

HERMINE TROVATI LAB

Understanding and treating red cell disorders

FROM BASIC DISCOVERY TO BETTER CARE

institut
imagine INSERM U1163
GUÉRIR LES MALADIES GÉNÉTIQUES



Necker-Enfants
Malades Hospital



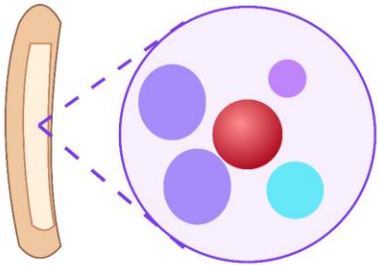
Fundamental &
Translational Research



Clinical Cohorts
& Biobanks

1. ERYTHROPOIESIS & BONE MARROW NICHE

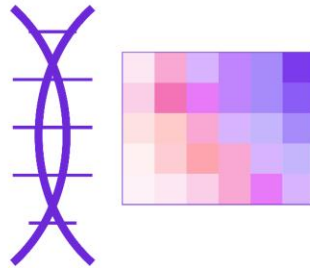
Regulation of erythropoiesis
and hematopoiesis



- Molecular pathways
(TGF- β , caspases, serotonin)
- HSCs and erythroid progenitors
- Ineffective and Defective erythropoiesis

2. GENETICS & DISEASE MODIFIERS

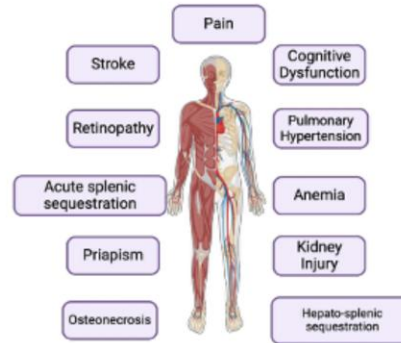
Identifying genetic determinants
of severity and response



- Genomic & functional approaches
- New variants and mechanisms
- Impact on hematopoiesis and niche

3. SICKLE CELL DISEASE & RED CELL PATHOPHYSIOLOGY

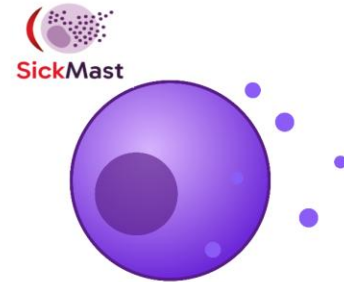
From red cell defect to systemic
complications



- Vaso-occlusive crises
- Acute chest syndrome
- Vascular dysfunction
- Pain and organ damage

4. INFLAMMATION & MAST CELLS

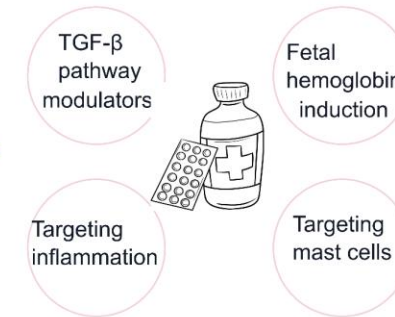
Immune dysregulation as a driver
of disease



- Mast cell activation
- Inflammatory biomarkers
- Link to complications
- RHU Sickmast project

5. THERAPEUTIC INNOVATION

Developing next-generation
therapies



6. PREGNANCY & SICKLE CELL DISEASE

Maternal inflammation
and fetal outcomes,



OUR IMPACT: IMPROVING THE LIVES OF PATIENTS WITH RED CELL DISORDERS
RED CELL BIOLOGY • IMMUNITY • GENETICS • INNOVATION • TRANSLATIONAL MEDICINE