

Subcommittee on Analysis and Measurement Technologies

- Social Issues: All biotechnology fields
- Leadership Organization: Shimadzu Corporation
- Representative: Hiroto Itoi (Managing Executive Officer, CTO, Shimadzu Corporation)
- Leader: Kiyotoshi Fujimoto (Section Chief, Life and Green Industry Promotion Section, Industry and Tourism Bureau, City of Kyoto)
- Leader: Koichi Meisho (Chief Researcher, Kyoto Municipal Institute of Industrial Technology and Culture)
- Leader: Rintaro Yamamoto (Deputy General Manager, Research & Development Department, Analytical & Measuring Instruments Division, Shimadzu Corporation)





Progress in Genetic Engineering

Genome analysis Genome editing

IT/AI technologies Bioinformatics Sustainable Bioeconomy Society

To date

- Manufacturing based on chemical synthesis
- Low molecular weight drugs
- Fossil fuels and petrochemistry



In the future

- Manufacturing using biological functions
- Macromolecular drugs and antibody drugs
- Reduction of CO₂ emissions, carbon neutrality, and energy efficiency

Analysis and measurement technologies provide the basis for each stage of research, development, manufacture, and quality control



Bioindustry

Vision and Mission



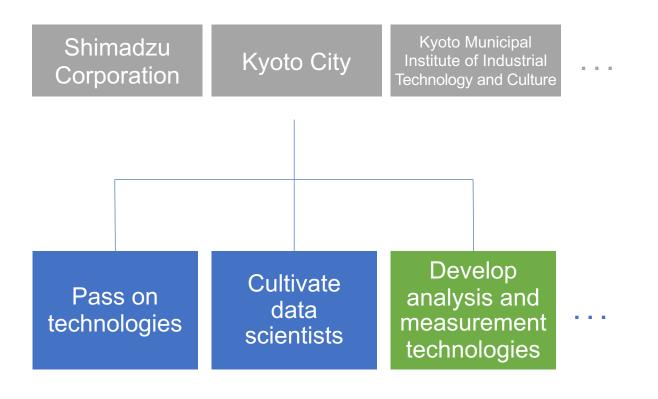
- Analysis and measurement technology is not being passed on to • Issues: the next generation. There is a shortage of data scientists and a flow of personnel out of the Kansai area
- To realize the development of a world-class bioindustry with • Vision: analysis and measurement technology
- Mission: Cultivate human resources and develop new technologies
 - 1. Cultivate and educate human resources to properly pass on existing analysis and measurement technologies
 - 2. Cultivate data scientists familiar with the analysis and measurement field, which are currently in short supply
- Cultivation of Human Resources 3. Apply countermeasures to stop the outflow of human resources from the Kansai region to other regions
 - 1. Utilize analysis and measurement technologies as a means of sharing achievements between subcommittees
 - Biotechnology start-ups are created and supported by analysis and measurement 2. technologies
 - 3. Develop new analysis and measurement technologies in the biotechnology field
 - 4. Accumulate and utilize analysis methods and the data acquired

Development o Technologies



- 1. Pharmaceutical and food and beverage manufacturers
- 2. Chemical and reagent manufacturers
- 3. Analytical and measuring instrument manufacturers
- 4. Public organizations
- 5. Universities and academia
- 6. Biotechnology start-ups

etc.







1. Program to Develop Analysis and Measurement Human Resources

- 1. Holding analysis and measurement seminars <Cultivate human resources for analysis and measurement, pass on technology and know-how, using OBs>
- 2. Holding analysis and measurement seminars <Support and cultivate data scientists, having a background of "wet lab" science>
- 3. Human resource bridge-building between academia and companies in Kansai in the analysis and measurement field

2. Development of Analysis and Measurement Technologies

- 1. Utilize analysis and measurement technologies as a means of sharing achievements between subcommittees (Trouble consultation), and create and support biotechnology start-ups through analysis and measurement technologies
- 2. From 1, identify new analysis and measurement technology needs, and accumulate and utilize applications
- 3. Development of analysis and measurement technologies Example: antibody analysis, more advanced genetic analysis, new measurements using magnetic nanoparticles, etc.



Five-Year Activity Schedule

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Program to Develop Analysis and Measurement Human Resources	1st year	2nd year	3rd year	4th year	5th year
Holding analysis and measurement seminars (1) <cultivate analysis="" and="" for="" human="" know-how="" measurement,="" on="" pass="" resources=""></cultivate>			E X		
Holding analysis and measurement seminars (2) <support "wet="" a="" and="" background="" cultivate="" data="" having="" lab"="" of="" science="" scientists,=""></support>			P 0 2 0		
Human resource bridge-building between academia and companies in Kansai in the analysis and measurement field			2 5		

Development of Analysis and Measurement Technologies	1st year	2nd year	3rd year	4th year	5th year
Utilize analysis and measurement technologies as a means of sharing achievements between subcommittees <trouble consultation=""></trouble>			E X P		
Identify new analysis and measurement technology needs, and accumulate and utilize applications			0 2		
Develop new analysis and measurement technologies			0 2 5		

