Company Brochure · 2024

Read Data, Lead Big

Bio Big Data Leader, Insilicogen

INSILICOGEN

www.insilicogen.com

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Upgraded Bioinformatics service with AI

Insilicogen is a company, specializes in Bioinformatics. Our company provides a platform to share and execute various biological data analysis effectively.

Insilicogen is preparing for the future and is motivated by our new slogan “make the data come alive.” Insilicogen will provide the standards of big data and ensure that various data worldwide is evolved ceaselessly by being deeply involved with data collection, data storage, and data analysis.

We, 人Co, will actively learn and adopt AI, state-of-the-art technology, and quickly provide new values to our customers. Our overarching goal is to design the future of our clients with one-step-ahead suggestions.

Bio Big Data Leader

Insilicogen has continuously constructed the bio big data for the past 20 years.
We have and are constructing Omics big data system for government administrations such as the Ministry of Science and ICT, the Ministry of Health and Welfare, the Ministry of Agriculture, Food and Rural Affairs, Korea Disease Control and Prevention Agency and the Rural Development Administration.
BIGBIGHUG, BLIMS, CODA, CRIS, CowScan, KAHIS, MAGIC, MBDC, MEE, NABIC, ODFM, OREO, RRM are the representatives.

Constructing a database is an opportunity to learn where the raw data comes from, flows into and what the hidden implications are.
Our country and many corporations have produced bio-data with massive investments for a very long period of time and are still producing them. However, there will be no meaning in creating larger data unless data is standardized and managed systematically.

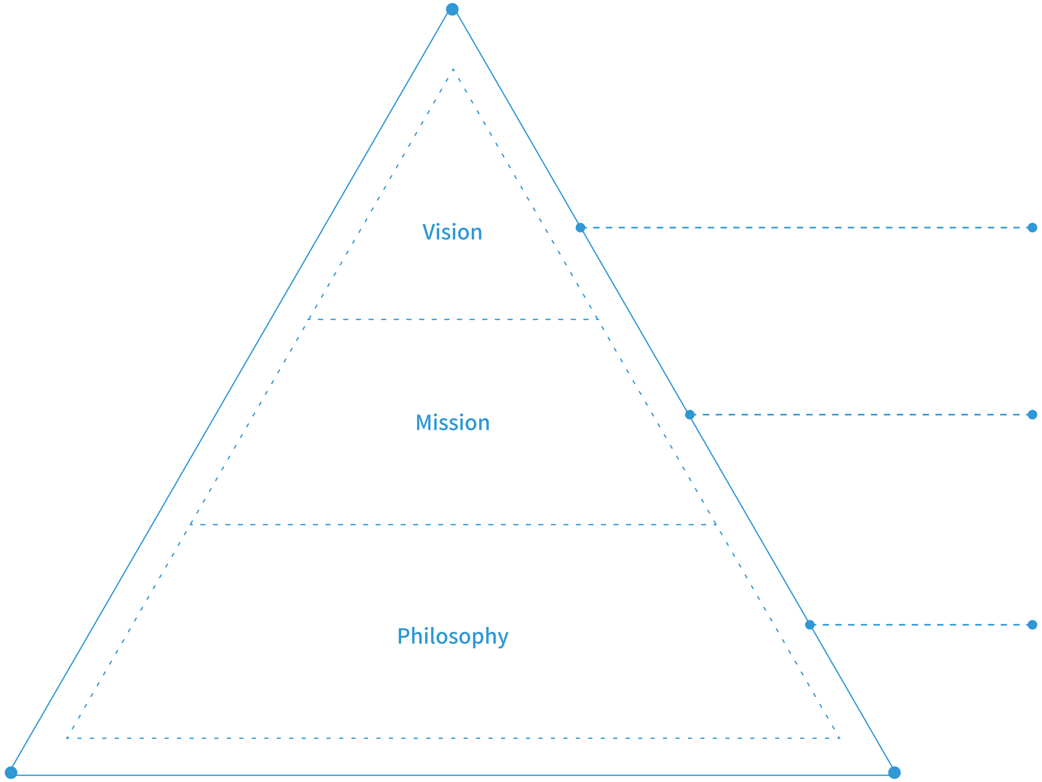
We 人Co will go one step deeper into this trend. Insilicogen will be the headstone of big data and will provide the most productive and effective process with the know-how that has been acquired through the development of data production, archiving, modeling and analysis.

As always, insillicogen will always put people first and leap forward to make the technical advancement.
We greatly appreciate your interest and support.

CEO of Insilicogen, Namwoo Choi.

Value Pyramid

人Co is an Insilicogen's core brand value. It represents our aim to create our own corporate culture with the help of people, computer technology, and through considerate communication.

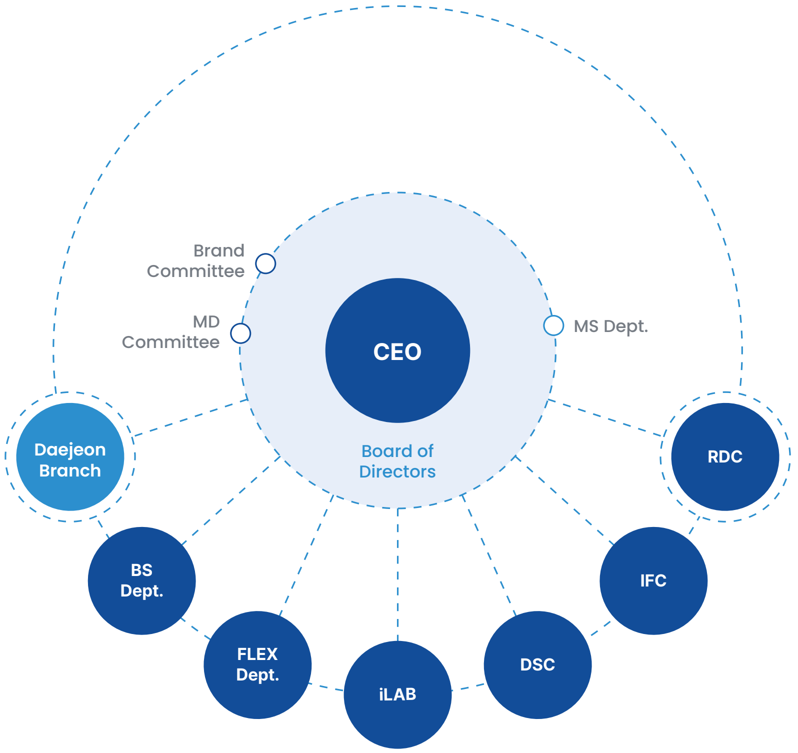


Professional Bioinformatics company

Creation of new value through sharing
biological information and communication.

A dream you dream alone is only a dream.
A dream you dream together becomes a reality.

Horizontal communication and creative culture guarantee diversity



iLAB

insilico Lab

iLAB, your customized bioinformatics partner, provides everything you need in the lab using our techniques and know-how obtained from years of experience and consulting various solutions.

RDC

R&D Center

(Ministry of Science and ICT Designated Outstanding Corporate Research Institute)

Beyond the combination of coded biological data and algorithms, RDC is providing the consultation for the Bioinformatics analysis of NGS-related data for animals, plants, and microbes.

BS

Bioinformatics System Department

BS leads knowledge informatization by blowing life into information and putting it into the system.

FLEX

FLEX Department

FLEX will offer practical customer values utilizing a successful digital business model by integrating planning, marketing, UX/UI, Front-end and Back-end.

DSC

Data Science Center

DSC provides practical values for the basic science, medical science, plant/animal breeding and microbiome. DSC provides integrated data science services from professional consulting to data analysis and platform development.

IFC

insilico Food Center

IFC offers FoodTech services integrated with Artificial Intelligence (AI) and Internet of Things (IoT) by developing technology that provides personalized diet recommendations and tailored food suggestions utilizing bio-food big data.

We will continue to transform for our business growth

2004

- 10 Insilicogen's distributed business established

2005

- 08 Insilicogen, Inc. Bioinformatics Consulting Firm established

2006

- 02 Joint research on the development of alternative materials for malachite green derived from natural materials
- 06 Win a contract on constructing 'Animal Genome Information System' for the National Livestock Research Institute (Formerly Livestock Research Institute)

2007

- 06 Certified R&D center, Insilicogen, Inc. as a research institute
- 07 Win a contract on constructing 'Breeding Information Linkage Utilization System' for the National Institute of Agricultural Science and Technology

2008

- 04 Selected as the supervision institution to participate on National Research project organized from Ministry of Environment (Construction of environmentally harmful substance-genome knowledge database and development of technology-based on semantics, 2008 ~ 2010)
- 05 Moved the office to Suwon High-Tech Venture Valley
- 06 Signed MOU on joint research projects and technical cooperation with Biomax Informatics AG
- 07 Win a contract on the development of DB analysis tool for early detection pathogen, posted from KCDC
- 09 Build an Ancient Genetic Resource Database for National Institute of Cultural Heritage

2009

- 02 Registered LabKM® trademark
- 05 Developed a genetic information system to identify fallen soldiers from the Korean War(Ministry of National Defense Inspection Headquarters)
- 10 Insilicogen, Inc. Daejeon branch established

2010

- 01 Completed analysis of the Korean cow's entire genomic sequence analysis on its single mutation with Yeungnam University, Department of Animal Science, Chungbuk National University, CLC bio A / S, Solgent
- 03 Signed Plant Genomics MOU with three organization (Insilicogen, Inc., CLC bio A/S, Seoul National Univ.)
- 05 Participated in establishment of LIMS(Laboratory Information Management System) for Livestock Products Quality Assurance Service
- 09 Win a contract on Bioinformatics analysis of cabbage SNP marker from National Horticultural Research Institute
- 12 Registered Glter® trademark

...

2011

- 01 Ontle™(Web-based Ontology Editing), international patent registered
- 01 Signed MOU on cultivating prospective bioinformaticians(School of Life Systems, Soongsil Univ.)
- 06 Selected as a Management Innovation Certification Company
- 12 Selected as a technology innovation business by Ministry of Knowledge Economy(2011~2016)

2012

- 01 Patent for Ontle™(Web-based Ontology Editing) registered
- 11 Signed academic exchange agreement with 6 Universities(Yeungnam, Hanyang, Chungbuk, Chonbuk, Sungkyunkwan, Sangmyung)

2013

- 07 Patent for KinMatch™ (DNA search method) registered
- 10 Selected as a special research center from military manpower administration for those who need alternative military service
- 11 Executed ICT fusion contents utilization system and information standardization project based on traditional food history of KFRI and scientific evidences (Bio Big Data Business)

2014

- 01 Joint registered pepper gene sequencing analysis on ‘Nature Genetics’(The Next Generation Bio-Green 21, organized by the RDA)
- 03 Registered as a research and development service
- 08 Selected as a prospective public data providing company
- 12 Moved to Heungdeok IT Valley

2015

- 01 Certified as a small-giant company by Ministry of Employment and labor
- 09 Incorporated Insilicogen’s Daejeon branch
- 10 Organized Hanwoo Genome Symposium (sponsored by the Ministry of Agriculture, Forestry and Fisheries Technology Planning and Evaluation, Gyeongsangbuk-do)
- 11 Increased capital to 200 million won
- 12 Opened 人CoFLEX

2016

- 02 Selected as an excellent management company designated by the Military Manpower Administration (Awarded from Small and Medium Business Administration in Gyeonggi province)
- 07 Registered a domestic patent on developing traitchemical network-based model for providing personalized trait-specific dietary information

2017

- 03 Selected as a sincere taxpayer in the year of 2017
- 08 Selected as the best-service company by Korean Credit Guarantee Fund
- 11 Registered trademark iF(insilico Food)

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2018

- 01 Selected as a youth-friendly small company in the year 2018(Ministry of Employment and Labor)
- 03 Signed MOU on building a big-data based, customized service platform(Kwangdong Pharmaceutical Co.,Ltd.)
- 12 Received a certified award from Ministry of Oceans and Fisheries(Business on building National Fisheries Biointegration System)

2019

- 01 Signed MOU on building the ecosystem of healthcare healing convergence business((Re)GSIPA)
- 04 Proceeded a workshop on animal genetic big data platform based on IncoGWAS at the RDA & NIAS (Opened Event)
- 11 Registered domestic patent for a target gene screening method and device for multi-omics data and survival analysis
- 12 Received a certified award from Ministry of Oceans and Fisheries

2020

- 01 Selected as a youth-friendly small company(Excellence in work life balance)
- 03 Registered a domestic patent for human body type and metabolic susceptibility SNP marker and diagnostic information provision method
- 12 Received a minister award (Ministry of Agriculture, Food and Rural Affairs)

2021

- 01 Selected as a youth-friendly company (Above-average Salaries in the industry/ Excellence in Work-life Balance)
- 06 Selected as an excellent corporation R&D Center in 2021 (Value creation through outstanding R&D competencies)
- 06 Selected as an outstanding small and medium sized company in 2021 (Contributing to the growth of the industry)

2022

- 01 Selected as a youth-friendly company (Above-average Salaries in the industry)
- 04 Signed a contract on digital breeding technology development business with Korea Institute of Planning and Evaluation for Technology in Food (Ministry of Agriculture, Food and Rural Affairs)

2023

- 01 Selected as a youth-friendly company (Above-average Salaries in the industry)
- 07 Registered a domestic patent on developing camera-integrated tenderloin imaging device
- 11 The 28th Agricultural Day : Presidential Commendation Award

2024

- 01 Selected as Youth-Friendly Small and Medium Enterprise (Outstanding Work-Life Balance)

Beyond collaboration, we build partnership for mutual growth!

By building a real-time collaborative work system with global Bioinformatics companies, we enhance the product development and its service.

CJ BIOSCIENCE

SCL

KHU

Humanizing Genomics macrogen

intel

ORACLE

amazon

YEUNGNAM UNIVERSITY 1947 영남대학교

DELL

QIAGEN

Biomax INFORMATICS

CELEMICS

아주대학교 AJOU UNIVERSITY 1973

DNALINK

SUNGKYUNKWAN UNIVERSITY 1398 성균관대학교

NAVER

Data Production

- DNA Link
- LabGenomics
- Macrogen
- BioCore
- Seoul Clinical Laboratories
- Celemics
- Seasun Biomaterials
- CJ Bioscience
- Ajou University Medical Center
- Weedahm Oriental Hospital
- SFC

Database & Hardware

- BethesdaSoft
- Mutecsoft
- Daewon CTS
- ThinkTek
- Zinion
- Misoinfo
- Naver
- Dell Korea
- Oracle Korea
- Intel Korea
- IBM Korea
- Lenovo Korea
- Amazon Korea

Data Analysis

- Biobase(QIAGEN)
- BioBam Bioinformatics S.L.
- Biomax Informatics AG
- CLC bio(QIAGEN)
- Gene Codes Corporation
- geneXplain GmbH
- Ingenuity(QIAGEN)
- OmicSoft Corporation(QIAGEN)
- Petagene
- ThermoFisher Scientific Korea
- Agilent Technologies Korea

Sales & Marketing

- Qiagen Korea
- ThermoFisher Scientific Korea
- HanDok
- Bioplus
- Ventech Science
- Dawinbio
- Pigenomics
- Eloombio
- Hanall
- Bion-tech

Education

- Gachon Univ.
- Kangwon National Univ.
- Konkuk Univ.
- Kyung Hee Univ.
- Sangmyung Univ.
- Seoul Women’s Univ.
- Sungkyunkwan Univ.
- Sejong Univ.
- Sookmyung Women’s Univ.
- Soonchunhyang Univ.
- Soongsil Univ.
- Ajou Univ.
- Yeungnam Univ.
- Chung-Ang Univ.
- Chonnam National Univ.
- Jeonbuk National Univ.
- Chungnam National Univ.
- Chungbuk Univ.
- Hanyang Univ.

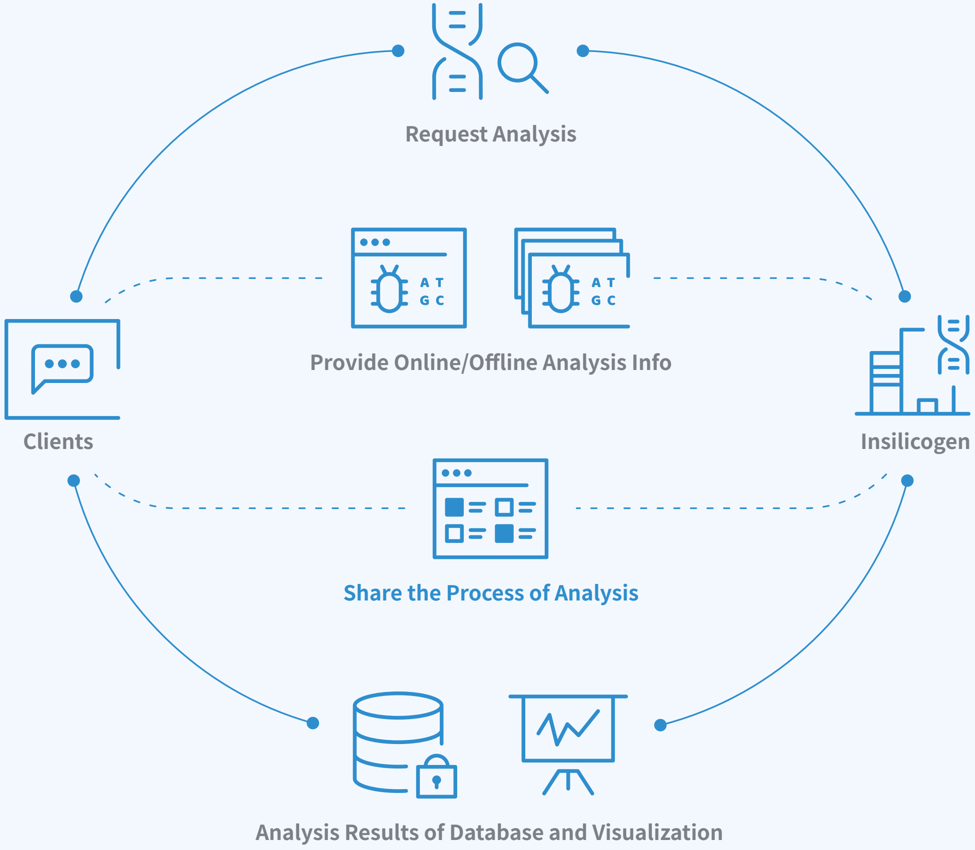
Together with the highly-skilled foreign and domestic professionals, provide fast, reliable, and personalized Bioinformatics services

Insilicogen is a professional Bioinformatics company.
We suggest methodologies to satisfy clients' needs and purpose, and communicate based on the results. Next-Generation Sequencing(NGS) becomes a universally used research method in all fields, including Genomics, Transcriptome, and Variant analysis.

Insilicogen provides customized service with 60 Bioinformatics professionals and Bioinformatics analysis pipeline and knowledge developed by foreign partners for years. Experience all-in-one service that allows from production to analysis of data difficult to interpret and specialize in the new studies.

Analysis of 500TB raw data in decoding 30 genomes

Korean beef, abalone, flatfish, rockfish, red pepper, sweet potato, cucumber, red seabream, mushroom, etc.


Request Analysis
A T
G C
A T
G C
Provide Online/Offline Analysis Info
Clients
Insilicogen
Share the Process of Analysis
Analysis Results of Database and Visualization

Human

- Disease-associated variant analysis(WES, Targeted)
  CLC Genomics Workbench
  CLC Genomics Workbench Premium
  QCI Interpret
- Gene expression and network analysis
  CLC Genomics Workbench Premium
  Ingenuity Pathway Analysis
  OmicSoft Suite & Land

Animal·Plants

- Analysis of functional trait-related variations
  CLC Genomics Workbench
  OmicsBox Genome Analysis
- Gene expression analysis (RNA-seq)
  CLC Genomics Workbench
  OmicsBox Transcriptomics

Microbe

- Genetic structure and function analysis
  CLC Genomics Workbench Premium
  OmicsBox Genome Analysis
  OmicsBox Functional Analysis
- Gene expression analysis (RNA-seq)
  CLC Genomics Workbench
  OmicsBox Transcriptomics
- Metagenome analysis
  CLC Genomics Workbench Premium
  OmicsBox Metagenomics

Transcriptome

- Gene Expression profiling
- DEG/Pattern analysis
- GSEA analysis
- Pathway analysis
- Association study between promoters and transcripts
- WGCNA

Genome

- Genome size estimation
- De novo genome assembly
- Repeat elements analysis
- Structure gene prediction (Ab initio gene + Evidenced gene)
- Protein function annotation
- Long non-coding RNA analysis
- Promoter prediction
- Linkage map construction using GBS data

Variation

- Potential SNPs detection
- Potential SSRs analysis
- Lineage marker development
- Genetic marker development for breeding
- Hereditary/disease associated SNP marker
- Population structure analysis
- Selective sweep analysis
- Genomic selection analysis
- Effective population size analysis
- GWAS analysis
- Marker development based on ML

Comparative Genomics

- Ortholog analysis
- Phylogeny analysis
- Gene gain & loss analysis
- Gene duplication analysis
- Synteny analysis
- Pangenome analysis

Epigenome

- Epigenome analysis based on array/sequencing
- Methylation/histone mark/miRNA analysis
- DMR and pattern analysis
- GSEA and pathway analysis
- Comprehensive analysis of expression & regulation

Transcriptome

01 Initial response on protein medicine in human PBMC
02 Transcriptome profiling for human sepsis
03 Human brain tumor & senescence transcriptional association study
04 Transcriptome and Pathway analysis on the 'Korean beef'
05 Genetically modified mouse(GEM) RNA-sequencing
06 Discovery marker from *Equus ferus caballus* Transcriptome analysis
07 Comparative transcriptomics between two *Haliotis discus* subspecies
08 *De novo* transcriptome assembly of *Frankliniella occidentalis*
09 piRNA/miRNA/small RNA Expression profile of Chicken
10 Establishment of the EST information of Korean domestic canine
11 Transcriptome analysis and discovery of novel AMP on *Scolopendra subspinipes*
12 Discovery novel AMP and transcriptome analysis on the cockroach
13 *De novo* transcriptome and DEG/pathway analysis on *Valeriana fauriei*
14 Transcriptome profiling for marine fish with bacterial infection
15 *De novo* transcriptome and functional DEGs/pathway analysis on the grass
16 Leaf color gene expression profile on the rice
17 Gene expression profile of the radiation effect on *Arabidopsis thaliana*
18 *Panax ginseng* ESTs analysis
19 *De novo* transcriptome assembly and DEG analysis on the *Bostrychia*
20 Gene expression profile of *Pleurotus ostreatus* by developmental stage
21 Gene expression difference between asexsual and sexual reproduction of the *Fusarium* sp

Variation

01 Discovery of the genetic factor and mechanism for Papaver petal color
02 Comparative genomics for HIV
03 Identification of prediction markers for *Platycodon grandiflorus*
04 Discovery of early diagnostic markers of degenerative disease of a house dog
05 Korean breast cancer WES analysis
06 Discovery of breed-classification markers of Chestnut
07 *Haliotis discus hannai*(abalone) population study
08 *Undaria pinnatifida* population study
09 Discovery of Functional Gene and variant on 'Korean beef'
10 Variant analysis among Traditional chicken strains

11 *Coturnix japonica* variant analysis among subspecies
12 *Caenorhabditis elegans* comparative genome analysis using variants
13 Methylation/mRNA/miRNA chip analysis on the breast and stomach cancer
14 Variant analysis on Rice strains and novel gene discovery
15 Cabbage SNP marker selection
16 Variant analysis among Chili pepper strains
17 Discovery of the strain identification marker of Lettuce
18 Discovery of the origin identification marker of milk vetch root
19 Discovery of the species identification marker of *Brucella*

Genome

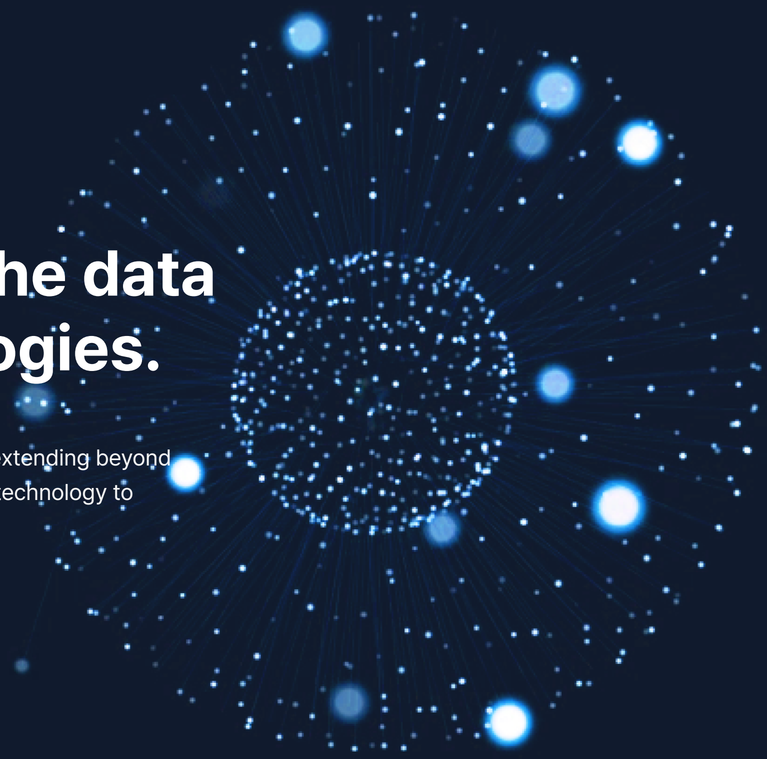
01 Senna tora genome analysis
02 8 fishes genome project (*Epinephelus akaara, Thamnaconus modestus, Misgurnus mizolepis, Anguilla japonica, Hypomesus nipponensis,Theragra Chalcogramma, Platichthys stellatus,* and Amphiprioninae)
03 Powdery mildew mtDNA analysis
04 Development of liquid biopsy NGS pipelines and clinical reporting system
05 Seawater/Freshwater *Bivalvia* genome project
06 *Haliotis discus hannai* genome analysis
07 *Trombiculidae,* factor of Scrub typhus, genome analysis
08 *Coturnix japonica* genome analysis
09 Minke whale genome analysis
10 Analysis of the genomic sequence of Chili pepper, Cabbage genome analysis
11 *Gracilariopsis chorda*(red algae) genome analysis, *Gelidium vagum*(red algae) genome analysis, *Undaria pinnatifida* genome analysis
12 *Xylaria*(fungi) genome analysis
13 *Cochliobolus miyabeanus*(Brown spot disease) genome analysis
14 *Phellinus linteus*(Fungi) genome analysis
15 Genome analysis for Hansenula polymorpha
16 Comparative genomics among *Fusarium* subspecies
17 *Oplegnathus fasciatus, Sebastes schlegelii, Pagrus major and Chelon haematocheilus* genome analysis
18 *Scolopendra subspinipes* genome analysis

Comparative genomics

01 Genome-enabled discovery of anthraquinone biosynthesis in *Senna tora*
02 Expansion of alginate, ferredoxin, and transporter related gene families led to the evolution of brown algae in the Stramenopiles.
03 Chromosome-Scale Genome Assemblies of Two Korean Cucumber Inbred Lines.
04 Pangenome analysis with Enterococcus

Epigenome

01 Epigenetic response for heat stress in *Haliotis discus hannai*
02 The multi-omics analysis on ‘Korean beef’ (RNA/MBD-seq)
03 The multi-omics analysis to discover a genetic effect of the Chinese medicine (RNA/Epic850k)
04 Cancer Stem Cell(CSC) Histone CHIP-seq analysis
05 Mouse WGBS analysis



The Future of the seed industry lies within the data generated through digital breeding technologies.

Insilicogen will harness data breeding to uncover high-value resources in the fields of pharmaceuticals, bioproducts, and energy, extending beyond “seeds,” which are the fundamental source of sustenance.We are dedicated to integrating biological information, big data, and AI technology to discover novel seeds in silico, relentlessly seeking the foundational value for the future bio-industry.

Download Digital Breeding Casebook(Vol.1)

Agriculture

Effective Selective Breeding is feasible through data breeding.

Fishery

Time to acquire economic trait will be reduced.

Animal Husbandry

Optimal characteristics will be maintained through the simulation of crossbreeding.

SOLUTIONS

Phenotype-Genotype Integrated Data Analysis

- Genotyping and SNP chip development
- RIL population variant exploration
- Elite lineage variant exploration and inter-lineage relatedness estimation
- Group analysis - PCA, STRUCTURE, Phylogeny
- MABC marker discovery and construction of phenotype-genotype database

Machine Learning for Trait Prediction

- Genotype-phenotype association marker search (GWAS/FST)
- Calculation of heritability index for each marker
- Establishment of a machine learning phenotype prediction model

Breeding Simulation

- Calculation of breeding value (GBLUP, ssBLUP, rrBLUP)
- Calculation of valid group
- Mating simulation and mating efficiency test

OUR SERVICES

Phenotype-Genotype Customized Database Construction

Standardized phenotype and genotype big data design and development

Phenotypic Prediction Modeling

Machine learning modeling for selection of superior individuals based on data breeding

Phenotypic Prediction

Genotype-based phenotypic prediction using machine learning models

Breeding Efficiency Prediction

Breeding guidelines for superior trait preservation

Customized Data Analysis

De novo decoding and beneficial gene discovery based on bioinformatics

Genotyping

Customized genotype analysis services for breeding optimization

Molecular Detection Kit

Development of rapid and economical molecular detection kits for economically important traits

In the process of transforming data into knowledge, our AI will assist you

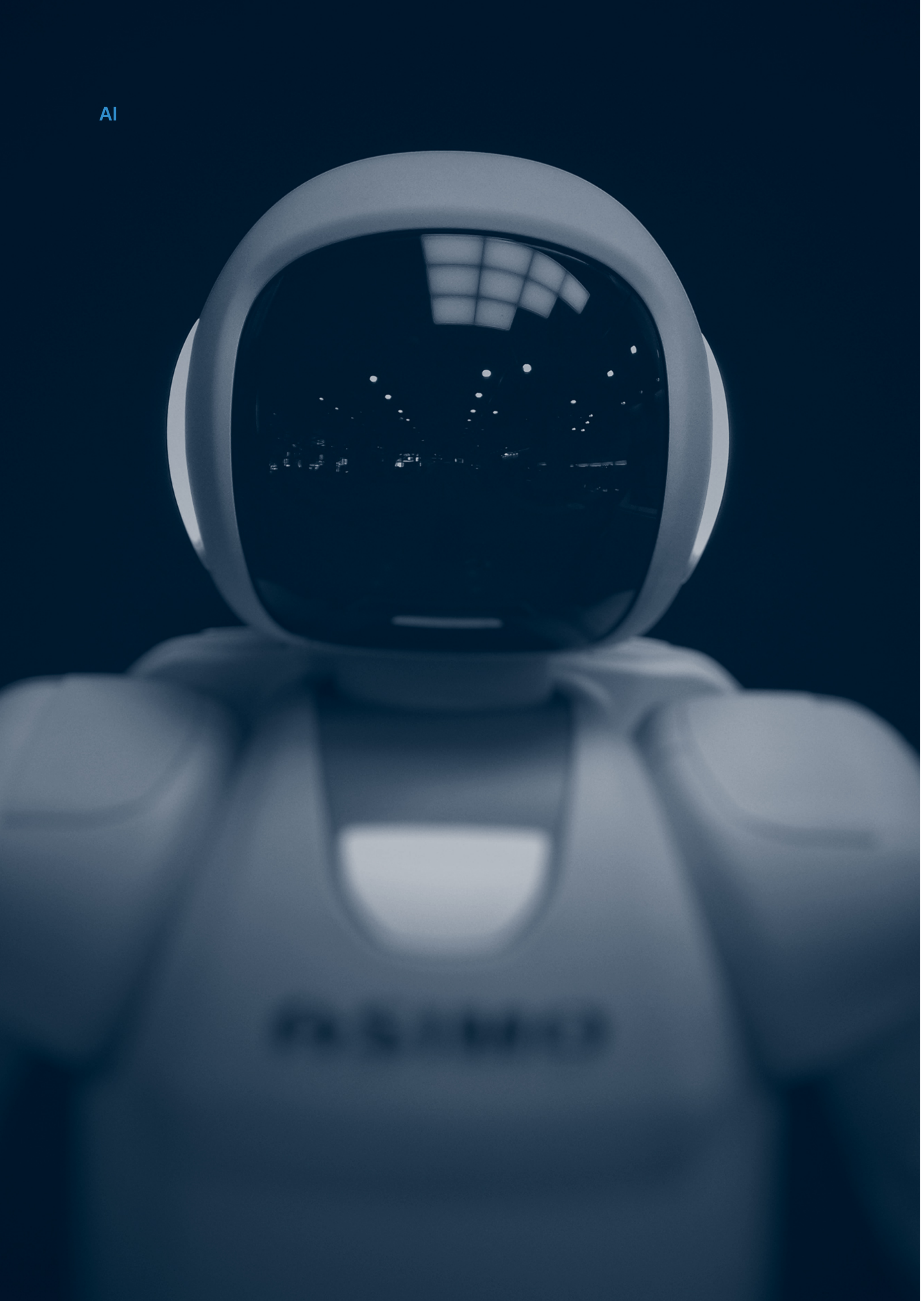
In Bioinformatics, Artificial Intelligence plays a significant role.
Through machine-learning, we discover unknown matters.
Recently, persistent technological advancements of big data and deep-learning elevate the possibility.

AI technology unveils and discovers meanings and values of complicated data
not only from multi-omics but also from documents, videos, and networks.

Insilicogen's AI technology handles character data, sequential data, video imaging, and unstructured big data to discover hidden knowledge and implements techniques such as structuring, interconnecting, machine-learning, feature selection, and extraction to support integrated understanding.

Multiple big data analysis, machine learning task execution

Beef quality estimation by image analysis, selection of genetic markers for agricultural, forestry and fishery economic traits, analysis of pottery microelements



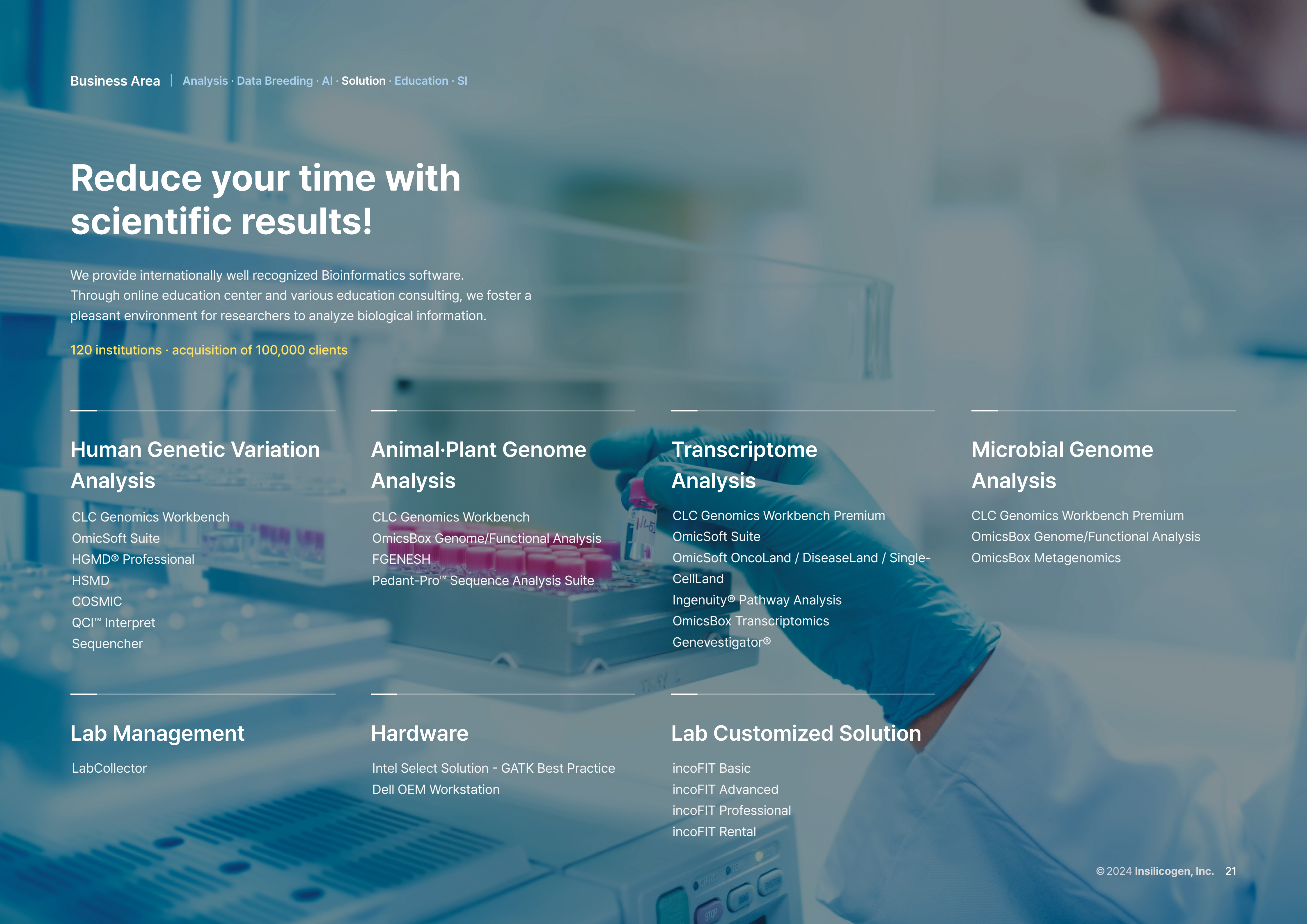
incoRECOM	• Artificial Intelligence Recommendation System • Wide & Deep Learning for Recommender System Deep FM / AutoRec / KGCN
incoCV	• Artificial Intelligence Video Recognition, Segmentation, and Detection • OpenCV / Image Detection (YOLO v3) / Image Classification / Image Segementation (U-Net)
Semantic Modeling	• Through semantic modeling, we integrate the clients’ complex data and open sources for continuous data accumulation and creation, and find insight.
Machine Learning	• EDA (Exploratory data analysis) • Analysis of data structure and reduction of dimension • Data refinement, transformation and preprocessing • Feature selection and extraction • An optimized machine-learning model Development and assessment
Deep Learning	• Extract pattern map using DNN(Deep Neural Network), create a deep learning model by applying the architecture • Classification, detection, segmentation, and model development for biological and medical image • Complex network construction by NLP (Natural language processing) based literature data analysis
Tailored Knowledge	• Visualize web-based analysis results • Provide data result of real-time dynamic programming, which is available online • Web application and mobile app development • Development of artificial intelligence and analysis algorithms at mobile edge

Research Projects

[Korea Disease Control and Prevention Agency] Building a large-scale computing-based AI pipeline and visualization
[Rowan] Establishment of a personalized content-based recommendation system for dementia
[National Institute of Fisheries Science] Establishment of flatfish growth prediction model based on machine learning
[Korea Institute for Animal Products Quality Evaluation] Establishment of a mechanized quality evaluation system for Korean beef based on artificial intelligence
[D.iF] Food object detection and classification by deep learning
[National Research Institute of Cultural Heritage] Establishment of machine learning model to predict termite damage of wooden cultural heritage
[Korea Institute for Animal Products Quality Evaluation] Beef quality estimation by image analysis (Deep Learning) and machine learning
[National Institute of Animal Science] Maker selection for degenerative disease by machine learning
[National Institute of Fisheries Science] Development of machine learning model for prediction of high temperature tolerance for abalone
[Ministry of Environment] Construction of environmentally hazardous material-genomics knowledge-based and Development of semantics-based technology
[Ministry of Environment] Excavation of indicators for heavy metal toxicology using toxicogenomics
[Food Industry Technology Support Center] Coordination analysis among health function, culture, excellence geographic location of Korean food and Korean food ingredient
[Korea Food Research Institute] Traditional food semantics database construction and analysis program
[Korea Food Research Institute] Construction of semantics database and korean food specialized ontology
[Pusan National University] Construction of anti-aging molecular network of aging Database
[Korea Food Research Institute] Development of InsilicoFood pilot system through the integrated analysis of food information
[Kwang Dong] Development of iF DB based dry complex system DB and h-pilot system

Patent and Program Registration

[Patent Registration 10-2021-0168283] System for risk prediction of osteoporosis
[Patent Registration 10-2118103] Method for measuring the fineness of marbling using ribeye image of Korean beef
[Patent Registration 10-2067076] Biomarker composition for prediction or diagnosis of canine patellar lunation
[Patent Registration 10-2018-0156903] Biomarker composition for prediction or diagnosis of canine patellar lunation
[Patent Application 10-2019-0023081] Biomarker composition for diagnosing lung cancer comprising peptide nucleic acid
[Patent Application 10-2019-0025109] High sensitive genetic variation detection and reporting system based on barcode sequence
[Patent Application 10-2019-0155754] Biomarker composition for prediction or diagnosis of canine degenerative Diseases
[Patent Registration 10-1107582] Web-based ontology editing operation system
[Program Registration 2011-01-121-005389] Smart-TGM heavy metals toxicity-index excavating tools
[Program Registration 2011-01-129-001569] WeightViz by weight visualization tool
[Program Registration C-2014-030421] Personal genomics-based obesity risk computing program
[PCT Application pct110125] Web-based ontology editing operation system
[Patent Application 10-2014-0163505] Customized personal traits dietary ingredients for information character-chemical agent network system and providing methods
[Patent Application 10-2014-0170397] Personal genomics-based obesity risk analysis system and method
[Patent Application 10-2015-0156844] Customized food information recommendation system considering personal genotype and phenotype information



Reduce your time with scientific results!

We provide internationally well recognized Bioinformatics software.
Through online education center and various education consulting, we foster a pleasant environment for researchers to analyze biological information.

120 institutions · acquisition of 100,000 clients

Human Genetic Variation Analysis

- CLC Genomics Workbench
- OmicSoft Suite
- HGMD® Professional
- HSMD
- COSMIC
- QCI™ Interpret
- Sequencher

Animal·Plant Genome Analysis

- CLC Genomics Workbench
- OmicsBox Genome/Functional Analysis
- FGENESH
- Pedant-Pro™ Sequence Analysis Suite

Transcriptome Analysis

- CLC Genomics Workbench Premium
- OmicSoft Suite
- OmicSoft OncoLand / DiseaseLand / Single-CellLand
- Ingenuity® Pathway Analysis
- OmicsBox Transcriptomics
- Genevestigator®

Microbial Genome Analysis

- CLC Genomics Workbench Premium
- OmicsBox Genome/Functional Analysis
- OmicsBox Metagenomics

Lab Management

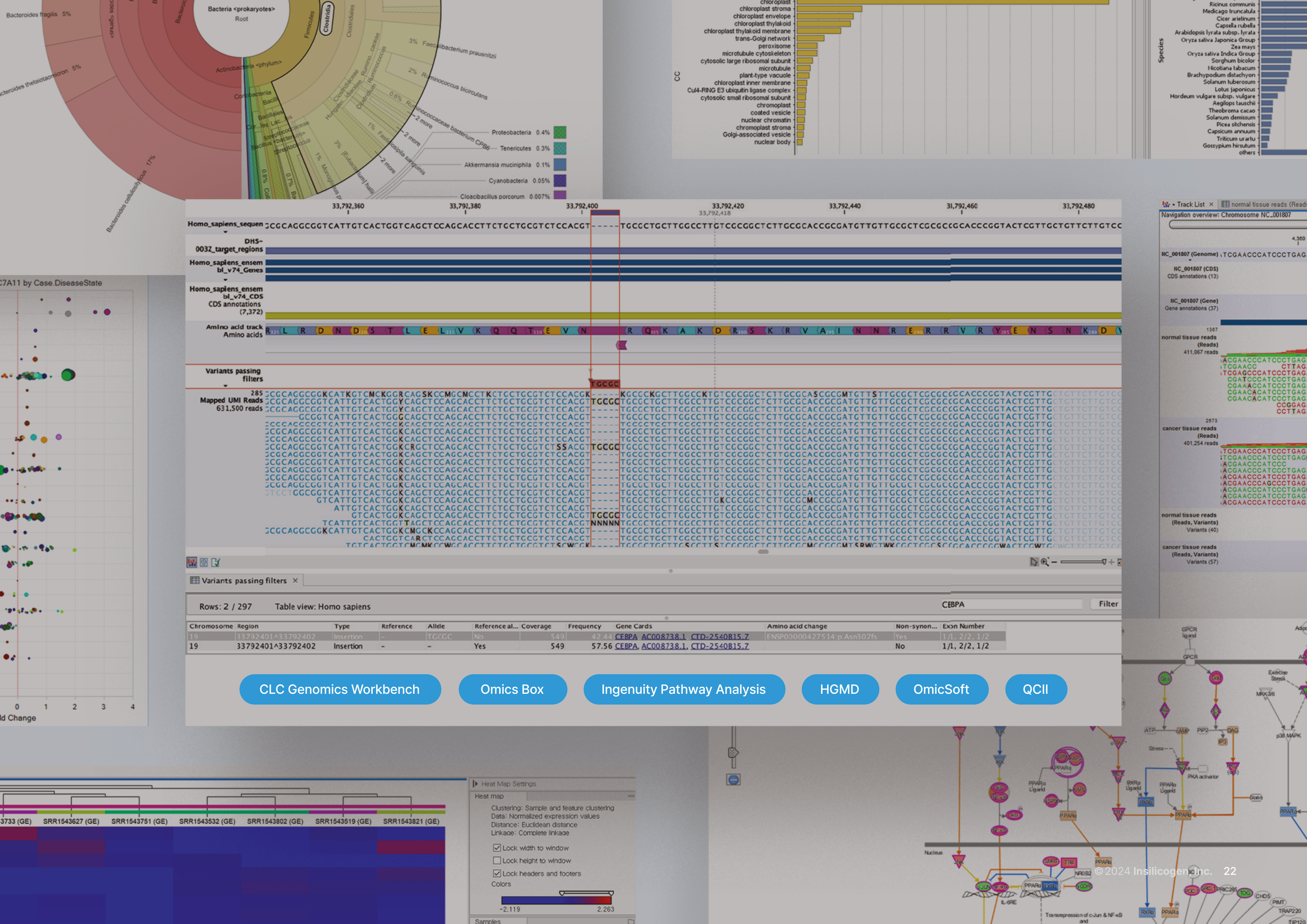
- LabCollector

Hardware

- Intel Select Solution - GATK Best Practice
- Dell OEM Workstation

Lab Customized Solution

- incoFIT Basic
- incoFIT Advanced
- incoFIT Professional
- incoFIT Rental



Variants passing filters

Rows: 2 / 297 Table view: Homo sapiens

Chromosome	Region	Type	Reference	Allele	Reference al...	Coverage	Frequency	Gene Cards	Amino acid change	Non-synon...	Exon Number
19	33792401^33792402	Insertion	-	TGCGC	No	549	42.44	CEBPA, AC008738.1, CTD-2540B15.7	ENSP00000427514:p.Asn307fs	Yes	1/1, 2/2, 1/2
19	33792401^33792402	Insertion	-	-	Yes	549	57.56	CEBPA, AC008738.1, CTD-2540B15.7		No	1/1, 2/2, 1/2

CLC Genomics Workbench

Omics Box

Ingenuity Pathway Analysis

HGMD

OmicSoft

QCII

Our education programs drive the growth of Bioinformatics

For the latest Bioinformatics education demanded from a domestic research institute, we provide onsite human resource training and the best bioinformatic solution to develop their skills required for biological research and development.

Insilicogen has experts in various fields, such as data processing, genomics & transcriptomics analysis, and programming. With the help of experts, we come up with a suitable curriculum for our target education group and have the best educational results.

50 institutions, Training 10,000 talented individuals

人CoSEMINAR

- Basic educational program for Bioinformatics
- Education on utilizing Bioinformatics solution and its theory

人CoWORKSHOP

- Personalized education for enhancement of Bioinformatic analysis
- Provide example centered education for the work

New-Generation BI Educational Workshop

- Collaborate with KOBIC
- Proceed an education on overall Bioinformatics

人CoEDU

- Online education center
- Provide various educational contents using Bioinformatics solutions and support Bioinformatics analysis

人CoINTERNSHIP

- Program for educating prospective bioinformaticians
- Provide opportunities to understand a basic concept of research development and life in the company via practices

Lead knowledge informatization by blowing life into information and put it into the system

Insilicogen’s System Integration(SI) business provides the latest BIO DB management and analysis solutions that researchers need based on 20 years of experience in building and analyzing biometric information systems, making it easier and more convenient to produce useful data and analyze large amounts of biological information data.

Insilicogen will always work in all areas that require basic genetic resource management, such as species, genes, and samples, laboratory information management, omics data and large-capacity data analysis and management, and even data-breeding to develop new varieties using big data and artificial intelligence.

과학기술정보통신부
농림축산검역본부
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환경부
산업통상자원부
중소벤처기업부
통일부
해양수산부
행정안전부
질병관리본부 KCDC
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KFRI 한국식품연구원
KAERI 한국원자력연구원

30 institutions, 60 system development

CODA, NABIC, MAGIC, Dementia Big Data Platform AlzNAVI,
Genetic Retrieval System for 6.25 war dead and missing children, etc

Genome Browser
RRM
Radiation Reaction Map
국가 방사선 반응지도 모델링 플랫폼
소개
등록
조회
네트워크
원문정보
예측분
서비스 더 알아보기
사용자 매뉴얼
통합검색
원문정보
실험정보
네트워크
예측분석
최신순
검색어를 입력하세요.
방사선 반응
네트워크 실
MULTI EXPOSO

유·무기 소재 및 생명체 방사선 반응 정보의
체계적 수집·관리·통합·예측을 위한 데이터베이스입니다.

많이 찾는 검색어 : 당근, 김치, PVC, 우유, 옥수수나방

Construction of an Integrated Information System

[Korea Centers for Disease Control and Prevention] Establishment of Clinical Genetic Management System for Rare Diseases
[Korea Bioinformation Center] Establishment of Quality Management System for Bio data
[National Marine Biodiversity Institute of Korea] Development of Marine Bio Data Center Platform
[National Institute of Fisheries Science] Establishment of national fisheries biological zone integration system
[Korea Atomic Energy Research Institute] Standardization of food and quarantine radiation response data and establishment of management system
[Centers for Disease Control & Prevention] Clinical Omics Data Archive(CODA)
[National Institute of Agricultural Sciences] Agricultural biotechnology-information system(NABIC)
[National Research Institute of Cultural Heritage] Ancient genetic information system
[National Institute of Animal Science] Livestock genetic resource total management system
[National Institute of Animal Science] Animal genetic information system
[National Research Institute of Cultural Heritage] Ancient human bone traits integration information system

Omics Analysis and Management System Development

[Korea Centers for Disease Control and Prevention] Establishment of a multi-omics information analysis system for COVID-19 confirmed patients
[National Research Institute of Cultural Heritage] Ancient life genetics big data DB system
[KISTI - Korean Institute of Science and Technology Information] Web-based multi-omics integration analysis interface
[KISTI - Korean Institute of Science and Technology Information] Next-generation bio research analysis technology for International cooperation research support
[KISTI - Korean Institute of Science and Technology Information] User-customized next-generation genetics data integration analysis system

Genetic Resource Management and DB Development

[Gachon University Medical Campus] Establishment of a medical database for intermediary research related to COVID-19 rest
[Korea Bioinformation Center] Establishment of Genetic Registration and Management System
[Centers for Disease Control & Prevention] Integrated database construction of Kor-GLASS
[Ministry of Food and Drug Safety] Food poisoning bacteria integration information DB system
[Centers for Disease Control & Prevention] Virus gene DB acceleration
[Centers for Disease Control & Prevention] Food poisoning virus surveillance operation system and genetic analysis module development
[Centers for Disease Control & Prevention] Nervous system virus gene DB function improvement and extension
[Animal and Plant Quarantine Agency] Genetic variation management system
[National Institute of Fisheries Science] Marine life single nucleotide information management system
[Centers for Disease Control & Prevention] System for real-time acute diarrhea disease-causing agent DB operation
[Animal and Plant Quarantine Agency] Genetic analysis results and DB management system
[National Institute of Fisheries Science] Life resources integration DB
[National Research Institute of Cultural Heritage] Ancient human skeleton Y-SNP and ancient life genetic information DB system
[Korea Research Institute of Bioscience & Biotechnology] Genetically modified mouse data collecting computing system

Bio-bank System

[VHS Medical Center] Establishment of BioBank and genetic information management system

Record Management System Development

[Shinan-gun, Jeollanamdo] Production traceability management system for Shinan Bay salt prestige
[Namwon Environmentally-Friendly Black Pork Cluster Enterprise Organization] Environmentally-friendly Gowon black pork record management tracking system
[Hankyong National University] Evergreen Hongcheon Korean-beef RFID record information management system
[Korea Institute for Animal Products Quality Evaluation] Smart beef record system advancement
[Chonnam National University] Green Korean-beef population management system
[Hankyong National University] Jangsu country population management system

Analysis and Development of a Large Volume of DB

[KISTI - Korean Institute of Science and Technology Information] Integrated analysis system for biodegradable network big data
[Agency for Defense Development] Unknown agent integrated verification system
[KISTI - Korean Institute of Science and Technology Information] Alzheimer data network navigation program and integrated analysis platform
[KISTI - Korean Institute of Science and Technology Information] Astronomical space data analysis cloud user interface
[KISTI - Korean Institute of Science and Technology Information] Protein interaction and computer simulation integration management system

[KISTI - Korean Institute of Science and Technology Information] Interface for managing virtual cluster
[KISTI - Korean Institute of Science and Technology Information] Resource management portal system for brain imaging information extraction application analysis
[National Marine Biodiversity Institute of Korea] National marine fishery resources genetics information management system

Genetic Inspection System Development

[Ministry of the Interior and Safety] Compulsory mobilization victim DNA identity validation DB
[Ministry of Unification] Genetic information of separated families DB
[KISTI - Korean Institute of Science and Technology Information] Web-based multi-omics integrated analysis interface
[Korea Institute for Animal Products Quality Evaluation] Beef-record laboratory information management system
[Criminal Investigation Command] Genetic information identification system of fallen soldiers from the Korean War(6.25)
[National Forensic Service] Genetic information search system for finding missing children

Sample Management and Genetic Barcode

[National Institute of Biological Resources] Wildlife integrated genetic information system
[National Institute of Fisheries Sciences] Marine life sample-securing DB and management system
[Chungnam National University] Marine life resource donation registry agency Integration management system
[RDA-Genebank Information Center] Agricultural genetic resources barcoding system

Achievements - Certifications & Patent Registration

Certifications

01 Certified youth-friendly small and medium sized company
From Ministry of Employment and Labor 2024.01.01 / 2026.12.31

02 Certificate of professional research business operator
(order research: engineering research and development business)
From Ministry of Science and ICT 2022.06.27 / 2024.10.20

03 Certified youth-friendly small and medium sized company(excellent wage))
From Ministry of Employment and Labor 2022.01.01 / 2023.12.31

04 Designated excellent corporate research institute
From Ministry of Science and ICT 2021.06.22 / 2024.06.21

05 Direct production certificate(Big-data analysis)
From Korea Federation of SMEs 2021.03.17 / 2023.03.16

06 Direct production certificate(Software development)
From Ministry of Employment and Labor 2021.03.17 / 2023.03.16

07 Certified youth-friendly small and medium sized company
(excellent wage/outstanding work-life balance)
From Ministry of Employment and Labor 2021.01.01 / 2021.12.31

08 Confirmation of Innovative business management in small and medium sized company(MAIN-BIZ)
From Small and Medium Business Administration 2020.06.27 / 2023.06.26

09 Certified youth-friendly small and medium sized company(outstanding work-life balance)
From Ministry of Employment and Labor 2020.01.01 / 2020.12.31

10 Certified youth-friendly small and medium sized company(occupational safety
From Ministry of Employment and Labor 2018.01.01 / 2018.12.31

11 Selected as the best service company
From Korea Credit Guarantee Fund 2017.08.04

12 Approved as a research Institute
From KOITA 2007.06.18

Patent Registration

01 Camera-integrated tenderloin imaging device(10-2554362) 2023.07.06

02 Human body type and metabolic susceptibility SNP marker and diagnostic information provision method (10-2093453) 2020.03.19

03 Prediction and diagnosis method of canine degenerative joint disease(10-2067076) 2020.01.10

04 Targeted gene screening method and device using multi-omics data and survival analysis(10-1107582) 2019.11.01

05 DNA search method(10-1287400) 2013.07.12

06 Web-based ontology editing operation system(10-1107582) 2012.01.12

Awards

01 Official commendation for contributions to advancement in agricultural technology
From Presidential Award 2023.11

02 Official commendation for contributions to the advancement of the food industry
From the Minister of Agriculture, Food and Rural Affairs 2020.12

03 Official commendation for contributions to the development of the marine and fisheries industry
From the Minister of Oceans and Fisheries 2019.12

04 Official commendation on promoting experimental research of fishery
From the Minister of Ocean and Fisheries 2018.12

05 Official commendation on excellence in management
From the Gyeonggi Provincial Small and Medium Business Administration 2016.02

Registered Mark

01 iF®(INSILICO FOOD)
2017.11.01

Program Registration

01 Registered 76 programs including KinMatch(Birth related information search system)

Applied Patent

01 A device provides gene expression information and 6 others

Knowledge-based Bioinformatics platform, 70,000 monthly users!

Insilicogen’s Bioinformatics knowledge platform shares biological information, proceeds online and offline bioinformatics educational programs, and provides various contents for big-data search-based Bioinformatics analysis that leads to online purchases.

人CoDOM · 人CoBLOG

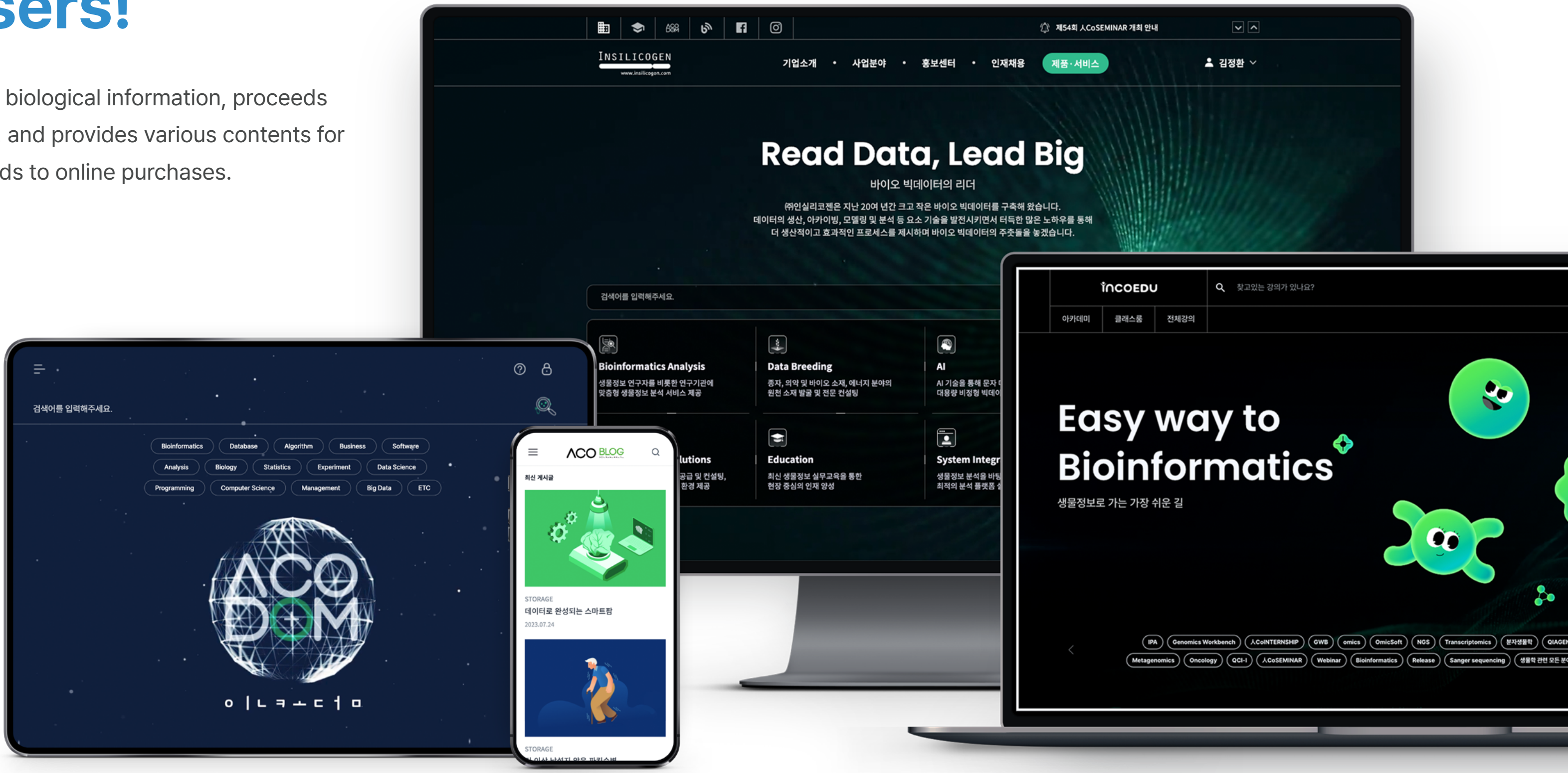
- Knowledge sharing channel of Bioinformatics field
- 2,300 professional articles(人CoDOM)
- 500 blog posts(人CoBLOG)

Offline bioinformatics education

- Internship program
- Run new-generation Bioinformatics education

incoEDU · MyInco

- Online educational channel
- Online purchase channel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Easy way to Bioinformatics
생물정보로 가는 가장 쉬운 길

Achievements - 89 Published Articles (2009-2024)

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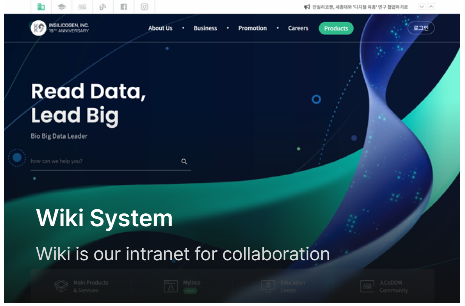
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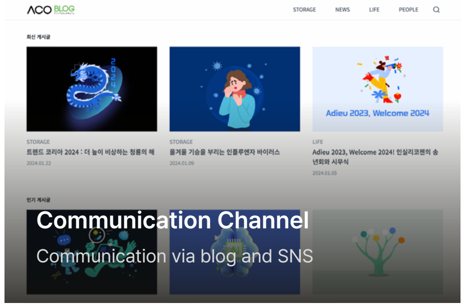
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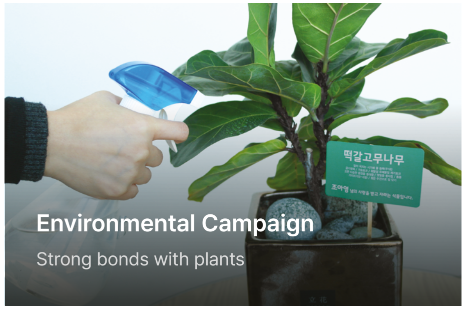

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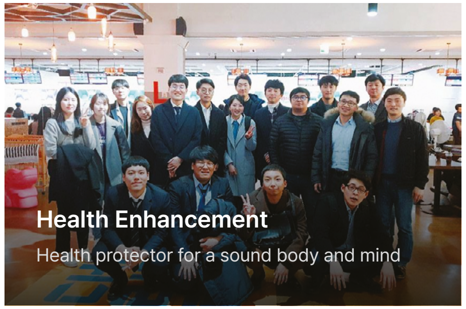

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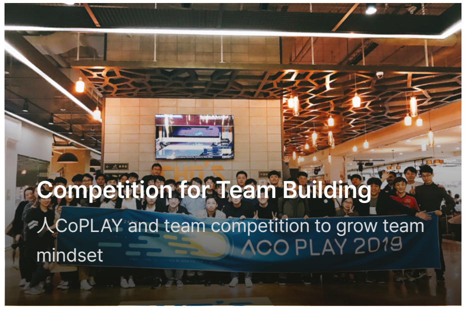
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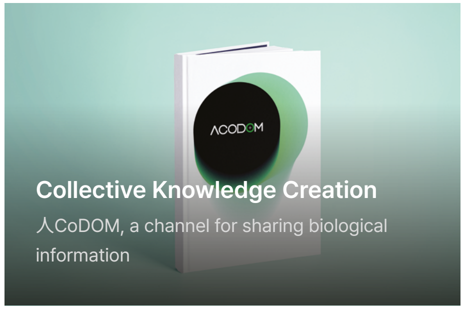

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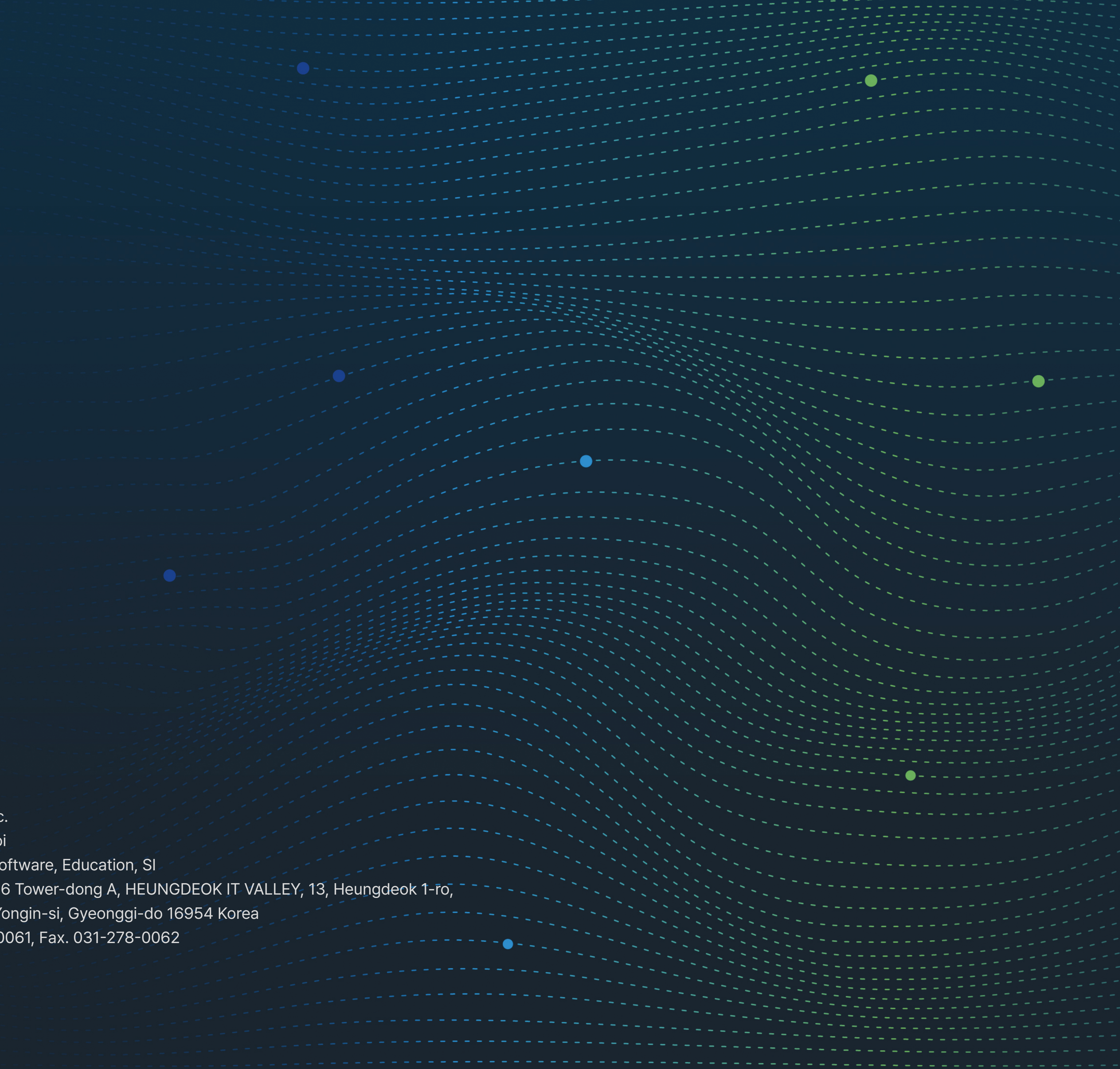

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