Cleveland Clinic Innovations

Anti-C6 Antibody Therapy for Complement Mediated Diseases

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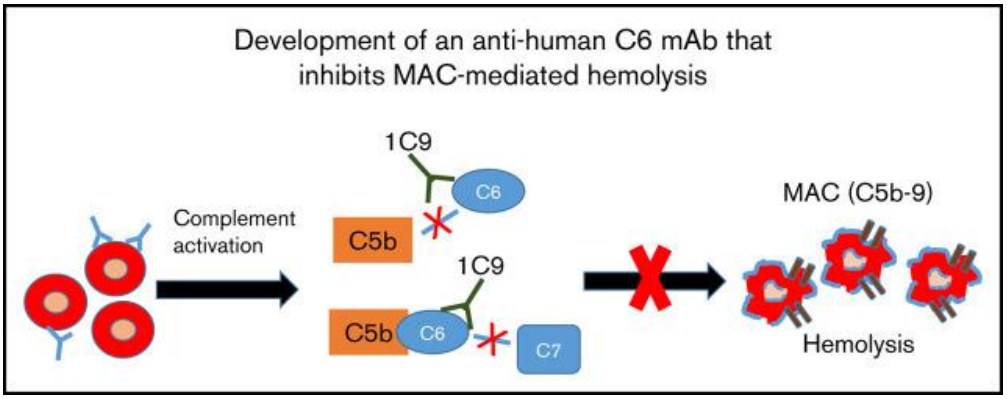
OPPORTUNITY

- Membrane attack complexes assembled after complement activation mediate various diseases.
- Eculizumab, a monoclonal antibody against complement component C5, is being used therapeutically to treat MAC-mediated disease.
- However, C5 is not a selective target for MAC inhibition, and some patients respond incompletely or not at all to the eculizumab treatment.
- C6, the next essential component in the terminal pathway of complement activation, may be an alternative target for the selective inhibition of MAC formation.

SOLUTION

- Feng Lin, PhD, a leader in the complement biology field, has developed a pipeline of antibody therapies target different proteins in the complement cascade.
- An anti-human C6 mAb demonstrated recognition of C6 both in free circulation and within C5b6 complexes.
- The candidate mAb has also demonstrated reduced human intravascular hemolysis in vivo in a preclinical animal model.
- The mAb has been fully humanized through collaboration with LifeArc and is prepared for IND-enabling studies



PRODUCT

Therapeutic antibody targeting complement component 6 (C6)

INDICATION

Membrane Attack Complex (MAC)-mediated diseases including intravascular hemolysis

VALUE PROPOSITION

- More selective targeting over competitive therapeutics
- Potential for accelerated development and regulatory pathways
- Experienced biologic therapeutic development team

DEVELOPMENT STAGE

Antibody fully humanized and prepared for IND-enabling studies

INTELLECTUAL PROPERTY

PCT/US2023/077377

RELATED PUBLICATIONS

Zhang L,… **Lin F**. Mol Immunol. 2024 Jun:170:19-25. PMID: 38598870

Lin K, … **Lin F**. Blood Adv. 2020 May 12;4(9):2049-2057. PMID: 32396613.

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