

Research targets in life science (3 flows)

(Yamato's view of Biological Science)

- matter → biochemistry (metabolism etc)
- energy → biophysics (muscle contraction etc)
- information[#] → molecular biology or information biology
(*genetic code, signal transduction, nerve/brain system etc)

*Genetic code (Bioinformatics)

- DNA to RNA to amino acid sequence and regulation
- Amino acid sequence to protein (protein folding)

[#]Bio-informatics in broad sense

Fig. Three major research targets in life science: Living organisms are basically created on the flows of materials, energy, and information at non-equilibrium steady state. Accordingly researches in biology are mainly targeted on such three major flows, and then three major research fields mainly deal with those respective targets, overlapping each other. There is not yet such a terminology as “information biology”, but we propose it as a new naming of this research field.