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SAE Media Group Proudly Present the 3rd Annual Conference...

# Wearable Injectors and Connected Devices Conference

Strategies to advance digital health and on-body drug devices for large volume delivery

CONFERENCE: 10TH - 11TH WORKSHOPS: 12TH

OCT 2022

Hilton London Kensington, London, UK

Engage with key regulatory updates surrounding digital

**Discover** advances in device design and development for large volume delivery via on-body injectors

**Explore** the key drivers of the industry, including

the growing development of highly viscous drugs

accelerating the development of on-body injectors

Hear insights into the growing potential of digital health to improve patient experience and treatment

Engage in design strategy approaches for connected



### CHAIRS FOR 2022:



**Min Wei,** Senior Director, **AstraZeneca** 

Cedric Gysel, Manager, Heo

Manager, Health Care Solutions and Design, Johnson & Johnson

## FEATURED 2022 SPEAKERS INCLUDE:

- Bjorg Hunter, Director, Novo Nordisk
- Blaine Martin, Director, Medical Device Customer Success & Training, Merck
- Harminder Mudhar, Associate Director, AstraZeneca
- Arabe Ahmed, Medicinal Technical Specialist, BSI
- Ali Matour, Senior Device Engineer, GSK
- Benjamin Werner, Primary Packaging and Process
   Development Specialist, Boehringer Ingelheim
- Geraint Davies, Principal Human Factors Engineer, Roche
- Samir Shah, Director, AstraZeneca

#### PLUS ONE INTERACTIVE HALF-DAY POST-CONFERENCE WORKSHOP WEDNESDAY 12TH OCTOBER 2022, HILTON, KENSINGTON, LONDON UK

Key Challenges and Future Needs for a Successful Product for Targeted Patients

Workshop Leader: Xavier Donnette, Senior Consultant

8.30 - 12.30

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**KEY REASONS TO ATTEND:** 

health and medical devices

drug delivery devices



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CPD



# Wearable Injectors and Connected Devices Conference Day One | Monday 10th October 2022 www.wearable-injectors.co.uk

#### LETTER FROM THE CHAIRS:

It is with great pleasure that we invite you to SAE Media Group's Wearable Injectors and Connected Devices conference, taking place on the 10th - 11th October 2022 in London.

As part of SAE Media Group's leading series of conferences, this year's event will bring together expertise from individuals within the Wearable Injectors and Connected Devices field. The two-day conference will offer a series of presentations, through which you will gain insight into the latest developments in on-body devices and advancements in digital health.

The conference will consider the latest developments in the design and development of large wearable injectors as well as the latest digital applications and advancement in digitalised health. The conference will cover the key regulatory updates surrounding on-body devices and connected devices. Key drivers for the need of wearable devices and the importance of user-centric design will be covered.

Following the main event, two post-conference workshops will be held on Wednesday 12th October 2022 focusing on design approaches for wearable injectors, and challenges and future needs for a successful product for targeted patients.

As the chairs of this conference, we look forward to welcoming you to this must-attend event in London this October.

Yours Sincerely,



09.10

Cedric Gysel, Manager, Health Care Solutions and Design, Johnson & Johnson

#### 08.00 Registration & Coffee

09.00 Chairs' Opening Remarks

Min Wei, Senior Director, AstraZeneca Cedric Gysel, Manager, Health Care Solutions and Design, Johnson & Johnson

#### WEARABLE DEVICE DEVELOPMENT AND DESIGN PART 1

#### **OPENING ADDRESS**





- Introduction to device and packaging development
  Case study on wearable device
- Case study on wearable device
  Case study on wearable device end-of-life, and considering
- sustainability, device disassembly and circular materials • Discussion of FPA: developing an end-of-life product standard-

considerations and design principles Cedric Gysel, Manager, Health Care Solutions and Design, Johnson & Johnson

#### 09.50 Lessons learned: on-body delivery system design and development

- Learning from user experiences in early development of delivery systems
- Current regulatory guidance for wearable devices and understanding international requirements
- Case Study: designing patient-centric on-body delivery systems
- How have we seen device design evolving in recent years and a future forecast

Amber Witteman, Founder, Managing Director, Ebenbroth B.V.- EPIWatch

#### 10.30 Morning Coffee

# 11.00 Centralising scientific and medical input to wearable injectors and connected devices

- Insight into centralising device input and supporting the development of connected devices and wearable injectors
- Importance of implementing wearable devices and digital platforms from a pharma perspective
- Case study on the process of on-body injector development
- Assessing the safety of medical devices and digital health: impact of digital assets on pharmacovigilance

Harminder Mudhar, Associate Director, AstraZeneca

#### 11.40 Solving drug delivery device challenges with high performance polymers

- Traditional materials, such as commodity polymers and metals, can be used for some applications, but what happens when there are multiple engineering requirements for components that have complex designs and need to operate with precision over a long lifetime?
- Increasingly, designers are looking to high-performance polymers for answers. Without a doubt, poly-ether-ether-ketone (PEEK) is one of the highest performing polymers, and one that can support multiple engineering requirements including weight, space optimisation, thermal environments and complex miniaturised electronic components.
- Dr Jarman-Smith will present concept designs for next generation drug delivery devices with complex engineering requirements, including a smart, wearable injectable patch pump with the electronics are sintered directly into a PEEK polymer casing to create an antenna to communicate wirelessly via Bluetooth.

Marcus Jarman-Smith, Strategic Marketing Manager and New Business Development, Victrex plc



#### 12.20 Networking Lunch

#### CONNECTED PLATFORMS AND PATIENT CENTRICITY

#### 13.20 Using Patient Centric Design to develop engaging Patient Medical Device Training

- Patient and user considerations for the design of digital training solutions that connect with patients and caregivers
- Considering patient experience and how emerging technologies can enhance patient adoption and treatment compliance
- Case study examples
- Discussion of digital tools and services to support patients in using their devices

Blaine Martin, Director, Medical Device Customer Success & Training, Merck

#### 14.00 Deriving Value From Digital: Enhancing the Use Experience Through Connected Devices

- How technologically enriched Human Factors studies have increased learnings, accelerated design decision-making, and reduced the evidence burden of a successful design
- Current state of digitally-enabled study devices, and how existing technologies can be applied to the medical device development process
- Future technologies and applications of digital devices

Alex Turner, Electronics and Software Engineer, Crux Product Design Ltd

#### 14.40 Afternoon Tea

#### 15.10 Behaviour Design for digital health solutions

- Discussion about the importance of patient engagement for successful digital health interventions
- Discussion about the principle of human behaviour and particularly how it relates to adherence
- Introduction to behaviour design process and how it can be applied to digital health
- Geraint Davies, Principal Human Factors Engineer, Roche
- 15.50 Smart solutions to practical problems: connected health and human centred design
  - The practical and personal problems of self-injection
  - Connected injectors and their role in expanding patient support
  - Improving the patient journey using digital technology and tools such as companion apps
  - Insight into developing a connected eco-system
  - Case study on ecosystem product
  - Soeren Skov, Senior Human Factors / User experience Engineer, Novartis

#### 16.30 Chairs' Closing Remarks and Close of Day One

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08.30 Registration & Coffee
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09.00 Chairs' Opening Remarks

Min Wei, Senior Director, AstraZeneca

#### WEARABLE DEVICE DEVELOPMENT AND DESIGN PART 2

#### OPENING ADDRESS



- 09.10 An industry outlook for wearable injector development
  - An overview of the current wearable injector landscape
  - Discussion of the new ISO-11608-6 and the impact of this
  - Development considerations for primary containers used in wearable injectors
  - Development considerations for fluid path within a wearable injector device
  - An outlook to the future: broader collaboration is needed for developing complex wearable injector devices

Min Wei, Senior Director, AstraZeneca

#### 09.50 Evaluation of different on-body injectors for biologicals

- Essential performance requirements
- Characterization of the siliconization
- Particulate matters

Jan Schuhholz, Scientist, Boehringer Ingelheim Pharma GmbH & Co. KG

#### 10.30 Morning Coffee

#### 11.00 Comparing primary packaging for oncolytic drug development

- Discussion of quality assurance and container closure integrity (CCI)
- Mechanical and compatibility considerations
- Comparison of the use of glass and polymer for container functionality of sustained injectable delivery

Ina Rianasari, Head of Laboratory, Boehringer Ingelheim Pharma GmbH & Co.KG

#### 11.40 Wearable Injectors: Latest Devices and Recent Trends

- An overview of the current wearable injector landscape
- Increasing competition from non-wearable devices
- Current good practice in wearable injector design
- International standard progress such as the new ISO-11608-6 and their implications
- Future outlook

Tom Oakley, Director of Drug Delivery, Springboard

#### 12.20 Networking Lunch

#### 13.20 Wearable Injector Battery Selection and Power Budget Management

- A wearable injector is usually an electromechanical device powered by batteries. It is critical to select the battery properly. This presentation will focus on:
- Battery selection
- Power budget management
- System power characterization technique
- Battery characterization technique
- Zheng Ling, Associate Director, Alexion

#### **REGULATORY OUTLOOK**

#### 14.00 Regulatory Challenges in the Development of Digital Health

- Managing regulatory submissions of connected devices
   Assessing the classification of connected devices- should the device follow the classification of the medical device or should it have its own classification?
- Exploring the impact of classification on development
- Discussion of the need for improved guidance and harmonization of global regulations and the importance of consistency
- Outlook on the development of connected devices
- Bjorg Hunter, Director, Novo Nordisk

#### 14.40 Afternoon Tea

#### 15.10 Connected Devices and Drug Combination Products Under MDR (Article 117)

- Introduction to Article 117 and what it means
- Discussion of the impact of MDR on connected devices and drug combination products
- Insight into manufacturer responsibilities
- Exploring evidence and fulfilment of the General Safety and Performance Requirements (GSPRs)

Arabe Ahmed, Medicinal Technical Specialist, BSI

# 15.50 What is Electromagnetic Compatibility and Why do Regulators Want me to Comply?

- Disasters attributed by electromagnetic disturbances
- What is 60601-1-2 and what do all the terms mean?
- Why regulators still ask for testing on electronics while relaxing requirements on software

Samir Shah, Director, AstraZeneca

16.30 Chairs' Closing Remarks and Close of Day Two

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**POST-CONFERENCE WORKSHOP** 08.30 - 12.30



#### Key Challenges and future needs for a successful product for targeted patients

#### Workshop Overview:

This workshop split into 4 sessions aim to support pharma and device developers to Identify key requirements of a wearable device, challenges and highlight need of partnership to make an OBDS combination product a success for the targeted patients.

#### Why you should attend:

- Identification of unforeseen requirements
- Challenges to be overcome
- Partnership, a winning spirit What's next? What are the future needs for wearable devices?

#### About the workshop leaders:

Xavier has a MS degree in mechanical engineering from ENSAM – Elite National Higher School of Skills and Professions. He has 20+ years industry experience in different fields. As a freelancer, founder and CEO of XADE consulting, he supports pharmaceutical companies and device manufacturers to develop combination products and medical devices. His career started as a mechanical designer in automotive and electronical industry before moving into pharmaceutical industry as a design team leader. For the past 15 years, he supported companies such as Aptar, Astra Zeneca and Sandoz in the development of Dry Powder Inhalers (e.g. Prohaler), pressurized Metered Dose Inhalers, nasal pumps, insulin pens, wearable devices supporting from marketing definitions and human factor requirements to industrialization.

#### Programme

- 13.00 Reaistration and Coffee
- 13.30 **Opening Remarks**
- Session 1: Understanding key requirements from pharma for on 13.40 body devices
  - Patient indication specificities (age, impairements, skin, )
  - Human Factors (wearability, informations, connectivity) • Design / injection specification

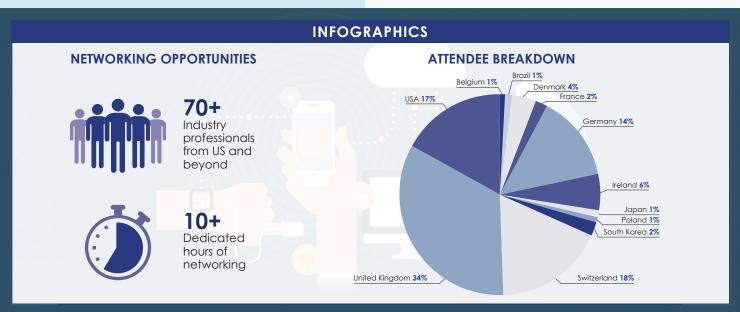
  - Green / Sustainability
- Session 2: Common challenges working with device developers 14.20 on a wearable platform (regulatory submissions, details needed from device developer etc)
  - Regulatory
  - DME/MAE of device or technical details
  - · Global shortage of components

#### 15 00 Afternoon Tea

- Session 3: How device developers and pharma can work 15.30 together for a successful product collaboration
  - DP compatibility
  - patient compatibility (adhesive/skin, needles, device size, visual & audible indications, HF/ergonomy)
  - Primary Function, Essential Performance, SW Classification definitions / alignement
  - Green / recycling

#### 16.10 Session 4: Looking to the next 5-10 years what will be required from wearable devices for evolving therapeutic pipelines

- · Wearable devices for which indication? For what kind of patient?
- Connectivity, a necessity or a useless option?
- What route of administration?
- What volumes?
- 16.50 **Closing Remarks**
- 17.00 End of Workshop



#### SAE MEDIA GROUP UPCOMING PHARMACEUTICAL EVENTS

#### OCTOBER 2022

**Biosensors for Medical Wearables** 24th - 25th October 2022, Boston, USA

#### **NOVEMBER 2022**

Medical Devices and IVD 14th - 15th November 2022, London, UK

#### **JANUARY 2023**

Pre-Filled Syringes and Injectable Drug Devices 10th - 12th January 2023, London, UK

#### **Transdermal and Microneedle Delivery** 23rd - 24th January 2023, London, UK

**Pre-Filled Syringes East Coast** 25th - 27th April 2023, Boston, USA

**FEBRUARY 2023** 

Wearable Injectors USA

**APRIL 2023** 

20th - 21st February 2023, Boston, USA

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