



aspen

N O T R E D A M E  
D E B O N D E V I L L E

# ASPEN GROUP

- Aspen is a **global supplier** of branded and generic **pharmaceutical products** as well as infant nutritional and consumer **healthcare products**
- Aspen products are provided in more than **150 countries** around the world. Products are divided in **4 therapeutic categories**: Thrombosis, anaesthetics, cytotoxics and infant nutritionals
- The **6<sup>th</sup>** largest generic company in the world (06/15)
- **18** manufacturing sites of pharmaceutical products on **6** continents (North and South America – Asia – Africa – Oceania – Europe )
- **More than 10 000 employees** around the world



# Manufacturing sites in Europe



## Aspen Bad Oldesloe, Germany

- Acquired in 2009
- Manufactures finished form tablets, creams, liquids and nebulers



## Aspen Oss, Netherlands

- Acquired in 2013
- Manufactures chemical and bio-chemical active pharmaceutical ingredients



## Aspen Notre-Dame-de-Bondeville, France

- Acquired in 2014
- Manufactures finished form pre-filled syringes

WHO  
ARE  
WE?

# Our products



## FRAXIPARINE™/ FRAXODI™

Low molecular weight heparin indicated for venous thromboembolic events

**90 million units shipped**



## ARIXTRA™

Unique synthetic injectable inhibitor of Factor Xa approved for a range of uses in VTE treatment/prophylaxis and treatment of acute coronary syndromes

**25 million units shipped**



## DILUENTS

Production diluents syringes for third part contractor, used for reconstitution of vaccines prior to injection or oral administration

**20 million units shipped**

# Our History

1968

Starting Choay on the current site

1985

Launch of Fraxiparine™

2006

Start production of vaccines thinners GSK BIO (Rotarix™)

2002

Launch of Arixtra™ U.S. market included

2009

Start the filling / inspection line Etna

2015

Start of the filling line Stromboli



New quality control laboratory Started in april 2017



CHOAY

SANOFI

GSK

ASPEN



Creation Laboratories Choay

Acquisition of Choay by Sanofi

Acquisition by GSK

Acquisition by Aspen

Upgrade of Nadroparin Process

Workshop for Certoparin API production

1911

1984

2004

2014

2016

2018

# Our key figures

**2**   
Active ingredients

 **5**  
products

**Fraxiparine/Fraxodi**  
(preventive & curative form)

**Arixtra** (preventive & curative form)

**Diluant**

**123** markets 

**90%** of production  
shipped internationally

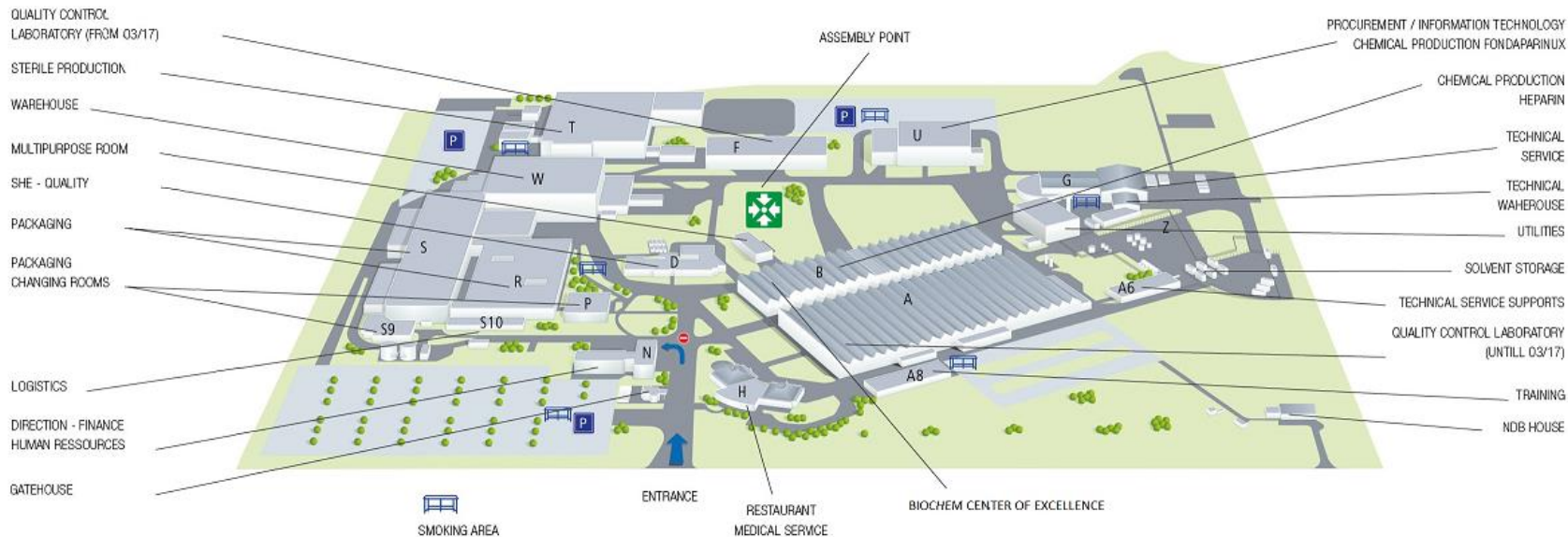
**330**   
references shipped

**135** Million units  
shipped

 **745**  
Employees  
and subcontractors  
(August 16)



# Notre-Dame-de-Bondeville Site



# Women and men of NDB\*



## OUR VALUES

INTEGRITY  
INNOVATION  
EXCELLENCE  
ENGAGEMENT  
TEAM WORK

# Our Site Leadership Team



**SITE MANAGEMENT**  
**Jean-Charles ROUSSET**  
Director



**QUALITY ASSURANCE &  
RESPONSIBLE PHARMACIST**  
Director  
**Patrick ROUSSEAU**



**FINANCE**  
**Rabah RAFA**  
Director



**STERILE PLATFORM PROJECT**  
**Wladimir GUITEL**  
Director



**VS API & VS FILLING**  
**Ingrid TOUZET**  
Director



**HUMAN RESOURCES**  
**Benoît DE VERGNETTE**  
Director



**LOGISTICS**  
**Arnaud BEAUDOUIN**  
Director



**AUTOMATIC INSPECTION &  
PACKAGING**  
**Simona VLASA**  
Director



**TRANSFORMATION,  
STRATEGY &  
COMMUNICATION**  
**Vincent PHILIBERT**  
Director



**PROCUREMENT**  
**Rémy BOUDSOCQ**  
Director



**TECHNICAL**  
**Virginie LEBIDOIS**  
Director



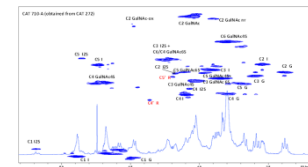
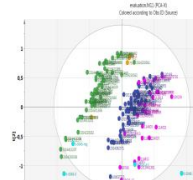
**LEGAL, ETHICS &  
COMPLIANCE**  
**Alexandre ROMAND**  
Senior Manager



**S.H.E**  
**Luc PARENT**  
Director

# ASPEN's center of excellence for biochem (CEB)

- ✓ **Multidisciplinary platform oriented to ASPEN's Biochem portefolio development and support:**
  - Danaparoid sodium, Nadroparin calcium, Certoparin sodium, Heparin sodium, Fondaparinux sodium
- ✓ **3 major expertise area:**
  - ✓ **Quality:** To ensure a quality oversight of the entire supply chain and to strengthen the consistency between the quality approach and the regulatory strategy:
    - Supply chain security (traceability, species control, supplier selection, management and audit,.....)
    - Biological risk management (prion and viral safety risk assessment.....)
  - ✓ **Project management:** To consolidate all Biochem projects across the organization and to offer a methodological support to internal and external partner
  - ✓ **Technology support and innovation** including the following expertises:
    - Analytical sciences (biological assays, orthogonal methods to decipher complex biologics structure, NMR method, state of the art general methods)
    - Technical expertise and oversight of the supply chain
    - Process development
    - Development of predictive mathematical model for process control
- ✓ **Interactive platform with internal and external partner and organization:**
  - Partnership with academics
  - Interface with regulators
  - Active member of international organization (EDQM, USP....)
  - Interface with internal and external manufacturing site



# Women and Men of NDB (in 2017)



**47% women - 53% men**



**19 456 h**  
training hours

**Average age 42 years**

**23 pharmacists**



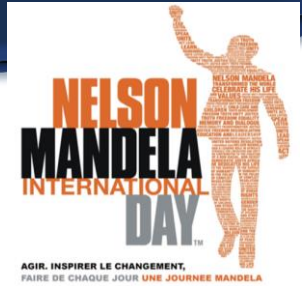
**19** trainees

**28** part-time students



# A committed team

## Site employees engaged to support local associations



# Our production equipment



# Our production facilities

2 API manufacturing workshops



3 inspection lines

11 packaging lines

2 sterile filling lines



# Fondaparinux Facility

- **Sodium Fondaparinux: Arixtra™ API**
  - ✓ Building U: production opened in September 2004
  - ✓ Purification steps of Fondaparinux crude
  - ✓ 2 shifts x 5 days operation
  - ✓ Production capacity: 36 batches of purified Sodium Fondaparinux per year



# Heparin Facility

- **Nadroparin Calcium : Fraxiparine™ API**

- ✓ Launched in 1985
- ✓ Refurbishment in 2011-2012-2016
- ✓ Production capacity: 200 batches per year
- ✓ 1 shift x 5 days operation



# Certoparin Facility

**Sodium Certoparine:**

**Mono embolex™ API**

**10 millions €uros of investment**

- ✓ Ongoing work on process optimisation, product transfert and infrastructure of the new facility
- ✓ **Launch of the first validation batches planned in 2017**
- ✓ Expected volume: **45 batches** per year



# Syringe filling facilities

- **2 filling lines:**
  - ✓ Etna line: Fraxiparine™ + Arixtra™ + WFI
  - ✓ Stromboli line: Fraxiparine™
  
- Aseptic filling under isolator
- Final sterilisation by autoclaving





# Stromboli line

New high speed filling line with the highest quality standards for the production of sterile prefilled syringes

**38 millions Euros invested**

Start of production : October 2015

Line capacity :

**36 000 syringes / hour**

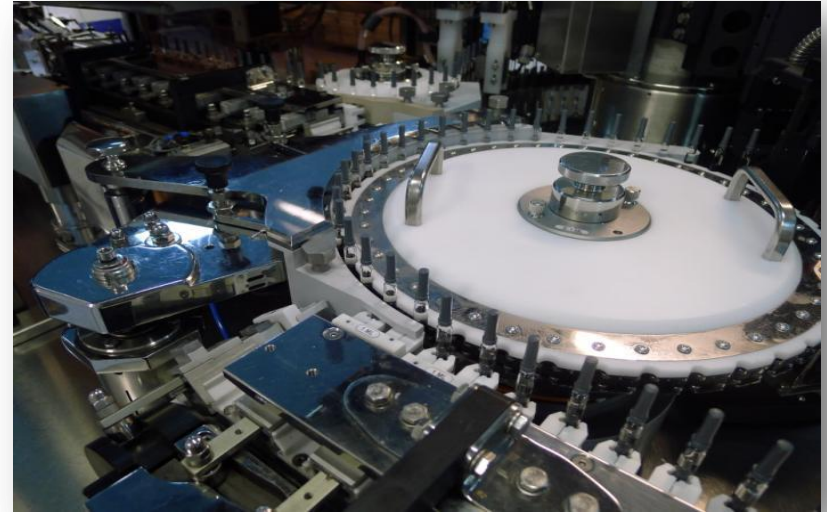
**130 millions of syringes maximum per year**



# Syringe Inspection facilities

- **3 inspection lines :**
  - ✓ Etna automatic: Fraxiparine™ & Arixtra™
  - ✓ L24 Maewa automatic inspection : Fraxiparine™, Arixtra™ & diluents (\*).
  - ✓ L20 semi-automatic: Fraxiparine™ & Arixtra™

(\* ) production line for US market



# Syringe Packaging Facilities

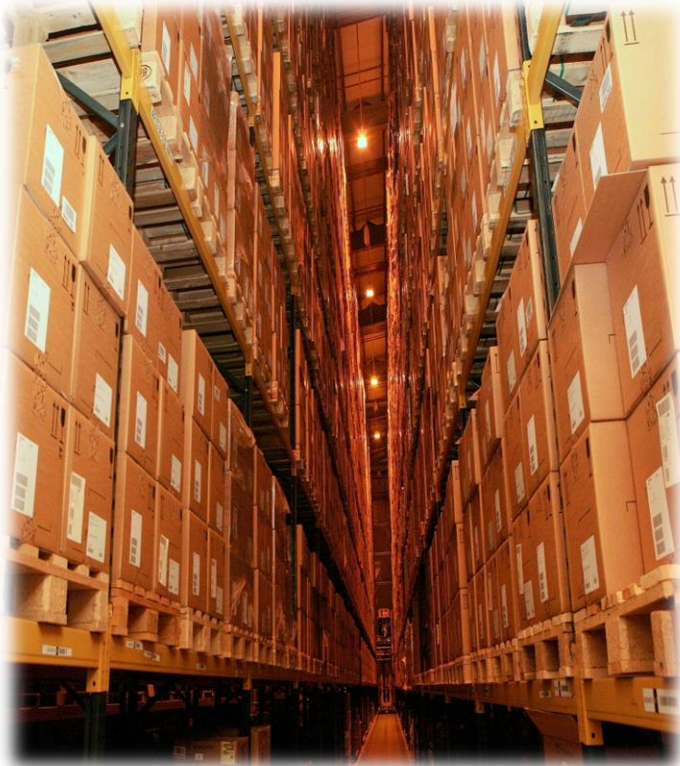
- **Fraxiparine™**
  - ✓ L15 / L23: labelling lines
  - ✓ L 2 / L4 / L14: assembling & packaging lines
  - ✓ L 5 / L 27: labelling, assembling and packaging line
  
- ✓ **Arixtra™**
  - ✓ L16 : assembling, labelling & packaging line
  - ✓ L17 : assembling, labelling & packaging line\*
  - ✓ L22 : semi-auto packaging line
  - ✓ L25 : packaging line dedicated to Japan

\* US line





# Warehouse



- **Warehouse**
  - ✓ 2 654 m<sup>2</sup> x 15m height (capacity = 7 000 pallets)
  - ✓ Controlled temperature 15 – 25 ° C by probes
  - ✓ Operation 3 shifts x 5 days
  - ✓ Inbound/Outbound ≈ 50 000 pallets / year
  - ✓ Staging ≈ 70 000 pallets / year
  - ✓ Store and stock status are managed by SAP system
- **Equipment**
  - ✓ Class C room for sampling operations (raw material, primary and secondary packaging components)
  - ✓ Cold chamber 2 – 8°C
  - ✓ Weighing room for raw materials in a close laminar flow hood

# New quality control laboratory

Building of a new quality control laboratory near production workshops

**6 millions Euros of investment**

**Laboratory of 2500 m<sup>2</sup> on 3 levels**



octobre 2015 :  
Starting of  
construction

Novembre 2016 :  
Delivery of building

1<sup>er</sup> trimestre 2017 :  
transfert of analytical  
activities

# Our commitments

# Quality Commitment ...

Quality is at the heart of our business. The Aspen Notre Dame de Bondeville site has received certifications and is regularly audited by the following health authorities:

**Brazil**



**France**



**Canada**



**Japan**



**Europe**



**USA**



# Health, Safety, Environment

Aspen NdB site has a Management System certified by DQS for OHSAS 18001 ISO 14001 and ISO 50001 standards.

Based on continuous improvement, our SHE policy reflects the management's commitment into areas for progress such as:

- ✓ Reduction in injuries
- ✓ Improvement in Quality of WorkLife
- ✓ Control of energy consumption and quantity of waste
- ✓ Control of environmental aspects and risks of pollution
- ✓ Compliance with our commitments to the authorities and the Aspen group



Le Site Aspen Notre Dame de Bondeville est spécialisé dans la fabrication de produits stériles ; de la production du principe actif à la fabrication du produit fini pharmaceutique. En tant qu'entreprises de santé, nous sommes attentifs aux attentes sociétales en termes de transparence, d'éthique, d'équité, de respect des Hommes et de l'Environnement dans un contexte réglementaire en constante évolution.

Pour répondre à tous ces enjeux, la Direction du site alloue les moyens nécessaires pour déployer et faire appliquer cette politique à tous les niveaux hiérarchiques. Chaque collaborateur connaît son rôle et ses responsabilités en matière de Santé, de Sécurité et d'Environnement et participe activement à la prévention des risques et des pollutions, ainsi qu'à l'amélioration de la performance énergétique.

Cette politique s'applique à l'ensemble des collaborateurs ASPEN NDB, aux intervenants extérieurs ainsi qu'aux visiteurs. Les principes fondamentaux qui caractérisent l'engagement de la Direction sont :

- La conformité à la réglementation en vigueur et aux autres exigences, notamment celles du groupe Aspen
- L'amélioration continue des performances SSE, basées sur la prévention des accidents et des pollutions,
- L'identification des situations à risque par l'ensemble des salariés et leur résolution,
- L'intégration des aspects SSE dans tous les projets, de la conception à la réception,
- Le respect par tous les salariés des règles et exigences SSE.

Ces principes se déclinent dans des axes de progrès tels que :

- La réduction de l'accidentologie,
- L'amélioration de la Qualité de Vie au Travail,
- L'amélioration de notre performance environnementale (énergies, déchets, rejets dans l'air et dans l'eau),
- L'amélioration de notre performance énergétique en favorisant des achats intégrant une approche écoresponsable,
- La maîtrise des aspects environnementaux et des risques de pollution,
- Le respect de nos engagements vis-à-vis des autorités et du groupe Aspen.

Ces axes de progrès, cohérents avec le Programme Annuel de Prévention, seront mis à jour au minimum une fois par an en revue de Direction.

NDB le 28/02/2017



# Environment performance

**2,5 millions €**

invested for the  
environment  
since 2010



## waste

**0 waste** buried since 2012

Reduction of **33%** in 7 years

**75%** of waste is recycled



## Energy savings

**40%** reduction in 6 years



## Water consumption

**70%** reduction in 6 years



# Safety

## Some instructions



### Emergency Number: 66

Call 66 (+33.2.35.14.31.00  
from an external set)  
Stay with the person until the  
arrival of the nurse, first aider, or  
external emergency



### Fire Emergency

- Evacuation alarm  
(modulated sound)
- Follow your site guide to the  
assembly point



### Smoking or using an e-cigarette

is forbidden excepted in  
dedicated areas



### Personal Protection Equipment

Safety shoes and  
Personal Protective  
Equipment, as  
appropriate, required to  
enter operational areas

# Complementary instructions during the visit



**Foot protective shelves**  
must be worn inside facilities



**Photos**  
Photos/videos of equipments  
and employees are  
forbidden within the site  
without prior written  
permission from direction.



**Respect pedestrian  
ways**  
Use the pedestrian walkways  
both inside and outside buildings.  
It is forbidden to walk outside  
the painted lines



**Products**  
It is forbidden to touch the  
products during the visit in  
facilities



THANK YOU!