Dr. Charles Johnson's Welcome Message to begin a new year of our Omega Leo Medical Explorers.

August 25, 2026

Welcome to a new year.

Every fall, when we begin another year, I think about the many students who have been a part of this organization over the past 36 years and the careers they eventually entered—medicine, nursing, physician assistant, emergency medicine, research, epidemiology, and many others. We have many across our country who have very successful careers as health professionals. They got their start here, just like you today. Our Medical Explorer program may have played an important part in the

discovery of their place as a health professional. Take advantage of all we offer just like they did. For those just now joining us, your life as a health professional begins today. Yes, we have high expectations, but we deliver much to an aspiring future health professional. Membership as a Medical Explorer will demand a level of seriousness that may be new to you. In this organization, we expect everyone to assume "professional level responsibility for yourself and the care of patients you will encounter." You have much to learn. Your job will be to learn fast. Focus and be frugal with your time.

I believe those of you beginning your healthcare careers today are entering medicine at one of the most remarkable times in human history.

You may practice medicine for the next forty or fifty years. Think about what that means.

Some of the diseases you learn about today may be treated very differently by the time you finish your professional education. Some diseases that we now consider chronic may be curable. Some conditions that presently require major surgery may eventually be treated with gene therapy, regenerative medicine, or treatments we have not yet imagined.

You are entering healthcare during a genuine scientific revolution.

Artificial intelligence is beginning to help physicians interpret medical images (breast cancer tumors are easily found by computers today using AI), recognize patterns in enormous amounts of clinical information, discover new drugs, and diagnose diseases earlier.

Genomic medicine is allowing us to understand disease at the level of DNA itself.

Gene-editing technologies offer the possibility of correcting diseases at their biological source rather than simply treating their symptoms.

Cancer treatment is increasingly being designed around the molecular characteristics of an individual's tumor. Vaccines made from a patients own tumors are already in human trials to treat Melanoma.

These immunotherapy vaccines have demonstrated that a patient's own immune system can sometimes be redirected to attack their cancer.

Regenerative medicine and stem-cell science are exploring whether damaged tissues might someday be repaired or replaced. Diabetic cures using stem cells are already in human trials.

And researchers are beginning to ask an extraordinary question:

Can we actually modify the biological processes that cause us to age?

For most of human history, aging has been considered inevitable and irreversible. Today, scientists are studying aging itself as a collection of biological processes that might potentially be modified. Aging is becoming just another disease to cure or at least delay.

Researchers are investigating cellular senescence—the accumulation of damaged or dysfunctional cells as we grow older. They are studying drugs and immune-based approaches that might selectively remove some of these "zombie" cells.

Even more remarkable is research involving **partial cellular reprogramming**. Scientists are investigating whether some of the molecular characteristics of older cells can be shifted toward a younger biological state without causing those cells to lose their normal identity. Recent reviews describe experiments in which researchers have reversed molecular markers associated with aging and improved regenerative functions in laboratory and animal models.

This year, the National Institutes of Health highlighted research showing that manipulating the activity of particular transcription factors reversed some effects of aging in cells and improved health measures in older mice.

That does **not** mean that we've discovered a cure for human aging. **We haven't yet!** But we're advancing our medical knowledge rapidly and in your career, you'll see new therapies that will significantly delay the symptoms of aging.

There are enormous scientific and safety questions still to answer. Researchers must determine whether these techniques can be used safely in people without causing cancer, abnormal cell growth, immune problems, or other consequences. Someone in this room may find themselves involved in that research.

But consider how extraordinary the question itself has become.

When I was your age, asking whether physicians might someday reverse aspects of biological aging would largely have belonged to science fiction.

For your generation, it's becoming a legitimate field of biomedical research.

And that leads me to something very important!

If medicine changes this dramatically, healthcare professionals must change with it.

The physician, nurse, physician assistant, pharmacist, researcher, therapist, or other health professional of the future cannot simply memorize what's known today.

You will have to become lifelong learners.

During your careers, you may encounter technologies that have not yet been invented, treatments that have not yet been discovered, and diseases that will be understood in ways that today's textbooks cannot describe.

When I started in healthcare, computers were rare. MRI, CAT scans, ultra-sound – all were just beginning. Electronic medical records were experimental. Medicine was essentially “paper-based.”

But there is something else I want you to remember.

Technology will not eliminate the need for compassionate healthcare professionals.

In fact, I believe the opposite will happen.

The more technologically sophisticated medicine becomes, the more important the human qualities of medicine will become.

A computer may someday identify a cancer more accurately than a human being.

Artificial intelligence may help determine the best treatment.

Genomic analysis may tell us exactly which medication is most likely to work.

But someone will still have to sit beside the frightened patient and explain what their diagnosis means.

Someone will still have to hold the hand of a family member. Death and suffering will not go away. Grief and sorrow will always be a part of medicine.

Someone will still have to recognize suffering and be the support a patient or family will need.

Someone will still have to advocate for the patient who cannot advocate for himself or herself.

And someone will still have to make difficult decisions based upon ethics, compassion, judgment, and respect for human dignity.

That someone may be you!

That is one reason what you do as a Medical Explorer matters.

When you volunteer at a community event, learn CPR, take a blood pressure, control bleeding, help someone who is frightened, assist another volunteer, or simply stop to ask someone, ***"Are you okay?"***—you are learning something that cannot be taught completely in a classroom.

You are learning to serve with compassion.

The technical skills will come. Medical school can teach medicine. Nursing school can teach nursing. PA school can teach clinical practice.

But becoming the kind of healthcare professional whom people trust begins much earlier. It should begin now!

It begins with character.

It begins with curiosity.

It begins with integrity.

It begins with learning to work as part of a team.

And most importantly, it begins with developing **a heart and duty for service**.

That has always been central to what we hope the Omega Leo Medical Explorers will become.

So as we begin this new year, I want you to look beyond your next examination, your next semester, and even your application to professional school.

Think about the world in which you may someday practice.

Some of you may participate in discoveries that we cannot imagine today.

One of you may help develop a new cancer treatment.

One of you may work with artificial intelligence systems capable of detecting disease years before symptoms appear.

One of you may participate in regenerative medicine that restores damaged organs.

And perhaps someone sitting in this room will someday work in the emerging science of aging and longevity.

Your generation may ultimately have to confront a question no previous generation of healthcare professionals has seriously faced:

What happens to medicine—and to society—if we learn not simply how to treat the diseases of aging, but how to significantly slow or even reverse some of the biological processes of aging itself?

Will the advances to come be available to all who need them? Is medicine "fair?"

I don't know the answers.

Neither does anyone else.

And that is precisely what makes your future so exciting.

You are not entering healthcare at the end of medical discovery.

You are entering it at the beginning of an entirely new chapter.

There will be difficult courses ahead of you. There will be examinations, disappointments, long nights, and

moments when you wonder whether becoming a healthcare professional is worth all the effort.

When those moments come, remember why you started.

Somewhere in your future is a patient you have not yet met.

That person may someday depend upon your knowledge.

They may depend upon your judgment.

They may depend upon your courage.

And they will certainly depend upon your compassion.

Prepare yourself for that patient.

Learn everything you can.

Ask questions.

Embrace new technology without surrendering your judgment to it.

Be excited about scientific progress while remaining humble about what science does not yet know.

And never allow extraordinary technology to make you forget the extraordinary value of an individual human life.

I am tremendously optimistic about the future of medicine.

But I am even more optimistic about you who will inherit that medical future.

Welcome to a new year of the Omega Leo Medical Explorers.

The future of medicine is being written right now.

And someday, you may be among the people helping write it.