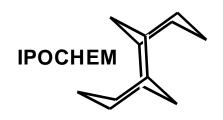
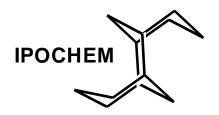
# IPOCHEM Sp. z o.o. ORGANIC SYNTHESIS



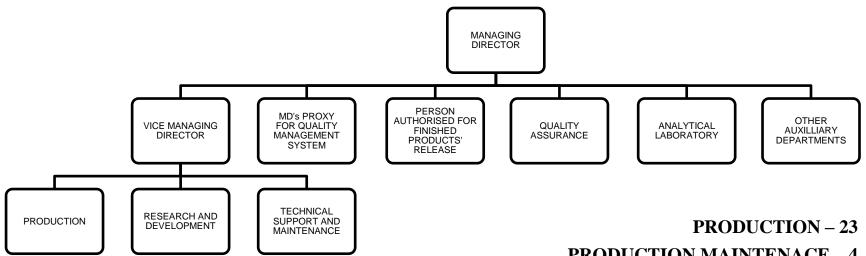


#### **HISTORY**

- 1988 FOUNDATION
  BY THE INSTITUTE OF INDUSTRIAL ORGANIC CHEMISTRY
- 1998 Warsaw Pharmaceutical Works Polfa as the biggest shareholder with 80% of shares
- 2001 NEW GMP-COMPLIANT FACILITY FOR POST-CRITICAL STAGES IN APIS' PRODUCTION
- 2005 ISO 9001:2000 CERTIFICATION BY TÜV RHEINLAND, LATER UPHELD ACCORDING TO ISO 9001:2008
- 2007 NEW GMP-COMPLIANT FACILITY FOR APIS' PHYSICAL PROCESSING
- 2011/2014/2017 –SUCCESFUL GMP INSPECTIONS BY THE POLISH MAIN PHARMACEUTICAL INSPECTOR (GIF)
- 2012 PART OF THE POLPHARMA GROUP



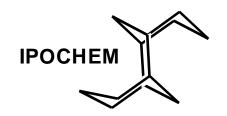
#### **STAFF**



#### HIGHLY SKILLED AND EXPERIENCED TEAM EDUCATIONAL BACKGROUND:

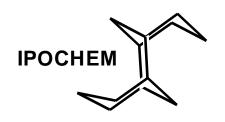
PHD (2) **UNIVERSITY DEGREE (26) SECONDARY TECHNICAL EDUCATION (12)** PROFESIONAL EDUCATION (8)

- PRODUCTION MAINTENACE 4
- **RESEARCH & DEVELOPMENT 3** 
  - ANALITYCAL LABORATORY 5
    - **OA AND OC-4**
    - SALES AND PURCHASING 3
      - ACCOUNTING 2
      - **INVESTMENTS 1**
- **ENVIRONMENT PROTECTION -1** 
  - **MANAGING BOARD 2**



## SCOPE OF OFFER

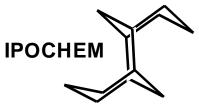
- ACTIVE PHARMACEUTICAL INGREDIENTS
  - QUALITY COMPLIANT WITH CURRENT MONOGRAPHS: EP/BP/USP
  - ASMF DOCUMENTATION IN CTD FORMAT
- CHEMICAL INTERMEDIATES FOR PHARMA INDUSTRY
- CUSTOM SYNTHESIS
- POWDERING AND MICRONIZATION
  - AIR JET MILLS
  - PARTICLE SIZE DISTRIBUTION LASER ANALYSIS
- DEVELOPMENT AND TRANSFER
  OF PROCESSES AND TECHNOLOGIES
  - DEFINING AND IMPLEMENTING COMPLETE MANUFACTURING METHODS



## FIELDS OF EXPERTISE

- SYNTHESIS OF CHIRAL ACTIVE PHARMACEUTICAL INGREDIENTS
- SYNTHESISWITH CHIRAL SUBSTRATES
- SYNTHESIS INCLUDING ALKALINE CYANIDES APPLICATION
- SYNTHESIS OF 5-MEMBERED HETEROCYCLIC RINGS

- GRIGNARD REACTIONS
- REACTIONS UTILIZING Cl<sub>2</sub>, Br<sub>2</sub>, KCN, SOCl<sub>2</sub>
- CATALYTICHYDROGENATION(50 ATM)
- DIAZOTIZATION
- MICRONIZATION



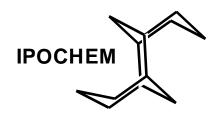
## **EQUIPMENT**

REACTORS	CAPACITY	QUANTITY
Steel glass-lined	.1300.L	5
	500 - <u>600 L</u>	10
	250 L	6
Hastelloy	1600 L	1
	70 L	1

PROCESSING SETS	CHARACTERISTICS	QUANTITY
Vacuum distillations 50, 150, 250 L	Tmax = 200°C; pmin = 3-30 Tr	5
Azeotropic distillations 250, 600 L	Tmax = 200°C	2
patm distillations 250, 500, 1000 L	Tmax = 150°C	4
Rectifications 100, 250 L	Tmax = 150 - 200°C	4
Crystallizations 150, 250, 500 L		3
Rotary evaporators 10, 20, 50 L	<u>p.min</u> = 30 <u>Tr</u>	4

PLANT INSTALLATIONS	CHARACTERISTICS
Central Vacuum	<u>pmin</u> = 30 <u>Tr</u>
Low Vacuum	<u>pmin</u> = 2 – 3 <u>Tr</u>
Central Process Steam	pmax = 6 atm
Compressed Air	pmax = 6 atm
Cooling (ethylene glycol)	-35°C
Heating (process steam, oil)	160°C, 250°C

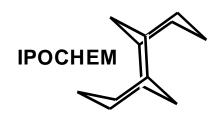
OTHER EQUIPMENT	CHARACTERISTICS		
Filters (pressure, vacuum, flow)	20 - 300 L		
Dryers (tray vacuum, shelves, fluid be	ed) <u>Tmax</u> = 130°C		
Grinders (jet mill, oscillating granulator)			
Ultra-filtration set - dedicated for Iron (III) <u>Dextran</u>			



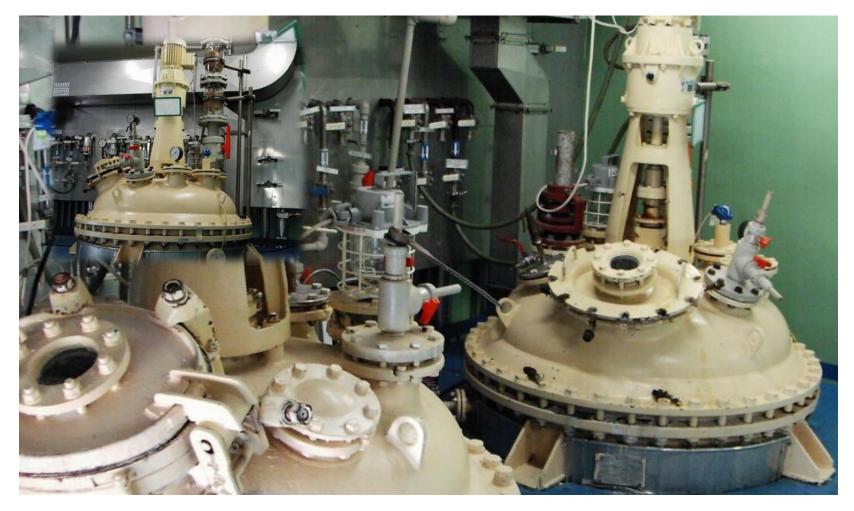
## **PREMISES**



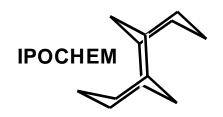
PRODUCTION FACILITY FOR APIS' PHYSICAL PROCESSING



## **PREMISES**



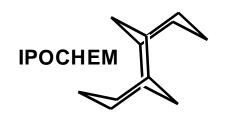
TWO-STOREY PLANT FOR POST-CRITICAL STAGES IN APIS' PRODUCTION



## **PREMISES**



FOUR-STOREY SYNTHESIS PLANT FOR OPERATIONS IN CONDITIONS: -30 - 200°C / 3 TR-50 ATM



## LIST OF PRODUCTS

# ACTIVE PHARMACEUTICAL INGREDIENTS:

ACENOCOUMAROL

ANTAZOLINE HYDROCHLORIDE

ANTAZOLINE MESYLATE

ANTAZOLINE SULPHATE

**CHLORMIDAZOL** 

CLEMASTINE FUMARATE

**CLOPAMIDE** 

DIISOPROMINE HYDROCHLORIDE

IRON (III) DEXTRAN

ITCL-DENOTIVIR

**MOLSIDOMINE** 

NEFOPAM HYDROCHLORIDE

UNDECYLENAMIDE MEA

XYLOMETAZOLINE HYDROCHLORIDE

#### **INTERMEDIATES:**

2-(2-CHLOROETHYL)-1-

**METHYLPYRROLIDINE** 

**HYDROCHLORIDE** 

DIMEPRANOL ACEDOBEN

4-HYDROXYBENZYL ALCOHOL

8-HYDROXYOUINALDINE

1-METHYL-2-PYRROLIDINEETHANOL

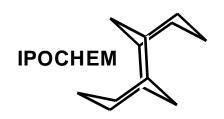
3-MORPHOLINOSYDNONIMINE, HCL

POTASSIUM ETHYL CARBONATE

N-(p-TOLUENESULFONYL)-

L-ĞLUTAMIC ACID

2,3,5-TRICHLOROBENZALDEHYDE



### **CORE PRODUCTS**

#### **ACENOCOUMAROL**

CAS RN: 152-72-7 BP current edition

#### ANTAZOLINE HYDROCHLORIDE

CAS RN: 3131-32-6 EP current edition

#### **ANTAZOLINE SULPHATE**

CAS RN: 24359-81-7 Internal specification

#### **CLEMASTINE FUMARATE**

CAS RN: 14976-57-9 EP current edition

#### **CLOPAMIDE**

CAS RN: 636-54-4 EP current edition

## XYLOMETAZOLINE HYDROCHLORIDE

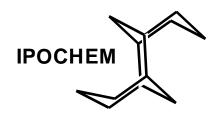
CAS RN: 1218-35-5 EP current edition

#### **MOLSIDOMINE**

CAS RN: 25717-80-0 EP current edition

#### 1-METHYL-2-PYRROLIDINEETHANOL

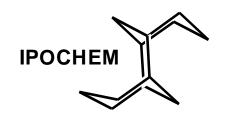
CAS RN: 67004-64-2 Internal specification



### **KEY CUSTOMERS**

GLAXOSMITHKLINE PHARMACEUTICALS (POLAND)
VALEANT - ICN POLFA RZESZÓW (POLAND)
VALEANT - JELFA S.A. (POLAND)
HASCO-LEK S.A. (POLAND)

THERABEL PHARMACEUTICALS (IRELAND)
TOYOTA TSUSHO CORPORATION (JAPAN)
STADA ARZNEIMITTEL AG (GERMANY)
PHARCO PHARMACEUTICALS (EGYPT)
SANDOZ – SALUTAS (GERMANY)
ARROW GENERIQUES (FRANCE)
NOVARTIS PHARMA PAKISTAN
SEKISUI MEDICAL (JAPAN)
SANOFI-AVENTIS (SPAIN)
MYLAN (FRANCE)



# CERTIFICATES APPROVALS

- GMP COMPLIANCE CERTIFICATES
  (OF POLISH MAIN PHARMACEUTICAL INSPECTOR):
  GIF-IW-400/0394\_01\_01/04/208-1/14
  GIF-IW-400/0394\_01\_01/04/21/17
- TÜV RHEINLAND ISO 9001:2008 CERTIFICATE FOR QUALITY MANAGEMENT SYSTEM
- CUSTOMERS' AUDITS AND APPROVALS: Valeant, Polfa, Polpharma, Pharmaceutical Research Institute, GSK, Sanofi-Aventis, Sandoz, Mylan, Stada Arzneimittel, Novartis.

## IPOCHEM Sp. z o.o.

