ARMI | BioFabUSA: Scaling to change lives

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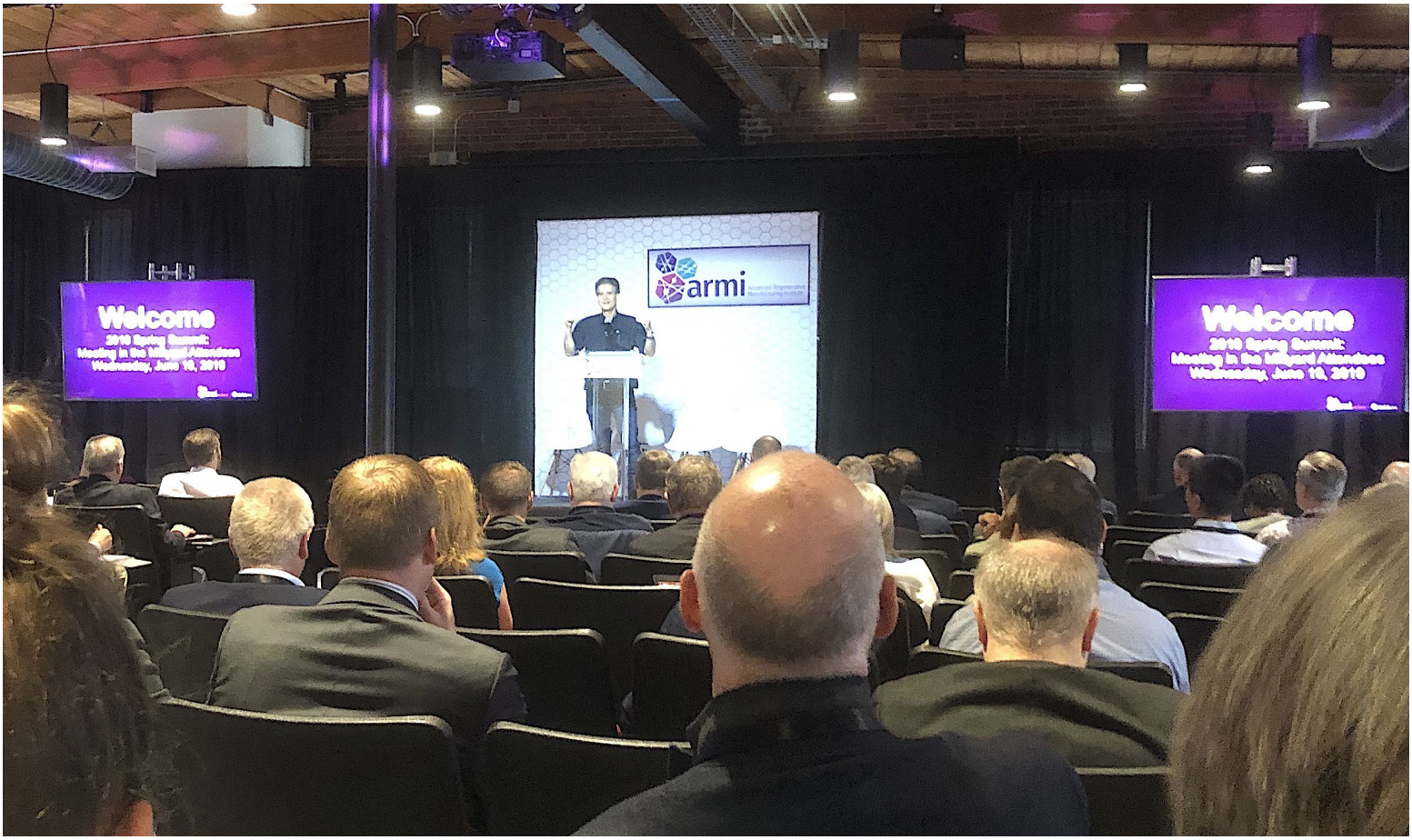

Dean Kamen talks about the future of regenerative technology during BioFabUSA's spring summit. Photo/Jon Leer

MANCHESTER, NH – Day in, day out the news reports advances in research that give hope to thousands, if not millions, of people throughout the world who are looking for solutions to their health conditions. And often we wonder, how long will it take for these miracles to actually come true, and be available to the public? In

the past, new medical discoveries have been plagued with lengthy delays in testing, clinical trials, and FDA approvals deemed required for our safety. But this may be changing with what is happening in Manchester's Millyard. The Advanced Regenerative Manufacturing Institute (ARMI) and its growing number of members (more than 150) are accelerating the transformation of research discoveries into engineered and manufactured health solutions that will be available on a large scale, easily manufactured, and safe.

Wednesday morning, Dean Kamen, New Hampshire's premier inventor and entrepreneur, stood at the podium in front of members and guests of ARMI to introduce them to the its BioFabUSA Spring Summit event to share what the organization is doing in its efforts to transform biotechnology research into practical, large-scale manufacturing of engineered tissues and tissue-related technologies to help people around the world.

He noted that there are more people dying each day from medical conditions, such as cancer and heart disease, than died during World War II. "The urgency to fix this situation should drive us to act as if we are at war."

He pointed out that the Department of Defense (DOD) has solved many urgent problems that required a solution against all odds by taking on a different role and mobilizing different industries to join together to apply their expertise to find a solution. He added that it is obvious that engineers, scientists, and manufacturing experts speak "different languages." But even without understanding each other's technologies, they can each benefit by sharing information that helps expand their individual strengths and expertise and opens the door to accelerate finding a solution. In this case, it is the urgency to generate organs and tissues needed by many sick and hurting people throughout our country and the world, Kamen said.

"We need to bring all these skill sets together to manufacture human organs. Some of the science is here today, ready for the plucking."

The Possibility of the Impossible

If you took biology in high school or college, you may remember what a petri dish is. It is a small round, clear, covered dish with agar to grow and study small organisms (e.g., mold) in the lab. But beyond that, you probably could not guess what you would use it for. But what if you could look beyond the petri dish to something that would grow something more meaningful to our health system, such as skin, ligaments, and bone? That would be useful, particularly if it could produce sufficient quantities to meet the huge shortage that is needed today.

Kamen shared that, to make this possible, ARMI's goal is to make a "foundry" that takes the expertise of scientists, engineers, and manufacturers to deploy a "scalable, modular, automated, and a closed system." The foundry would permit the manufacturing from start to finish in a predictable, cost-effective, and safe way. And guess what – with no masks or gowns necessary.

The ARMI | BioFabUSA event brought together its members to think "out-of-the-box." By adapting the DOD's mindset of bringing all the brightest minds in multiple industries together to solve an urgent problem makes sense. Dean Kamen and ARMI's goals are bringing needed manufacturing back to the Manchester Millyard for a cause we can all benefit from.

The ARMI | BioFabUSA Spring 2019 Meeting in the Millyard was held June 19-20 at the Technology Center Auditorium, 400 Commercial St., in Manchester. Click here for the event agenda and speakers' bios. Also visit ARMI's Linkedin page at https://www.linkedin.com/company/armiusa/.