

PARTNER PLATFORM
High Throughput Screening / Hit to lead

Center for Drug Discovery and Development (C3D)

General information

Administrative information	
Structure	Cancer Research Center of Lyon (CRCL)
Address	28 rue Laennec 69008 Lyon
Website	https://www.crcl.fr/les-plateformes/c3d-centre-de-decouverte-et-de-developpement-du-medicament/
Manager	Stéphane Giraud
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Date of implementation	October 2012

Labels / quality approach	
IBiSA	Yes, November 2023
ISO 9001 certification	Yes / No + date of obtention
National networks	Yes / No + date of obtention
International networks	Specify
Other	GDR ChemBio

Team	
Number of researchers	1 (permanent)
Number of engineers	2 (permanent)
Number of technicians	
Number of administrative staff	1 (shared with other CRCL platforms)
Other	Specify

Main achievements	
Number of screenings performed since creation	10
Number of screenings performed per year	1-2
Fields of expertise / therapeutic areas	
<p>Based on the targets identified by project leaders, the C3D platform supports academic researchers and private companies in the development of new therapies in the field of oncology, in the form of small chemical molecules or therapeutic antibodies. One of the platform's key features is its ability to support project leaders from target identification up to the clinic. The platform has all the necessary expertise to intervene at various stages in the development of these new therapies, ranging from compound or hybridoma screening to hit-lead optimization, mechanism of action identification, pharmacological efficacy, and regulatory non-clinical development. 17 projects have been successfully performed since the creation of the platform.</p>	

Scientific Information

Chemical Library	
Description of the collection (number of chemical molecules, natural, royalty-free products, known synthesis methods, etc)	
Prestwick library, 1,200 FDA approved compounds • Core library of 65,000 « drug like » compounds • Natural like compounds: 1,200 • Kinase inhibitor (approved or under development drugs): 590 compounds • Fr-PPICChem: protein/protein inhibition; 10,313 compounds.	
Conditioning	96 or 384 well-plates
Database (structure, accessibility conditions)	Structure databases for all our libraries. Structure available to our collaborators.
Member of the National Chemical Library	No

Targets
Targets for the screening service (e.g. protein targets, cell targets, etc.)
Target-based and Cell-based assay – High content screening – Phenotypic screening
Activities (e.g. cloning, protein expression, obtaining cell lines, management and storage of lines, cell culture, etc.)
Activities of the platform linked to the screening (the scope of actions is broader): cloning, protein production and purification. Design and implementation of primary screening assays on isolated target or cell lines. Cell culture and storage of cell lines. High content screening analysis. Screening results analyzed using TIBCO spotfire.

High throughput screening	
Number of measurements/days (approx.)	2000-4000
Biological tests proposed (e.g. in vitro enzymatic tests, cell tests (binding tests, cell survival, image analysis, etc)	
In vitro: Enzymatic assays, protein-protein interaction inhibition. Binding affinity determination. In cellulo: Phenotypic screening adapted to the cellular pathway targeted; apoptosis; cell viability assays; in cellulo protein protein interactions (BiFc).	
Technologies / Equipment (robots, automats, etc.)	
TRIC, BLI, BiFc, luminescent, fluorescent (HTRF for example), colorimetric methods, High Content screening (HCS). Equipment: Automated liquid handling (robotic platform TECAN EVO150) • Multi-technology microplate readers (96 – 384 wells, TECAN SPARK, TECAN Infinite 500) • Dianthus (Nanotemper) • Octet 96 (Sartorius) • HP D300 dispenser for titration (TECAN) • Cell culture room • HCS platform: Opera Phenix Perkin Elmer	

Access	
Site teams	Yes
External academic teams	Yes
Private Outdoor Teams	Yes

Training courses offered
HTRF and TRIC technologies; Assay robotization