



Integrated ChemoResponse Assay – Prioritizing Cancer Treatment

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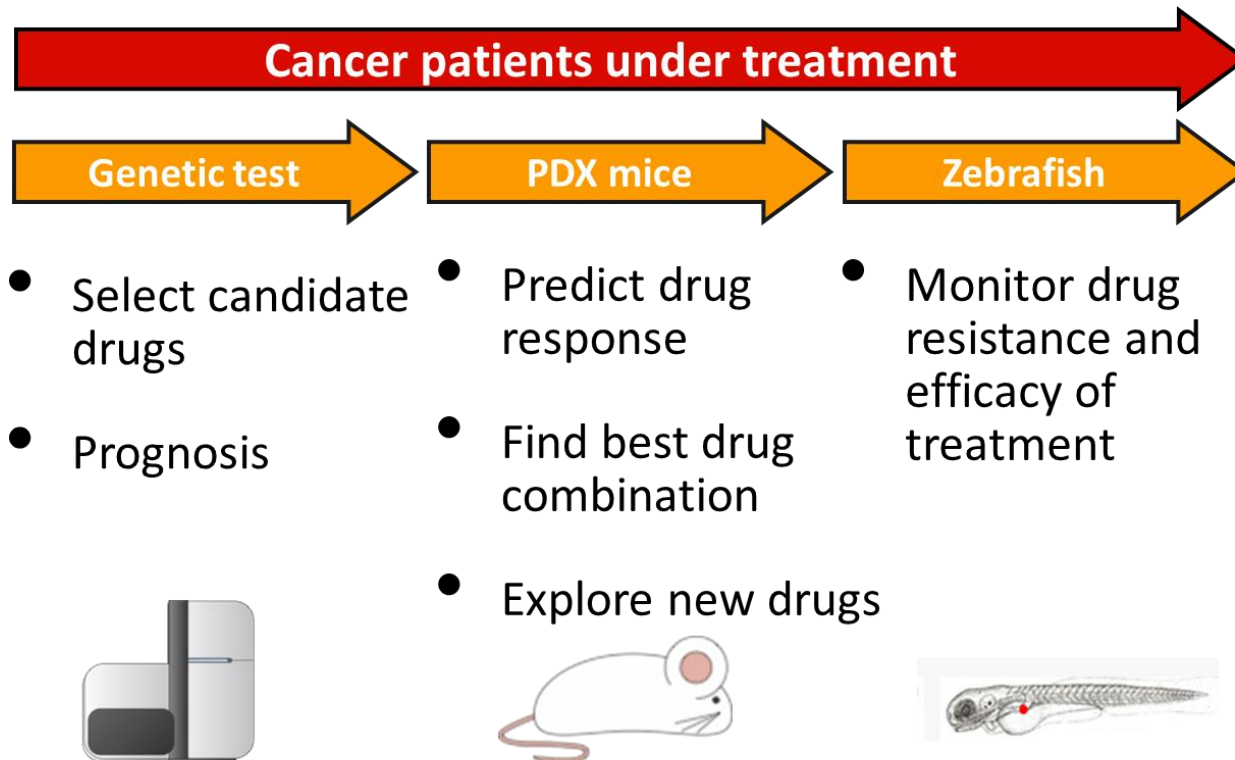
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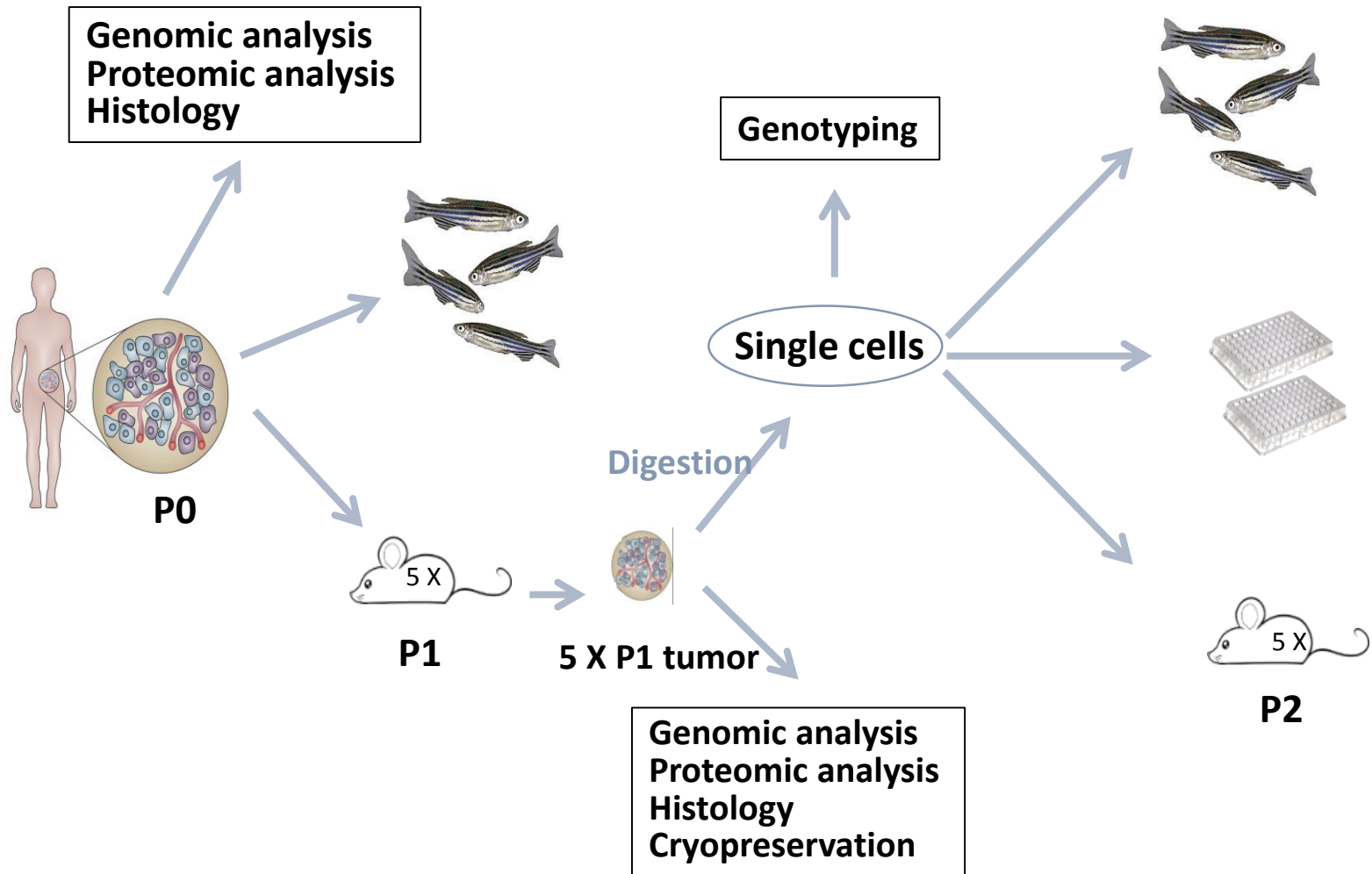
Website: <http://www.nhri.org.tw/>

NHRI Has Developed a platform for personalized medicine: Integrative ChemoResponse (ICR) Assay

- Technology know-how on **Patient-derived xenograft & drug screening in mice** models
- Technology know-how on **drug sensitivity screening in zebrafish** models
- Integrated analysis platform to **correlate drug sensitivity profile with “trans”-omics data**



Combined Genomic analysis, mice PDX and zebrafish chemoresponse assay give you the precise decision

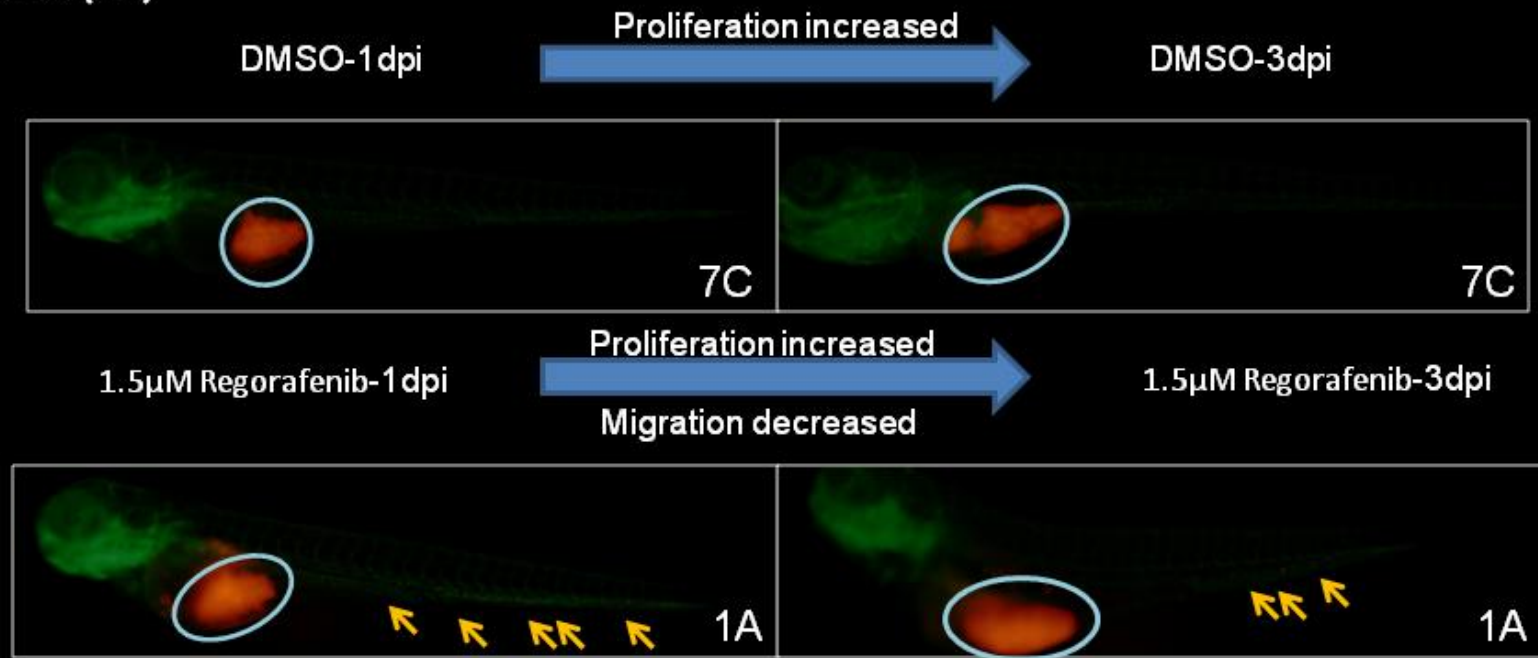


Integrative ChemoResponse (ICR) Assay versus traditional PDX mouse model

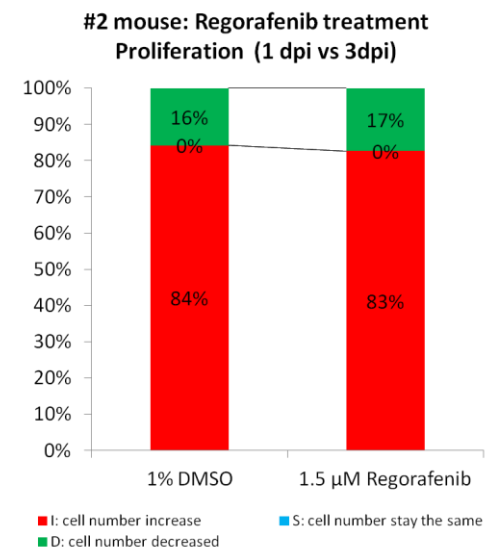
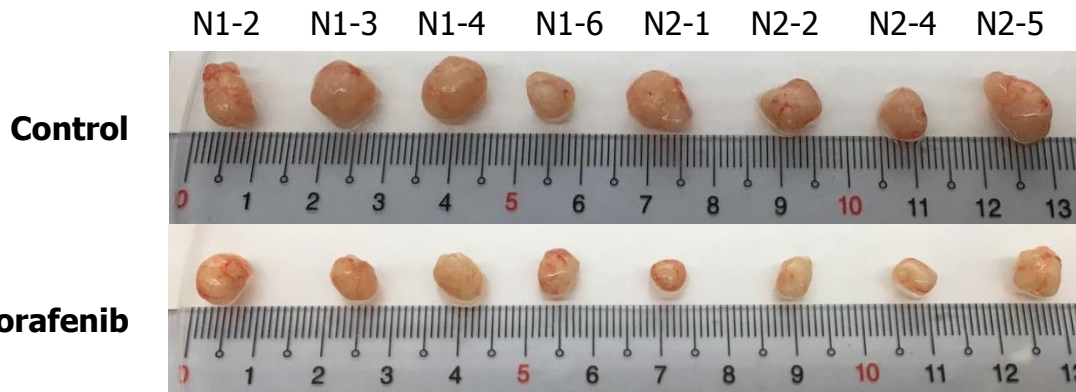
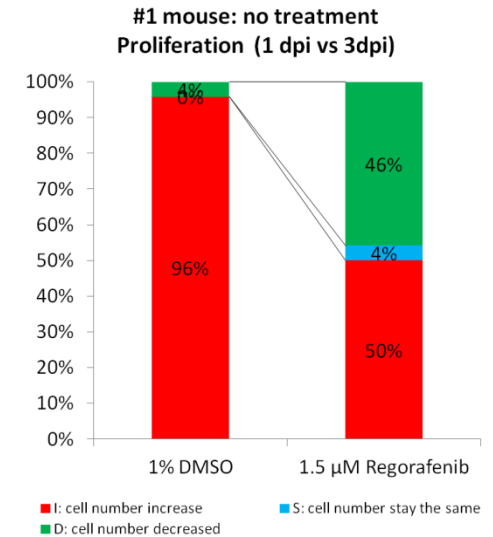
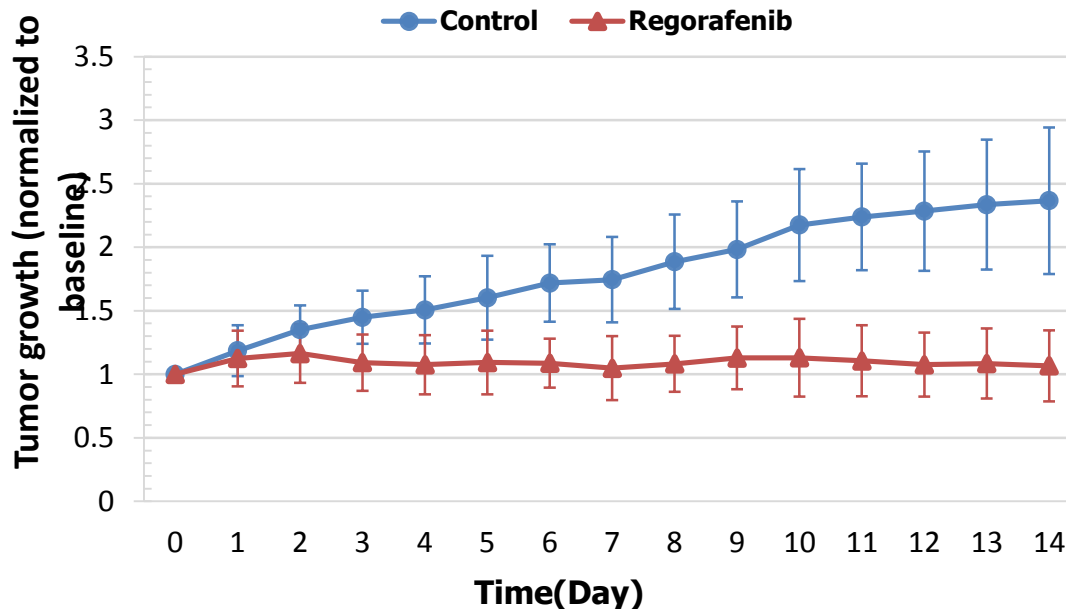
	ICR	PDX mouse
The amount of tumor	Same	same
Drug screening schedule	Within 4 weeks	About 8 to 12 weeks
“Trans”-omics analyses	much	less
Data integration	strong	weak

zebrafish chemoresponse assay provide the fast results

Case 6 (P5)

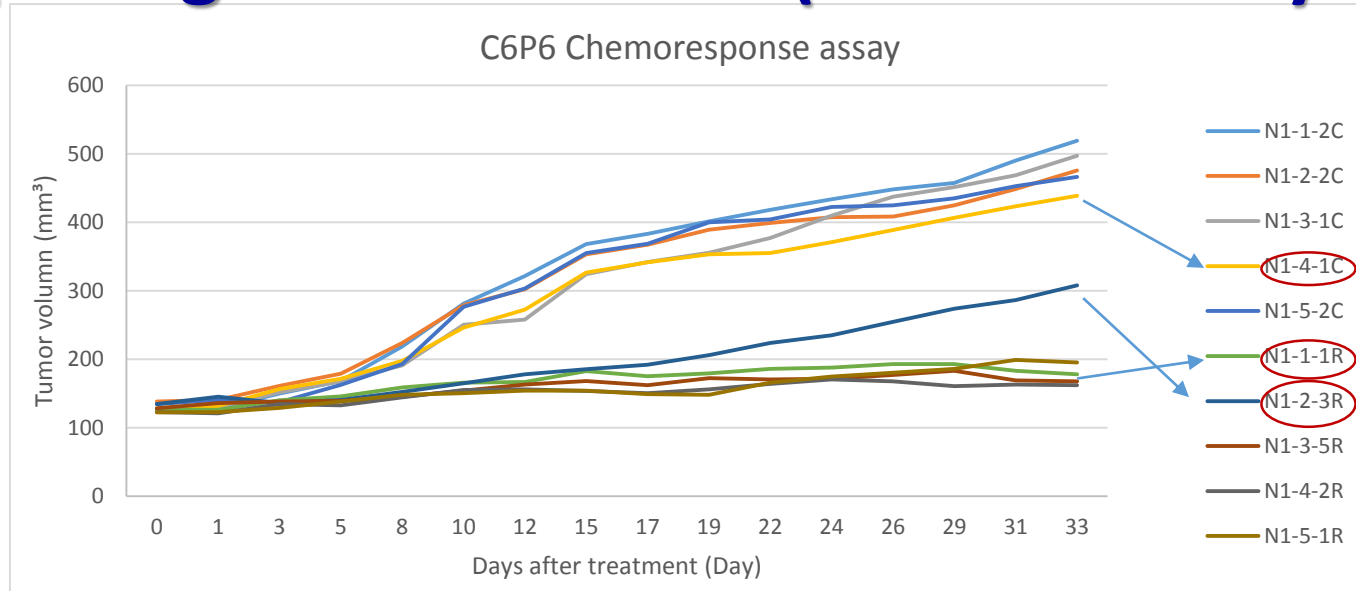


PDX Mice showed Regorafenib inhibition and zebrafish model reveals drug resistance



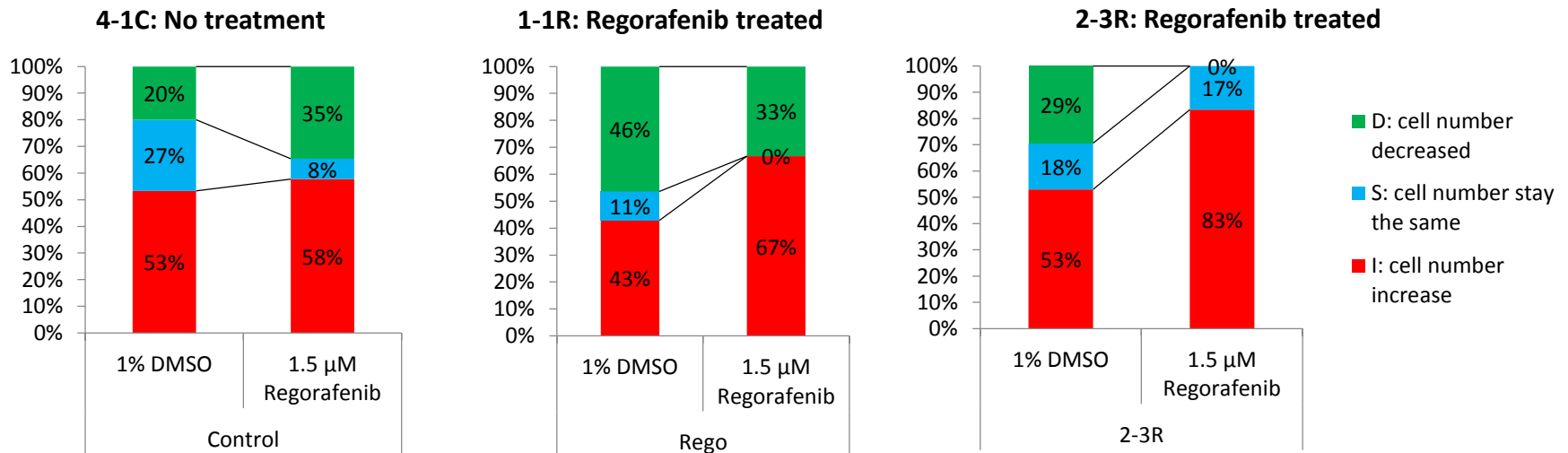
14 days

Emergence of regorafenib resistance in serial passage of tumor cells (as revealed by PDX mice)



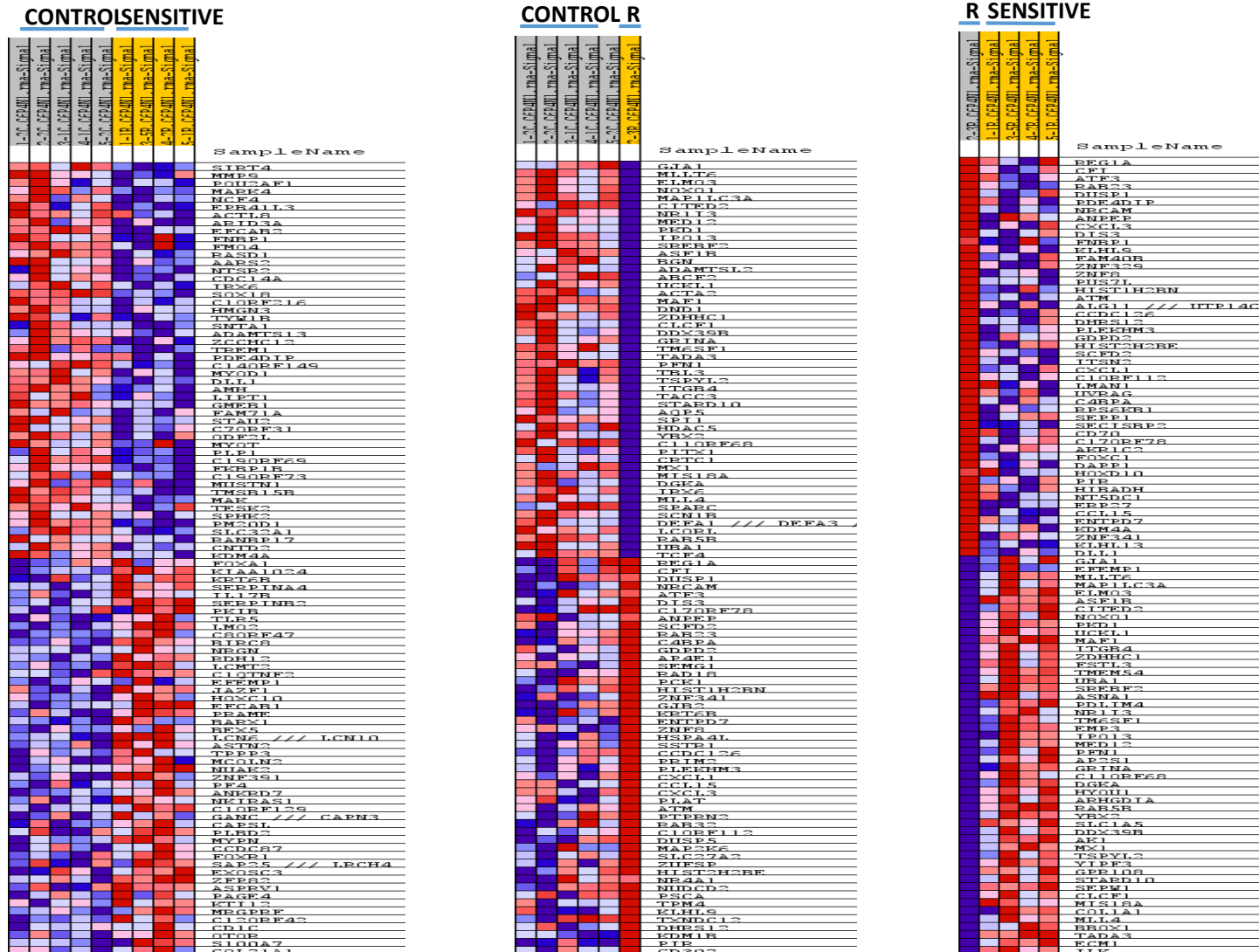
Zebra fish lab

Loss of chemosensitivity in regorafenib-treated cells



“Trans”-omics analyses:

GSEA: Gene expression markers for the CONTROL, SENSITIVE & RESISTANT comparison



Potential industrial applications & business opportunities: Pursue of a market niche

- Provide service using the thus **developed technology platform for researchers/clinicians on cancers**
- License the thus **developed technology platform to R & D departments of biotech companies** which are interested in developing chemosensitivity testing platforms in mouse/zebrafish models
- Provide **reference toxicity profiles database** generated from thus developed technology platform for **pharmaceutical companies** which are interested in using mouse/zebrafish models for multiple drug screening

Thank you!

