

"Materials Science Meets Passion - A Look at the Journey"

Presented by: Victoria Wilmore



Good afternoon, I hope everyone has enjoyed the summit the last two days. Before we wrap things up, I'm going to share a few details about my life which ideally would lead you to continue supporting ASM and their endeavors.

(Slide 2) Passion - this one word can evoke many different emotions and can have several different connotations.

Whether being referenced with respect to a hobby, a person, or an opinion it usually isn't used when discussing materials science or even engineering. However, I'd like to describe how passion has been part of my educational and professional journey over the past 17 years since I attended the ASM Materials Camp in 2001 on the University of Washington campus in Seattle.

A lot has happened both professionally and personally in the last 17 years. I graduated from high school, earned an Engineering degree at Texas A&M University, got hired by Johnson & Johnson, got married, and am now the mother to 2 beautiful children. One thing that I never lost over that timeframe was a zest for life and helping others. In fact, ASM and Johnson & Johnson are very similar in that they are both very compassionate and selfless organizations - ASM by providing wonderful educational opportunities for people in all phases of their career and Johnson & Johnson by putting patients first in all business decisions.

(Slide 3) Johnson & Johnson is an iconic healthcare brand that most people world-wide either recognize by name or by sight. I have had the honor of working for this top-notch company since I graduated from Texas A&M with a Bachelor of Science in Chemical Engineering in 2006. Throughout my tenure with J&J, I have worked within the Medical Device and Pharmaceutical sectors performing functions ranging from Health & Safety to Reliability Engineering to Quality Assurance. I am currently based out of the great state of Texas, I live specifically in the Dallas/Fort Worth area, and I am the Quality & Compliance Manager for several medical device distribution centers in Texas, Arizona, Hawaii, and Indiana. The products that we distribute both domestically and internationally range from silicone breast implants to catgut sutures to polymer intraocular lenses to even titanium knee implants. My responsibility is to ensure that the right products, get to the right customer, at the right time, in the right condition to ensure a flawless

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patient outcome. That is what keeps me coming into the office even when the quantity of emails is daunting, the projects are seemingly always behind schedule, and long hours are required. In short, I am passionate about helping people.

(Slide 4) What inspires me the most about my job is that I am able to apply my technical abilities in a constructive way that will forever change patient's lives for the better. Johnson & Johnson is the most comprehensive healthcare company on the planet. In fact, we touch over one billion people daily. Johnson & Johnson is able to provide life saving medical devices in addition to pharmaceuticals that improve people's quality of life. Furthermore, most everyone here today has benefitted from consumer products such as Tylenol, Aveeno, or Johnsons Baby all of which are under the Johnson & Johnson umbrella.

(Slide 5) So how does this all relate back to my experience from the Materials Camp and my involvement in ASM? The first way is that by attending the Materials Camp, I realized that there were many people out there that were "rooting for me." What I mean by this is that they wanted to help me be successful in the STEM field without any gain for themselves. I was blown away as a student that someone would be willing to pay for me to fly me across the US, help me learn about materials science, and even allow me to use some really expensive and sophisticated equipment. At that point, I knew ASM was a special group of people. In fact, I remember Ash Khare talking to me and encouraging me while my team was in the lab working on our failure analysis project. Never would I have imagined that over 14 years later he would still care about me and even mention me in his George Roberts Award acceptance speech. If this isn't a true picture of selflessness, I don't know what is. I am continually encouraged that we as a community of science and engineering professionals are able to celebrate each other's successes.

(Slide 6) Secondly, the Materials Camp taught me life skills like how to adapt to any situation and work with people from different walks of life. This has helped me tremendously over my years at J&J as it is a very relationship-based company and the healthcare landscape is always changing. Being agile and having emotional intelligence are two of the most important traits that leaders these days need to be successful. While at camp we were joined up with other

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attendees to work together on completing a failure analysis. Our team consisted of 5 people, all from different states with different backgrounds. In a matter of days, we were challenged to determine why a fireman's oxygen tank had failed during hydrostatic testing. In order to do this successfully, we had to go through all the phases a team does - forming, storming, norming, and performing - all in an accelerated time frame. We also had to learn new techniques on how to investigate problems, most of which we never had been exposed to during our traditional education in high school. Needless to say, I am able to draw upon those experiences even today. I have been on many different team teams where the people aspect has been more challenging than the technical aspect.

However, knowing how to capitalize upon each person's strength for the success of the team was something that Materials Camps was able to teach me first hand.

(Slide 7) On a more technical level, the Materials Camp helped me to develop my critical thinking skills especially with respect to failure analysis. Working within the Quality arena, being able to dissect a problem and take a systematic approach to understanding the root cause is critical. Even though the applications can be different, for example medical device defects versus catastrophic failures of architectural structures, the analysis principles are the same. For example, when I was working in a manufacturing plant in Juarez, Mexico I had to lead a team, in Spanish I might add, on investigating why a device that was designed to cut and staple tissue at the same time had a higher force to fire. The force to fire is how much pressure must be applied to the trigger of the device by the doctor to advance the knife and eject the staples from the cartridge simultaneously. The device had many different components that could contribute but we had to follow a systematic methodology to define, measure, analyze, improve, and control the process to avoid having this continue during production.

(Slide 8) In summary, the last 17 years have been an amazing journey but the best part is that this is not the end at all – I'm just getting started. The passion that ASM ignited in me many years ago still lives on today and I'm excited to not only see how many lives will be positively impacted in the future but how many emerging leaders I can influence. As Harvey Firestone, the tire innovator, said "The growth and development of people is the highest calling of leadership."

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(Slide 9) I thank each and every member of ASM, past and present, for their commitment to student education and I encourage you to continue in that support. In the same vein, I challenge you to evaluate where you are in the virtuous circle and determine where you would like to be. On your flights home today or tomorrow, jot down a couple of things you could do this upcoming year to make that happen. If I can be of any assistance in helping you achieve that goal, I would be more than happy to lend a helping hand.

(Slide 10) I'll close out with one last simple thought – passion and materials science can go together.