



## Philip Leslie

### Head of Manufacturing

#### PERSONAL PROFILE

As a top global pharmaceutical executive with well over three decades in manufacturing leadership roles for some of the world's leading pharma companies—including GSK, MSD and Eli Lilly in Australia, New Zealand and the UK—Philip Leslie knows something about what it takes to succeed.

“I think you really need to be passionate about what you're doing,” he says. “Then you just dive in and make things happen.”

Philip's experience with Blow-Fill-Seal (BFS) manufacturing technology, which ApiJect uses for vaccine in BFS single-dose injectors, is broad and deep. At GlaxoSmithKline in Australia, he ran the production facility for a number of years which had a cross functional team of nearly 200 skilled people. He then led a team that designed, built and commissioned the world's first and only BFS vaccine filling facility.

This is only one group of milestones in a career that is full of them. Philip worked for GSK for 29 years, holding increasingly responsible posts as the company expanded investing heavily in BFS technology and supplying the world with lifesaving drugs.

Again and again, he provided critical leadership on large-scale projects.

Examples include construction of a state-of-the-art solid dose facility that introduced one of the first electronic batch record systems with material and equipment tracking, and being part of the global rollout of an ERP system across multiple sites.

One of Philip's proudest achievements was his launch of a unique partnership between GSK and Monash University, giving 100 or so students an opportunity to gain experience in pharmaceuticals manufacturing, while introducing GSK to a pool of exceptional talent. This partnership won the Business/Higher education award for excellence in



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**“Supplying vaccine to the world will be an amazing outcome. That's what drives me with BFS Prefilled Injectors and ApiJect.”**

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collaboration across Australia.

In 2017, Philip's lifetime of service, success and innovation in pharmaceuticals prompted the government of the Australian state of Victoria to induct him into the Victorian Manufacturing Hall of Fame. But Philip is not looking backward; his eyes are fixed on today and ApiJect.

“To me, BFS is a highly impressive process because it performs the fill and finish in a single process, in a few seconds, with a high level of sterility assurance,” he says. “For this reason, BFS opens a whole range of opportunities to better serve patients—and an innovative solution to vaccine supply in a global pandemic.”

# “In a pandemic, people rise to the challenge and do extraordinary things.”

Combatting a pandemic requires people to pitch in and make incredible efforts—and many individuals will do just that, according to world-class manufacturing expert Philip Leslie.

After 30+ years of building, running and transforming a series of state-of-the-art pharmaceutical manufacturing facilities and operations for some of that industry’s largest global companies, Philip Leslie is eager to plunge in and apply his lifetime of expertise to the biggest pandemic challenge of the past 100 years, COVID-19.

As Head of Manufacturing for ApiJect, Philip is doing precisely that. In the process, he is rediscovering what he has always known: that people facing extraordinary challenges can rise to the occasion and accomplish extraordinary things.

**INTERVIEWER:** Philip, you have been through a global pandemic before. You have seen firsthand what can be accomplished when dedicated people put their minds, hearts, and hands to the task. Can you share that experience with us?

**PHILIP:** I’ll never forget what happened when the swine flu pandemic, H1N1, struck in 2009. We got involved early because the director of our site at GlaxoSmithKline in Australia saw a news story over the weekend, saying Mexico was reporting a very serious outbreak.

When he came to the site on Monday morning, he got the team to agree that we would order some packaging components printed for Mexico and commence the startup of our antiviral



Philip Leslie (at left) was inducted into the Manufacturing Hall of Fame of the Australian State of Victoria. He’s seen here with Wade Noonan, right, Victoria’s Minister for Industry and Employment.

manufacturing and packaging line, which mostly stood idle.

**What happened?**

We ramped up extremely fast. Our first order followed days later and the following week our first shipment was on its way to Mexico. By then demand was climbing fast and we had increased manufacturing and packaging operations to six days per week, 24 hours per day.

**All while keeping regular production going for non-emergency medications. How did you manage that?**

By reassigning staff and taking on quite a large contingent workforce to both back up the experienced people and also to help on the lines. Over the next few months, we made a phenomenal amount of product and shipped it to Mexico and other countries impacted by the pandemic.

**And looking back on it now, how do you evaluate this experience?**

It was a pretty special event. All of a sudden, this demand came out of the blue and our team responded. It brought everyone together and people went the extra mile. Everyone felt great to be part of that effort. We all celebrated being able to make a difference.

**What lesson did you take from this experience?**

I was deeply affected by seeing that in a pandemic, people do extraordinary things. They work incredible hours and make personal sacrifices because it is the “right thing to do.”

**How does this experience apply to us today?**

I believe we are seeing this same response again with the COVID-19 pandemic. People are stepping up and taking responsibility; they want to contribute to being part of the solution. I only wish that the H1N1 treatment from 10 years ago was also effective against this novel coronavirus today!

**You were educated as a chemist, and you earned a couple of degrees in that field. Yet you actually spent your career in a highly specialized form of management, in the field of pharmaceutical manufacturing. Was this a result of your passion for innovation? Your curiosity about learning new things? Or, is it fair to say that as your company grew, you grew with it?**

After a few early years at Dow and Eli Lilly, among others, I ended up launching my own business doing project management and consulting for people who wanted to do something different. I liked the innovation aspect of it. Then I took a job with Glaxo to build and commission a state-of-the-art tablet manufacturing plant here in Melbourne. I ran that facility for a number of years including the packaging where we optimized the packs with the patient in mind. That was the start of a 30-year career at GSK.

**Even though you were technically with one company, you had many different roles in many different sectors.**

It was always a changing environment, which I really enjoyed. Every two or three years we'd merge, or a new product would come along, or there'd be some acquisitions. It was a constantly changing company which provided lots of opportunities to do new things and be challenged.

**How did you get involved with Blow-Fill-Seal?**

Making tablets and capsules is a very simple process. We began looking for a differentiator that would enable GSK to offer products higher up the value



Philip and colleagues at GlaxoSmithKline (Australia) helped pioneer filling oral vaccines in plastic vials using aseptic Blow-Fill-Seal technology. Philip led the design, construction and operation of GSK's BFS facility.

**“BFS offers new opportunities for global vaccine supply in a worldwide pandemic.”**

— Philip Leslie —

chain. BFS was relatively new at that time and innovative. It provided many advantages to the patient, so we set up a BFS facility in Melbourne which grew rapidly and I ran it for several years.

**What is your evaluation of BFS? What are its most important strengths?**

I think it's a very impressive technology because one machine can convert a bulk supply of liquid drug into many unit dose vials in just in a few seconds, in one seamless process, that just requires the polymer and the product.

It runs at a very high level of efficiency, combined with the flexibility to change to different container shapes in a comparatively fast, low-cost way, which opens up a whole range of opportunities for companies to customize their product for the patient.

The ability of BFS production lines to do all this while providing an enormous level of assurance around sterility, is absolutely brilliant.

**How did you first meet Marc Koska, inventor of the ApiJect BFS Prefilled Injector?**

Several years ago Rommelag, the

company that invented BFS and is the world's leading producer of BFS manufacturing machines, suggested that we have a chat. We got talking and discovered we've got common interests in sailing and innovation and providing access to emerging markets with safe, effective medicines, so we got on really well.

**So when the pandemic struck, suddenly there was a need for accelerated manufacturing to supply vaccines. Marc came to you and said, Hey, we could use your help. Why don't you become a part of ApiJect?**

That's right. I think the ApiJect BFS Prefilled Injector can be an important part of the world's solution to this pandemic, not just for the U.S. but eventually for the entire world. That would be an amazing outcome. And that's what drives me with BFS Prefilled Injectors and ApiJect.

I am excited to know that we can supply the developed world, of course.

At the same time, I see our biggest challenge as supplying vaccine in BFS single-dose injectors to the developing world of Africa and Asia, where the populations are so much more at risk and the resources and healthcare systems are so much less developed.

**As with your GSK team in 2009 fighting H1N1, you find yourself once again drawn to be part of a dedicated, passionate group of people who are determined to make a difference.**

Passion is what drives people to do extraordinary things and go the extra mile, whether it's developing a new vaccine at high speed or creating better ways to fill that vaccine in injectors and provide it to patients around the world. I think you really need to be passionate about what you're doing. Then you just dive in and make things happen.

**Thank you, Philip.**