



Corporate Presentation

October 2022

Healthcare in Africa

23% of Global Disease Burden, Disproportionate Share



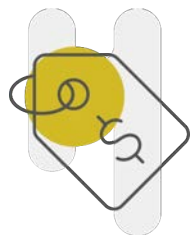
Population

16% of the global population;
60% of African population live in rural isolated areas, 83% excluded from healthcare services



Infrastructure

1% global healthcare expenditure;
0.3 physician, 1.0 nurse, 1.3 hospital beds per 1,000 people



Affordability

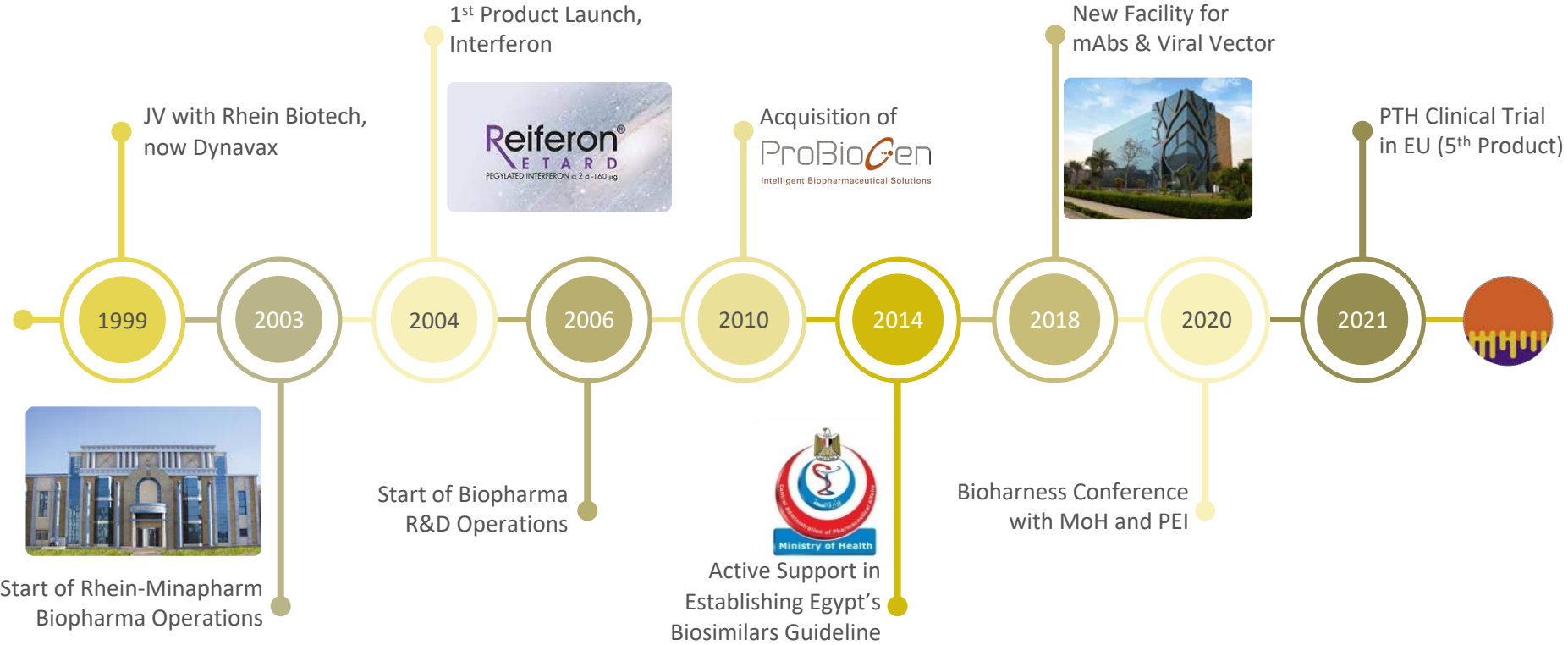
High costs of biologic treatments combined with **out-of-pockets** payments limiting access



Diagnosis

Low, resulting in **poor outcome**; in cancer, as many as 80% of patients diagnosed late/end stage

Minapharm Group Journey in Biopharma Started 20+ Years Ago



MiGenTra, Healthcare Transforming Medicines for Africa

Incorporated April 2021 by ProBioGen AG and MinaPharm Pharmaceuticals



Dedicated to the **end-to-end development and commercialization of high quality affordable biologic medicines** in the field of Biosimilars, Cell- and Gene Therapies and Vaccines to **serve the needs of patients across Africa and the Middle East**, a unique constellation hard to be replicated in the foreseeable future.
Berlin, Germany

ProBioGen

Intelligent Biopharmaceutical Solutions

Internationally known partner with 20 years experiences in biopharmaceutical cell development, manufacturing & analytic of complex therapeutic proteins.
Berlin, Germany; 250+ employees



MINAPHARM

PHARMACEUTICALS 

Only gene-to-market biopharmaceutical company in Africa & the Middle East region with 20 years of track record in biotech and local end-to-end manufacturing site in Egypt, GMP compliant.
Cairo, Egypt; 1,500+ employees



Organizational Chart

Executive Team



Dr. Lutz Hilbrich
Chief Executive Officer,
MiGenTra GmbH &
ProBioGen AG



Dr. Shaheer Bardissi
Executive Board Member,
Minapharm Pharmaceuticals



Frédéric Bouvier
Head Corporate Development
& Business Development &
Licencing,
MiGenTra GmbH



Andrea Hauptmann
Chief Financial Officer,
MiGenTra GmbH &
ProBioGen AG

International External Advisors

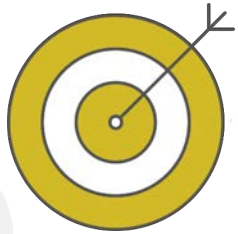


Heidi Hunter,
President Specialty Solutions Business at
Cardinal Health, US



Prof. Dr. Petra Reinke,
Professor of Medicine & founding director of the Berlin
Center for Advanced Therapies (BeCAT), Germany

Healthcare is a Human Right



Mission

Providing **quality & affordable** biological medicines to **more patients** across **Africa & the Middle-East**



Vision

Transforming healthcare in Africa & the Middle East

Strategic Pillars: TREAT

Holistic Approach to Delivering on Our Ambition.



THERAPIES

Bring an industry-leading portfolio of biologic therapies covering multiple modalities to market



REACH

Geographic expansion and telehealth solutions to serve the maximum number of patients



TRANSFORMATION

Make innovation affordable by providing quality biologic therapies at affordable prices

In-House Pipeline of Biosimilars

Track Record of Successful Biosimilar Developments

Product	INN	Therapeutic Area		Cell-Line	Preclinical	Clinical	Filed	Marketed
Gonapure	rHu-FSH ^[1]	Infertility						2014 ^[3]
Reiferon Retard	r-IFN ^[2] alfa-2a	HCV						2006 ^[3]
Thrombexx	r-hirudin	Thrombosis						2005 ^[3]
Bonosome ^[4]	TERI paratide	Osteoporosis						2022 ^[5]
Adessia	ADAL imumab	Autoimmune						2024 ^[5]
MP-103	undisclosed	Oncology						2025 ^[5]
MP-104	undisclosed	Oncology						2025 ^[5]
MGT-2201	undisclosed	Oncology						2026 ^[5]
MGT-2202	undisclosed	Oncology						2027 ^[5]
MGT-2203	undisclosed	Oncology						2028 ^[5]

[1] Follitropin alpha

[2] Interferon

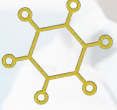
[3] First launch, Egypt

[4] First Teriparatide developed in Africa developed; phase I clinical trail performed in Europe

[5] expected launch in Egypt

Innovation Made Affordable Leveraging the Best of Two Worlds

Uniquely positioned to serve Africa with quality biologic therapies at affordable cost



Cell Line



Process



Drug Substance



Drug Product



ProBioGen
Intelligent Biopharmaceutical Solutions

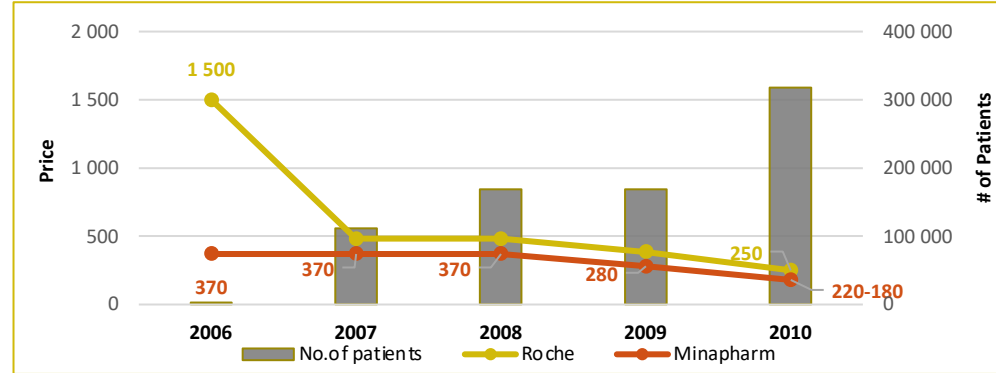
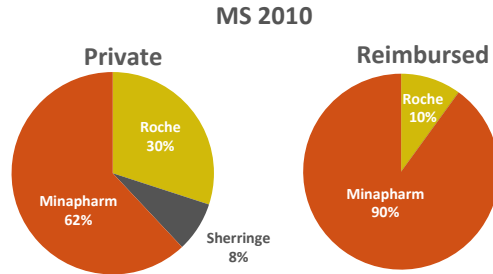


MINAPHARM
PHARMACEUTICALS



Transforming Healthcare

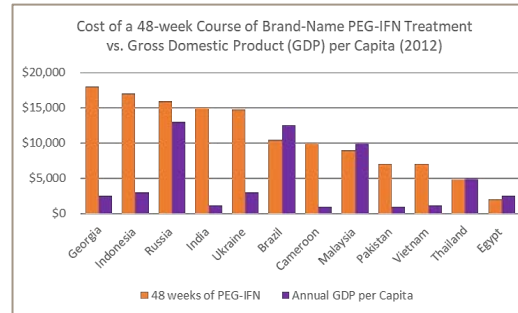
Reiferon Retard Case Study



- Launched in 2006
- 6-fold reduction in price of the originator
- 115 folds increase in number of patients

Outcomes:

- **Market expansion** with greater number of patients having access to interferon treatments
- **Market leadership** of Minapharm's Reiferon Retard
- **Acknowledgments** from specialized press and authorities

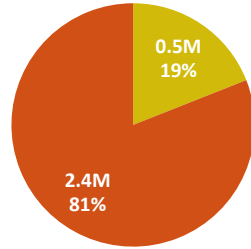


Transforming Healthcare

Gonapure Case Study



MS 2021

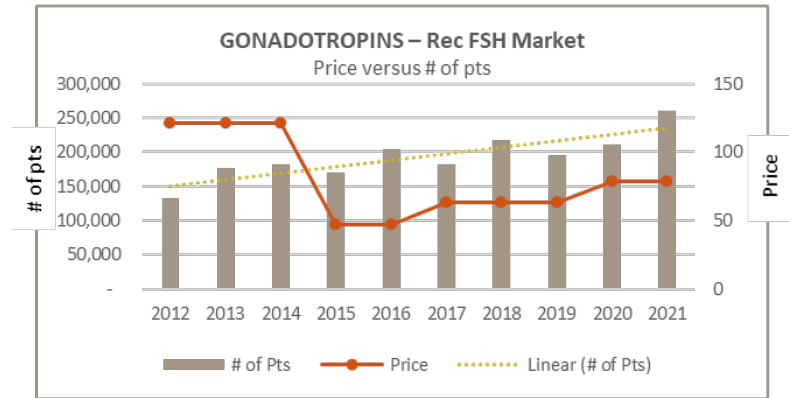
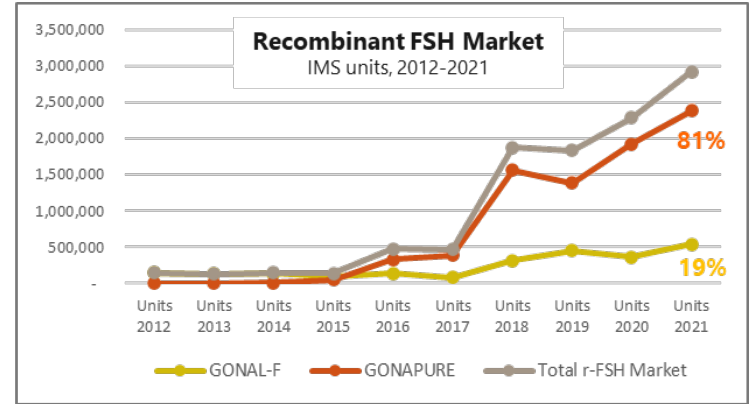


■ Merck ■ Minapharm

- Launched Dec 2014
- 35% price reduction – 50% increase in number of patients

Outcomes:

- **Market expansion** with greater number of patients having access to FSH treatments
- **Market leadership** of Minapharm’s Gonapure



New Cutting Edge Biomanufacturing Facility

Minapharm's 2nd Biofacility in Egypt; Unique in Africa & the Middle East

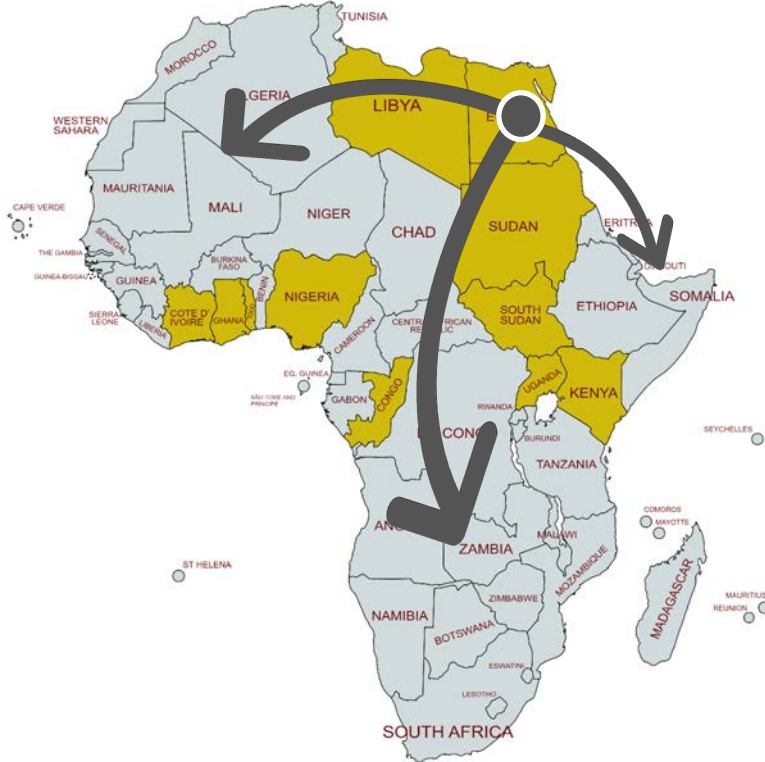
- 6 floors, **15,000m²** total floor space
- 1 floor fully equipped with automated **single use bioreactors** w/ total capacity of 11kL
- **Fully integrated**, from drug substance to fill & finish, quality control, storage of starting materials and intermediates
- **GMP compliant***



* Certification via MHRA or LaGeSo ongoing

Commercial Ready Now

Current Network and Planned Geographic Expansion to Cover Most of Africa & Middle-East.



Presence in **12 markets** via **18 partners**; **active expansion ongoing** through new product registrations



MiGenTra
Healthcare Transforming Medicines

**Providing quality & affordable
biological medicines to more patients
across Africa & the Middle-East**