



# COMPANY OVERVIEW

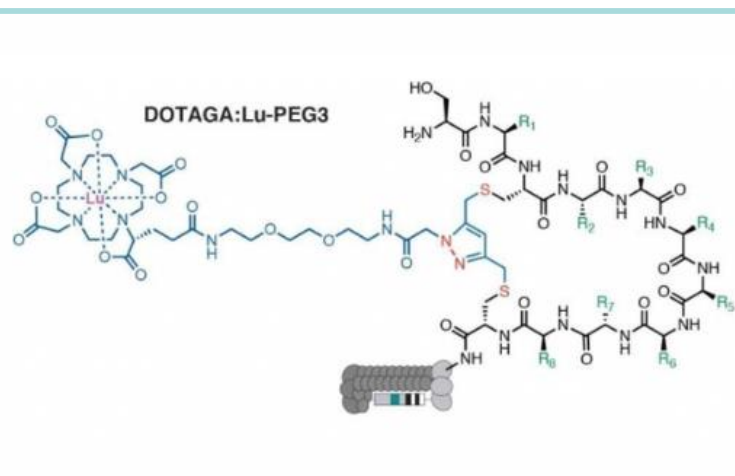
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Prepared for BIO2025

# RAPID DISCOVERY AND ADVANCEMENT OF NOVEL TARGETED THERAPEUTICS

RayzeBio

Fusion  
Pharmaceuticals Inc.



NEWS RELEASES

## Fusion Pharmaceuticals Announces Research Collaboration With 48Hour Discovery To Develop Peptide-Based Radiopharmaceuticals



AMILTON, Ontario and BOSTON, Jan. 11, 2022 /PRNewswire/ -- Fusion Pharmaceuticals Inc. (Nasdaq: FUSN), a clinical-stage oncology company focused on developing next-generation radiopharmaceuticals as precision medicines, today announced the company has entered into a strategic research collaboration with 48 Hour Discovery Inc. (48HD) to discover novel, peptide-based radiopharmaceuticals for the treatment of various solid tumors.

## Founded 2017 in Edmonton, Canada

- Multi-disciplinary team of 26: >40% PhDs
- 5 patents securing the 48HD platform
- Delivered on +20 partnerships including top Global Pharmaceutical companies

## Novel Peptide Discovery Platform

- Discovery of cyclic peptides with chemical modification
- Unique chemical space using billion-scale genetically encoded libraries
- Protein and cell screening for rapid discovery of preclinical candidates

## Your Ideal Discovery Partner

- Optimize for payload delivery at an early stage
- Screening against variable ring sizes, linkers, and chelators all in same experiment
- Business model: partnership & fee-for-service

48Hour Discovery

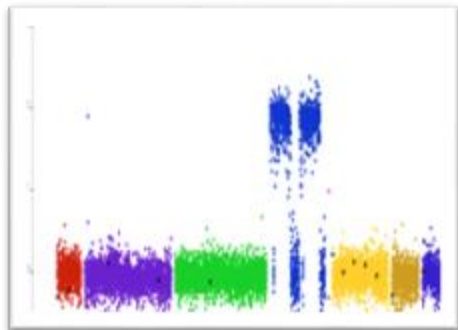
MERCK

oranomed  
<sup>212</sup>Pb for Targeted Alpha Therapy

# Enabling Next-Gen Target Discovery

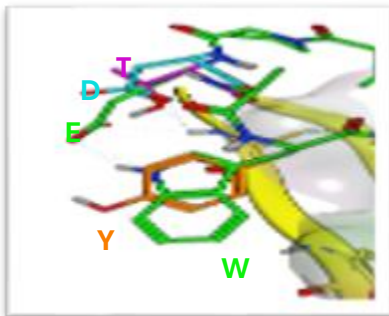
## Hit Discovery

- *Proteins & Live Cells*
- *Unique Chemical Space*



## Preclinical Readiness

- *In Vivo Screening*
- *MedChem*

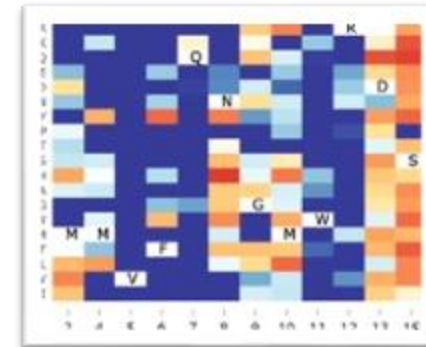


## Genetically Encoded & Chemically Modified Libraries

- *Diverse Architectures*
- *Billion Scale Diversity*

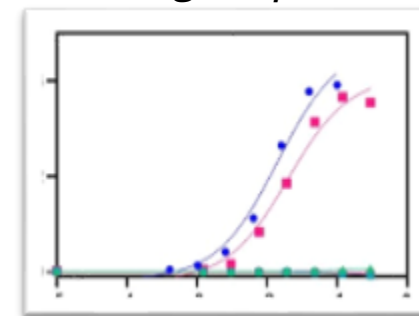
## Optimization

- *Positional Scans*
- *Affinity Maturation & AI/ML*



## Validation

- *SPR, ELISA, Flow*
- *Binding & Specificity*



# Key 48HD Platform Differentiators



## De Novo Discovery

- **Billion Scale Genetically Encoded Macrocyclic Libraries :**
  - 20 In-House architectures
  - Custom library design
- **Protein & Cell Screening**
  - Rapidly eliminate pre-clinical liabilities
- **Modified Library Screening:**
  - Bicyclic Peptides
  - Linker+Chelators
    - Different linker lengths, chelators, metals, etc.
  - Value added modifiers
- **Calibrated Screening:**
  - Positive and negative controls
  - Spiked reference libraries
- **Rapid NGS Analysis:**
  - Identification of motifs/families

## Optimization

- **Positional Scanning & SAR:**
  - Identify conserved AAs and areas for improvement
- **Affinity Maturation**
  - Custom medium-large scale libraries
- **Medicinal Chemistry**
  - Unnatural AA substitutions
  - Structure based improvements
- **AI/ML Optimization**
  - Automated optimization pipeline
- **Cell Lines:**
  - +20 active cell lines in-house
- **Modified Screening Optimization**
- **Out-sourcing:**
  - Co-crystal structure, peptide synthesis

## Validation

- **Pre-Screened Assets:**
  - Portfolio of potent binders
- **Q1 2025:**
  - Acquiring in-house SPR for rapid gold standard testing
- **Protein Binding:**
  - In-house BLI & ELISA assays to determine affinity and specificity
- **Cell Binding:**
  - Flow cytometry to determine affinity and specificity
- **Peptide Database:**
  - Tracking against +1.5B peptides
  - Over 100 targets in database
- **Platform calibration**
  - Improving resolution of optimization campaigns



# How To Work With 48Hour Discovery

## *Work With Us – Let's Move Fast on Novel Targets*

### Novel Discovery

- Screen billion-scale libraries **de novo**
- Rapid selection using **proteins & live cells**
- Actionable insights in **weeks**

### Pre-Screened Program

- **Skip the screening phase**  
– start with **hits in optimization**
- **Access rich datasets**  
(SAR, selectivity, motifs, affinity)
- **Faster pathway to lead nomination**

### Co-Development

- Leverage **in vivo screening** prioritization
- Combine strengths to **advance novel radiopharmaceuticals**
- **Seeking partners for PD-L1 program**