



that's
GOOD
science!™

Innovation with Takara Bio Europe

Adebiotech - 27 Jan 2016

pierre.lacaze@takara-clontech.eu

© 2016 Takara Bio Europe SAS - Confidential

Who are we?

Takara Bio Europe SAS, France



Customers Served

- Academic institutions
- Government research facilities
- Hospitals, clinical research
- Pharmaceuticals, other biotech
- OEM and customization for product manufacturers

Background

- Established in 1995
- Headquartered in Saint-Germain-en-Laye, France
- A wholly owned subsidiary of Takara Bio, Inc.
- Direct sales as well as a network of distributors covering EMEA

Who are we?

Worldwide Locations

Takara Bio Inc.

Corporate Headquarters: Otsu, Shiga, Japan

Affiliates WW

- Clontech Laboratories, Inc., USA, California & Wisconsin
- Takara Bio Dalian – PR China (manufacturing site)
- Takara Bio Beijing, China
- Takara Bio Korea
- DSS Takara Bio India Pvt. Ltd.
- Takara Bio Europe, France & Sweden



Who are we?

Takara Bio, Inc.



Bio Industry
Gene Therapy
Agri Bio

Core Businesses

Gene Therapy, Life Sciences, and Nutraceuticals

Background

- Subsidiary of Takara Holdings, Inc.
- A public company listed in Tokyo Stock Exchange
- Established: Bio group in 1967; parent company in 1925
- Leading Japanese company for enzyme technology and gene therapy.
- First company to:
 - introduce restriction enzymes and PCR products in Japan
 - Patented LA PCR Technology
 - enter the Chinese market within the industry
- Top-notch, cost-competitive manufacturing in China

Additional Capabilities

- Next-Gen sequencing contract research services
- Custom and OEM offerings for restriction/modifying enzymes, polymerases, and molecular biology kits
- CDMO activities



Who are we?

Takara Affiliate Capabilities

	Takara Beijing	Takara Dalian	DSS Takara	Takara Korea	Takara Europe	Clontech Inc.	Takara Bio
R&D		✓			✓	✓	✓
MFG	✓	✓	✓		✓	✓	✓
S&M	✓	✓	✓	✓	✓	✓	✓
Service		✓			✓		✓
Instruments	✓		✓	✓			✓

Who are we?

Takara Biotechnology (Dalian), China

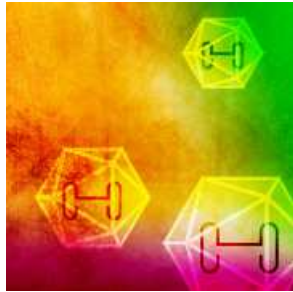
Background

- 7 different manufacturing group (Enzyme, Oligo, PCR Kits, Molecular Bio Kits, Assembly, etc.), along with QA and Planning
- Land Space: 40,000 m²
- 1 million finished goods per year
- Equipped with five 50L fermenters
- Bio Safety Level II clean rooms
- Quality Systems



Who are we?

Clontech Laboratories, USA



innovation for
life science
research

Customers Served

- Academic institutions
- Government research facilities
- Hospitals, clinical research
- Pharmaceuticals, other biotech
- Translational research groups
- OEM and customization for product manufacturers

Background

- Established in 1984
- Headquartered in Mountain View, CA
- A wholly owned subsidiary of Takara Bio, Inc. (acquired in 2005)
- Affiliate offices in Japan, Europe, China, Korea, and India
- Worldwide network of distributors

ISO Certifications

- ISO 9001:2008 certified
- ISO 13485:2003 certified

Who are we?

Center for Gene & Cell Processing, Japan

1st F : E.Coli Master Cell Bank Production

- Plasmid Vector Production
- RetroNectin Production
- Larger Scale Fermenter
- Quality Control
- Cell Bank

2nd F : GMP Viral Vector Production

- Protein Purification
- Aseptic packaging

3rd F : Cell Processing

- Quality Control
- Test Sample Storage



Center for Gene & Cell Processing in Kusatsu city, Shiga, Japan. Area : 6,500 m²

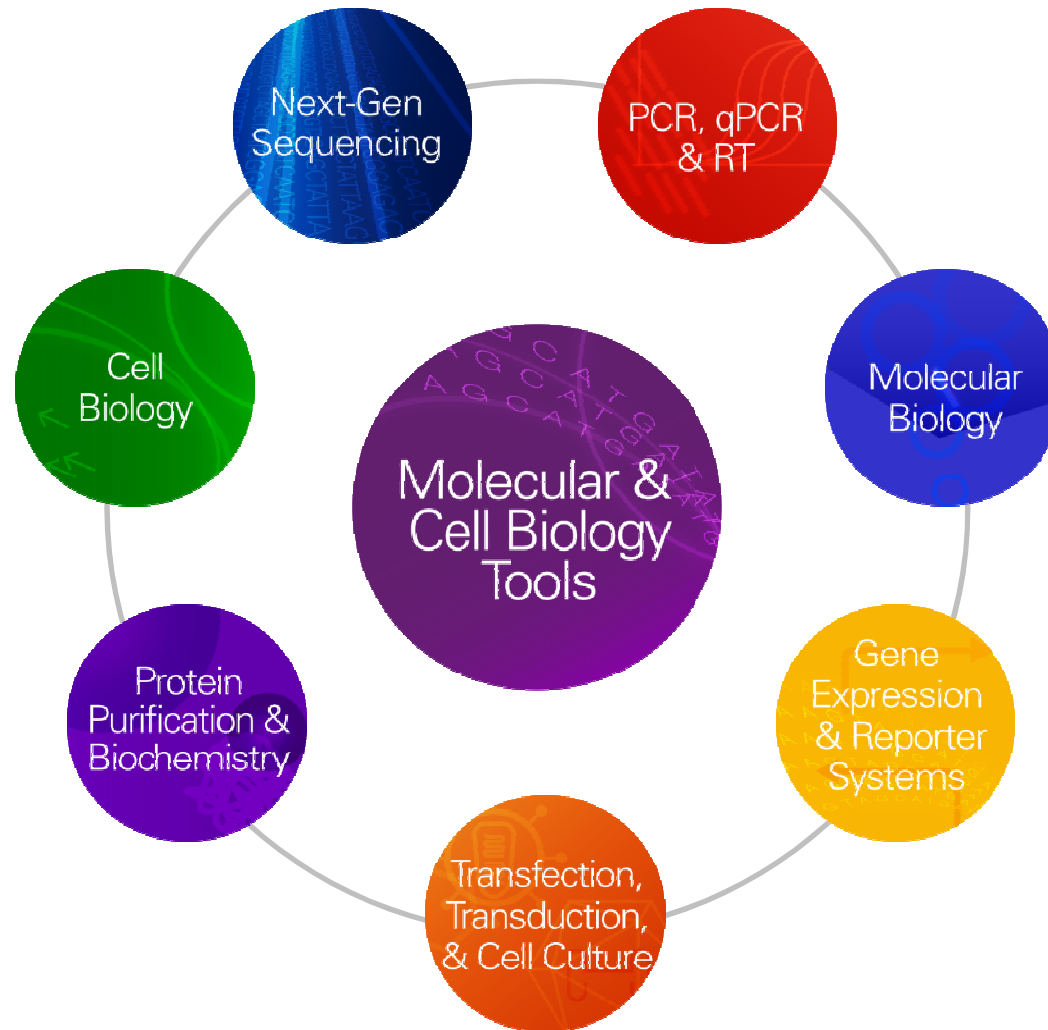
Who are we?

Takara Bio Europe AB, Gothenberg

- Founded in 2001, 15 years experience in cell differentiation from human pluripotent stem cells
- Established and banked a large number of hiPSC lines and hESC
- 40 employees
- Situated in Gothenburg, Sweden
- Since September 1st 2014, a wholly owned subsidiary of Takara Bio



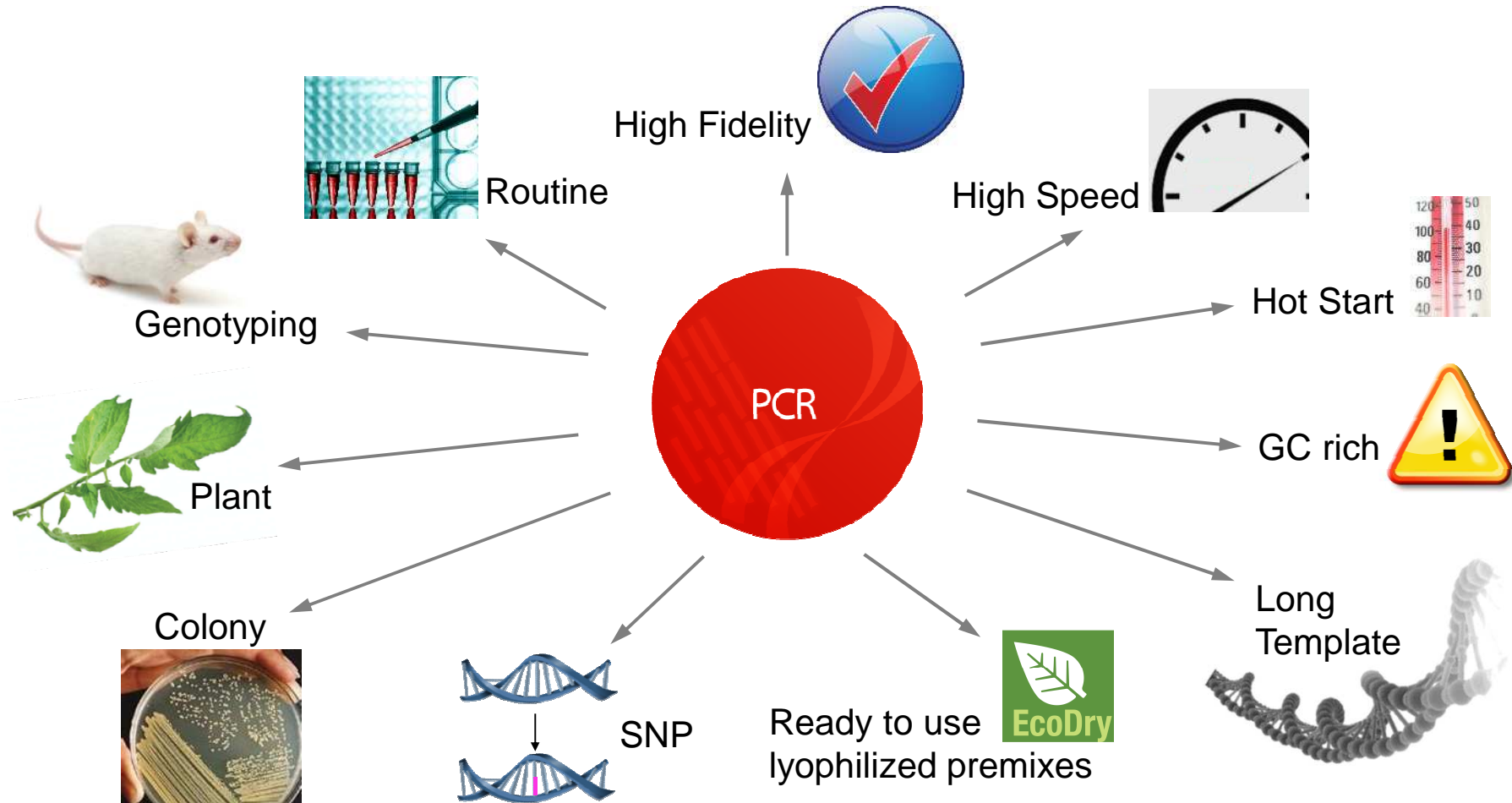
Core Areas of Technology



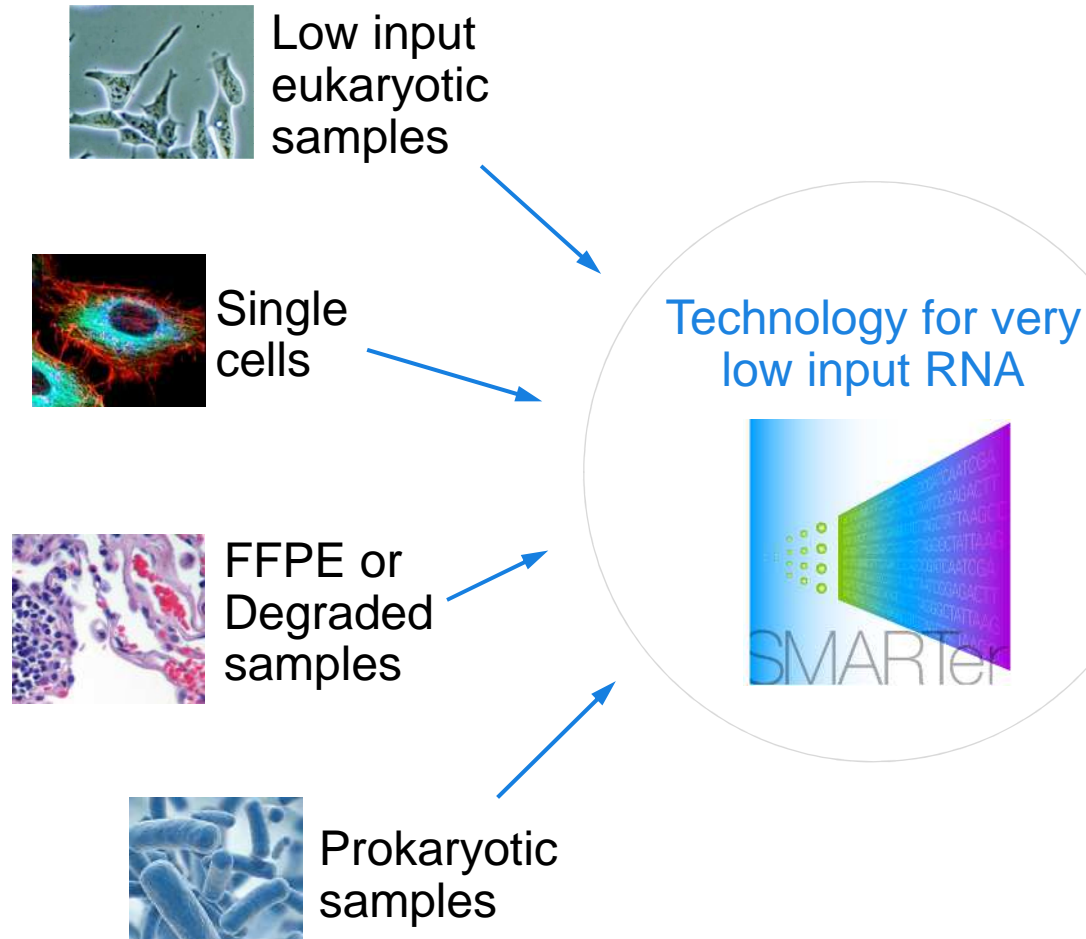
DNA Amplification



High performance kits and enzymes for all applications



NGS: Transcriptome Analysis



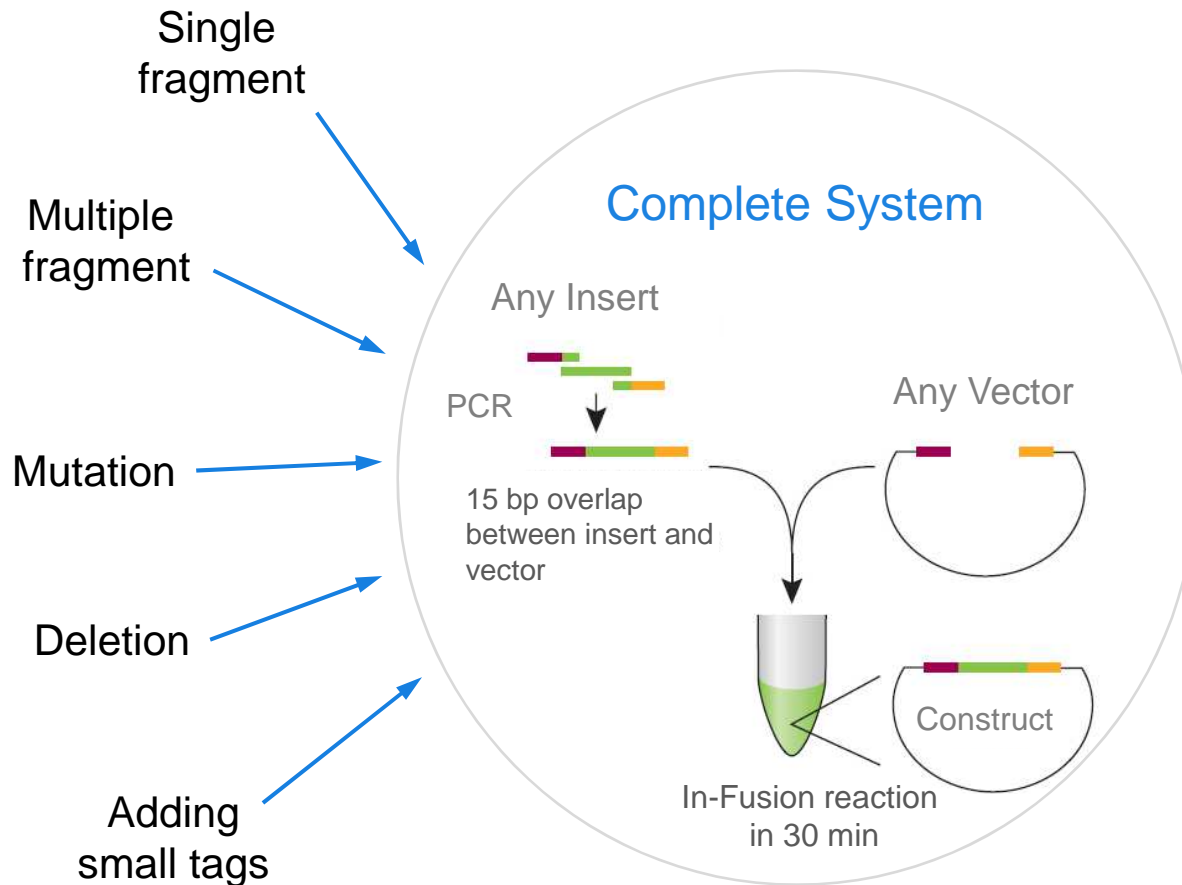
Next Gen Sequencing

- Industry gold standard for low-input and single-cell RNA-seq
- Confidence in full length gene information
- Highest sensitivity in gene number detection
- Uniform gene body coverage

Cloning Technology



In-Fusion HD Cloning: The right clone, every time.



Perfect Cloning

- 10+ years of research
- Seamless construction

Excellent Performance

- 95% positive recombinant clone
- Fast and accurate

Simple & Powerful

- Any size, any number of inserts
- One system with multiple applications



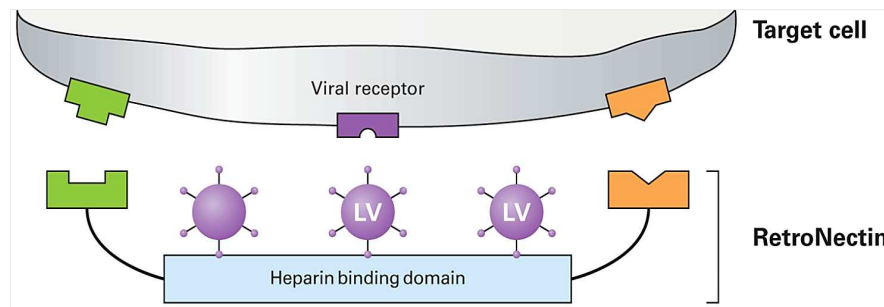
Lyophilized ready-to-use format also available

Enhanced Gene Transfer

RetroNectin Reagent

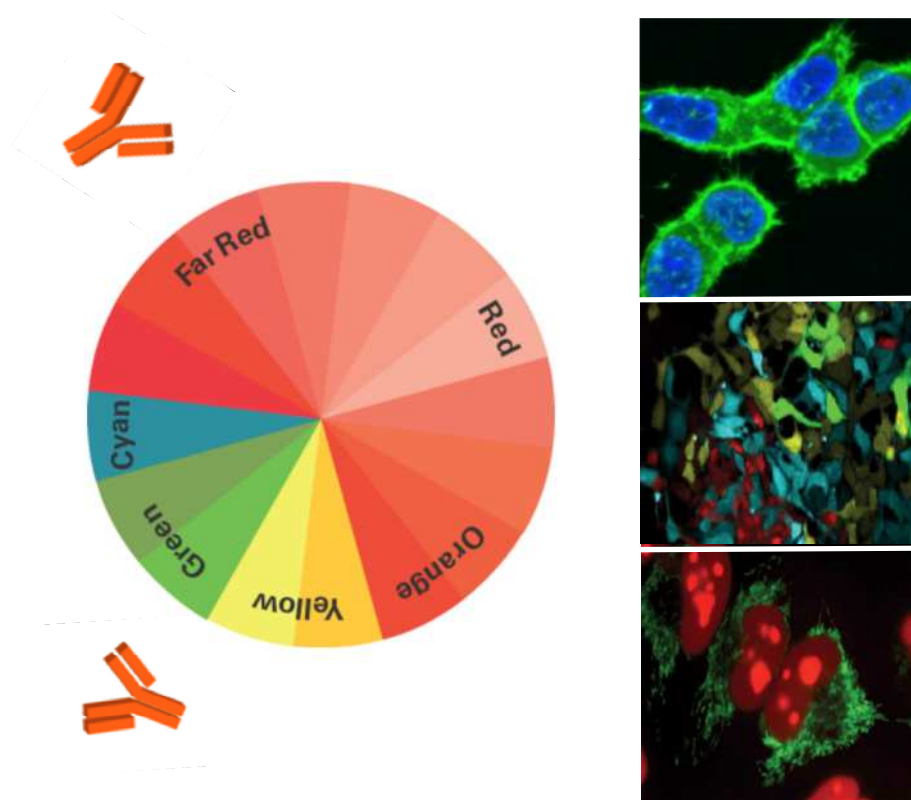
- Recombinant human fibronectin fragment
- For hard-to-transduce cells or hematopoietic stem cells
- Maximizes cell-virus contact in culture
- Improves gene transfer efficiency
- Non-toxic
- GMP grade available

Clinical grade
RetroNectin is
also available



Visualization

Fluorescent protein vectors & antibodies



Applications

- Fusions
- FRET
- Subcellular Labeling
- Proteasome Activity
- Kinetic Studies
- Cell Labeling
- Cell Cycle Reporters
- Promoter Reporters
- Timed Gene Expression
- Bacterial Expression
- Coexpression of genes
- Stem Cell Application
- Viral Vectors
- Cell Capture and Enrichment
- *In vivo* Imaging

Custom, Bulk & OEM Capabilities

Products & Services

A broad portfolio of products is available for custom/bulk needs and OEM supply, such as:

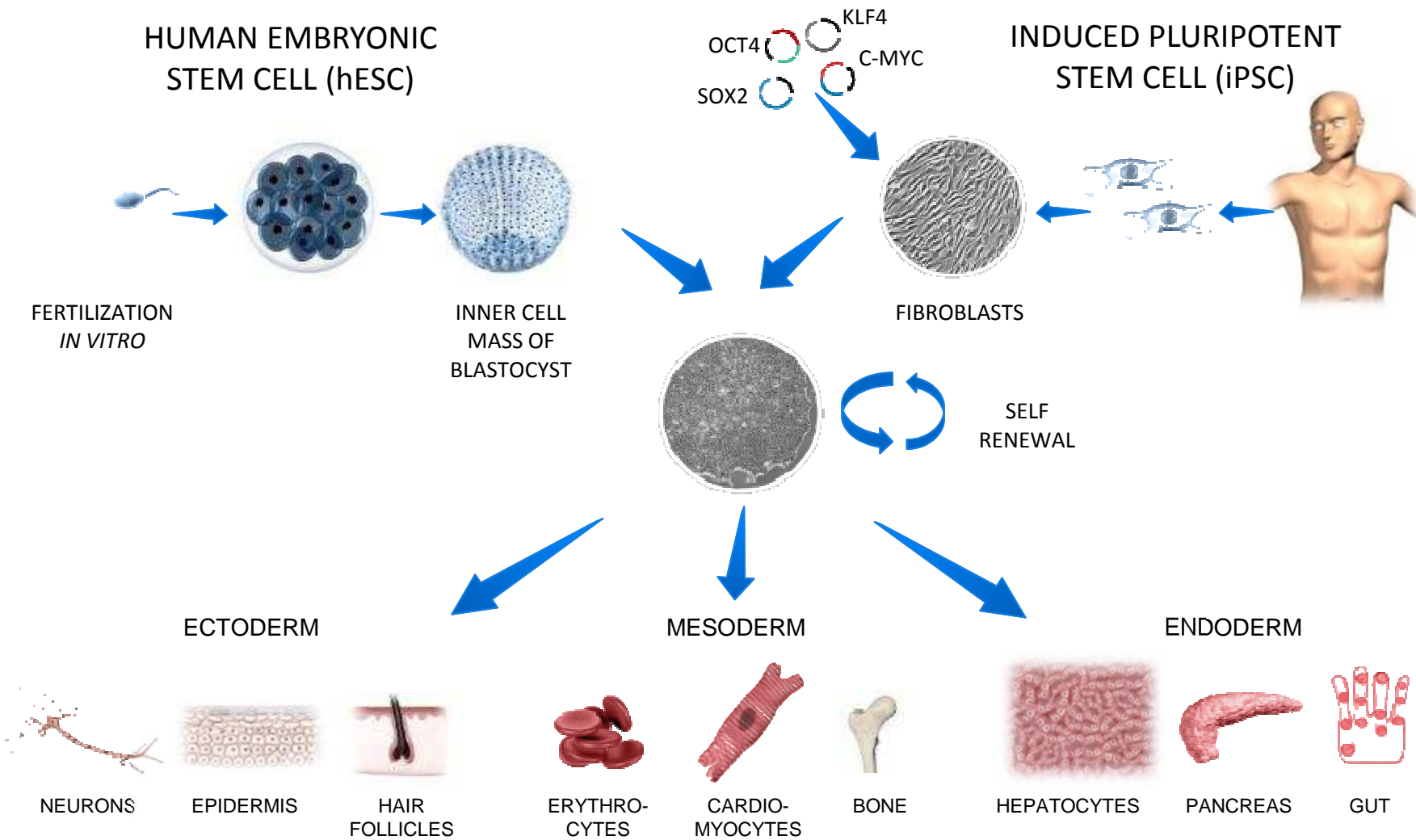
- Restriction and modifying enzymes
- Polymerases
- Nucleic acids
- Molecular biology kits
- TaqStart® antibodies
- ...



Recognized for

- Expert manufacturing
- Reliable quality
- Reproducible product performance
- Prompt delivery time
- Flexible packaging options
- Competitive pricing
- Long-standing customer relationships

Human pluripotent stem cells: origin and potential



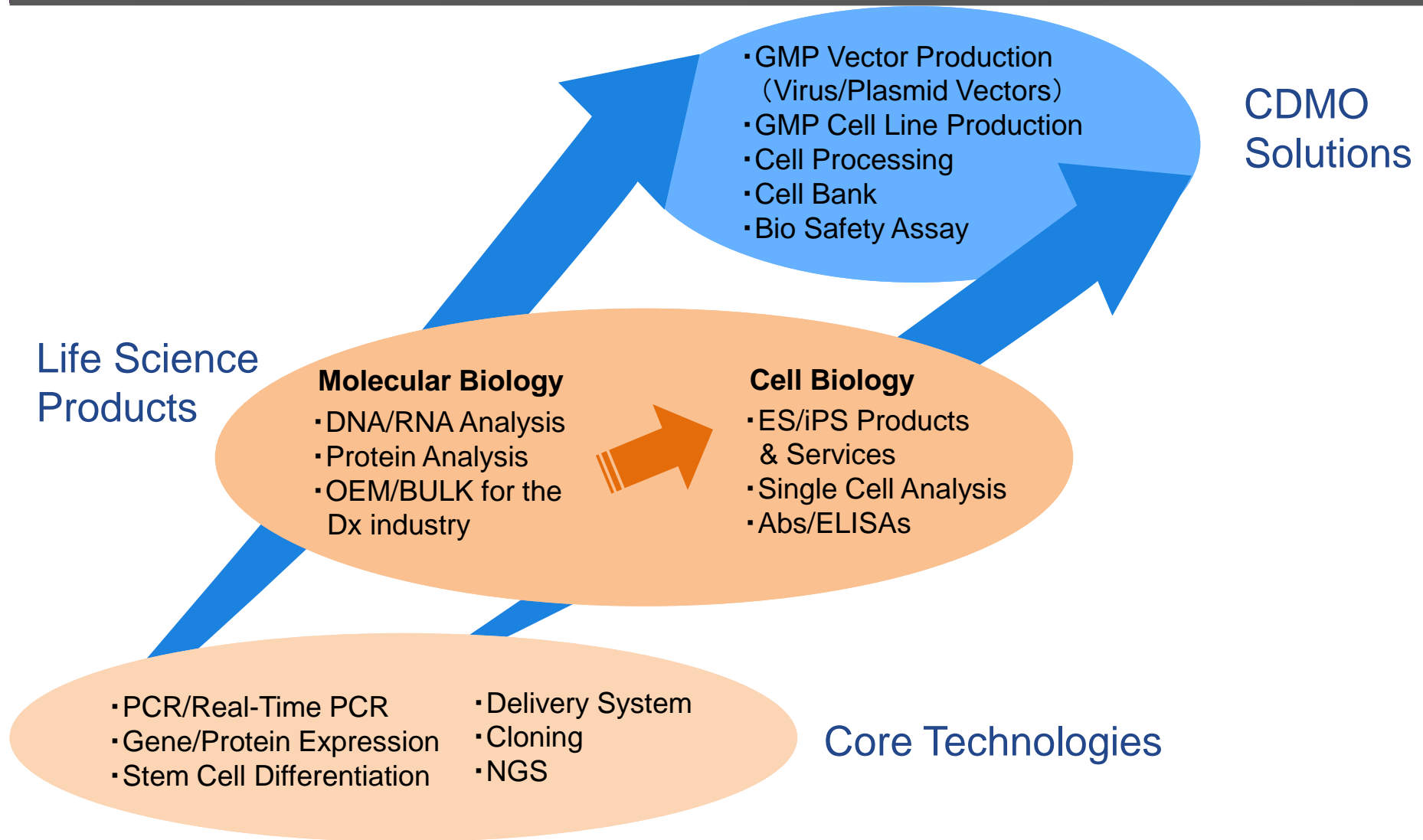
Cellartis® Products & Services



- **Specialized Cells (large scale production)**
 - Hepatocytes
 - Cardiomyocytes
 - Mesenchymal Progenitors
 - Neuronal Progenitors
 - Beta Cells
- **Products for Pluripotent Stem Cell Research**
 - DEF-CS™ (culturing system, suitable for large scale production)
 - DEF-hPSC (both hESC- and hiPSC-lines)
 - Cellartis® DEF-CS Xeno-Free cGMP Culture System
 - Differentiation kits (toward DE and hepatocytes)
- **iPS Services**
 - Sourcing
 - Reprogramming
 - Banking
 - Genetic Engineering
 - Directed Differentiation
 - Clinical grade reprogramming and hESC derivation



From lab essentials to CDMO solutions



Takara Clontech and now Cellartis offer...

Leading-edge
innovation.

Ecommerce
integration.

Best-in-Class Tools
Expert Support
Value Pricing

Decades of
expertise.

Dedication to our
customers.

that's
GOOD[™]
science!

Takara  Clontech