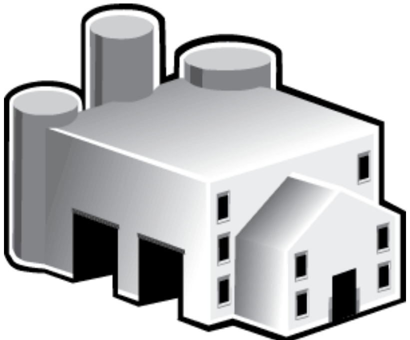
GP.FARMASI INDONESIA

Presentation Business Engagement - Pharmaceutical

The Indonesian Pharmaceutical Association

24 January 2019

Summary : Indonesian Pharmaceutical Market



206 Pharmaceutical Company
(**4** Govt, **178** Domestic Co,
24 Multinational)

**95% Raw Materials imported
(Roughly USD 2,2bio in 2017)**

Market Size (2017)
**Rp 70 trilliun
(+/-USD 5 bio)**

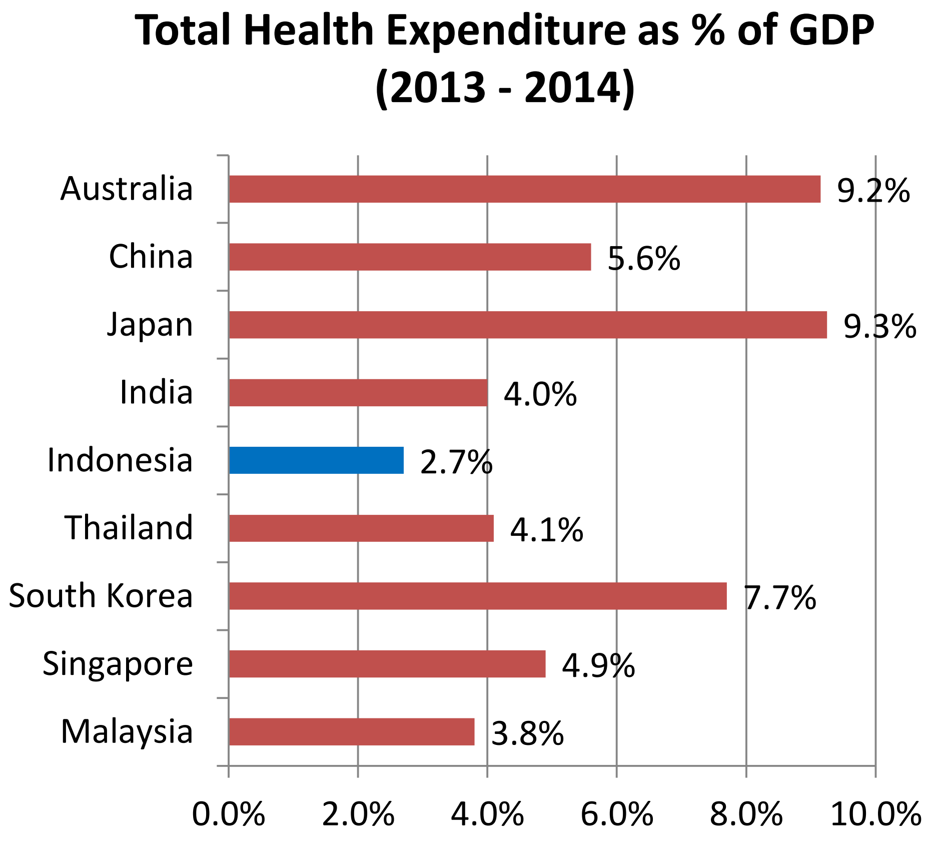
CAGR: 8%

73% value of the market dominated by Domestic Company

27% of ASEAN market is in Indonesia

Sumber: IMS Report Q4 2015,; Kemenkes

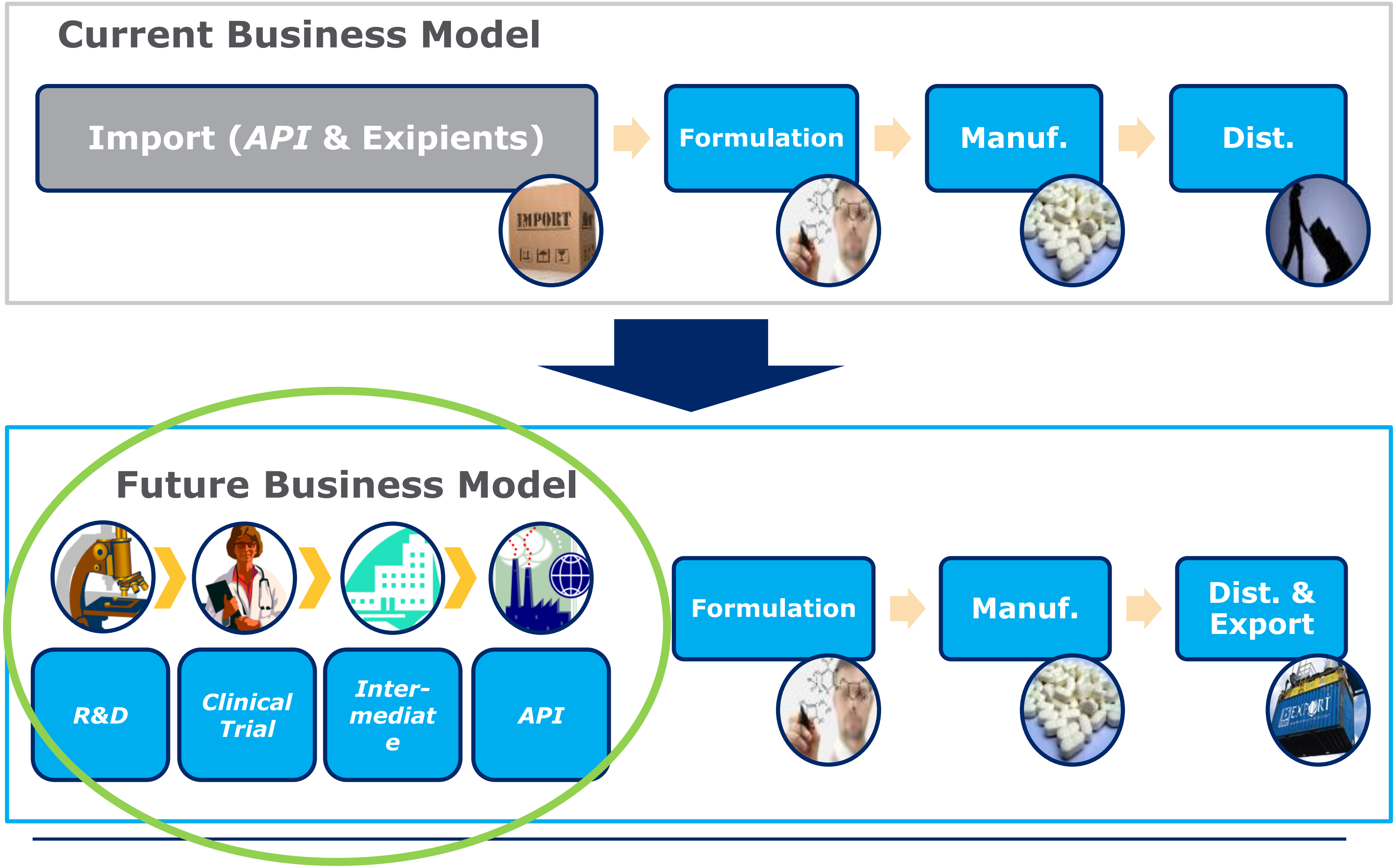
Total Health Expenditure as % GDP



Sumber: Pharmaceutical & Healthcare Countries Report Q2 2014, Business Monitor International; IMS Asia Pacific Insight, 2013

Transformation of Indonesian Pharma Industry

From formulation-production to Integrated Pharma Industry



Potential Business Opportunity for Indian Pharma Companies

Project No 1 : Investment

Pharmaceutical Raw Materials

Considerations for Indian API Manufacturer in Indonesia

1. **Indonesian Government "push" for API Manufacturer to reduce import of API :**
   - ✓ 95% of raw materials API still imported
   - ✓ Allowing 100% Foreign Investment in production of Pharma API manufacturer. No local partners needed. Proprietary technology can be secured.
2. **Replacing other API suppliers, which is having a substantial portion in Indonesian API business.**
   - ✓ Since 1 Jan 2016, Local FDA requires DMF for API, Indian company have better knowledge and skills in developing and following proper DMF.
   - ✓ Assurance of API supply for Indonesian pharma producers.
3. **Ease of access to Indonesian Market**
   - ✓ Marketing foothold for superior Indian products to be introduced to 178 Indonesian local manufacturer. (USP, EP, DMF)
   - ✓ Support technical data required for DMF and other requirement by local FDA (COA, impurities, etc)

Potential Business Opportunity for Indian Pharma Companies

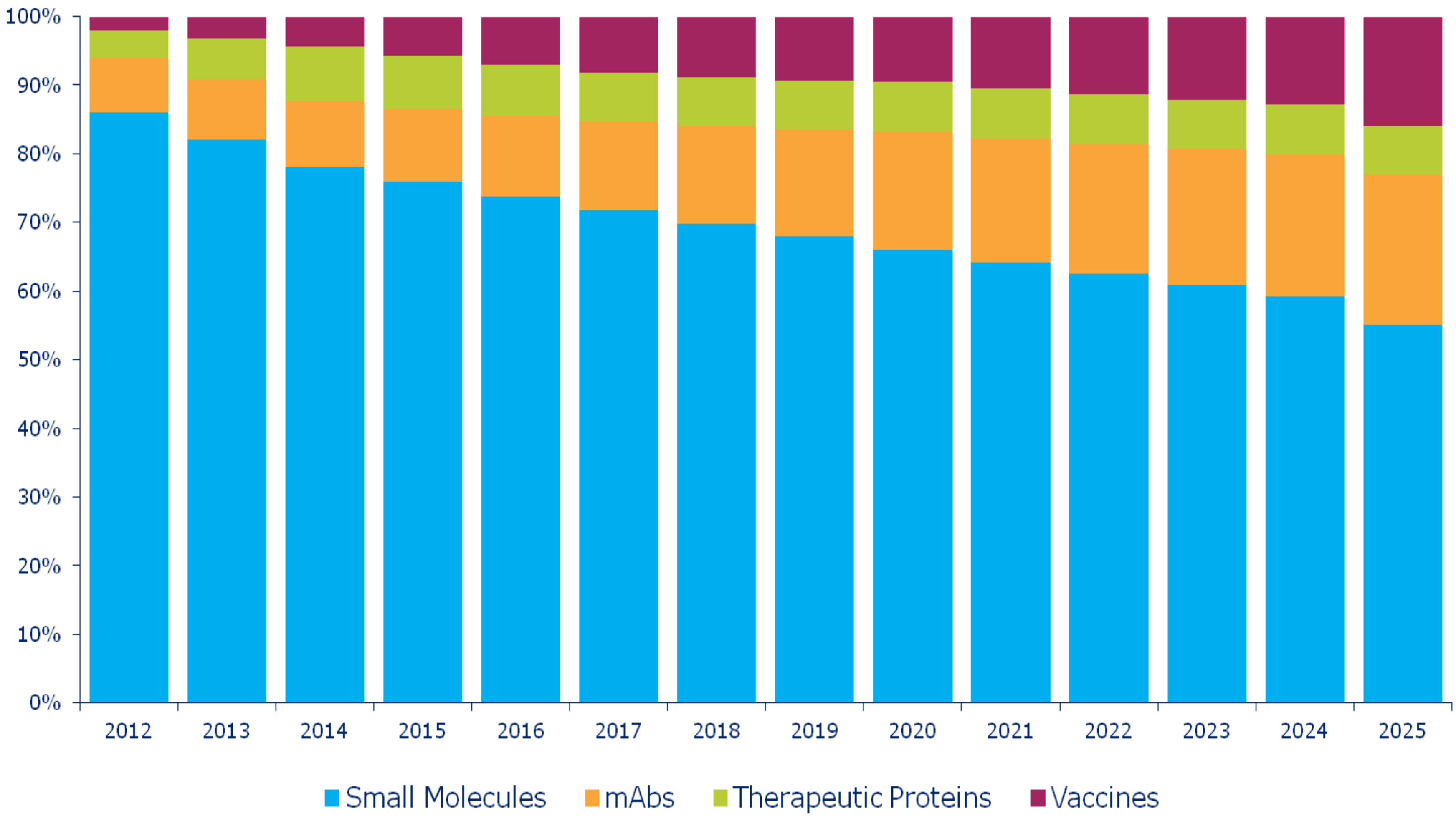
Project No 2 : Trading (Export to Indonesia)

Hightech Products

(Biotech, Cancer, Blood-related, mAbs, ARV etc)

IMS : Biopharmaceuticals:
Big Molecule is the Global Trend

Global Trend by Bio-Pharmaceutical Market



Source : www.statista.com

Rapid Developed Segment in Pharmacy Industry

5 among Top 10 Global Blockbusters

Global top 10 products 2011-13

	2011	2012	2013
1	LIPITOR	LIPITOR	SERETIDE
2	PLAVIX	SERETIDE	HUMIRA
3	SERETIDE	PLAVIX	CRESTOR
4	NEXIUM	CRESTOR	ENBREL
5	CRESTOR	HUMIRA	NEXIUM
6	SEROQUEL	NEXIUM	REMICADE
7	ENBREL	ENBREL	ABILIFY
8	HUMIRA	REMICADE	LANTUS
9	REMICADE	SEROQUEL	CYMBALTA
10	ZYPREXA	ABILIFY	MABTHERA

Small molecule products

Biologic products

Biopharmaceuticals in Indonesia : Indian Company has advantage to penetrate Indonesian Market

	Sales 2013 (Rp mio)	Growth 2012-2013
VACCINES	686,965	20.9%
ANTIVIRALS EXCL ANTI-HIV	250,640	1.5%
ERYTHROPOIETIN PRODUCTS	188,438	21.5%
IMMUNOSTIM AG EX INTFRON	37,365	8.8%
INTERFERONS	1,390	-51.8%
HUMAN INSULIN+ANALOGUES	486,834	20.5%
GROWTH HORMONES	20,991	35.3%
ALL OTH. ANTINEOPLASTICS	445,016	22.7%
ANTI-TNF PRODUCTS	12,653	2.3%

TNF : Tumor Necrosis Factor

- Biopharmaceuticals market in Indonesia is still in infant phase, except for vaccine market lead by Biofarma, Bandung.
- ***Indian technology is needed to reduce drugs price/expenditure, especially for products supplied by multinationals.***

Source : ITMA, 2013

Opportunities for Indian Biotech Products
Top 10 Cancer related drugs (National Insurance)

2014

NO.	NAMA GENERIK OBAT	JUMLAH KASUS	JUMLAH OBAT	BIAYA (RP)
1	Docetaxel	9,659	19,463	34,471,614,352
2	Paclitaxel	10,145	46,789	30,471,620,870
3	Trastuzumab	1,158	1,239	24,070,102,848
4	Bevacizumab	673	2,794	13,439,158,948
5	Capecitabine	4,755	349,698	12,046,944,380
6	Oxaliplatin	3,015	7,575	12,017,540,800
7	Rituximab	728	942	8,959,004,724
8	Imatinib Mesylate	407	41,900	8,354,777,513
9	Gemcitabine	3,058	7,351	6,604,030,958
10	Cetuximab	356	1,752	6,248,096,203

2015

No	Drug Name	No cases	Unit Drugs	Cost (Rupiah)
1	Docetaxel	8,848	38,954	38,777,809,080
2	Paclitaxel	11,484	52,641	22,712,395,148
3	Capecitabine	6,098	457,355	12,788,486,145
4	Trastuzumab	789	842	8,734,222,165
5	Cetuximab	561	3,218	7,996,329,139
6	Ifosfamide	1,015	5,923	7,883,230,273
7	Oxaliplatin	3,438	6,970	5,136,475,700
8	Vinorelbine	859	4,151	5,109,274,028
9	Bevacizumab	397	1,539	5,101,605,698
10	Gefitinib	821	15,958	4,794,166,900

= Biotech Products provided by MNC

Opportunities for Indian Biotech Products

RANK	HOSPITAL PRODUCTS	Potential VALUE	
MAT	(IMS Q1 2016)	(USD.Mio)	%G
1	imatinib	18,7	235,0%
2	bevacizumab	17,3	238,8%
3	trastuzumab	17,2	101,1%
4	insulin	16,0	7,2%
8	docetaxel	13,3	12,7%
9	rituximab	11,9	107,6%
10	albumin	11,8	-6,8%
11	gefitinib	11,7	263,9%
16	nilotinib	10,6	247,1%
18	paclitaxel	10,5	89,1%
19	erithropoetin	10,1	15,0%
22	docetaxel	9,2	3,7%
28	capecitabine	7,5	42,2%

Current Regulations on Drugs in Indonesia : PICs standard : applied to domestic and import

API	GMP	Registration Dossier
Drug Master File	Site Inspection (infrastructure & QA documentation)	Common Technical Dossier format
Halal Certificate for all raw-mats. (2019)	PICs guidelines	EP/BP/USP
		3 consecutive production batches, with complete validation data
		Stability Data
		Biotech : Clinical Trial Phase III by CRO GCP, GLP
		Halal Certificate (2019)

Conclusion

1. Indonesia provides more investment flexibility for foreign company to invest in an API facility in Indonesia.
2. Leading Indian Pharma-biotech companies have competitive advantage to export its biotech products to Indonesia.
3. Indonesian FDA is imposing equal standard to local and imported products, with strict PICs standard.

Thank you

GP.FARMASI INDONESIA