

Graduates of 1998, parents, relatives, friends, ladies and gentlemen.

I have always enjoyed visiting museums - good museums.

And there are many throughout the world.

The Aerospace Museum in Washington, D. C. - with everything from the Wright Brothers' biplane to a moon lander.

The Egyptian Museum in Cairo - with the marvelous treasures of King Tutankamen.

I like the Zwinger in Dresden - where Raphael's Sistine Madonna is prominently displayed.

And who can resist the Mona Lisa and the Venus de Milo in the Louvre in Paris.

But my real favorite is none of these. It is instead the British Museum in London.

Some of you who have visited there are thinking -- Oh, he must like to see the Elgin marbles from the Parthenon or the Rosetta Stone which enabled Champollion to decipher Egyptian hieroglyphics.

And that is true. I do like these very much. I even like to walk across the street to the Museum Pub where Karl Marx spent much of his time while supposedly working in the British Museum Library.

But my very favorite thing in that mammoth collection of notable objects is found in the book and document area along with better known artifacts such as a Gutenberg Bible. It is a simple, rather small laboratory notebook - originally the property of a man named Alexander Fleming.

Many of you know the story of Fleming's discovery of penicillin. In 1928, this Scots physician who was working at St. Mary's hospital in London took a vacation.

He left in his laboratory sink a pile of unwashed culture plates containing staphylococci organisms. On his return, he noted that one of the plates had been contaminated with a green mold.

Around the mold was a clear area where the bacteria not only had failed to grow but had literally been dissolved away. The green mold was acting as an antibiotic, a killer of bacteria.

This was certainly not a new observation. Every bacteriologist since Louis Pasteur developed the science had probably had such a contaminated culture.

But Fleming, a stubborn Scotsman, was different. He wrote in his notebook - now displayed in the British Museum - "I was sufficiently interested to pursue the subject. The appearance of the culture plate was such that I thought it should not be neglected."

And pursue it he did. The mold was identified as Penicillium notatum: the antibacterial agent it produced was penicillin.

Working with other scientists, especially Drs. Howard Flory and E .B. Chain, penicillin was isolated, purified, and its chemical structure determined.

During World War 11, large quantities of the new antibiotic were required and most of the large-scale production work was done here in America.

One of these scientists involved was a woman named Mary Hunt who discovered a super Penicillium species on a moldy cantaloupe in a Peoria, Illinois, fruit market. Ever after, she was lovingly referred to as "Moldy Mary."

Fleming was knighted for his discovery in 1944, and a year later received the Nobel Prize, along with many other honors. He is buried in St. Paul's Cathedral in London, where you may see his tomb today.

His notebook and a replica of the famous culture plate are displayed in the British Museum.

It is no exaggeration to say that the health and the lives of many millions of people have been preserved all because one man , in his own words,"was sufficiently interested to pursue the subject."

In the field of pharmacy and medicine, a willingness to pursue such subjects was not unique to Fleming.

William Withering, an English physician, was willing to pursue the herbal remedy of an old woman of Shropshire, resulting in the introduction of digitalis as an important drug, much used even today for congestive heart failure. The German, Paul Ehrlich, pursued syphilis with 605 different chemical compounds until he discovered arsphenamine on the 606th try. It was a true magic bullet for that dread disease.

Another German, Felix Hoffman, diligently pursued a tolerable remedy for his father's rheumatism until he found that acetylsalicylic acid (aspirin) was useful for that condition.

Canadian Frederick Banting pursued a cure for the then incurable diabetes until he found a way to extract active insulin from pancreatic tissue.

These examples are all taken from my own field of interest, but I want to emphasize that one should apply the same principle of diligent pursuit to any and all fields of human interest, ranging alphabetically from agriculture to zoology.

You can collect similar examples of the utility of this principle from your own field of knowledge.

Whatever that may be.

Robert Browning said it this way: "Ah, but a man's reach should exceed his grasp. Or, what's a heaven for?"

But I also like Henry David Thoreau's optimistic outlook, when he wrote, "This world is but a canvas for our imaginations."

Having urged you to exercise diligence in the pursuit of whatever interests you, I want now to emphasize that education at a great institution such as the University of Connecticut is not just for a career but an education for life itself.

Our careers should provide us with a thirst not just for technique but for understanding.

Our innate gift of curiosity should enable us to fulfill a transcendent human need by affiliating and empathizing with that which lies outside ourselves.

William Inge summarized it this way - "The aim of education is the knowledge not of facts but of values."

All of the examples I gave you earlier - Fleming, Withering, Ehrlich, Hoffman, and Banting, sought knowledge not just for personal use but for its application to others.

While knowledge in and of itself is certainly good, it becomes most useful when employed in some way for the benefit of humankind.

You have been exceptionally fortunate in being able to carry out advanced studies in the field of knowledge which interests you most. That is a rare privilege accorded to only a select few in a world increasingly dominated by restrictions of every sort.

So permit me to urge you not just to know values but to implement them in such a way that others may benefit from them.

Two modern examples come to mind. The memories of both Mother Teresa and Princess Diana are honored today not for who they were but for what they did for others.

Beyond urging diligent pursuit and knowledge of values employed for the benefit of others, my third and final message to you graduates today is one of heartiest congratulations.

Forty-five years ago this spring, I was in exactly your position when I received my advanced degree, the Doctor of Philosophy, from this University.

I have always been proud to be a University of Connecticut graduate as I know you will be, too. The education I received here served me well, both in my career, and far more important as I have said, in life itself.

I know you will also value what you have achieved here for the rest of your life, which I trust will be as happy and fulfilling as mine has been.

Goethe once said, "The highest happiness of man is to have probed what is knowable and quietly to revere what is unknowable."

Use the fine education you have received here to follow that philosophy, and you, too, will be a happy individual.

Heartiest congratulations - and best wishes - in all your future endeavors!