AA Annual Presentations – September 5, 2025

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COSH

Slide 1

Good afternoon, everyone.
It's a privilege to share some of the remarkable progress the College of Science and Health made last year.

First, let me acknowledge two leaders whose contributions have left a lasting mark:

- **Dr. Gilbert Ndjatou** for guiding the department through the rigorous process of ABET accreditation: a milestone that ensured our Computer Science program meets the highest standards of quality.
- **Dr. Daria Napierkowski**, who led us during our transformation from a Department to a School of Nursing, overseeing unprecedented growth in enrollment in our online programs and faculty.
  We thank them for their leadership that lit the path forward.
- Let us also congratulate **Drs. Kiho Lim, Jaclyn Morisette** on their tenure, **Nan Wang for her Tenure by exception** and Jacklyn for her promotion to Associate Professor.

And speaking of faculty, we've welcomed four new colleagues whose expertise expands our intellectual footprint:

- **Chris Mayack**, Department of Biology, a scientist-entrepreneur whose work spans entomology, molecular biology, and computational drug discovery. He bridges the worlds of academia and industry, exactly the kind of talent that enriches our College.
- **Luay Wahsheh**, Department of Computer Science, a seasoned academic leader with decades of experience guiding computer science programs and ABET processes. His expertise in cybersecurity and program development strengthens both our teaching and leadership capacity.
- **Bohan Fan**, Department of Computer Science, a scholar in algorithms, data science, and software engineering, with a rich academic journey from China to the U.S. His work in robust algorithms and applied problem-solving equips our students for the challenges of tomorrow.
- **Xiaoshan Wang**, Department of Computer Science, currently completing his Ph.D. in Computer Engineering at the University of Florida, with deep expertise in cybersecurity, cryptography, and machine learning. His teaching postdoc role brings fresh energy and advanced knowledge into our classrooms.

These new faculty represent not just hires, but investments in the future and leaders who will guide the next generation of innovators.

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Three points of pride that stand out.

1. Faculty Excellence – Dr. Griffiths earned the 2025 Research Award; Dr. Emily Monroe earned the 2025 Teaching Award.
2. Student Achievement – our ASPIRE program continues to shine, with 15 graduates this year in disciplines of biology, chemistry, computer science, and IT. This breadth reflects the strength of our programs and the success of our students, with well-deserved national recognition.
3. Student Success – Non-returner rate cut to 18% below our goal—thanks to expanded supplemental instruction support and leadership from Associate Dean Dr. Zeleke and our COSH Chairs. The DFW rates in our gateway STEM courses are under 25%.

Looking ahead, we see three major opportunities.

1. For faculty development, 10 of our colleagues earned ACUE micro-credentials in inclusive teaching, and we'll continue building on this foundation as we have in previous years in developing teaching scholars.
2. For career networking, our SHINE events are opening doors. Our upcoming event will spotlight kinesiology and allied health.
3. And finally, facility upgrades are strengthening both research and learning, from our $1M Nursing SIM lab upgrades to advanced instrumentation for a $700,000 NMR for Chemistry. Together, these points of pride and opportunities show how far we've come, and how much promise lies ahead.

Clearly, our progress is also shaped by the themes of our strategic plan.

- **Access and Equity in Higher Education.** Impacts of the **ASPIRE** program are transformative, changing lives, one student at a time.
- **Strategic Growth and Collaboration.** Across colleges, we've seen partnerships multiply, leveraging strengths and creating a culture of shared innovation. Collaboration is now our growth engine.
- **Enhancement of Academic Offerings and Support Services.** We are strengthening alumni engagement and career networking, ensuring our students don't just graduate with knowledge, but with pathways to success by bringing alumni, like the SHINE events.
- **Infrastructure and Technological Advancement.** Investment is fueling excellence: **High-quality instrumentation** across the college, like BodPod for Kinesiology, and many equipment upgrades across the College. Many colleagues in the College saw a **new robot** greeting you at the all-college meeting yesterday, and we are eager to show that to the entire university community and beyond.
- And finally, **Building Community.** Because in the end, growth isn't just about buildings, equipment, or labs. It is about people, and the shared sense of belonging that keeps students, faculty, and alumni connected.

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Let me highlight just five examples of excellence from our College community:

- Congratulations to **Dr. Emmanuel Onaivi**, ranked among the top **0.5% of scholars worldwide** and #27 globally in **Cannabinoid Receptor Research**. This recognition affirms not only his lifetime achievements but also our College and University's global visibility.

- Applause as well for **Aamod Paudel**, a freshman mentored by Dr. Navid Mohammed, who won **First Place – Best Student Poster** for their AI-driven project decoding pet sentiments. A freshman! That's the spirit of innovation we're nurturing here.
- We're also proud of our **new Allied Health pathways:** Pre-PT, Pre-OT, an Audiology Minor, and the proposed BS in Medical Imaging Leadership. These programs expand opportunities for students in high-demand health careers.
- Our **Nursing program** continues to grow in volume and quality. With initiatives like the **ATI NCLEX Review**, we're preparing students to excel, even as intake rises. The challenge is real, but so is our commitment to maintaining excellence.

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Now, let's zoom out to the broader context shaping our work.
We are living through a profound convergence: **the Silver Tsunami and the Silicon Wave.**

- The **aging population** is driving unprecedented demand in healthcare.
- At the same time, **data-driven practice** is becoming the new normal.

Healthcare and social assistance are projected to be the **engines of U.S. job growth** this decade. Roles like nurse practitioners and health services managers are at the forefront.

But, here's the catch: nearly every one of these roles is now **data-adjacent**.

Quality, safety, informatics, AI-assisted decision support; these are no longer optional; they are essential.
That means the workforce of the future must combine **clinical expertise with data fluency.** Our task as educators is to prepare them for exactly that.

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Finally, let's talk about our Vision Headlines: a sector reshaping healthcare, agriculture, and environmental solutions. I am reminded of my friend and conversationalist in higher education, Dr. Lee Bolman, who shared a profound truth during one of my meetings with him at the Arden Seminars, a think tank group. ***A vision without a strategy remains an illusion.*** How true!!!

The market is projected to grow from **$1.74 trillion in 2025** to over **$5 trillion by 2034**. That's an annual growth rate of nearly **12.5%.**

Driving this surge are technologies like:

- **CRISPR gene editing**
- **AI-powered drug discovery**
- **Precision medicine**
- And advances in agriculture and environmental biotech.

Simply put, **Capital** is following **Science**:

- In 2023, U.S. biopharma invested **$96B in R&D,** over 20% of sales.
- IPOs surged in 2024, with offerings up **64% year-over-year.**
- And M&A remains strong, as big pharma acquires biotech firms to refresh their pipelines.

This is not just growth, it's a phenomenal transformation!
Globally, we see **North America leading**, **Asia-Pacific scaling fast**, **Europe specializing in rare diseases**, and regions like **Latin America and Africa** making strides in agriculture and infectious diseases.

The opportunities are extraordinary, but so are the risks: regulatory hurdles, clinical trial failures, and market volatility. In this landscape, informed strategy and diversification are critical.
And if you want a glimpse of where all this leads—imagine a **stethoscope that thinks.**
That's exactly what **Sanolla's AI-powered stethoscope** does: combining heart sounds and ECG signals with machine learning to detect what the human ear misses—atrial fibrillation, valve disease, even early signs of heart failure.
It doesn't just listen; it learns.
It doesn't just record; it guides.
It turns a 200-year-old tool into an AI diagnostic partner.
That's the future of biotech and healthcare: smarter tools, earlier detection, better outcomes.

Conclusion
So today, as we look at our college's growth, our faculty's excellence, and the global trends shaping science and healthcare, the message is clear:
We are not just keeping pace with change; we are helping to drive it.
We are preparing students not just for today's jobs, but for tomorrow's opportunities. And we are doing it by blending **tradition with innovation, science with entrepreneurship, people with purpose.**

Together, we are shaping the future. Thank you.