

湘南アイパークにおけるOpen Innovation Ecosystemの構築

Creating Open Innovation Ecosystem in Shonan iPark

ヘルスケアニューフロンティアシンポジウム

湘南ヘルスイノベーションパーク

Shonan Health Innovation Park (iPark)



Industry Environment in Healthcare

ヘルスケア産業をめぐる環境変化



Socio-Economic Pressure

社会経済的な圧力

- Aging Society
- Suppress expenditure for social welfare



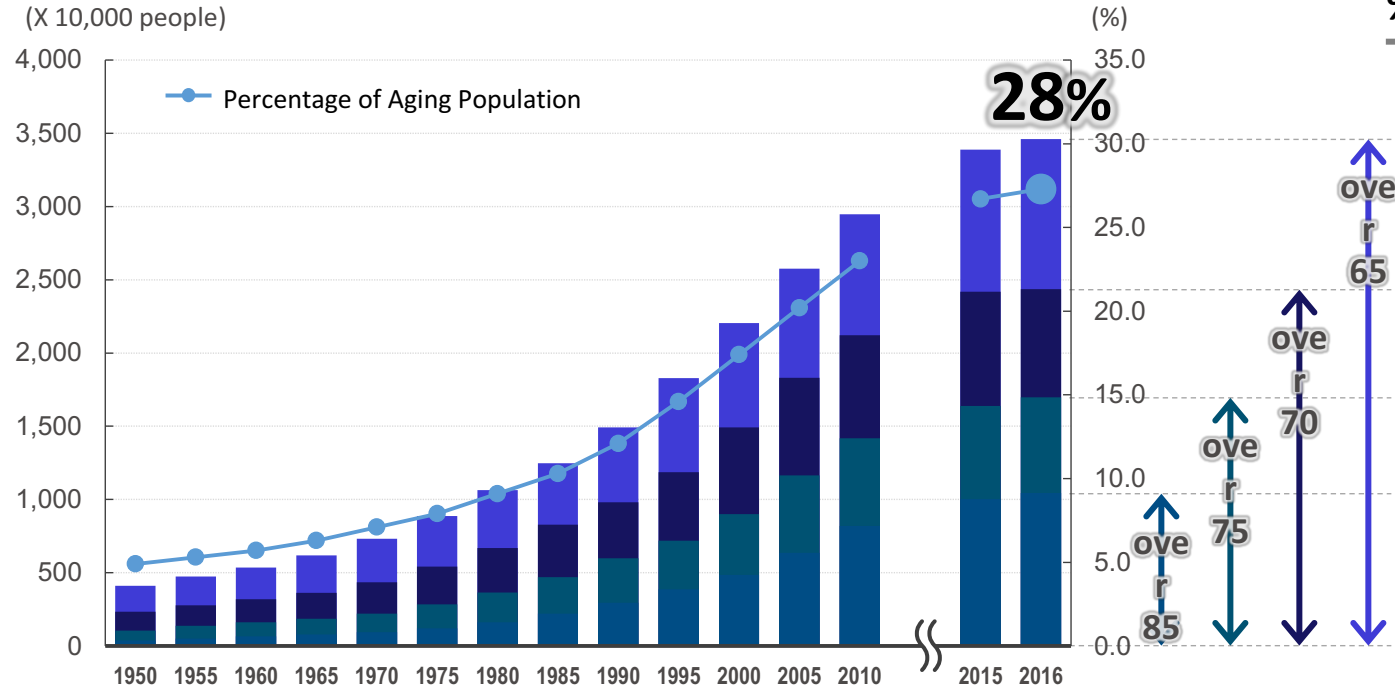
Burst in Innovative Technology

革新的技術の開花



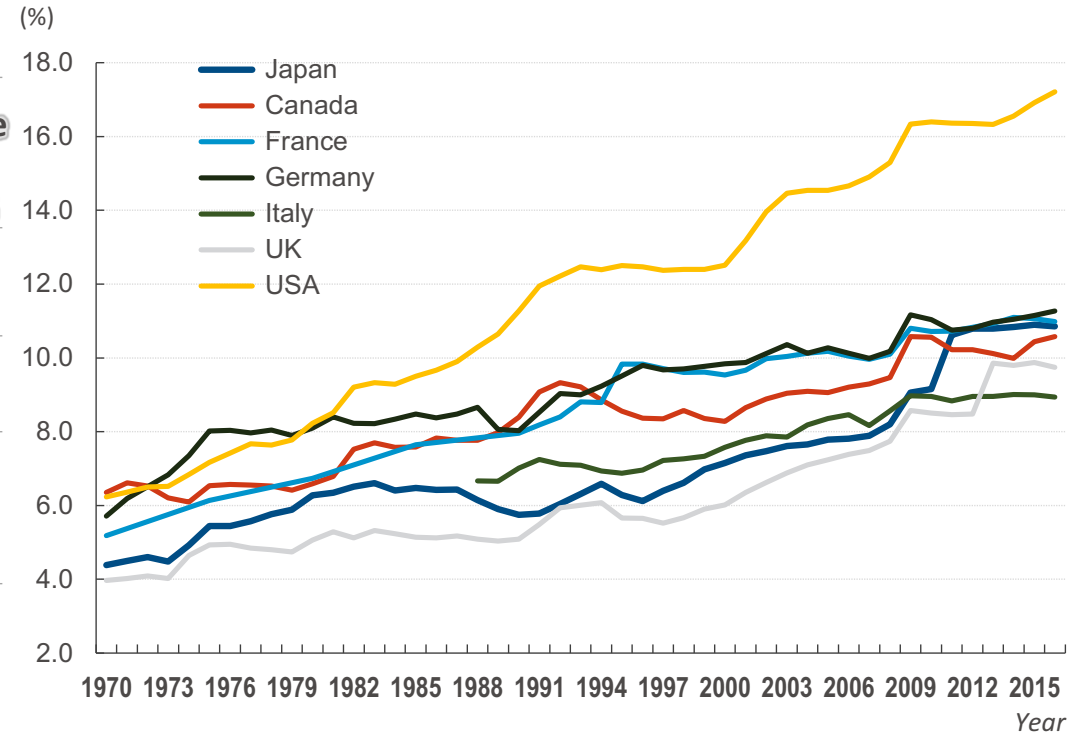
Aging Population in Japan/ Increasing Healthcare Expenditure Worldwide

進む高齢化と医療費の増大



28% of Japanese population is above 65 in 2016.

Total expenditure on health, % gross domestic product



Break in series
 Japan 1995, Canada 1995, France 1995,
 Germany 1992, UK 1997

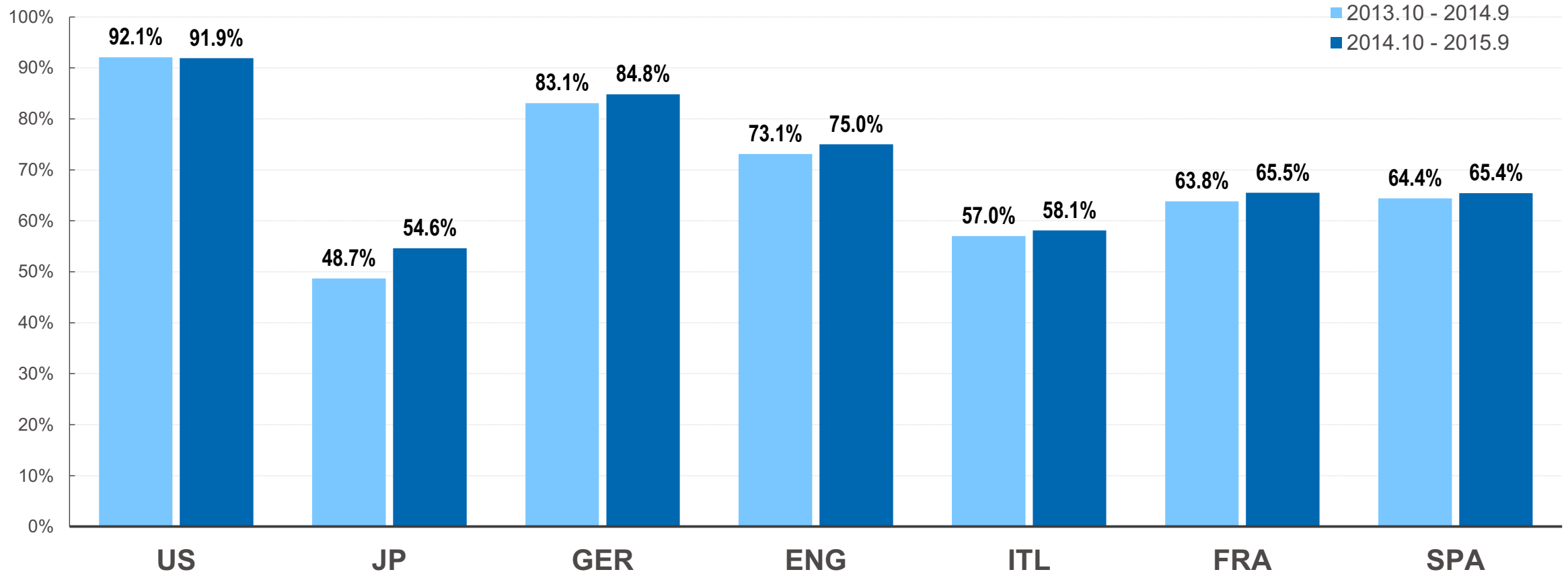
Data Source: Demographic data issued from The Ministry of Internal Affairs and Communications

* Translated into English by RCG
 Data Source: OECD HEALTH DATA 2016, June 2016

Expansion of Use in Generics

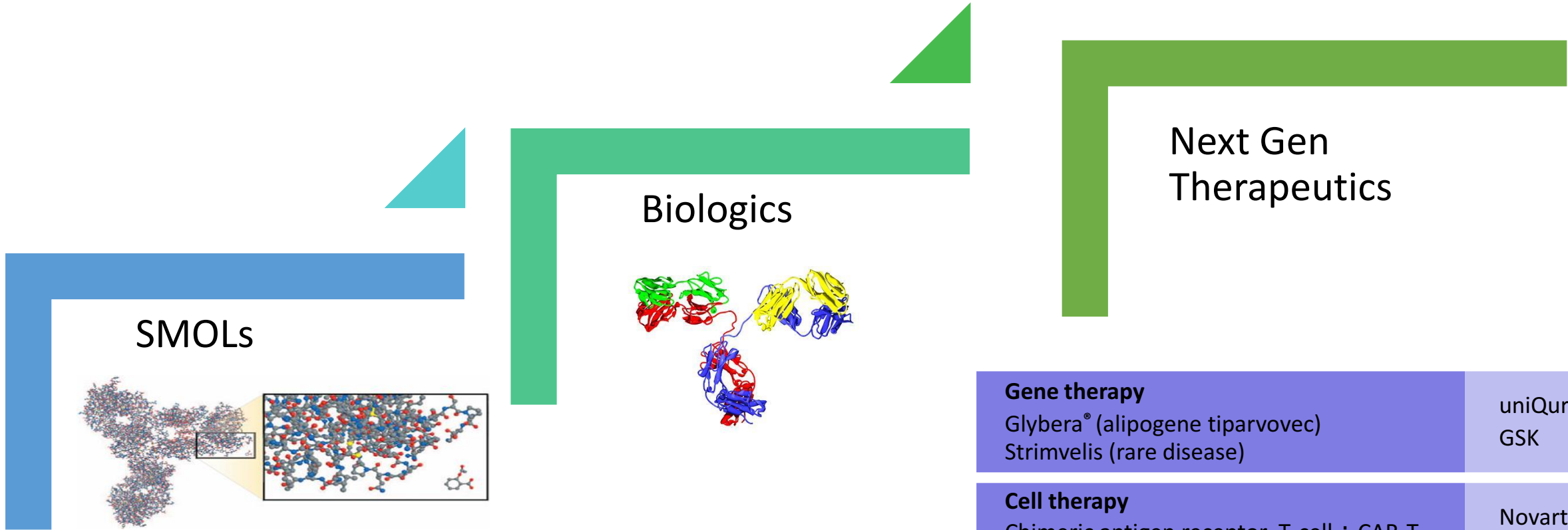
ジェネリック医薬品の浸透

Share of generics (volume basis, annual average)

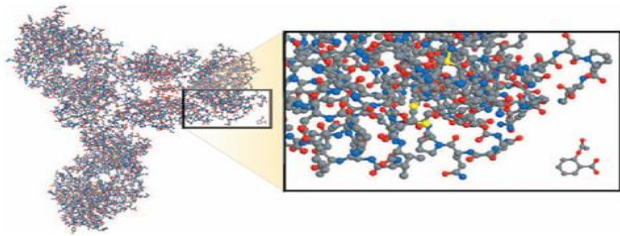


Rapid Progress in Science Diversifies Tx Modalities

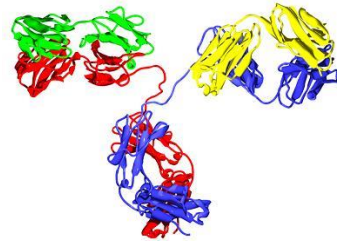
新たな治療法の発展



SMOLs



Biologics



Next Gen
Therapeutics

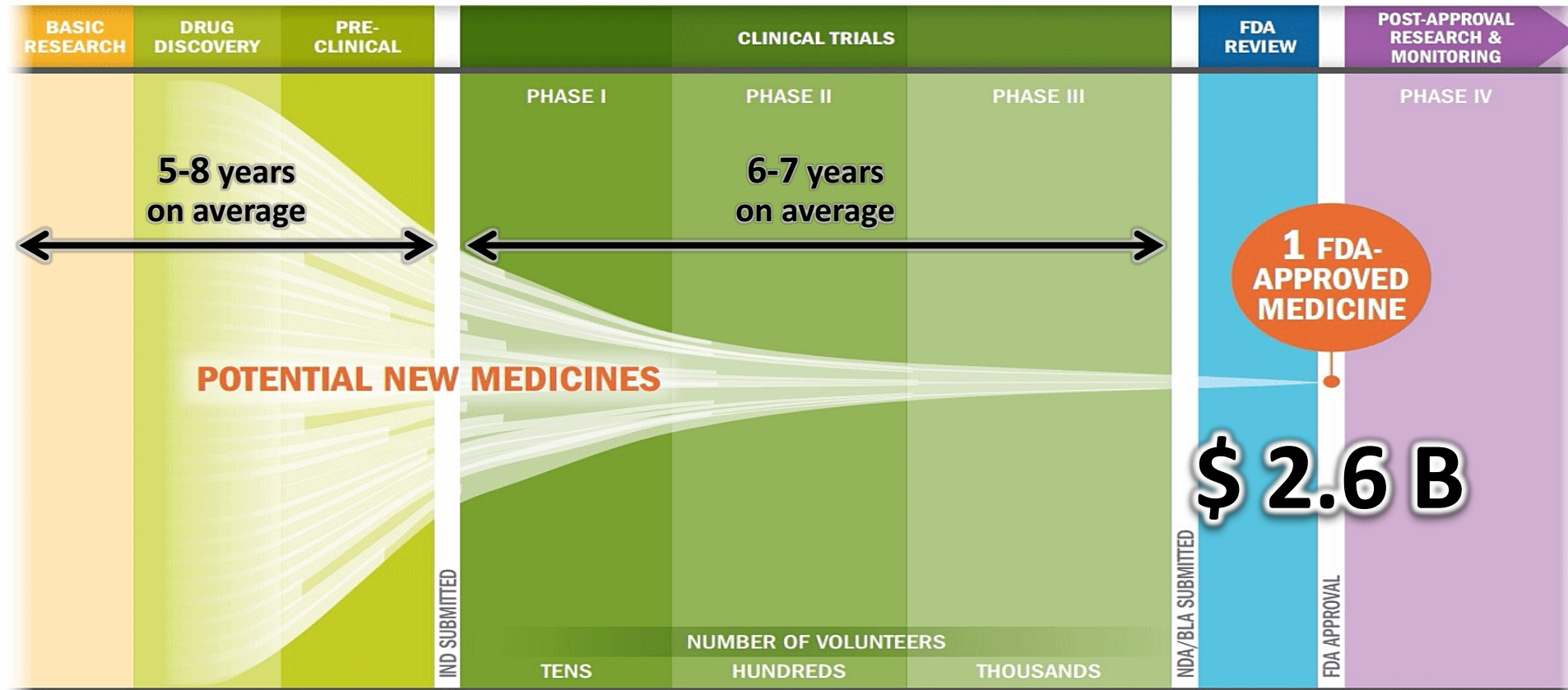
Size	200-500 Da	5,000 – 200,000 Da
Site of action	Intra- and extra cellular	Extracellular
Oral availability	+	-
Specificity	+	+++
COGS/g	< 2 US\$	> 200 US\$

Gene therapy Glybera® (alipogene tiparvovec) Strimvelis (rare disease)	uniQure GSK
Cell therapy Chimeric antigen receptor T-cell : CAR-T	Novartis
Oncolytic virus therapy Talimogene laherparepvec (T-VEC)	Amgen
Smart drug Abilify with Proteus' ingestible sensor	Otsuka

Long, Difficult, Costly process in Drug Development

薬の開発には長い時間とコストがかかる

THE BIOPHARMACEUTICAL RESEARCH AND DEVELOPMENT PROCESS



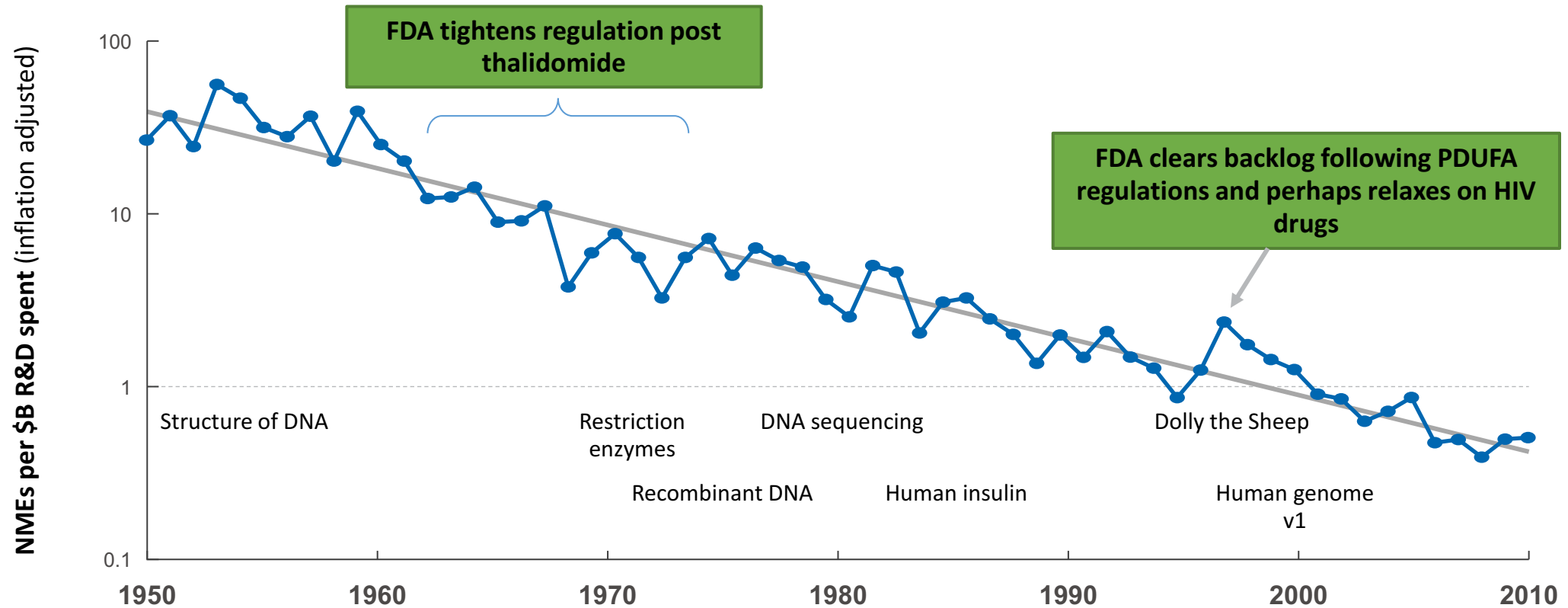
Key: IND: Investigational New Drug Application, NDA: New Drug Application, BLA: Biologics License Application

Data Source: PhRMA brochure: Biopharmaceutical Research & Development

Progress in Science Not Translated into R&D Productivity

サイエンスの発達が生産性の増加に結びついていない—どころか低下している

R&D productivity is on the decline



Note: R&D costs are estimated from PhRMA annual survey 2009; NMEs are the total number of small molecule and biologic approvals by the FDA

Data Source: Bernstein Research "The Long View – R&D Productivity" (September 30, 2010)

To Revitalize the Industry....Creating Innovation Ecosystem

ヘルスケア産業の再活性化のためにーエコシステムの構築

Entrepreneurship 企業家精神

- Talent Market 人材マーケット
- Supporting system (e.g. mentors, events) 支援システム
- Education 教育

Technology 技術

- Level of science サイエンスレベル
- Location/Access 場所・アクセス
- Transparency 透明性

Fund ファンド

- Capital Market マーケット
 - Variety of interests in VC (seeds, early-late stage)
 - Track records for success 成功経験



iPark
Shonan



湘南ヘルスイノベーションパーク
Shonan Health Innovation Park

武田薬品工業株式会社
Takeda Pharmaceutical Company Limited

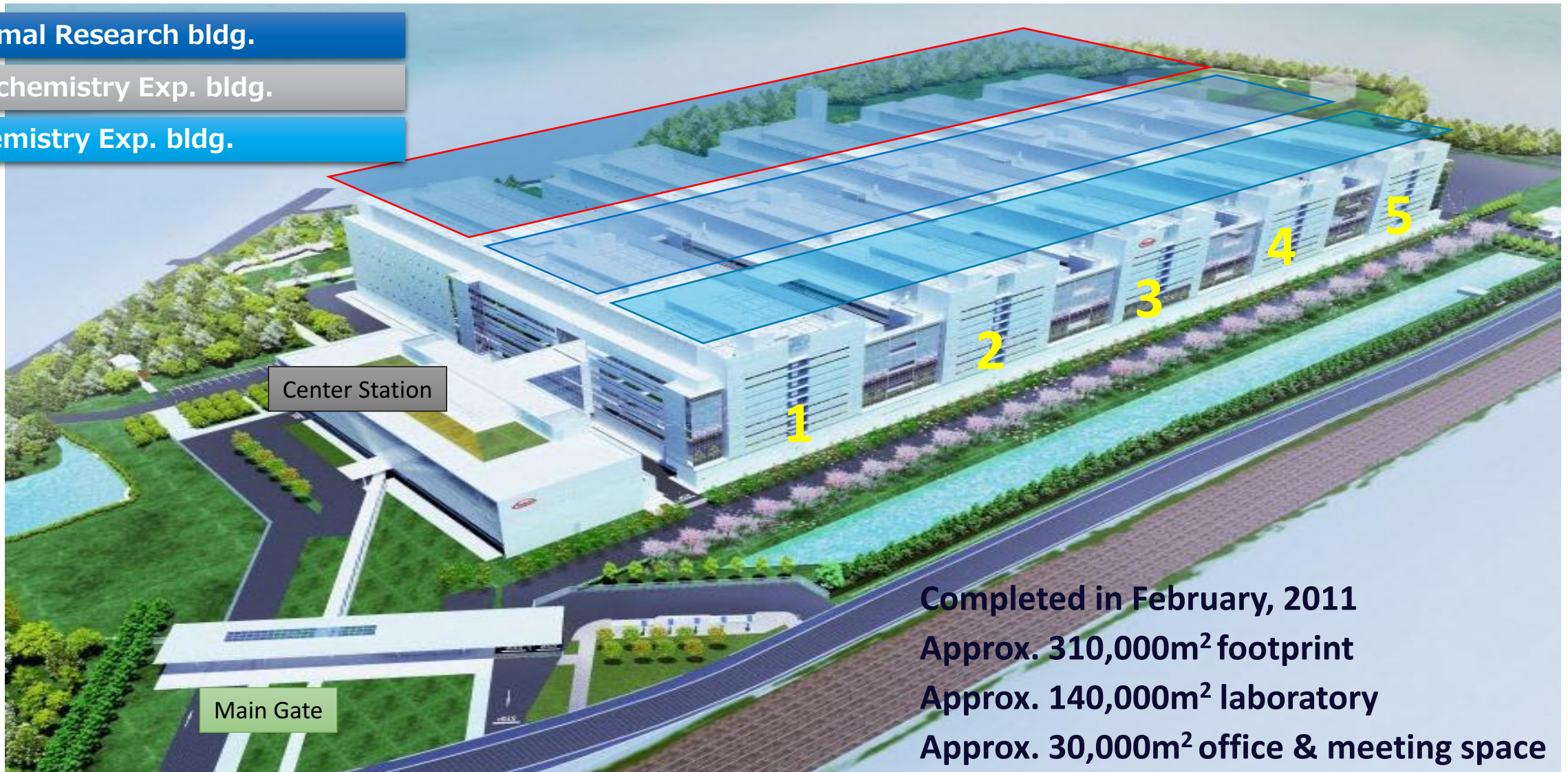
iPark Overview

湘南アイパークの概観

Animal Research bldg.

Biochemistry Exp. bldg.

Chemistry Exp. bldg.



Completed in February, 2011
Approx. 310,000m² footprint
Approx. 140,000m² laboratory
Approx. 30,000m² office & meeting space

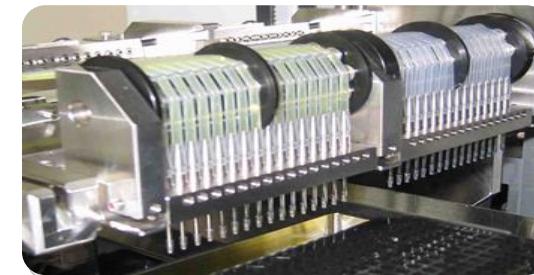
Research Lab facilities, Office and Equipment

実験施設・オフィス・設備

Laboratories



High Throughput Screening Machine



Automated Compound Pipetting Device for High Throughput Screening



Synthesis labs



Liquid Chromatography Mass Spectrometry

Office



Automatic Material Transfer



Animal research facility with full AAALAC accreditation with HVAC controls

Other Facilities

その他の設備

Auditorium for 400



Meeting Hall for 100



Meeting room for 20~40



Video Conference Room



Open community space



Cafe Evening: Bar



Gym



Cafeteria for 800



Convenience Store



Tennis Court



Location

ロケーション



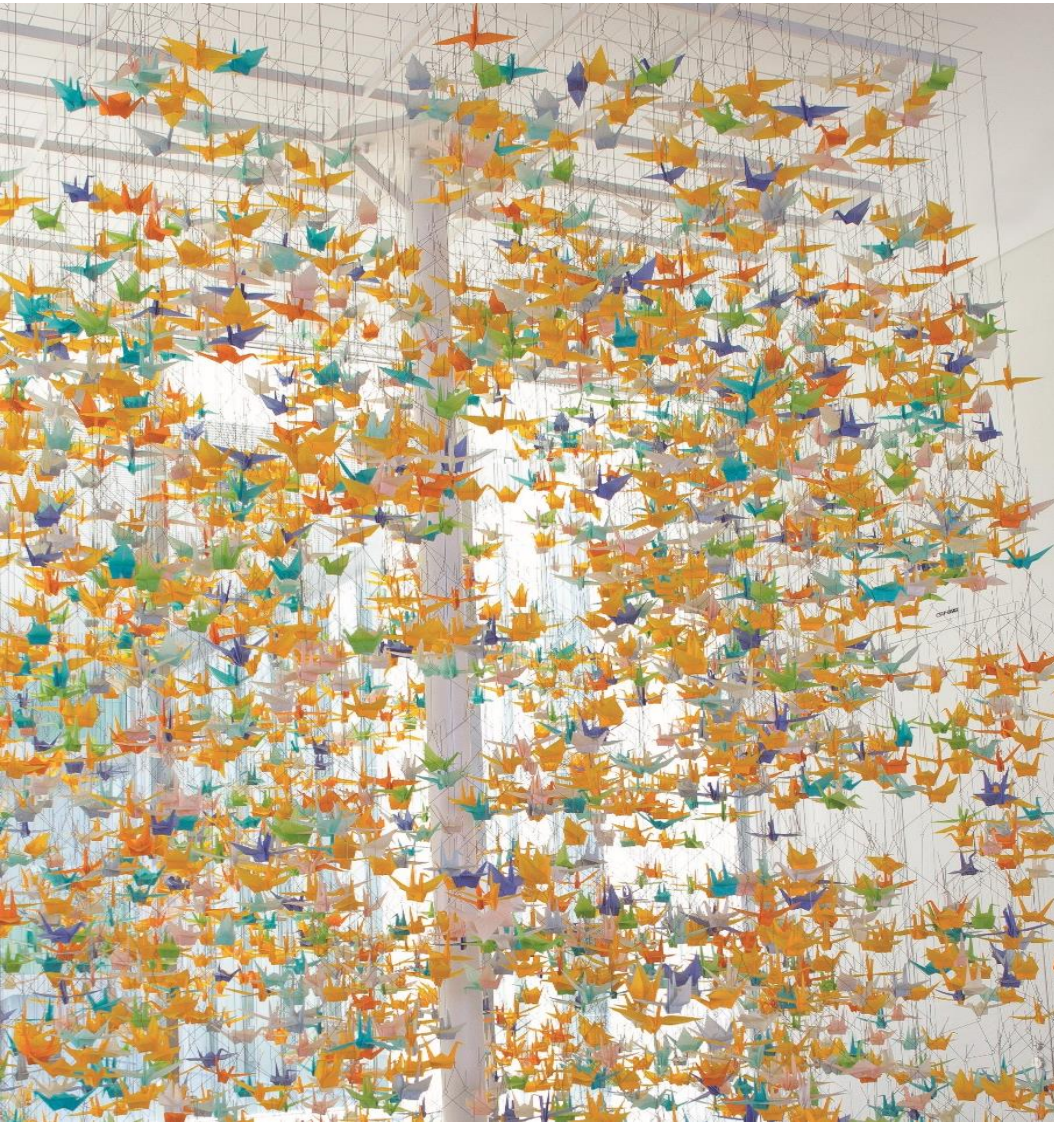
Close to Yokohama and Tokyo

Easily accessible by public transportation from Narita Airport (approx. 2 hrs.) and Haneda Airport (approx. 1 hr.)

The area is also known for its numerous historical temples and shrines, making it one of the “100 most beautiful historical sites of Japan.”

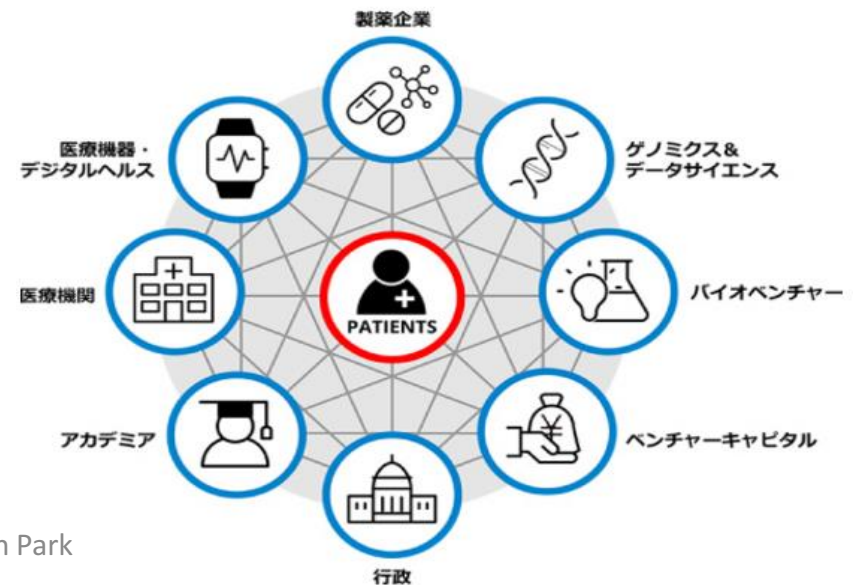
Our Vision

私たちのビジョン



Shonan Health Innovation Park aims to be an openly innovative ecosystem built on pharmaceutical know-how where industry, government, and academia come together to incubate and accelerate translation of cutting-edge science into impactful health solutions for patients in Japan and globally.

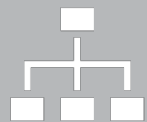
オープンイノベーションエコシステムの醸成





INCUBATE

釀成



DEVELOP

發展



COLLABORATE

協力



ACCELERATE

加速

INCUBATE



サイエンスメンター
Science Mentor



ベンチャーキャピタル
ネットワーク
VC Network



起業トレーニング
Business Training



薬事／知的財産相談
Regulatory/IP
consultation

COLLABORATE

ライフサイエンスに携わる
多様な関係者が共創する場へ
Place for Co-creation



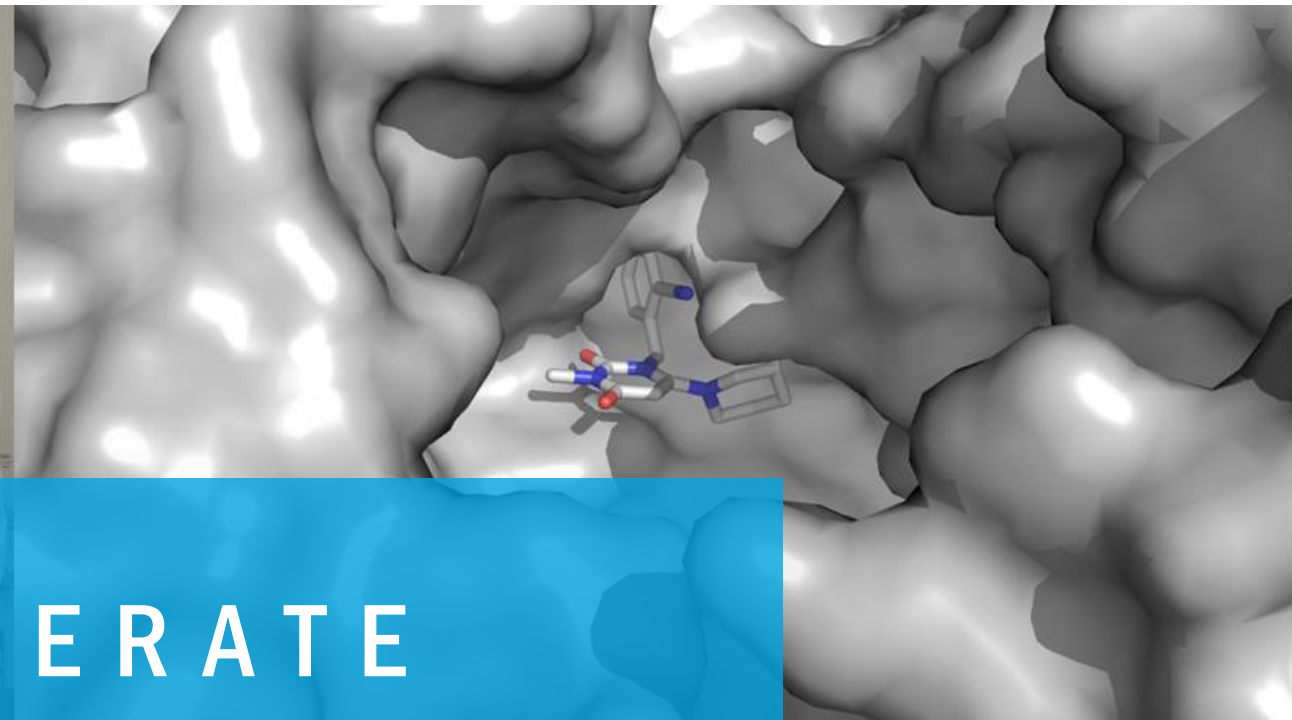
ChromaJean



T.N.TECHNOS., LTD.

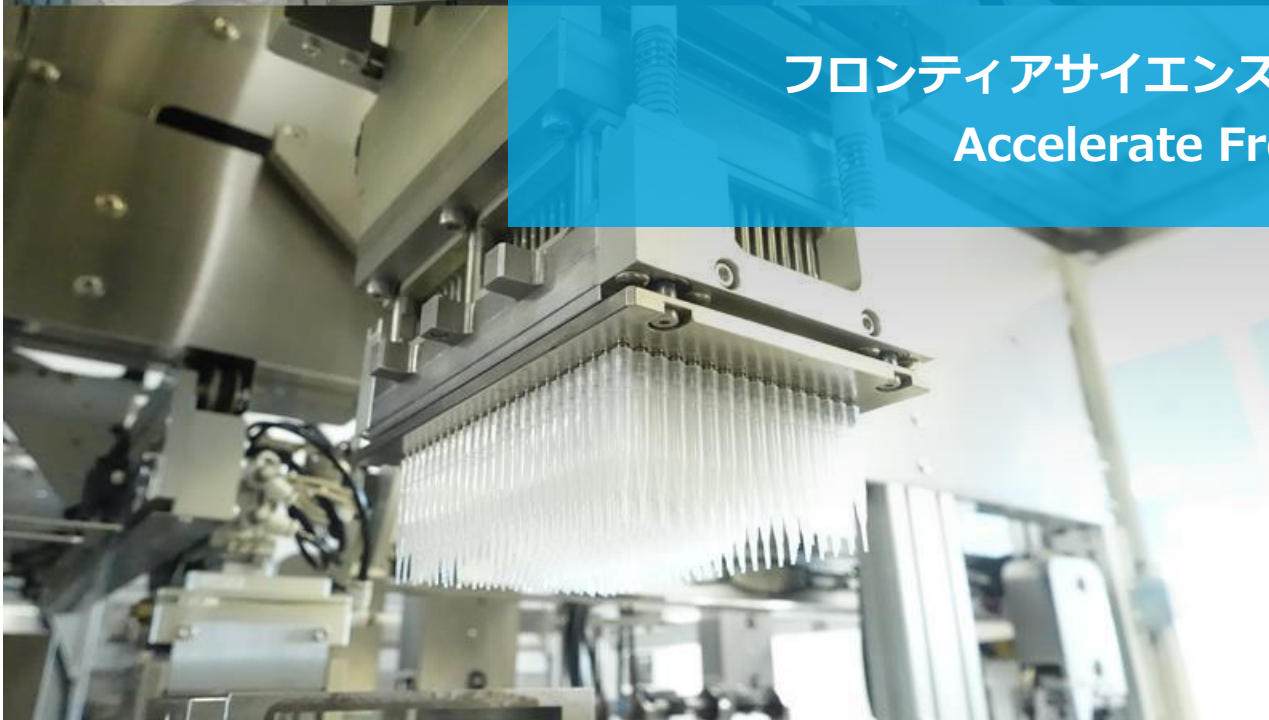
FORESIGHT & LINX





ACCELERATE

フロンティアサイエンスを探求し加速化する場へ
Accelerate Frontier Science



かながわサイエンスパーク
Kanagawa Science Park

川崎市高津区溝の口

キングスカイフロント
King Sky Front[LIC]

川崎市川崎区殿町地区

湘南ヘルスイノベーションパーク
Shonan iPark

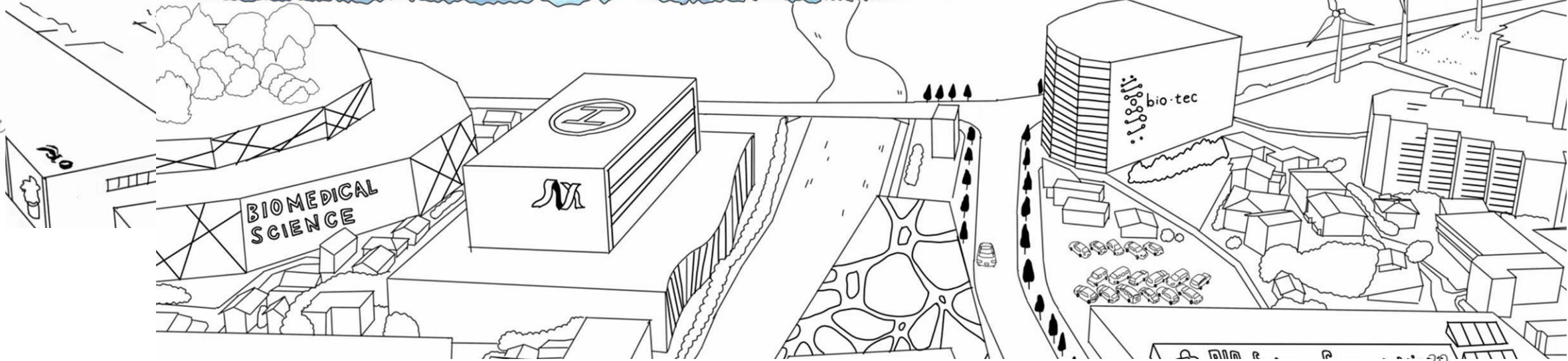
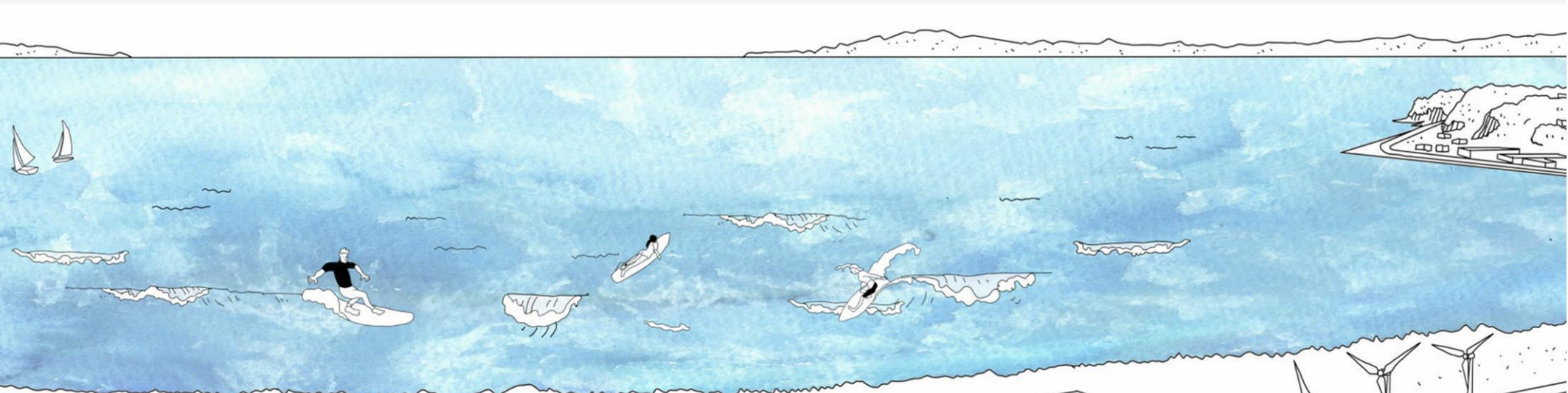
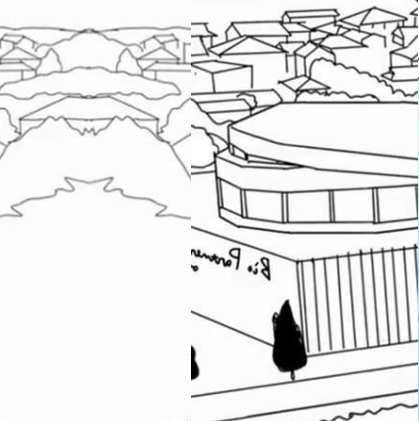
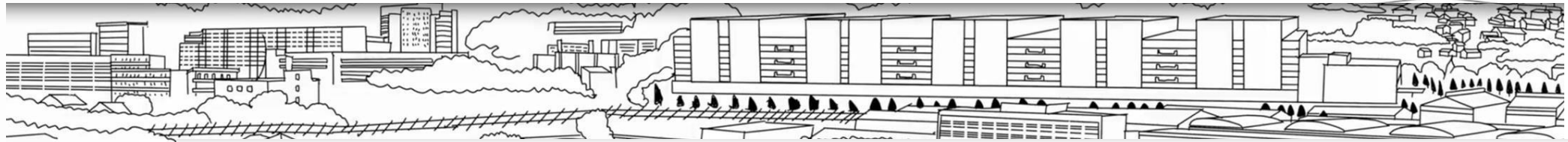
DEVELOP

湘南エリアとサイエンスを融合した新しい地域づくりへの貢献

Developing Area of Shonan by Adding Flavor of Science

Collaboration:

- In **seminars, consultations, events** on drug discovery research
セミナーやイベントの共催
- With universities and the healthcare-related companies in
Kamakura city and Fujisawa city
鎌倉市・藤沢市の大学や企業との連携
- In **talent development** and globalization at the healthcare
ヘルスケアにおける人材育成とグローバル化への協力





湘南ヘルスイノベーションパーク
Shonan Health Innovation Park