

# 2021 PDA UNIVERSE OF PRE-FILLED SYRINGES AND INJECTION DEVICES CONFERENCE

## EXHIBITOR BUYER'S GUIDE



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This Buyer's Guide is designed to help you maximize your virtual **2021 PDA Universe of Pre-Filled Syringes and Injection Devices Conference** experience.

The Exhibitor Abstracts and Exhibitor Listing in order of product category and services offered aim to ease navigation of the virtual Exhibit Hall.

Use the **Schedule-at-a-Glance** and **Tech Talk Schedule** to build your own itinerary. You can easily select, bookmark, make appointments, and connect with Exhibitors of interest directly.

We have developed this virtual conference platform to ensure it delivers high-quality content, an outstanding attendee experience, and professional networking opportunities you have come to appreciate and expect.

With superior content from thought leaders and ample opportunities for connecting with peers from all over the world, the Universe of Pre-Filled Syringes and Injection Devices Conference is the leading event in the field.

You can expect a week filled with pre-conference workshops, two-day, three-track conference as well as a Scientific Poster Session.



## THE DIFFERENCE OF **ONE DRUG DELIVERED**

**WITH A GLOBAL LEADER IN PREFILLABLE DELIVERY SYSTEMS.** BD partners closely with leading pharmaceutical companies to support their success from drug development to launch and beyond. With a broad portfolio of innovative drug delivery systems, a global perspective and regulatory insights, a BD Medical–Pharmaceutical Systems team can partner with you to match the optimal solutions to your product. In addition to prefillable syringes, our technologies include self-injection systems, safety and shielding solutions—which we can customize and develop to meet your precise technical requirements and the demands of your business. You can also count on our depth of regulatory knowledge, product development, medical expertise and responsive support. Discover the confidence of working with the right partner. **Discover the difference of BD.**

Learn more about the Difference of One at [drugdeliversystems.bd.com](http://drugdeliversystems.bd.com)



Advancing the world of health

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**2021 PDA**  
THE UNIVERSE OF PRE-FILLED SYRINGES AND  
INJECTION DEVICES CONFERENCE

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# THANK YOU TO OUR SPONSORS

PDA extends a special thank you to the following companies for their generous support of the 2021 PDA Universe of Pre-Filled Syringes and Injection Devices Conference.





## We see more than manufacturing drug delivery devices.

We see a trusted partnership to get your products to market faster and scale to meet demand.

As a leading provider of design and manufacturing services for pharma, we work with you to provide innovative medical products cost effectively. At the same time, our eye is on elevating manufacturing efficiencies, shortening the timeline from production to patient, backed by a highly resilient global supply chain.

Visit [flex.com/health](https://flex.com/health) or email [healthsolutions@flex.com](mailto:healthsolutions@flex.com) and find out how we can create the extraordinary together.

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- New Product Introduction
- Global Manufacturing
- Total Supply Chain
- World Class Quality System
- Digital Health



**Our Pharma Vision 2030:**  
*Providing more patient benefit  
at less cost to society*

THE UNIVERSE OF PRE-FILLED SYRINGES AND INJECTION DEVICES CONFERENCE

2021 PDA

# SCHEDULE-AT-A-GLANCE

## TUESDAY, 5 OCTOBER 2021 | 11:00 - 20:30 CEST



**Virtual Exhibition & Scientific Poster Session**  
11:00 – 12:00



**PDA Innovation Awards**  
11:55 – 12:00



**Live Opening & Concurrent Session**  
12:00 – 12:50



**Virtual Exhibition, Scientific Poster Session, Tech Talks**  
12:50 – 13:20



**Live Q&A**  
14:00-14:45



**Virtual Exhibition, Scientific Poster Session, Tech Talks**  
14:45 – 16:15



**Concurrent Session**  
16:15 – 17:20



**Live Q&A**  
17:20 – 18:00



**Virtual Exhibition, Scientific Poster Session, Tech Talks**  
18:00 – 19:00



**Concurrent Session**  
19:00 – 20:05



**Live Q&A, Closing**  
20:05 – 20:30

## WEDNESDAY, 6 OCTOBER 2021 | 11:00 - 20:00 CEST



**Virtual Exhibition & Scientific Poster Session**  
11:00 – 12:00



**Networking: Meet & Greet the Tech Talk Presenters from Day 1**  
11:05 – 12:00



**Live Opening & Concurrent Session**  
12:00 – 12:45



**Live Q&A**  
12:45 – 13:15



**Virtual Exhibition, Scientific Poster Session, Tech Talks**  
13:15 – 13:45



**Concurrent Session**  
13:45 – 14:50



**Live Q&A**  
14:50 – 15:20



**Virtual Exhibition, Scientific Poster Session, Tech Talks**  
15:20 – 16:50



**Concurrent Session**  
16:50 – 17:35



**Virtual Exhibition & Scientific Poster Session**  
17:35 – 18:35



**Networking: Meet & Greet the Tech Talk Presenters from Day 2**  
17:35 – 18:35



**Live Q&A**  
19:15 - 19:45



**Live Conference Summary**  
19:45 – 20:00

# THE DIFFERENCE OF ONE DRUG DELIVERED

WITH A RELIABLE, INTEGRATED SYSTEM THAT HELPS PUSH THE BOUNDARIES OF VISCOSITY. At BD, we understand that for some patients self-injecting medication can be intimidating—enough that they may forego treatment altogether. That’s why we designed the **BD Intevia™ 1 mL** handheld autoinjector, a two-step disposable autoinjector, to encourage patients with chronic disease who self-inject to have more confidence, comfort and compliance with every 1 mL treatment. Because it is made entirely by BD, the components of our autoinjector work together seamlessly for reliable, robust performance with high-viscosity medications.<sup>1,2</sup> Our discreet, ergonomic new design has two-step activation and audible, visual and tactile indicators,<sup>1</sup> and smart technology available for added insight with every dose. Discover how smarter design can enhance the self-injection experience. **Discover the new BD.**

<sup>1</sup> Design input specification for BD Intevia™ 1mL [internal report]. Pont-de-Claix, FR: Becton Dickinson and Company; 2017  
<sup>2</sup> Activation gliding force and injection time on syringe filled with viscous solutions assembled in Intevia™ [internal report]. Pont-de-Claix, FR: Becton Dickinson and Company; 2017



**BD INTEVIA™ 1 ML, TWO-STEP DISPOSABLE AUTOINJECTOR**  
 A reliable, integrated system that helps push the boundaries of viscosity<sup>1,2</sup>



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# TECH TALKS

## TUESDAY, 5 OCTOBER

13:00 – 13:20

### **Develop – De-risk – Deliver with BD Pharmaceutical Services and Solutions**

**Fabien Dubuc**, *Global Business Director, Combination Product Solutions and Services, Becton Dickinson*

Fabien\_Dubuc@bd.com

Fabien Dubuc will introduce a comprehensive set of services and solutions designed to mitigate the risks associated with combination product development to help pharmaceutical companies achieve their goals. These services and solutions help our customers from development all the way through to launch, including container selection, combination product expertise and testing, regulatory and technical documentation support, analytical testing, world class lab capabilities, ongoing consultation, and more.

14:55 – 15:05

### **Sustainability & Drug Delivery Devices**

**Grace Kane**, *Research & Strategy Skill Leader, DCA Design International*

medical@dca-design.com

How can drug delivery devices be made more sustainable? Though there is growing pressure on all industries to use more eco-friendly materials and processes, the high-risk, high-performance nature of medical devices can make this challenging. DCA will address how design can help give devices a smaller environmental footprint without compromising on functionality, and how reusability, materials and smart functionality can all play a role in making more sustainable drug delivery devices.

15:05 – 15:15

### **Ypsomed Tech Talk**

**Ian Thompson**, *Vice President Business Development, Ypsomed*

Ian.Thompson@ypsomed.com

The Ypsomed Tech Talk covers the latest highlights from Ypsomed's platform products, further investment in manufacturing infrastructure, and new developments in the focus areas of the large volume patch injectors, connected devices and Ypsomed's sustainability initiatives.

Continued next pages

# Speed up time-to-market with customised platform products.

- Clearly differentiated products based on innovative and patented technical solutions
- User-tested designs to improve patient compliance
- Industrialised for large-scale manufacturing

For more information visit [www.ypsomed.com/yds](http://www.ypsomed.com/yds)



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# TECH TALKS

## TUESDAY, 5 OCTOBER

15:15 – 15:25

### **PremiumCoat® Platform Vial and PFS Applications**

**Jean-Edouard Rabier**, *Global Business Development Director, Aptar Pharma*, Jean-Edouard.Rabier@aptar.com

**Sebastien Cordier**, *Technical Product Manager, Aptar Pharma*, Sebastien.Cordier@aptar.com

Whether in the development of new drug products, managing a molecule's life cycle or when repurposing existing drugs, the choice of the primary packaging is of highest importance. As the pharmaceutical industry continues to develop sensitive vaccines and biotech therapeutics, there is an increased need for injectable solutions that facilitate the development of challenging drugs. PremiumCoat® vial stoppers and syringe plunger improve the compatibility with the drug by combining a pure Bromobutyl rubber formulation with a market-proven ETFE film-coating that reduce extractables and leachables. The film is applied during the manufacturing process and covers only the drug-contact surface; its efficiency was evaluated in simulation studies using model solvents and GC-MS analyses. Our state-of-the-art manufacturing processes and automated visual inspection guarantee high quality combined with low particulate specifications, to meet the increasing regulatory requirements. Aptar Pharma continues to expand its PremiumCoat® manufacturing capabilities in Europe while developing additional capacity in the U.S. to serve the increased needs of the global market.

15:25 – 15:35

### **Pathway to Overcome Primary Container and F&F Challenges**

**Philippe Lauwers**, *Director Technology Development, TERUMO*

Philippe.Lauwers@terumo-europe.com

The close collaboration between Terumo and swissfillon has allowed both companies to tackle and solve specific challenges related to ophthalmic drug products and help to add value to customer projects. There is a tendency for the industry to work in silos, which can slow down the manufacturing processes. However, once it can be demonstrated that a detail in the design of the prefillable syringe can have a huge impact on the F&F process, it becomes possible to optimize the overall value chain. Time to market is often a key factor in the success of start-up companies developing biosimilars or entering the market with new DPs – and minimizing time to market is one of the strengths of the swissfillon/Terumo collaboration. Early discussions and collaboration between the drug manufacturer, the primary package manufacturer and the specialist CDMO is vital to support the project timeline. The companies are confident that the combination of Terumo and swissfillon will offer a best-in-class solution for ophthalmic projects. Their combined expertise and experience of using the technologies needed for this complex area enables them to provide support for other biologics entering the market and offer reliable and stable solutions suitable for each product's specific requirements.

Continued next pages

# The world needs you to succeed.



Let us help you get there faster, and safely.

Only a few ever reach the summit – those who possess the right combination of intelligence, resilience, bravery, and respect – backed up by a team of experienced and expert partners.

As the challenge to deliver COVID-19 related vaccines and treatments continues, you can count on Aptar Pharma to help you achieve your goal.

Our PremiumCoat® film-coated solutions can help derisk your drug development and support the specific needs of your COVID-19 projects.

PremiumCoat® stoppers, our proven multidose vial containment solution, can reliably accommodate up to 20 piercings, enabling HCPs to vaccinate and treat more people, more efficiently. Our platform approach with PremiumCoat® 1mL long and 1-3mL syringe plungers facilitates your transition to Pre-Filled Syringes to anticipate long term vaccination strategies.

Aptar Pharma. Enabling the rapid deployment of your vaccines worldwide.

To reach the summit faster, and with less risk, contact **Estelle Verger**, Business Development Senior Manager, Aptar Pharma, at [estelle.verger@aptar.com](mailto:estelle.verger@aptar.com)



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# TECH TALKS

## TUESDAY, 5 OCTOBER

15:35 – 15:45

### **The Evolution of COVID-19 Vaccine Packaging**

**Claudia Lee**, *Program Manager, Commercial Technology Development – Advanced Therapies, WEST*

Claudia.Lee@westpharma.com

The COVID-19 disease, which is caused by the SARS-CoV-2 coronavirus, is the cause of the currently on-going pandemic. As of August 2021, over 400 million doses had been distributed in the US alone, mainly in the form of mRNA vaccine. The 4 billion doses have been administered globally were mainly vaccines based on adenoviral vectors. Looking through the treaded path of influenza vaccine, we examine the evolution of vaccine presentation and the rationale behind the migration toward prefilled syringe in developed countries. Taking the stability of the different vaccine technologies into account, we will discuss the ideal yet practical critical quality attributes of vaccine presentations that is best suited to finally keep COVID-19 infection under control at a global scale.

15:45 – 15:55

### **Smart Labels Taking Syringe Integrity to the Next Level**

**Arne Rehm**, *Senior Product Manager RFID/NFC Solutions, Schreiner MediPharm*

Arne.Rehm@schreiner-medipharm.com

Thanks to the EU Falsified Medicines Directive tampering with secondary packaging has become more difficult. However, when it comes to primary containers such as prefilled syringes there is a security gap. They continue to be exposed to the risk of tampering although first-opening indication and product integrity would be particularly important in this case. Learn how customized labels for prefilled syringes can take product integrity to the next level by combining analog and digital security features that really make a difference.

- Market background supply chain security
- Challenges of ensuring product integrity of PFS on unit level
- Sophisticated labeling solutions combining innovative functionalities to provide reliable tamper evidence for enhanced product and patient safety
- Introduction of novel and unique labeling concepts – both analog and digital - as well as real-world use cases

Continued next pages



## By Your Side for a Healthier World™

West continues to partner with customers to Simplify the Journey™ aligning drug packaging, containment and delivery products with services, solutions and support. For the past year, we played a vital role in the race to deliver an effective vaccine for COVID-19. While we're proud of this accomplishment, it is an extension of the great work we do every day to provide leading edge primary containment and delivery technology for our customers. For nearly 100 years, we have helped the world's top pharmaceutical and biotechnology companies deliver new and novel life-saving, life-enhancing medicines to patients.

[WestPharma.com](http://WestPharma.com)



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# TECH TALKS

## TUESDAY, 5 OCTOBER

18:10 – 18:20

### **Novel Modular Positive Controls for He CCI Testing**

**Christian Proff**, *Senior Verification Engineer, Hoffmann-La Roche Ltd*

Christian.Proff@roche.com

The developed modular positive controls allow direct comparison of different setups and working principles over a measurement range (10<sup>-8</sup> to 10<sup>-3</sup> mbar l/s) for syringes, cartridges and vials. The modular construction permits the use of the same physical leak on any format, for which a so called positive format dummy is available. With these novel positive controls it is possible, to expand the understanding of capabilities and limitations of gas transport based container closure integrity test methods. Based on the construction principle, the resulting leakage rate can be tailored to create a leak corresponding to leakage levels of interest. This is valuable for construction of samples for method development, validation and optimization, as it allows studying specifically leakage levels of interest without the need to have real samples exhibiting these already at hands. Due to the modular nature, the modular setup significantly reduces the effort for upkeep of a set of positive controls. Technically only one single new positive control sample is required to expand the required sample set for an additional leakage level. For laboratories testing a wide range of formats for CCI this a significant step to limit the overall number of samples required to be held available.

18:20 – 18:40

### **Updates to SHL's Modular Assembly and Testing Equipment**

**Gilbert Fluetsch**, *Senior Director, Automation Systems, SHL Medical*

Gilbert.Fluetsch@shl-medical.com

Much like modular autoinjector platforms, modular equipment platforms leverage the competitiveness associated with traditional platforms (speed, scale, and comparatively lower costs) while offering additional flexibility to accommodate a range of device designs and development models. The same double competitiveness applies to autoinjector assembly and testing equipment in that a modular equipment platform, which utilizes a common base infrastructure, can be adjusted to process a mix of different products, or several versions of the same product, at speed, on a flexible scale, and with consistent quality. This complementation ensures that different autoinjector designs can be assembled or tested through common machines that feature interchangeable tools and stations corresponding to the device's characteristics. This makes it possible for the same equipment base to process both platform products as well as customized products at various stages of development and/or in mass production. By reusing much of the machinery, emissions from producing and operating individual pieces of machinery are reduced, increasing the overall sustainability of the final product. This Tech Talk will address the benefits of the modular equipment platform strategy and also provide a guide to the best assembly and testing solutions for different autoinjector projects.

Continued next pages



# The SHL Experience

Manufacturing Sites  
with full in-house  
capabilities



Access  
The SHL  
Experience  
here



## Empowering innovation for advanced drug delivery

SHL Medical is a world-leading provider of drug delivery solutions. Leveraging more than three decades of industry knowledge, SHL has supported the development of more than 40 launched combination products in various formats. These products are supported by a vertically integrated range of expertise and capabilities that enable streamlined, end-to-end development processes.



Learn more at  
[experience.shl-medical.com](http://experience.shl-medical.com)

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# TECH TALKS

## TUESDAY, 5 OCTOBER

18:40 – 18:50

### Device Connectivity

**Chris Conger**, Director of Technology Development, Phillips-Medisize

Chris.Conger@molex.com

Realize a connected health device faster with an experienced organization to reduce risk using common, pre-tested electronics, sensors and embedded software. In addition, we can combine elements in the most compact and innovative designs. In this talk, learn how to reduce the technical risk and development time of your design to develop a connected device.

## WEDNESDAY, 6 OCTOBER

11:05 – 12:00

### Interactive Networking Lounge - Meet & Greet

Engage in a live Q&A opportunity with our Tech Talk Presenters from Day 1 in a separate video chat room!

**Fabien Dubuc**, Global Business Director, Combination Product Solutions and Services, Becton Dickinson, Fabien\_Dubuc@bd.com

**Grace Kane**, Research & Strategy Skill Leader, DCA Design International, medical@dca-design.com

**Ian Thompson**, Vice President Business Development, Ypsomed, Ian.Thompson@ypsomed.com

**Jean-Edouard Rabier**, Global Business Development Director, Aptar Pharma, Jean-Edouard.Rabier@aptar.com

**Sebastien Cordier**, Technical Product Manager, Aptar Pharma, Sebastien.Cordier@aptar.com

**Philippe Lauwers**, Director Technology Development, TERUMO, Philippe.Lauwers@terumo-europe.com

**Claudia Lee**, Program Manager, Commercial Technology Development – Advanced Therapies, WEST, Claudia.Lee@westpharma.com

**Arne Rehm**, Senior Product Manager RFID/NFC Solutions, Schreiner MediPharm, Arne.Rehm@schreiner-medipharm.com

**Christian Proff**, Senior Verification Engineer, Hoffmann-La Roche Ltd, Christian.Proff@roche.com

**Gilbert Fluetsch**, Senior Director, Automation Systems, SHL Medical, Gilbert.Fluetsch@shl-medical.com

**Chris Conger**, Director of Technology Development, Phillips-Medisize, Chris.Conger@molex.com

Continued next pages

# Bring your vision to life

Design, development and manufacturing on a global scale with lower risk.

Bringing Possibilities to Life

Phillips-Medisize, a Molex company, helps you get from concept to creation quickly while reducing the inherent risks of any new product journey. We act as a singular resource for your company, offering robust end-to-end capabilities, including drug delivery device platforms. For over 60 years, pharma, diagnostic, and med tech companies have trusted us to deliver quality products that help people live healthier lives.

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# TECH TALKS

## WEDNESDAY, 6 OCTOBER

13:25 – 13:35

### **Emerging Therapeutic Oligonucleotides – Analytical Challenges Accepted**

**Alexandra Heussner**, *Analytical Science Laboratory, Development Service, Vetter Pharma*

Alexandra.Heussner@vetter-pharma.com

A relatively new class of parenteral drug products on the market - therapeutic oligonucleotides – poses new challenges on the pharmaceutical manufacturing process. E.g., an important prerequisite is the implementation of an unequivocal identity (ID) test for incoming goods and for release testing of injectabilia. Therefore, QC laboratories must implement new technologies and techniques to meet these needs, preferentially based on profound in-house scientific experience to enable fast and successful method transfer from third parties. To support this goal, we investigated the applicability of a method for ID testing of oligonucleotides in detail, which is based on the determination of melting temperatures ( $T_m$ ) by UV spectrophotometry. The procedure was challenged in various ways in order to define its limits of application. A high specificity of the method was confirmed as minimal changes in oligonucleotide sequences were detectable with high precision. Also, development and validation as platform method seems to be feasible. These results indicate that this simple and fast to perform, yet highly specific analytical method could be used as ID testing for oligonucleotides in a pharmaceutical QC environment.

13:35 – 13:45

### **Top Five Pitfalls in Designing Smart Disposables**

**Marco De Angeli**, *Sr.Dir. Innovation, Flex*

Marco.Deangeli@flex.com

The recent growth in patient remote monitoring applications and the push to improve collection of data to verify the adherence to the therapy are opening the path to new solutions: a new layer of intelligence is needed inside disposable devices like syringes and mechanical injectors. Despite the simplicity of a syringe, the cost targets and specific size constraints generate some challenges when electronics, battery, sensors and mechanics need to be integrated into the device. The speaker will go through some key lessons learned and best practices derived from smart syringe concept studies executed in Flex R&D labs, with the purpose to accelerate the design maturity and shorten the time to market for Flex customers.

Continued next pages



# Beyond the platform

## Flexibility built upon a modular platform technology

SHL's Molly® and Molly® 2.25 mL autoinjectors are built upon a proven technology to support shorter development timelines. With the incorporation of modularity, Molly® offers all the advantages of a platform device while enabling increased flexibility in device design, production, assembly, and testing.

**12+**

**Global**  
pharmaceutical  
partnerships

**17**

**Combination**  
product  
approvals

**33+**

**Number**  
of countries  
marketed

**1<sup>st</sup>**

**≥ 2.0 mL**  
autoinjector to  
be approved



Learn more at  
[molly.shl-medical.com](http://molly.shl-medical.com)



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# TECH TALKS

## WEDNESDAY, 6 OCTOBER

15:30 – 15:40

### **Wearable Bolus Injector**

**Tony Bedford**, *Director Front-end Innovation, Phillips-Medisize*

Tony.Bedford@molex.com

Market trends suggest an emerging need for wearable drug delivery devices that offer cost benefits and ease of use. This talk briefly summarises market conditions and stakeholder needs. Then, it introduces the novel Subcuject Wearable Bolus Injector and how the device and the collaboration between Phillips-Medisize and Subcuject can fulfill these market demands.

15:40 – 15:50

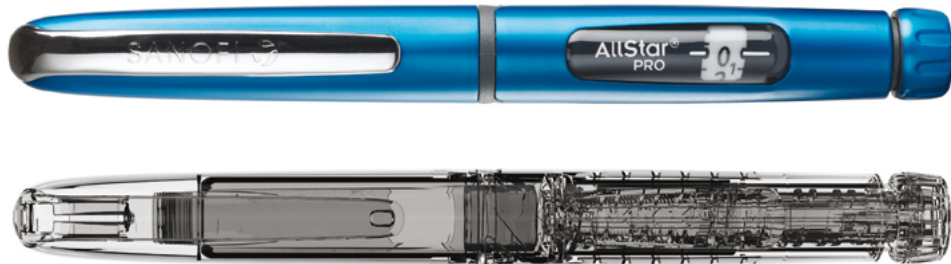
### **PremiumCoat® 1-3 mL Syringe Plunger for Vaccine and Biotech Applications**

**Audrey Chardonnet**, *Global Business Development Director, Aptar Pharma*, Audrey.Chardonnet@aptar.com

**Laure-Helene Guillemot**, *Project Engineer R&D, Aptar Pharma*, Laure-Helene.Guillemot@aptar.com

Choosing the right packaging is an essential step to any injectable drug development. The closure component plays a critical role in ensuring that the drug is efficiently packaged on the filling lines and that the syringe can reliably be integrated in a secondary device to deliver safe and comfortable doses to patients. While ETFE-coated components are in high demand for packaging sensitive drugs or critical vaccines, validating alternative suppliers can be essential for security of supply and avoiding full dependency on a single supplier. Aptar Pharma now extends its PremiumCoat® platform with the launch of a 1-3mL ETFE film-coated syringe plunger for Vaccine and Biologic applications. Our PremiumCoat® 1-3ml plunger demonstrates excellent machinability with both vent tube and vacuum stoppering machines as well as maintains the drug sterility during challenging air freight. The component's functional properties were proven by measuring the break-loose and gliding forces in different conditions, establishing that Aptar Pharma PremiumCoat® 1-3mL plunger enables manual injection and facilitates auto-injector integration even when used with viscous drugs. Aptar Pharma continues to expand its PremiumCoat® manufacturing capabilities in Europe while developing additional capacity in the U.S. to serve the increased needs of the global market.

Continued next pages



Helping our clients achieve success through great product design

[www.dca-design.com](http://www.dca-design.com)



Comprehensive support for your injectables

For over 40 years, Vetter has been a trusted partner in injectables manufacturing for pharmaceutical and biotech companies around the world. Our deep expertise enables us to integrate with your team to design and implement a personalized plan for success in a shifting global marketplace. Our strategic partnership includes:

- Customized clinical and commercial manufacturing services for your product throughout its lifecycle
- Deep and comprehensive technical, analytical, and regulatory subject matter expertise
- Proven manufacturing processes that are flexible, efficient, and scalable
- Filling and packaging capabilities that utilize the latest technology to meet international market demands

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# TECH TALKS

## WEDNESDAY, 6 OCTOBER

15:50 – 16:00

### **Injection Pain Tolerability, Research and Guidelines for Device Manufacturers**

**Steve Augustyn**, *Senior Consultant, Cambridge Design Partnership*, Steve.Augustyn@cambridge-design.com

**Chris Muenzer**, *Vice President Innovation & Development, Haselmeier*, Chris.Muenzer@sulzer.com

Injection pain, and fear of injection pain, still present barriers to helping patients to manage chronic conditions with parenteral drugs. In this presentation Steve Augustyn (Senior Consultant with Cambridge Design Partnership) and Chris Muenzer (Vice President Innovation & Development at Haselmeier) review published research into injection pain. From this research they extract guidelines to help device developers produce injectors that will provide the most comfortable injection experience.

16:00 – 16:10

### **Enhancing COC Syringes with Functional Labels**

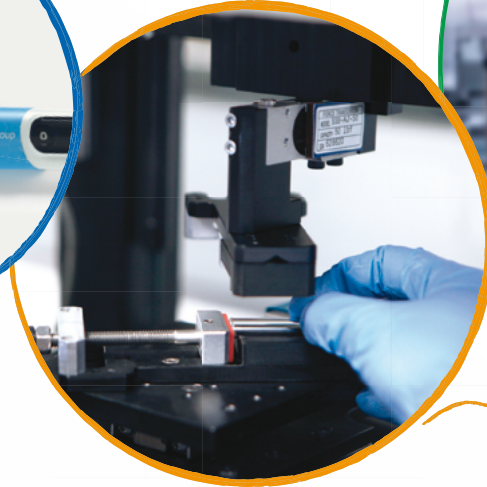
**Andreas Hofenauer**, *Senior Manager Innovation and Strategic Partnerships Healthcare, Schreiner MediPharm*

Andreas.hofenauer@schreiner-medipharm.com

COC syringes are offering a lot of advantages compared to glass syringes such as break resistance, lighter weight and greater design flexibility. However, the polymer has a different E&L profile and a lower oxygen and gas barrier threshold than glass, which increases the potential for drug interaction. In addition, as labels are applied directly to the container, there is a potential risk of adhesive and ink migration into the polymer. Also, cryogenic applications require reliable labeling at extremely low temperatures. Learn how customized label solutions with special functionalities and specific material properties can enhance COC syringes and minimize migration risks, thus extending possible applications to sensitive substances while ensuring patient safety.

- Market background and challenges of polymer syringes
- Adding an oxygen barrier to COC syringes using functional labels
- Adding UV and light protection to COC syringes via customized labels
- Combining a low migration label with a COC syringe
- Enabling reliable adherence of cryogenic labels to COC syringes”

Continued next pages



## Integrated solutions for pharma & healthcare

We are committed to creating systems, processes and services that enhance the integrity of medicines.

 Stevanato Group

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# TECH TALKS

## WEDNESDAY, 6 OCTOBER

16:10 – 16:20

### Aseptic Transfer and SUS - Simplified Fill-Finish Process

**Paolo Liverani**, Aseptic Transfer (DPTE®) Product Line Manager, Getinge

Paolo.Liverani@getinge.com

- Primary packaging and their closures play a vital role in ensuring the stability, sterility, and thereby, the overall quality, efficacy, and safety of a drug product. For the patient's safety, it is crucial to ensure a safe and efficient filling process.
- Evolving processes and therapies are prompting pharmaceutical industry players to look for leaner manufacturing and easy and quick transfer of packaging solutions. In this context, there is a need to reduce time-to-market for drug delivery and increase flexibility. Among different solutions, one opportunity to save both time and capital is to move from conventional to single-use technologies.
- Single-use increases manufacturing flexibility and scalability and supports high-speed production. The SU assembly integration offers many advantages for rapid changeover as it minimizes the need for extensive decontamination and cleaning between the manufacturing of different products. It also supports different applications (e.g. component transfer, liquid transfer, QC sampling).
- The DPTE® Alpha - the original rapid transfer port (RTP) – together with a single-use DPTE-BetaBag® provide a safe and quick path for aseptic transfer of components to the filling suite. The sterile, ready-to-use assembly is a time-saving solution ready to be integrated into an isolator filling machine."

17:35 – 18:35

### Interactive Networking Lounge - Meet & Greet

Engage in a live Q&A opportunity with our Tech Talk Presenters from Day 2 in a separate video chat room!

**Alexandra Heussner**, Analytical Science Laboratory, Development Service, Vetter, Alexandra.Heussner@vetter-pharma.com

**Marco De Angeli**, Sr.Dir. Innovation, Flex, Marco.Deangeli@flex.com

**Tony Bedford**, Director Front-end Innovation, Phillips-Medsize, Tony.Bedford@molex.com

**Audrey Chardonnet**, Global Business Development Director, Aptar Pharma, Audrey.Chardonnet@aptar.com

**Laure-Helene Guillemot**, Project Engineer R&D, Aptar Pharma, Laure-Helene.Guillemot@aptar.com

**Steve Augustyn**, Senior Consultant, Cambridge Design Partnership, Steve.Augustyn@cambridge-design.com

**Chris Muenzer**, Vice President Innovation & Development, Haselmeier, Chris.Muenzer@sulzer.com

**Andreas Hofenauer**, Senior Manager Innovation and Strategic Partnerships Healthcare, Schreiner MediPharm, Andreas.Hofenauer@schreiner-medipharm.com

**Paolo Liverani**, Aseptic Transfer (DPTE®) Product Line Manager, Getinge, Paolo.Liverani@getinge.com

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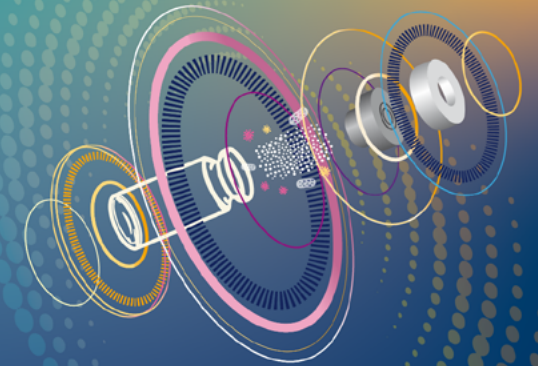


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# 2022 PDA PARENTERAL PACKAGING CONFERENCE



1-2 MARCH 2022

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3P innovation is a UK-based engineering and custom automation company. They work collaboratively with pharma and medical device businesses to help develop new products, devices and production processes. 3P specialises in aseptic automation and powder/liquid filling technologies. The company designs and builds scalable production solutions - supporting from lab-scale/bench top equipment to pilot plant and full production systems. They are active in the parenterals, reconstitution devices and cell and gene sector. They also work with sustained release drug products. To experience 3P's technologies in hyper-realistic 3D, copy this link and paste it into your browser: <https://www.3pinnovation.com/media-events/virtual-showroom>

**CATEGORIES**

- |                       |                                  |
|-----------------------|----------------------------------|
| Aseptic Processing    | Process Automation               |
| Consulting Services   | Processing Equipment             |
| Container Closure     | Product Development Services     |
| Drug-Delivery Systems | Sterile Processing               |
| Fill/Finish           | Stoppers and Elastomers          |
| Biotech               | Syringes                         |
| Combination Products  | Vaccines                         |
| Inspection Systems    | Vials                            |
| Packaging Science     | Visual Inspection of Parenterals |
| Container Development |                                  |
| Pre-filled Syringes   |                                  |



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**CATEGORIES**

Demo/Training Devices



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**CATEGORIES**

- Container Closure
- Drug-Delivery Systems
- Combination Products
- Extractables and Leachables
- Packaging Equipment
- Stoppers and Elastomers





## B. BRAUN MELSUNGEN AG

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B. Braun – Industrial Partnerships provides a broad range of services and manufacturing of pharmaceuticals and medical devices. Based on 175 years of experience, we serve the needs of our customers with customized system solutions and contract manufacturing services from our global development and manufacturing network.

### CATEGORIES

Aseptic Processing  
Container Closure  
Disposables  
Drug-Delivery Systems  
Glass Containers / Products  
Combination Products  
Contract Manufacturing  
Aseptic Animal Health  
Labeling & Coding  
Pre-filled Syringes  
Product Development Services  
Sterile Processing  
Syringes  
Vials



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### CATEGORIES

Drug-Delivery Systems  
Pre-filled Syringes  
Stoppers and Elastomers  
Syringes



## BESPAK BY RECIPHARM

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Bespak by Recipharm delivers market leading design, development and manufacture of drug delivery devices to the global pharmaceutical market. This includes inhaler, nasal technologies and auto-injectors as well as development and manufacturing services. Bespak by Recipharm is at the leading edge of drug delivery device innovation. Driven by customer and patient demand, our innovations have the potential to create new treatments and opportunities across the globe as well as accelerating routes to market.

### CATEGORIES

Drug-Delivery Systems  
Biotech  
Contract Manufacturing  
Biopharmaceuticals  
Proteins/Peptides  
Vaccines



**BIOCORP**

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Recognized for its expertise in the development and manufacture of medical devices and delivery systems, BIOCORP has today acquired a leading position in the connected medical device market thanks to Mallya. This smart sensor for insulin injection pens allows reliable monitoring of injected doses and thus offers better compliance in the treatment of patients with diabetes. Available for sale from 2020, Mallya spearheads BIOCORP's product portfolio of innovative connected solutions. The company has 70 employees.

**CATEGORIES**

- Container Closure
- Drug-Delivery Systems
- Fill/Finish
- Contract Manufacturing
- Pre-filled Syringes
- Product Development Services



**CAMBRIDGE DESIGN PARTNERSHIP**

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Cambridge Design Partnership is an end-to-end innovation partner, propelling global brands and ambitious start-ups to success. We build breakthrough products and services – from insight to ideas, prototypes to production – bringing innovation to life. Our teams are multi-disciplinary, uniting scientific rigor, design ingenuity, and engineering excellence for consumer, healthcare, and industrial clients. People-centered, deeply collaborative, and – above all – expert, we're uniquely positioned to shape the future for consumers, patients, and industry. Even our ownership model is innovative: We're 100% owned by our employees, ensuring an open culture and a total commitment to your project's success. One partner. No barriers. Extraordinary results.

**CATEGORIES**

- |                       |                              |
|-----------------------|------------------------------|
| Consulting Services   | Pre-filled Syringes          |
| Container Closure     | Process Automation           |
| Disposables           | Process Validation           |
| Drug-Delivery Systems | Product Development Services |
| Biotech               | Quality by Design            |
| Combination Products  | Sterile Processing           |
| Biopharmaceuticals    | Sterilization Sciences       |
| Labeling & Coding     | Syringes                     |
| Packaging Science     |                              |
| Container Development |                              |



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**CATEGORIES**

- Disposables
- Drug-Delivery Systems
- Combination Products
- Biopharmaceuticals
- Pre-filled Syringes
- Product Development Services
- Proteins/Peptides
- Syringes





**CREDESCENCE MEDSYSTEMS, INC.**

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Credence MedSystems is an innovator in injectable drug delivery devices. Credence's philosophy of Innovation Without Change results in products that impress and protect end-users while preserving pharma's existing processes, sourcing strategies and preferred primary package components. The Companion® family of syringe systems includes proprietary needle-retraction technology, reuse prevention and other critical safety and usability features in Staked and Luer needle formats. The Dual Chamber platform offers single-step mixing and injection for drugs requiring reconstitution at the time of delivery. Additional products such as metered dose devices, multi-length staked needles and other novel devices address the needs of specific therapeutic markets.

**CATEGORIES**

- Container Closure
- Drug-Delivery Systems
- Biotech
- Combination Products
- Pre-filled Syringes
- Syringes



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**CATEGORIES**

- Consulting Services
- Disposables
- Drug-Delivery Systems
- Combination Products
- Pre-filled Syringes
- Process Validation
- Product Development Services
- Quality by Design
- Syringes
- Research and Development



**EITAN MEDICAL (SORREL)**

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Eitan Medical is reimagining drug delivery, with reliable innovations that put patients at the center of care, making drug delivery easier and safer than ever before. Patient safety and care are only the starting point, as Eitan Medical goes beyond – delivering connected, intuitive drug delivery and infusion solutions that are designed to improve patient and clinician quality of life across the continuum of care, including hospital, ambulatory and home-care environments. For over a decade, Eitan Medical has provided safe, intuitive and flexible solutions that meet evolving drug delivery needs. Eitan Medical's product lines include the Sapphire infusion platform, providing connected infusion therapy systems in hospital and ambulatory settings; the Sorrel wearable drug delivery platform, the patient-centric on-body injector for delivery of biologic treatments; and Avoset, connected infusion systems for the home care market.

**CATEGORIES**

- Drug-Delivery Systems
- Combination Products
- Wearable



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**CATEGORIES**

Biotech  
Combination Products  
Biopharmaceuticals  
Diagnostics



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Flex provides sketch-to-scale solutions, delivering innovative design, engineering, manufacturing, real-time supply chain insight and logistics services to a wide range of industries. The Health Solutions division of Flex is a global leader in the design and manufacture of medical devices, including drug delivery systems. From pens and auto injectors to pumps and inhalers, Flex helps pharma companies by providing solutions from anywhere in the product lifecycle, whether it's innovative design, new product introduction, resource reallocation, or transformation. Our approach is supported by FDA-registered and ISO 13485 compliant facilities and a world-class quality system

**CATEGORIES**

Drug-Delivery Systems  
Combination Products  
Contract Manufacturing  
Product Development Services



**FRESENIUS KABI**

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Fresenius Kabi Contract Manufacturing offers its partners a full range of filling and finishing capabilities for sterile solutions and emulsions, with aseptic processing and terminal sterilization. Partners can choose from a wide range of standard primary packaging containers like pre-filled syringes, IV bags, vials, bottles, ampoules. Our partners are granted access to a global network of more than twenty advanced development and manufacturing state-of-the-art facilities. We will choose the right technology and production site based on your requirements and guide you through the setting-up of the development and supply partnership.

**CATEGORIES**

Aseptic Processing  
Fill/Finish  
Glass Containers / Products  
Contract Manufacturing  
Pre-filled Syringes  
Product Development Services  
Quality by Design  
Sterile Processing  
Syringes  
Vials  
Visual Inspection of Parenterals

**GERRESHEIMER AG**

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**CATEGORIES**

Vials  
Syringes

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With a firm belief that every person and community should have access to the best possible care, Getinge provides hospitals and life science institutions with products and solutions aiming to improve clinical results and optimize workflows. The offering includes products and solutions for intensive care, cardiovascular procedures, operating rooms, sterile reprocessing and life science. Getinge employs over 10,000 people worldwide and the products are sold in more than 135 countries.

**CATEGORIES**

Aseptic Processing  
Aseptic Animal Health  
Packaging Equipment  
Packaging Science, Container Development  
Pre-filled Syringes  
Sterile Processing  
Sterilization Sciences

**IGS GEBOJAGEMA**

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As a medical company, you may have a great idea for a device that will give you a competitive edge. But first you have to find a way to manufacture it according to the strict regulatory requirements for medical devices. IGS GeboJagama can help. For over 70 years, we have been delivering high precision moulds for some of the most successful metered dose inhalers, insulin pens, diagnostic products and other medical devices in the world. Many of the key players in the medical industry bring their toughest product challenges to IGS GeboJagama. That's because we provide the solutions they need to help them innovate new products. Our problem-solving mindset, proven track record in the healthcare industry, considerable medical experience and meticulously methodical way of working ensures you the highest quality, process control and traceability needed for your medical products. We make moulds for products you still have to design.

**CATEGORIES**

Disposables  
Drug-Delivery Systems  
Biotech  
Combination Products  
Extractables and Leachables  
Moulds for Drug delivery devices



# Lonza

## Biologics

### LONZA

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### CATEGORIES

Aseptic Processing	Process Validation
Container Closure	Product Development
Drug-Delivery Systems	Services
Fill/Finish	Proteins/Peptides
Biotech	Quality by Design
Contract Manufacturing	Sterile Processing
Extractables and Leachables	Syringes
Biopharmaceuticals	Vaccines
Packaging Equipment	Vials
Pre-filled Syringes	Visual Inspection of Parenterals



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### CATEGORIES

Container Closure  
Drug-Delivery Systems  
Combination Products  
Extractables and Leachables  
Pre-filled Syringes  
Syringes  
Vials  
Visual Inspection of Parenterals  
Testing and Validation



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### CATEGORIES

Packaging Equipment  
Process Automation  
Process Validation  
Processing Equipment  
Devices Assembly Systems



## NEMERA

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### CATEGORIES

Drug-Delivery Systems  
Combination Products  
Contract Manufacturing  
Pre-filled Syringes



## NELSON LABS NV

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About Nelson Labs: Nelson Labs is a global leader in microbiological and analytical chemistry testing and advisory services for the medical device and pharmaceutical industries. Nelson Labs serves over 3,800 customers across 14 facilities in the United States, Mexico, Asia and Europe. We have a comprehensive array of over 800 laboratory tests supporting our customers from initial product development and sterilization validation, through regulatory approval and ongoing product testing for sterility, safety and quality assurance. We are regarded as a best-in-class partner with a strong track record of collaborating with customers to solve complex issues. Learn more about Nelson Labs at [www.nelsonlabs.com](http://www.nelsonlabs.com) Safeguarding Global Health® - with every test we complete.

### CATEGORIES

Extractables and Leachables



## Noble International

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Noble is a global leader in medical device training solutions, patient onboarding strategies, and multisensory product development for the world's top pharmaceutical brands. Our mission is to deliver innovative products and services that provide the highest value to our clients by bringing the voice of the patient into that work and keeping the patient at the center of what we do. Our products and services include patient training devices, Human Factors + services, market insight services, digital health devices and patient video training development.

### CATEGORIES

Contract Manufacturing  
Pre-filled Syringes  
Product Development Services  
Patient Training and Onboarding Products and Services



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One World DMG is the leading provider of trainers to the commercial device and pharmaceutical industries. Our custom-designed trainers offer patients and HCPs the most authentic experience possible and promote compliance and better health outcomes. A full array of trainers for auto injectors, pens, pre-filled syringes, wearables, and respiratory devices, along with packing, kits, and video/print instructions are designed by our award-winning team of designers and engineers and manufactured in our ISO13485 facility.

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SMC Ltd. Group provides “end-to-end” integrated services for clinical and commercial manufacturing of drug delivery combination product. Oval Medical specializes in the development of patient-centric autoinjectors for challenging drug formulations including high viscosity/high volumes. Visit us at www.smcltd.com and/or www.ovalmedical.com

### CATEGORIES

Drug-Delivery Systems  
Fill/Finish  
Combination Products  
Contract Manufacturing  
Pre-filled Syringes



## OWEN MUMFORD LTD

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Owen Mumford Pharmaceutical Services specialises in the design, development and manufacture of injectable drug delivery systems for the pharmaceutical, biotech and generics industries. Our trusted devices are used daily in the delivery of various medications for a multitude of conditions across the globe.

### CATEGORIES

Drug-Delivery Systems  
Combination Products  
Biopharmaceuticals  
Pre-filled Syringes



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Picocyl enables the future of drug delivery through innovative device design and gas-powered solutions for the medical and pharmaceutical markets. A pioneer in developing unique energy sources to power drug delivery systems, the Company's flagship Pico-Cylinders have become the industry standard for single use, pressurized gas cylinders. Pico-Cylinders are leak free, with superior performance, energy and power density, and low noise impact. Produced in cleanroom manufacturing facilities in the United States of America, Pico-Cylinders come in multiple standard form factors. Pico-Cylinders can also be completely customized for unique size, weight, fill requirements, pressures, opening forces and gas types.

**CATEGORIES**

Drug-Delivery Systems  
Contract Manufacturing  
Product Development Service



**PHC Corporation**

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The PHC Group provides products and services for diabetes management, life sciences and diagnostics, as well as enhanced healthcare solutions that are used by patients, healthcare professionals and researchers in over 125 countries. By integrating digital solutions with our expertise in precision technology that has been nurtured over decades, we provide the best-in-class devices and services for advancing basic research, diagnosis and medical treatment.

**CATEGORIES**

Disposables  
Drug-Delivery Systems  
Combination Products  
Contract Manufacturing



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Phillips-Medisize, a Molex company, brings decades of innovation to leading healthcare and life science companies to develop groundbreaking solutions that help people live healthier, more productive lives. On average, the company commercializes 50 new products a year for customers, including the first-to-market FDA-registered drug-delivery device utilizing a connected health system. In addition, Molex brings decades of experience in advanced electronics, connectivity, and sensor technologies to help transform medical and pharmaceutical solutions. For more information, visit [www.phillipsmedisize.com](http://www.phillipsmedisize.com).

**CATEGORIES**

Aseptic Processing	Process Validation
Container Closure	Product Development
Drug-Delivery Systems	Services
Fill/Finish	Proteins/Peptides
Biotech	Quality by Design
Contract Manufacturing	Sterile Processing
Extractables and Leachables	Syringes
Biopharmaceuticals	Vaccines
Packaging Equipment	Vials
Pre-filled Syringes	Visual Inspection of Parenterals



# SCHOTT

glass made of ideas

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SCHOTT Pharmaceutical Systems helps people around the world protect, access and use the medicine they need as safely and conveniently as possible. As market leader in primary packaging made of glass and polymer, we are safeguarding and advancing the integrity of injectable solutions and more. We are pioneers with unsurpassed quality, safety and reliability.

### CATEGORIES

Glass Containers / Products  
Pre-filled Syringes  
Syringes

# schreiner

MediPharm

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[www.schreiner-medipharm.com](http://www.schreiner-medipharm.com)

Schreiner MediPharm is a leader in the development and manufacture of innovative specialty labels with value-added benefits for the healthcare industry. The product portfolio includes labels with integrated hangers, with detachable parts and multi-page labels. Additionally, the company offers syringe labels with integrated needle protection, anti-tampering and counterfeiting protection solutions as well as NFC/RFID labels and smart packaging solutions. These products simplify dispensing and administering of pharmaceuticals, enhance drug safety and clearly reduce process costs. Thanks to its strong solutions expertise and specialized know-how Schreiner MediPharm is a highly capable development partner and quality supplier to leading pharmaceutical companies worldwide.

### CATEGORIES

Labeling & Coding



## SHL MEDICAL AG SPONSOR

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SHL Medical is a leading drug delivery solutions partner committed to providing next-generation pharma- and patient-centric solutions. We design, develop, and manufacture advanced drug delivery devices such as autoinjectors and pen injectors, as well as provide final assembly, labeling, and packaging services for leading pharmaceutical and biotech companies globally. Our comprehensive solutions offer customization and optimization in each project to support specific drug requirements while addressing end-user needs.

### CATEGORIES

Drug-Delivery Systems  
Combination Products  
Process Automation  
Product Development Services



**SMITHERS MDT LIMITED**

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Smithers provides Testing and Regulatory expertise for Medical Devices and Pharmaceutical Products. Expert support with FDA, EMA, USP, MHRA, ASTM, ISO requirements

- Extractables and Leachables studies
- Device physical and functional testing
- Device verification and validation
- Product and packaging durability, integrity and stability testing
- Material selection, property characterisation, life prediction
- Failure analysis

**CATEGORIES**

Consulting Services,  
Extractables and Leachables  
Product Development Services  
Visual Inspection of Parenterals  
Device Physical Testing



**SONCEBOZ SA**

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Sonceboz designs, develops and produces mecha-  
tronic drive systems. In the medical/pharmaceutical  
sector, it provides motors for drug delivery systems  
such a wearable injectors, dual cartridge injection  
and automatic reconstitution, as well as developing  
a proprietary wearable injector platform.

**CATEGORIES**

Disposables  
Drug-Delivery Systems  
Pre-filled Syringes  
Product Development Services



**STEVANATO GROUP  
SPONSOR**

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Founded in 1949, Stevanato Group is a leading global  
provider of drug containment, drug delivery and diag-  
nostic solutions to the pharmaceutical, biotechnology  
and life sciences industries. The Group delivers an  
integrated, end-to-end portfolio of products, process-  
es and services that address customer needs across  
the entire drug life cycle at each of the development,  
clinical and commercial stages. Stevanato Group's  
core capabilities in scientific research and develop-  
ment, its commitment to technical innovation and its  
engineering excellence are central to its ability to offer  
value added solutions to clients.

**CATEGORIES**

Drug-Delivery Systems  
Glass Containers / Products  
Contract Manufacturing  
Inspection Systems  
Packaging Equipment  
Pre-filled Syringes  
Syringes  
Vials  
Visual Inspection of Parenterals  
Device Assembly Equipment



**TEAM CONSULTING**

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Designing award-winning medical devices – that’s what we’ve done for our clients for over 35 years. Team Consulting is a 100% medical focused design and development consultancy. Combining our expertise and experience in industrial design, engineering and human factors, we develop medical devices from early concept through to commercial launch. Working with the largest pharmacos to new start-ups, we follow a user-centred design approach to ensure your users get a product they love, while you get a competitive advantage. ISO 13485 certified, we employ thorough quality systems to help your product through the regulatory process.

**CATEGORIES**

- Consulting Services
- Disposables
- Drug-Delivery Systems
- Combination Products
- Auditing and Inspections
- Packaging Science
- Container Development
- Pre-filled Syringes
- Process Validation
- Product Development Services
- Quality by Design
- Syringes
- Visual Inspection of Parenterals



**TEN23 HEALTH AG**

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ten23 health, headquartered in Basel, Switzerland, was founded in 2021. We are the human-centric and sustainable strategic partner of choice for the pharmaceutical industry and biotech start-ups: we develop, manufacture, and test tomorrow’s medicines. We support our clients in developing differentiated, stable, usable, and safe injectable treatment options for patients. ten23 health combines the latest scientific findings with our proven and tested world-class industry and regulatory expertise to forge new paths for supporting our clients. We provide our innovative services in a fair and sustainable manner, respecting people’s health and the future of our planet.

**CATEGORIES**

- Fill/Finish
- Contract Manufacturing
- Biopharmaceuticals
- Packaging Science, Container Development
- Pre-filled Syringes



**TERUMO PHARMACEUTICAL SOLUTIONS SPONSOR**

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Terumo Pharmaceutical Solutions develops patient-oriented parenteral delivery solutions for therapeutic performance and safety. Globally trusted for quality and precision, Terumo Pharmaceutical Solutions offers pharmaceutical and medical device manufacturers around the world comprehensive product design and development services. We have decades of experience collaborating with pharmaceutical companies from the earliest phases of drug development to product commercialization to optimize critical aspects of parenteral drug delivery. Innovation and creativity are central to our value proposition. Our expert teams lead the industry in developing and manufacturing advanced, high-performing infusion and injection technologies for all parenteral applications. We listen. We question. We deliver.

**CATEGORIES**

- Drug-Delivery Systems
- Pre-filled Syringes
- Syringes

**VETTER PHARMA  
INTERNATIONAL GMBH  
SPONSOR**



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Vetter is a global leading contract development and manufacturing organization (CDMO), headquartered in Ravensburg, Germany, with production facilities in Germany and the United States. The company has long-term experience in supporting biotechnology and pharmaceutical customers both large and small. Vetter services range from early stage development support including clinical manufacturing, to commercial supply and numerous packaging solutions for vials, syringes and cartridges. As a leading solution provider, Vetter appreciates its responsibility to support the needs of its customers by developing devices that contribute to increased patient safety, convenience, and compliance. Great importance is also given to social responsibility including environmental protection and sustainability.

**CATEGORIES**

- Aseptic Processing
- Drug-Delivery Systems
- Fill/Finish
- Combination Products
- Contract Manufacturing
- Biopharmaceuticals
- Labeling & Coding
- Packaging Equipment
- Pre-filled Syringes
- Process Automation
- Process Validation
- Processing Equipment
- Product Development Services
- Quality by Design
- Sterile Processing
- Sterilization Sciences
- Syringes
- Vials
- Visual Inspection of Parenterals



**WEST PHARMACEUTICAL SERVICES  
SPONSOR**

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West Pharmaceutical Services, Inc. is a leading provider of innovative, high-quality injectable solutions and services. As a trusted partner to established and emerging drug developers, West helps ensure the safe, effective containment and delivery of life-saving and life-enhancing medicines for patients. With almost 10,000 team members across 50 sites worldwide, West helps support our customers by delivering over 40 billion components and devices each year. Headquartered in Exton, Pennsylvania, and in business for nearly a century, West in its fiscal year 2020 generated over \$2.15 billion in sales.

For more information, visit [www.westpharma.com](http://www.westpharma.com).

**CATEGORIES**

- Container Closure
- Drug-Delivery Systems
- Contract Manufacturing
- Extractables and Leachables
- Packaging Science, Container Development
- Quality by Design
- Stoppers and Elastomers
- Syringes
- Vial



**YPSOMED  
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Ypsomed Delivery Systems (YDS) provides a complete range of device technologies and services for reliable and user-friendly self-injection systems. From technical development and design to fully automated manufacturing, Ypsomed makes a crucial contribution to patient safety and market success of drug products. Our customers are pharmaceutical and biotechnology companies that develop, manufacture and market injectable therapies. With over 35 years' experience, Ypsomed is the global leader in the development of innovative injection systems. We offer this experience to our project partners together with comprehensive services tailored to their requirements. Ypsomed has its headquarters in Burgdorf, Switzerland.

**CATEGORIES**

- Disposables
- Drug-Delivery Systems
- Combination Products
- Contract Manufacturing
- Pre-filled Syringes
- Product Development Services
- Quality by Design



# ZEON

**ZEON EUROPE GMBH**

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At our European Headquarters in Dusseldorf and our regional sales offices we act as the Sales and Distribution Centre throughout Europe for ZEON CORPORATION and it's affiliates. Our core business is the wide range of innovative elastomeric products developed within the Zeon group, focussed on specialities based upon the chemistry of the C4 and C5 fractions. These elements also form the starting point for new products like cyclo-olefin polymers. Our Research & Development Departments are continually seeking innovative new products and applications to meet the technical and environmental challenges of an ever changing world. Through developing cooperative solutions to present and future challenges we can achieve a high level of customer satisfaction.

## **CATEGORIES**

Raw materials for primary packaging

**2022 PDA**

**VISUAL INSPECTION FORUM**

**PDA**  
Parenteral Drug Association

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