# Bridging the gap between biologists and bioinformaticians.

Omics is irreversible trend of life science, and it's no longer ignorable for all biologists. But, many biologists still don't utilize omics data in daily work. It's still hard for them to handle such huge and complex data without help of bioinformaticians or expensive software.

## What do biologists need?

Biologists at work bench want to view omics data with casual PC. They need rich visual aids, and convenient support. They want to integrate wide varieties of information, e.g. gene and sample annotations, cell images and attachment files, to interpret in biological context. But free software don't satisfy such needs of biologists.

Subio Platform provides all such fundamental functionalities for absolutely free. What's the difference between Subio Platform and current free software?

## The gap unfilled for long.

It's been said there is a gap between biologists and bioinformaticians. Instead of great efforts on this problem, it still remains. Why?

Bioinformaticians are interested and incentivized in creating a new algorithm based on cutting-edge theory of informatics or statistics, but not in providing conservative tools in sophisticated way, which is biologists' strong demand. So this is a structural

#### omics data annotatition integrative view gene, transcript, gene expression, genomic location, exon, miRNA, CGH, LOH, sample informa-ChIP-chip, tion, web links, ChIP-seq, presentations, RAN-seq, PDFs, etc. etc.

Integrative Visualization with Subio Platform on casual PC

problem that can't be solved only by existing stake holders.

We think that only the way to fill up the gap is to put a mediator bridging two sides. The mediator must be 1) independent and neutral, 2) self-sustainable, 3) incentivized to help biologists (end users), 4) incentivized to propagate informatics tools, and 5) sharing benefit with both sides.

The incentive structure is a vital part and we established a company to implement it within a new business model. Subio Platform has a license management system, and bioinformaticians can distribute their analytical tools as Plug-ins of Subio Platform. We collect license fees from Plug-in users to provide aftercare service by us and to reward developers. Bioin-

formaticians will get feedbacks from a large user community, which are essential for improvement cycle and innovation.

Biologists are requested to pay for Plug-in and services, but it's reasonable if the prices are set much lower than a cost of self-learning or hiring technicians for most of biologists. Bioinformaticians can also distribute from Bioconductor simultaneously for who has IT skills enough.

## More communication !!!

Another problem of omics is data sharing. Actually, there are a lot of types of data and information. They have to use several informatics tools and databases for a comprehensive analysis. But most of biologists don't know which tools they should or can choose, use and combine.

Subio Platform mediates data and idea by turnkey archive system. When a researcher finishes analysis by combining data and information, s/he can export everything into an archive file and send it to collaborators. Receivers can reconstruct everything from the archive on their Subio Platform. We think such a rich and easy communication media is necessary for accelerating open discussions and collaborations in the new life science era.

## Biologists (user side)

Small amount of money for Plug-ins and services.



**Subio Platform** is a free omics data viewer and trunkey data sharing tool.

Subio provides technical support, maintenance and training services.

### Subio (mediator)

Subio substitutes Plug-in sales, delivery, licensing and aftercare.

The developer gets 2/3 of revenue.



Developers provide Plug-ins as keeping all IPs. They can distribute in any other ways like Bioconductor at a same time.

**Bioinformaticians (developer side)**