From Chemical Hood to Human Clinic
(Identify new biomarkers, Validate biomarkers, Develop new Imaging and therapeutic agents)

WWW.OMBIT.ORG (Dr. BHASKAR C.DAS LAB)

Chemical Biology

Chemistry

Biology

Druggable Target $$$$$???

Prostate Cancer

Magmas Inhibitor

Brain cancer Therapeutic agent

CMA Activator Anti aging Agent

Alamar Blue viability assay

Retinoic acid analogues

B-220

Chemistry

Small Molecule

Cell

Protein

Phenotypic Effect

Magmas Inhibitor

Brain cancer Therapeutic agent

CMA Activator Anti aging Agent

Druggable Target $$$$$???
Pathway Based Drug Discovery
Retinoic Acid (RA) and Oxidative Stress (OS)

1) Magmas inhibitors
2) MetAP2 Inhibitors
3) Retinoids agonist and antagonist
4) HGF mimetics
5) LKB1 activator (mTOR inhibitors)
6) CMA activator and inhibitor
7) HIF 1\(^\alpha\) and 2\(^\alpha\) inhibitors
8) SREBP activator
9) Proteasome inhibitor
10) AD36-Orf1 activator and inhibitor

Target Oriented Drug Discovery

11) Gamma Secretase Inhibitor
12) HDACs inhibitors
13) ILK(Integrin Linkase Kinase)
14) STAT3
15) GATA4
16) SIRT1
17) Par1b
18) Tet2
19) Tau
20) R-Spondin
21) CA4 (Combretastatin-A4)
22) Resveratrol
23) Curcumin
24) Honokiol
25) Coumarin
Drug Discovery Process

Target Discovery → Target Validation → Assay Development → Screening & Hits to Leads

NDA and Market ← Clinical Trials ← Development ← Lead Optimization

Screening & Hits to Leads

Lead Optimization

Development

Chemical Biology

Chemistry Zebrafish Biology