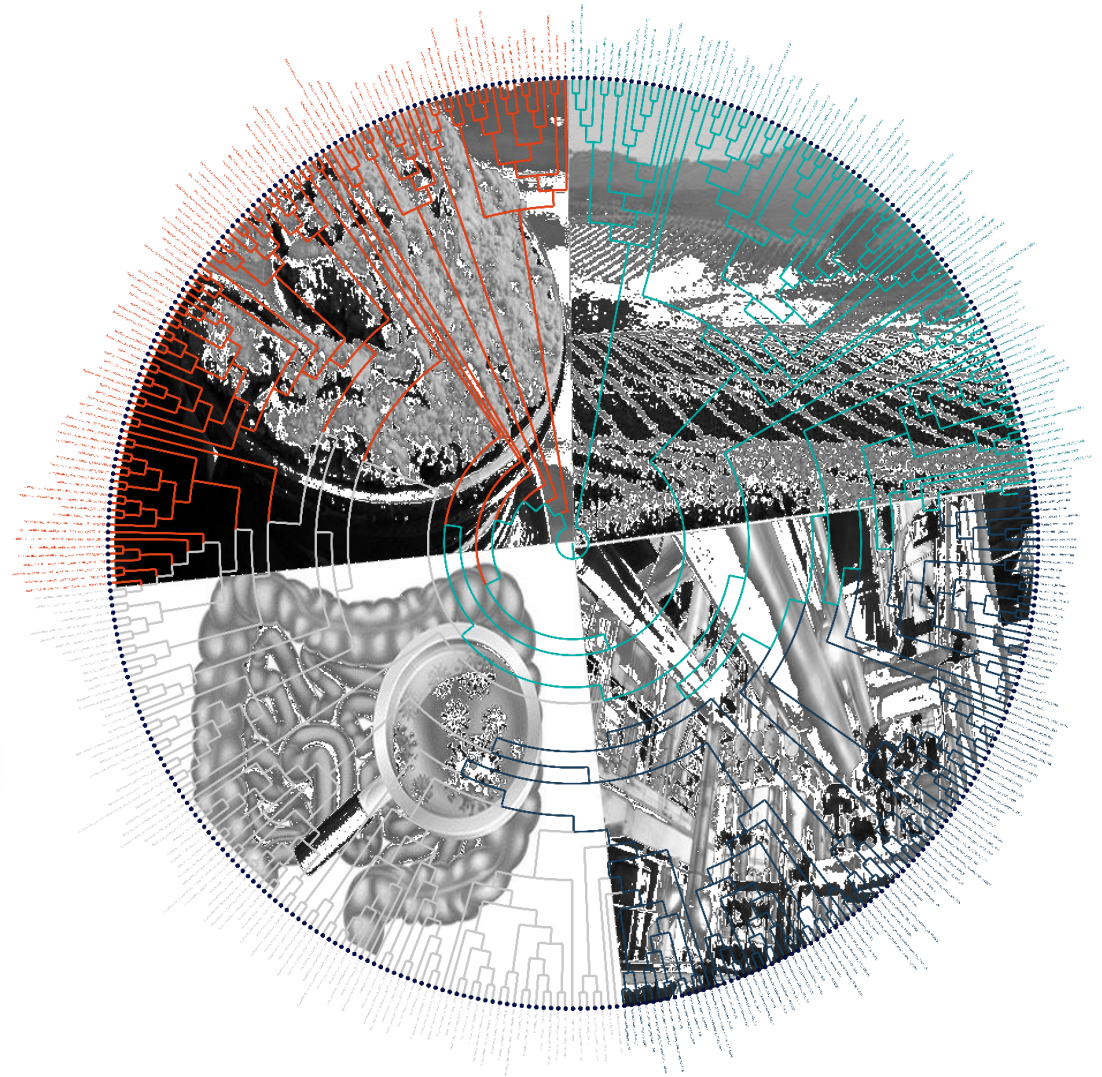


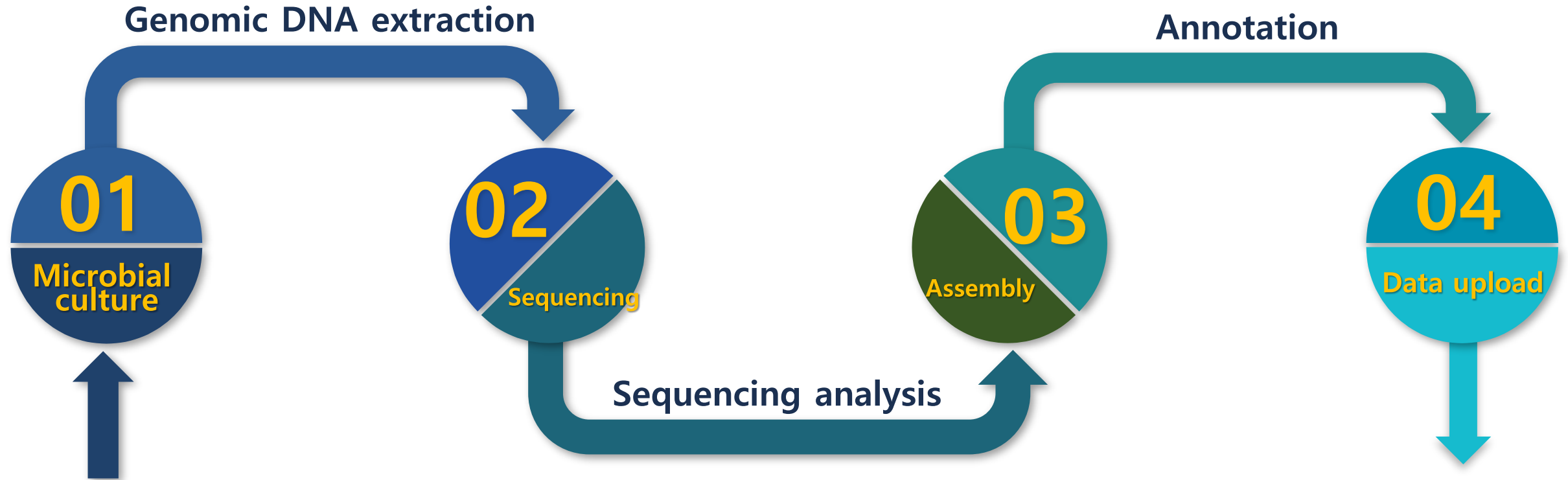
Whole Genome Sequencing

Agriculture and Health Industry

- ◆ **Make complete & reference genomes**
Using whole genome sequencing (PacBio RSII and PacBio sequel)
- ◆ **Uncover beneficial bacteria or genes**



02 Material and methods



Bacterial cell culture

- Bacterial cells were grown on appropriate temperature and media

Sequencing analysis

- Quality Control pass
- Using PacBio RSII & Sequel

Assembly

- For make single contig using SMRT portal & link

Data upload

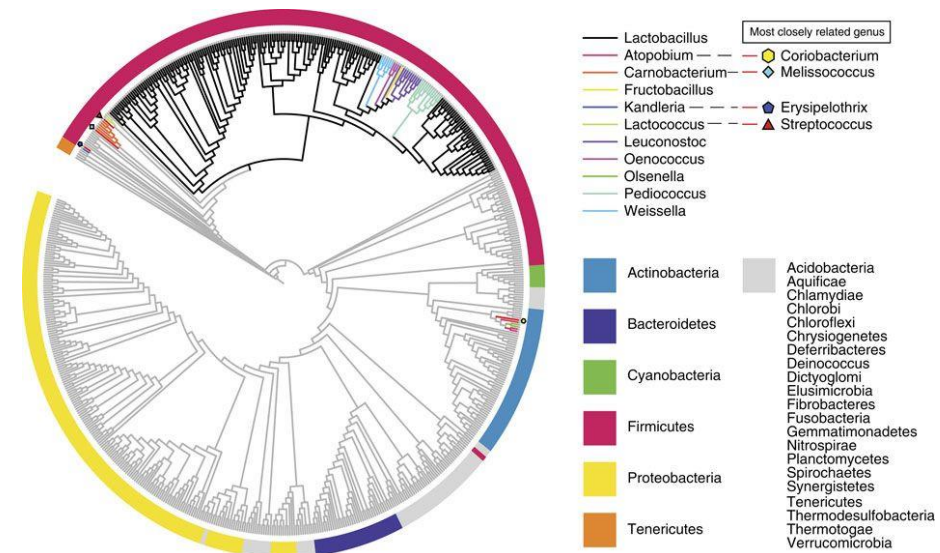
- Data will be uploaded on NCBI, iGEM and our own database

List of target bacteria and Expectancy effect

※ List of WGS target bacteria and sources (total 200 strains)

No.	Bacteria species	Source
1	<i>Enterococcus faecium</i> HB-1	Human gut
2	<i>Enterococcus faecium</i> DB-1	Human gut
3	<i>Enterococcus faecalis</i> HA-1	Human gut
4	<i>Enterococcus faecium</i> FB-1	Human gut
5	<i>Norcardioides</i> sp. KUDC5002	Dokdo island soil
6	<i>Norcardioides humi</i> DCY24T	Rhizosphere
7	<i>Bacillus amyloliquefaciens</i> KC41	Rhizosphere
8	<i>Microlunatus</i> sp. KUDC0627	Rhizosphere
9	<i>Lactobacillus buchneri</i> MGB0786	Kimchi
10	<i>Labrys neptuniae</i> KNU-23	Ginseng soil
11	<i>Cupriavidus campinensis</i>	Ginseng soil
12	<i>Corynebacterium nuruki</i> KACC15032	Nuruk
13	<i>Enterococcus faecium</i> FA-3	Human gut
14	<i>Enterococcus</i> sp. DA-9	Human gut
15	<i>Paenibacillus antarcticus</i> KACC11469	Antarctic environment
16	<i>Lactobacillus hilgardii</i> KCTC3500 (T)	Wine
17	<i>Lactobacillus dextrinicus</i> KCTC3506 (T)	Silage
18	<i>Lactobacillus graminis</i> KCTC3542 (T)	Grass silage
19	<i>Lactobacillus mali</i> KCTC3596 (T)	Apple juice from cider press
20	<i>Lactobacillus kefiranofaciens</i> KCTC5075 (T)	Kefir grains
21	<i>Lactobacillus manihotivorans</i> KCTC21010 (T)	Cassaba fermenter
22	<i>Lactobacillus acetotolerans</i> DSM20749 (T)	Fermented vinegar broth
23	<i>Lactobacillus frumenti</i> DSM13145 (T)	Rye-bran sourdough
etc	<i>Streptococcus</i> sp. nov. LPB0220 (T)	Respiratory tract

※ Expanding the biotechnology potential through comparative genomics



Expectancy result [Zhihong Sun et al., 2015](#)