

EuBiologics Co., Ltd.

Dec. 2018



1. Company Overview

EuBiologics Co., Ltd.

A Biopharmaceutical company building a portfolio of vaccines designed to improve global public health, in addition to providing CRMO* service to domestic and international clients



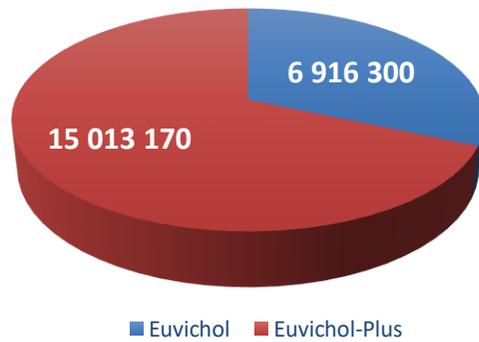
- CEO: Yeong Ok, Baik
 - Foundation: March 10, 2010
 - Business place: Main Office in Seoul / Bio-Plant, R&D Center in Chuncheon
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- No. of employees: 150
 - Capital : 12.0 Mil. USD
 - Executed an initial public offering on the KOSDAQ exchange in Jan 2017
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- Website : www.eubiologics.com
 - Tel.: 82-2-572-6675 / 82-33-817-4001
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- Business area
 - ✓ Vaccines (Development/supply of safe and effective vaccine for global public market)
 - ✓ CRMO Service (R&D and manufacture services for biopharmaceuticals under global GMP standards)

CRMO* (Contract Research and Manufacturing Organization)

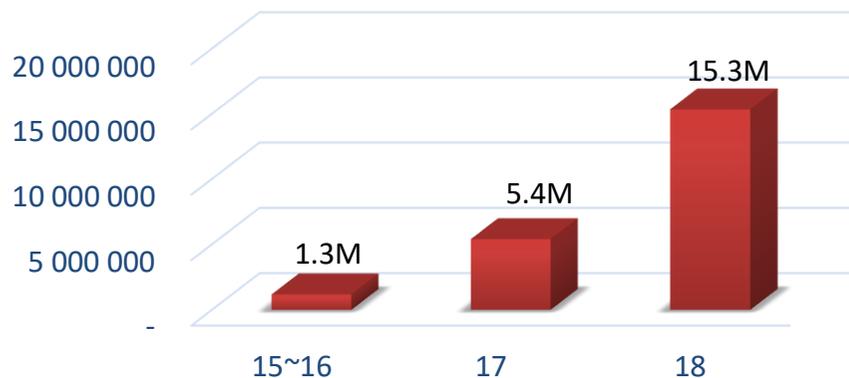
2. Euvichol[®] Shipment History

EuBiologics has supplied more than 22M doses of Euvichol and Euvichol-Plus to cholera endemic/outbreak countries through UNICEF since 2016

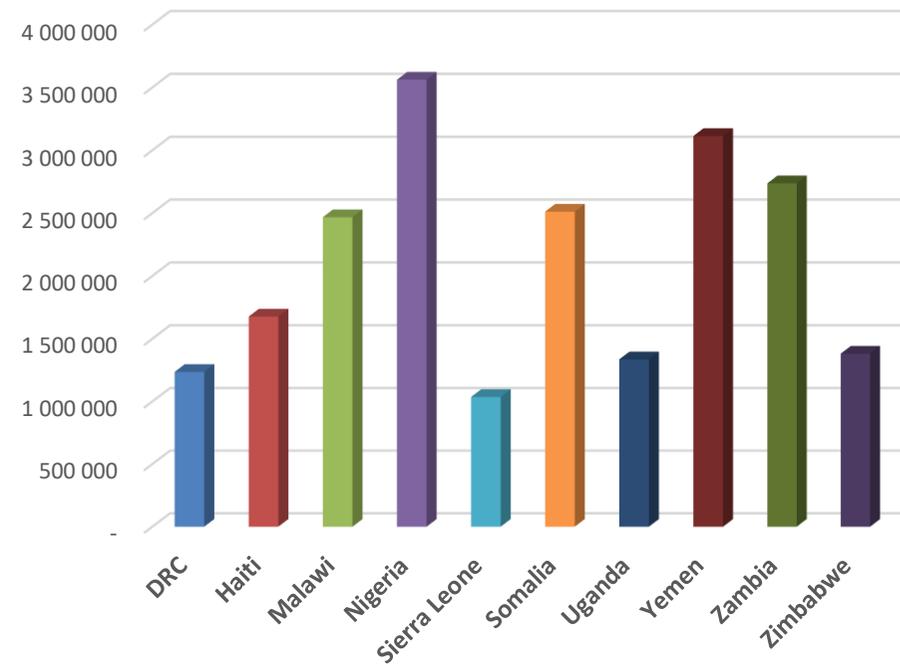
of doses supplied (Euvichol vs Euvichol-Plus)



No. of doses supplied yearly



Doses shipped by country (N=10)



3. Scale-up and Development

EuBiologics has made continuous effort for capacity expansion and improvement of presentation. As of now, EuBiologics is able to produce up to 25M doses annually. In case of demand increase, EuBiologics can establish an additional line for DS production, resulting in production of 50M doses per year.



◆ Euvichol vs Euvichol-Plus

External Box for export	Width (mm)	Length (mm)	Height (mm)	Quantity	Volume /dose (cm ³)	Weight/dose (g)
Euvichol	570	530	425	2,400	53.5	14.6
Euvichol-Plus	700	700	505	6,400	38.7	6.7

👉 *Almost 30 % reduction in volume/More than 50% reduction in weight*

4. Euvichol-Plus® Production Plan in 2019

EuBiologics is able to produce 24M doses of Euvichol-Plus in 2019, subject to the award by UNICEF. The shelf life of Euvichol-Plus is expected to be extended to 36 months in Jun 2019.

'2019 Euvichol-Plus Reserve

Unit: Million doses

		Jan('19)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Reserve	Plastic tube	1.98	2.12	1.76	2.12	2.12	2.12	2.12	2.12	1.94	1.94	2.12	1.94	24.38
	Shipped amount													
	Cumulative sum	1.98	4.10	5.86	7.98	10.09	12.21	14.33	16.44	18.39	20.33	22.44	24.38	

'2019 Euvichol Production Plan

Unit: Million doses

		Jan('19)	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Production	Drug Substances	3.99	1.89	2.03	1.89	1.89	1.89	1.89	1.89	1.89	2.03	1.89	1.89	25.01
	Plastic tube	2.16	1.80	2.16	2.16	2.16	2.16	2.16	1.98	1.98	2.16	1.98	1.98	24.84
	DS Over-and-Short	1.83	1.91	1.78	1.51	1.23	0.95	0.68	0.58	0.49	0.36	0.26	0.17	

5. Capacity Increase Plan

In case of OCV demand increase exceeding EuB's current capacity 25M doses, EuB is able to produce additional OCV DS up to 25M in its new manufacturing site currently under construction to supply from 2021. EuB has a fill/finish capacity up to 50M doses. The capacity increase decision shall be made after GAVI VIS in Jun 2019.

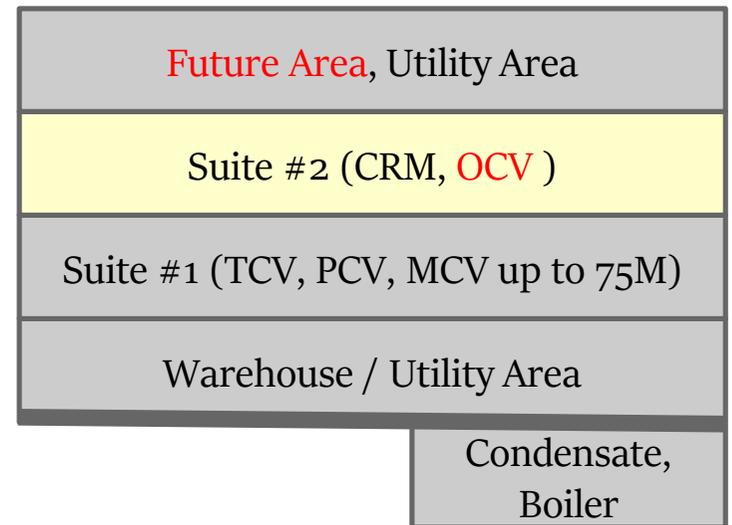
New Site Project



As of Oct 2018



Exp. Mar 2019



Production Building Stack-up Plan

5. Registration Status

No.	Country	Registration approved (Y/N)	Approval date	Remarks
1	Republic of Korea	Y	Mar 2017	Export only
2	WHO PQ	Y	Aug 2017	-
3	Zambia	Y	Jan 2018	
4	Caribbean Regulatory System (CARPHA/CRS)	Y	Apr 2018	Haiti included in CRS
5	Nepal	Y	May 2018	
6	Nigeria	Y	Jul 2018	
7	Dominican Republic	Y	Aug 2018	
8	Pakistan	N	-	Expected by the end of 2018
9	Uganda	N		Expected by the end of 2018
10	Mozambique	N		Expected by the end of 2018
11	Myanmar	N	-	Dossier submitted
12	Philippines	N	-	
13	DRC	N		Dossier submitted in Feb '18

Thank you

