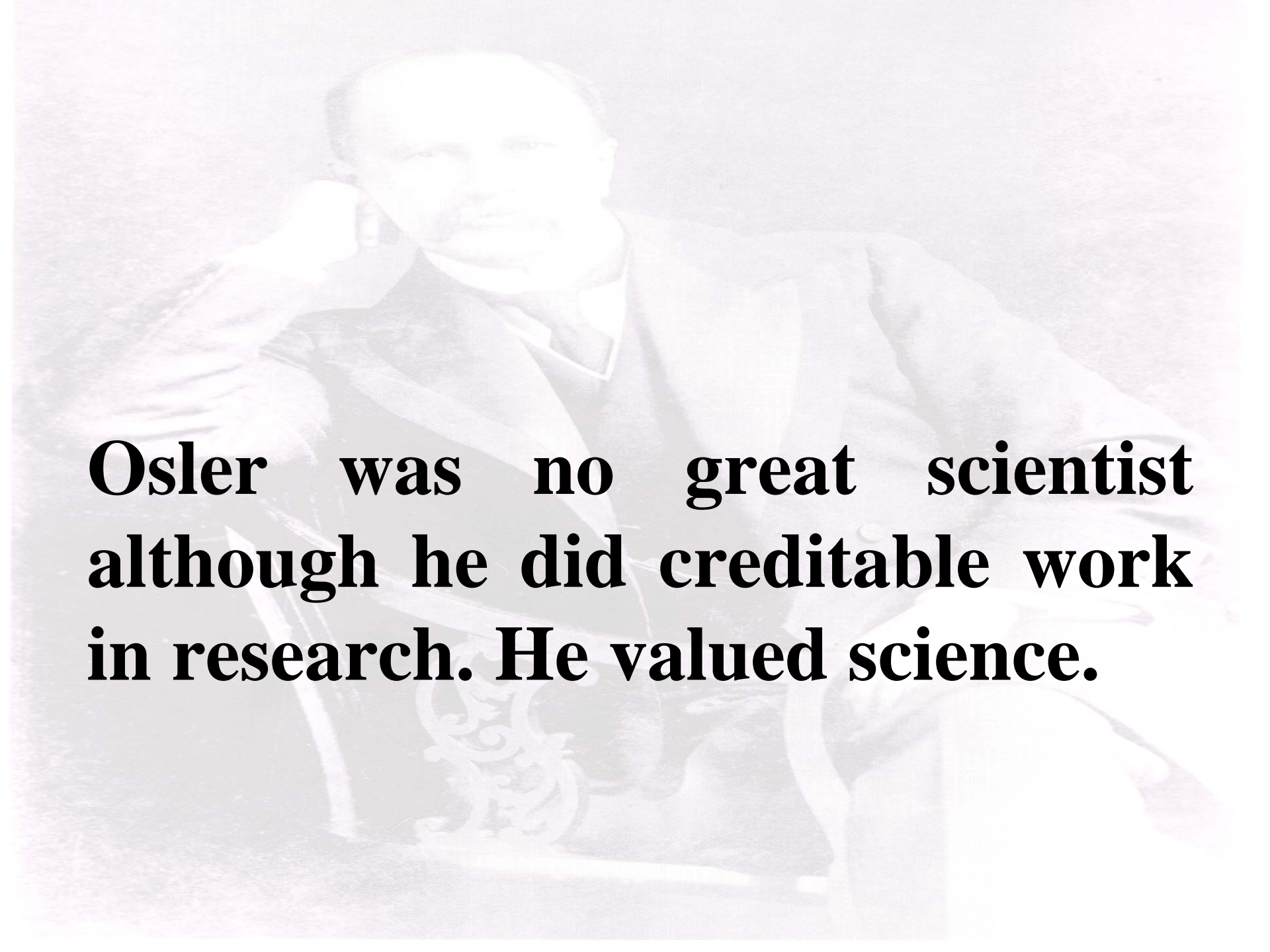
**704**

**Avoid wine and women**

**Avoid wine and women – choose a freckle-faced girl for a wife; they are invariably more amiable**

**BEAN WB. SIR WILLIAM OSLER: APHORISMS, 70**





**Osler was no great scientist although he did creditable work in research. He valued science.**

**779**

**Science has prolonged lives**

**Modern science has made to almost everyone of you the present of a few years.**

**BEAN WB. SIR WILLIAM OSLER: APHORISMS, 111**

## **Science cannot control emotions**

**Science has done much, and will do more, to alleviate the unhappy condition in which so many millions of our fellow-creatures live, and in no way more than in mitigating some of the horrors of disease; but we are too apt to forget that apart from and beyond her domain lie those irresistible forces which alone sway the hearts of men. With reason science never parts company, but with feeling, emotion, passion, what has she to do? They are not of her; they owe her no allegiance. She may study, analyze, and define, she can never control them, and by no possibility can their ways be justified to her.**

**763**

**The investigator thinks of the future**

**The investigator, to be successful, must start abreast of the knowledge of the day, and he differs from the teacher, who, living in the present, expounds only what is current, in that his thoughts must be in the future, and his ways and work in advance of the day in which he lives.**

**TEACHER AND STUDENT, IN AEQUANIMITAS, 29-30.**

**765**

**Society owes an enormous debt to the pioneers of scientific discovery**

**Only a cold-hearted, apathetic, phlegmatic, batrachian [frogs and toads], white-livered generation, with blood congealed in the cold storage of commercialism, could not recognize the enormous debt which we owe to these self-sacrificing miners of science.**

**SPECIALISM IN THE GENERAL HOSPITAL.**

**JOHNS HOPKINS HOSP BULL 1913;24:167-71**

**774**

**Scientific discovery precedes  
good medical practice**

**The hospital units mint, for current  
use in the community, the gold  
wrought by the miners of science.**

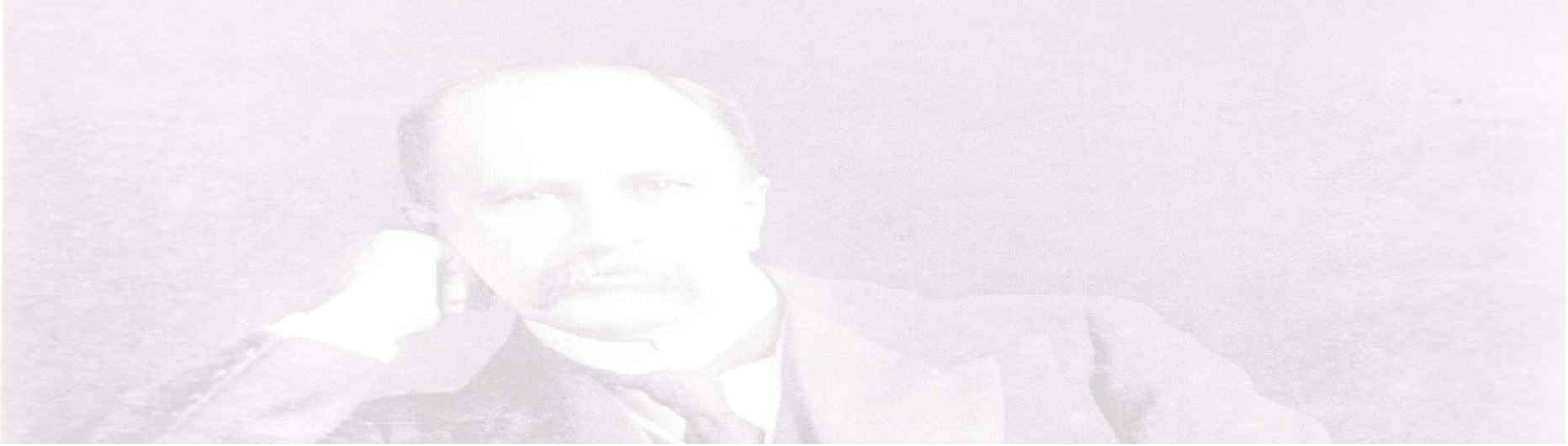
**SPECIALISM IN THE GENERAL HOSPITAL.  
JOHNS HOPKINS HOSP BULL 1913;24:167-71**

**778**

**In research, concentrate  
your efforts on a small area**

**A little field well-tilled! How much more  
may come from it than from a large one  
with its surface only scratched!**

**WARTHIN AS. OSLER AND THE INTERNATIONAL  
ASSOCIATION OF MEDICAL MUSEUMS (EDITORIAL).  
IN ABBOTT ME (ED). SIR WILLIAM OSLER MEMORIAL  
NUMBER BULLETIN NO IX OF THE INTERNATIONAL  
ASSOCIATION OF MEDICAL MUSEUMS AND JOURNAL  
OF TECHNICAL METHODS MONTREAL:  
PRIVATELY PRINTED, 1926:2**



**UK:1912 - President of Section  
of History of Medicine at  
the Royal Society of Medicine**

**1913 - President British Hospital Association**

**1919 - President Fellowship of Medicine**





## What a hospital should be

The type of school I have always felt the Hospital should be: a place of refuge for the sick poor of the city—a place where the best that is known is taught to a group of the best students—a place where new thought is materialized in research—a school where men are encouraged to base the art upon the science of medicine—a fountain to which teachers in every subject would come for inspiration—a place with a hearty welcome to every practitioner who seeks help—a consulting center for the whole country in cases of obscurity.

**175**

## **Mistakes in practising medicine are not surprising**

**It is astonishing with how little outside aid a large practice may be conducted, but it is not astonishing that in it cruel and unpardonable mistakes are made.**

**ON THE EDUCATIONAL VALUE OF THE MEDICAL SOCIETY.  
BOSTON MED SURG J 1903;147:275-9**

132

**Errors cannot be avoided**

**Errors in judgment must occur in the practice of an art which consists largely of balancing probabilities.**

**TEACHER AND STUDENT. IN AEQUANIMITAS, 38**

**133**

**Medicine is an art of probability**

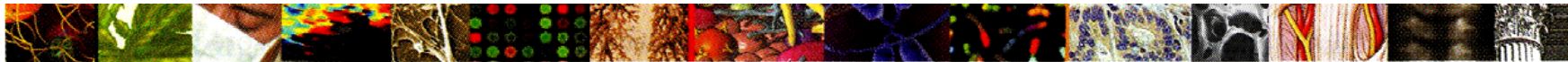
**Medicine is a science of uncertainty  
and an art of probability**

**BEAN WB. SIR WILLIAM OSLER: APHORISMS, 129**

## **Medical practice is inefficient**

**The average physician wastes fifty to sixty per cent of his time in going from place to place or in the repetition of uninstrucive details of practice.**

**GWYN N. THE EARLY LIFE OF SIR WILLIAM OSLER. IN  
ABBOTT ME(ED). SIR WILLIAM OSLER MEMORIAL  
NUMBER. BULLETIN NO IX OF THE INTERNATIONAL  
ASSOCIATION OF MEDICAL MUSEUMS AND JOURNAL OF  
TECHNICAL METHODS, MONTREAL:  
PRIVATELY PRINTED, 1926:143**



# The NEW ENGLAND JOURNAL of MEDICINE

Perspective  
AUGUST 23, 2007

## Healing Our *Sicko* Health Care System

Jacob S. Hacker, Ph.D.

There is a scene in *Sicko* — Michael Moore’s controversial new film about U.S. health care — that captures both the power and the limits of Moore’s cinematic polemic. A mother is speaking

about her 18-month-old daughter, Mychelle, who became ill one evening with vomiting, diarrhea, and a high fever. At the nearest emergency room, Mychelle is treated

of events, a swing hangs empty in the background. Even if we had not witnessed multiple tragedies already — a woman seriously injured in a car crash whose insurer

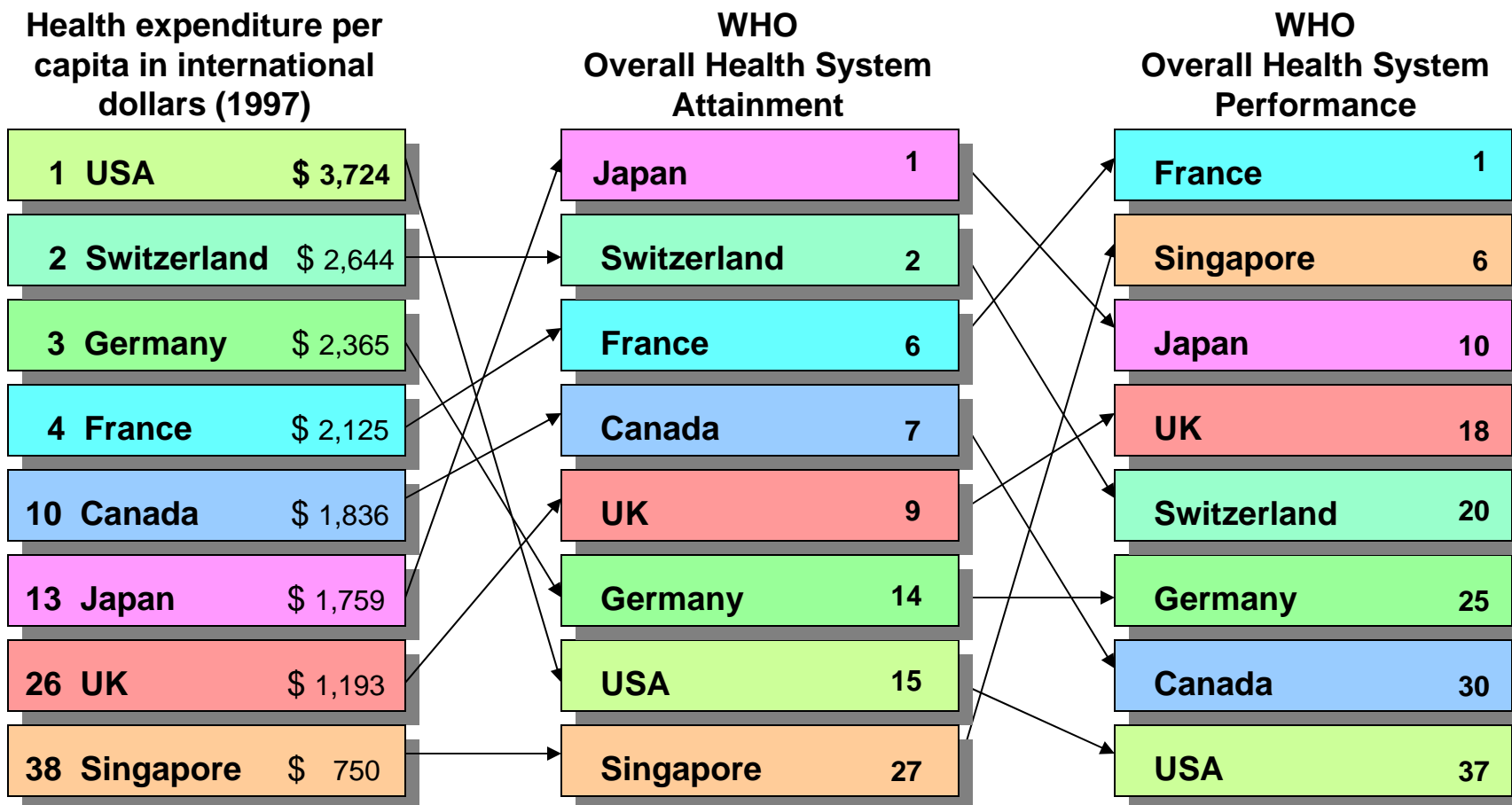
government “of, by, and for the people” fail so miserably to protect the people from such vast and preventable tragedies?

We do not find the answer in Moore’s movie — and that is its great limitation. The golden age of documentary has demonstrated the medium’s clout. Along with Al Gore’s global-warming warning, *An Inconvenient Truth*, *Sicko* may



# Overall attainment: Goodness and fairness combined

## Performance: Getting results from resources



Attainment is a measure of health outcome, responsiveness, fair financial contribution

Performance is a measure of efficiency



# ***To Change Medicine..... Change Your Mind***

- **Provider First**
- **Waiting is Good**
- **Errors are to be Expected**
- **At-risk employment**
- **OTJ Training**
- **Diffuse Accountability**
- **Add Resources**
- **Reduce Cost**
- **Retrospective Quality Assurance**
- **Management Oversight**
- **We Have Time**
- **Patient first**
- **Waiting is Bad**
- **Defect-free Medicine**
- **Guaranteed Employment**
- **Explicit Training**
- **Rigorous Accountability**
- **No New Resources**
- **Reduce Waste**
- **Real-time Quality Assurance**
- **Management On Site**
- **We Have No Time**

# Mayo formula? Best cross-disciplinary care for patients

BY NATALIE SOH

DOCTORS who continue to practise at public, academic-based medical institutions will keep their skills and knowledge up to date.

They will also help Singapore become a medical powerhouse.

Professor Tan Ser Kiat, CEO of SingHealth group and Singapore General Hospital, said yesterday that practitioners in private practice could find themselves lagging behind after a few years because they did not have the resources to keep up with the latest and best in medical technology.

But doctors who kept up

with the latest in knowledge, applied that knowledge and then taught it to others within the field – “or true professionals” as Dr Denis Cortese, president and CEO of Mayo Clinic, calls them – would be a vital plank in Singapore’s strategy.

Invited to Singapore as a distinguished visitor by the SingHealth group, he was sharing the key points of the Mayo Clinic philosophy that has resulted in patients from around the world visiting the clinic in the United States for treatment.

Speaking to assembled doctors at the College of Medicine building last night, Dr Cortese spoke about the common vision and mission that bonded the doctors at the clin-

ic. Unlike other organisations where research may be the priority, Mayo’s philosophy, said Dr Cortese, is to provide the best possible care, across disciplines, for the patient.

This means that at Mayo, specialist teams cooperate closely to deliver the very best care and expertise possible: “People are expected to work together. The team gets the job done.”

There are hardly issues of egos or in-fighting, because at Mayo, the doctors are salaried – they are paid a flat amount. They do not have a monetary incentive to see more paying patients, for instance.

Putting the patient first, and having the most accurate and timely knowledge and informa-

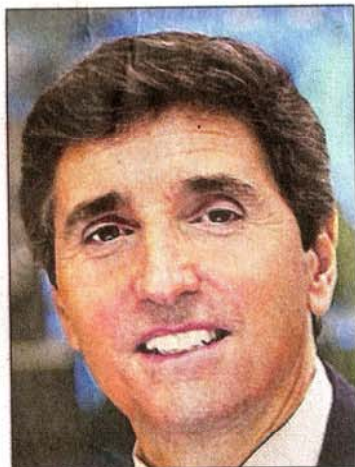
tion are not enough if the system is not specifically designed to make sure that treatment can be carried out smoothly.

For instance, tests are carried out in a carefully thought out sequence so patients don’t have to stay for too long, and patient turnover is smooth.

Singapore does not have to be the “Mayo of the East” said Dr Cortese. Rather it was a matter of assimilating the best of what other places had to offer and deciding what it wanted to be.

Referring to the SingHealth group, he said, “You can be a very successful organisation for your region.”

Post your comments online at [www.straitstimes.com](http://www.straitstimes.com)



**ONE VISION:** At Mayo Clinic, specialist teams work closely, said its CEO, Dr Cortese.

# Just the right dose of medicine

With more than half a million patients, how does Mayo Clinic, one of the world's most reputable healthcare institutions, run its system of patient care?

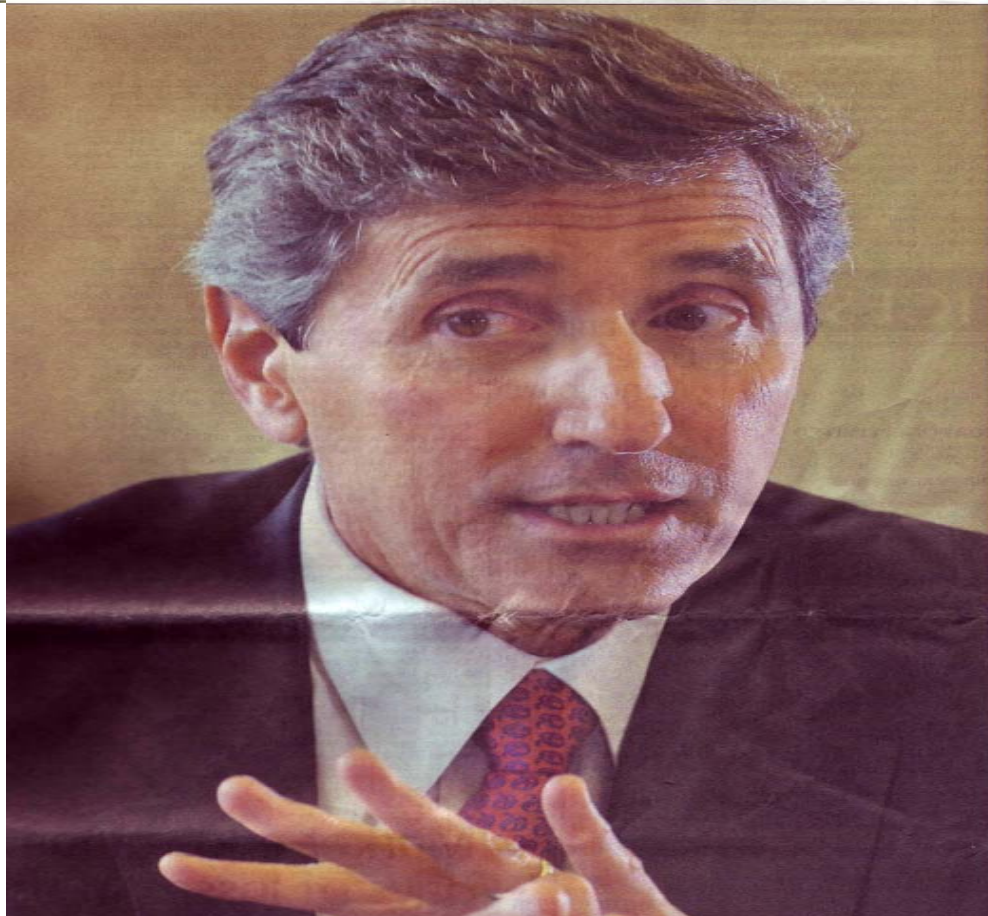
**CHEN HUIFEN** speaks to Denis Cortese, Mayo's chief executive and president

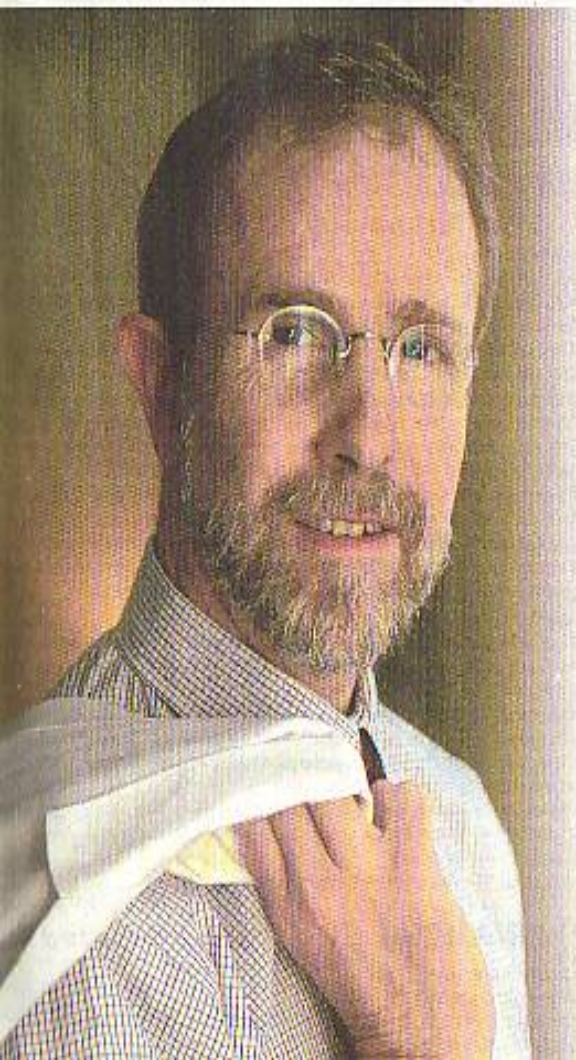
tals, especially those with chronic who he says can be better treated a

He describes the possible treatm ess of a patient who has high chole is prescribed a cholesterol control d monitored regularly by nurses or hot cians who call or take blood tests. the patient manages his condition functioning or working.

"The result is they don't go to ER (cy room)," said Dr Cortese. On top a patient sees less of the specialist, re savings over time.

This philosophy explains why the tion continues to call itself "clir though it owns 18 hospitals, incl Mayo Clinic Hospital in Arizona, Sal Hospital and Rochester Methodist H Minnesota and St Luke's Hospital i ville, Florida. "Hospitals are part of do, but it's a relatively small sect".





# Never too late to be a doctor

You may have gone down a different career path, but the Duke-NUS Graduate Medical School offers you the chance to become a doctor. **Surendren Apparoo** finds out how.

YOU may be a lawyer, engineer or have a degree in computer science or arts. But if you show the aptitude and desire for it, and the prerequisite grades, you just may be able to fulfil your ambition to be a doctor.

The Duke-NUS Graduate Medical School in Singapore can pave the way to a career in medicine.

Explains Dr R. Sanders Williams, the dean of the school, who concurrently holds the position of dean, Duke University School of Medicine, as well as

medicine and society.

He went on to discover genes, proteins and pathways that control development, proliferation, cell size, and differentiation of cardiac and skeletal muscle cells.

He says that graduates from the Duke-NUS Graduate Medical School are well-placed to turn out good doctors.

"But that's not enough," he adds. "We want them to be researchers and entrepreneurs, and change the health services. There is an important role

a mentor to pick a project. "Anything goes," says Dr Williams. Students can choose to do internships, work in a lab, or opt for an overseas stint. "But they will have to write a thesis at the end of the third year," he says.

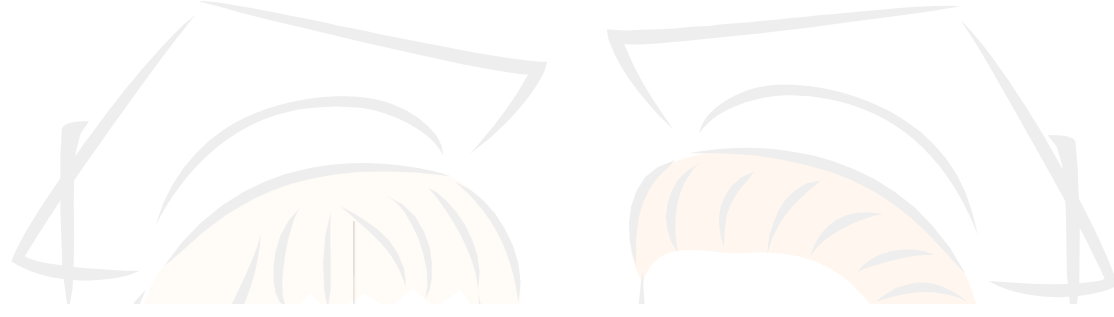
The students then return to the hospital in the fourth year. Summing up a student's experience, Dr Williams says: "He will be creating his own path from the third year."


He cautions: "This course is not for everyone. A student

of a Baccalaureate or Honours degree. Naturally, emphasis will be placed on the scores candidates achieve in the Medical College Admission Test, held in August and April each year.

Creativity and leadership qualities also count. The candidate should have been a student leader or participated in social and humanitarian work.

If you have these basic traits, you stand a higher chance of being accepted, as there are no minimum or maximum age limits. Duke University's



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**651**

**Teaching medicine is one of the noblest functions of the university**

**In teaching men what disease is, how it may be cured, a University is fulfilling one of its very noblest functions.**

**TEACHING AND THINKING, IN AEQUANIMITAS, 125**

Outstanding teachers with practical experience should be in charge of university departments.

The aim of a school should be to have these departments in the charge of men who have, first, **enthusiasm**, that deep love of a subject, that desire to teach and extend it without which all instruction becomes cold and lifeless; secondly, **a full personal knowledge of the branch taught**; not a second-hand information derived from books but the living experience derived from experimental and practical work in the best laboratories. Thirdly, men are required who have a **sense of obligation**, that feeling which impels a teacher to be also a contributor, and to add to the stores from which he so freely draws.

## **Without teaching, an institution is not first class**

**The work of an institution in which there is no teaching is rarely first class. There is not that keen interest nor the thorough study of the cases, nor amid the exigencies of the busy life is the hospital physician able to escape clinical slovenliness unless he teaches and in turn is taught by assistants and students. It is, I think, safe to say that in a hospital with students in the wards the patients are more carefully looked after, their diseases are more fully studied and fewer mistakes made.**





**1919 - 70 years old**

- **died in December of  
bronchopneumonia & empyema**
- **he had served the cause of  
Medicine in 3 countries**



**Medicine bridges the gap between science & society. The application of scientific knowledge to human health is a crucial aspect of clinical practice.**

**Medicine is more than the sum of our knowledge about diseases. Medicine concerns the experiences, feelings and interpretations of human beings in often extraordinary moments of fear, anxiety and doubt.**

**The practice of medicine is distinguished by the need for judgment in the face of uncertainty. Doctors take responsibility for these judgments and their consequences.**

**The good physician treats the disease;  
The great physician treats the patient  
who has the disease.**

**The good surgeon knows how to operate**  
**The great surgeon knows when not to**  
**operate**