AFAN - Repurposing of Afatinib for HN cancer treatment in FA patients

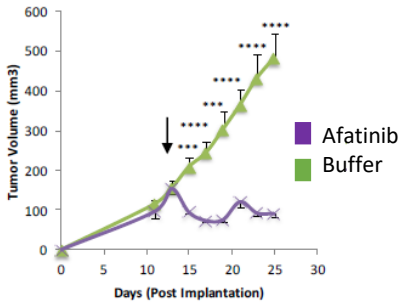
NEED

Head and neck squamous cell carcinoma (HNSCC) is the main cause of death in adulthood for **patients with Fanconi's Anemia (FA)**, as they cannot be treated with chemotherapy. **An effective, non-toxic therapeutic alternative is needed**.

SOLUTION

We propose a therapeutic alternative for HNSCC in FA patients. Researchers from UAB, IR-Sant Pau and CIBER-ER have developed **a non-toxic treatment based on a new therapeutic use for afatinib**, which is currently used to treat certain types of lung cancer.

TECHNOLOGY



TRL 6

PCT + extension

- PCT/EP2023/081937. European Patent granted. In examination in USA.
- **Orphan Drug Designation** granted by EMA 12 December 2018.

Preclinical validation

Afatinib showed cancer-specific lethality or cell growth inhibition in FA HNSCC cell lines and inhibited tumor growth in xenograft experiments in immunodeficient mice using two Fanconi anemia patient-derived. In vivo toxicity studies in **Fanca-deficient mice showed that administration of Afatinib well-tolerated**, displayed manageable side effects, **no toxicity to bone marrow progenitors**, and did not alter any hematologic parameters. **Phase I/IIb clinical trials will begin in 2024.**

VALUE PROPOSITION

- **Comparable activity without toxicity**: Comparable or improved activity vs. standard chemotherapeutic drugs without toxicity
- **Limited competition**: as other therapies currently approved are extremely toxic to FA patients.
- **Repurposed drug**: with a development timeline substantially shortened.

TEAM

Dr. Jordi Surrallés
Principal Investigator

Dr. Georgia Anguera & Dr. Oscar Gallego
Clinical team

Jana Iscla & Sandra Ramos
Innovation Managers

Boehringer Ingelheim
Partner

MARKET

1 in 136,000 Incidence rate of FA, a rare disease

550.000 Incidence of HNSCC

500-to 700-fold higher Incidence of HNSCC in FA patients

FANCONI™ CANCER FOUNDATION Key Stakeholder

COMPETITORS

This **is the first clinical trial for this condition** in the history of medicine

Other clinical trials in the future will most probably also focus on repurposing

ROADMAP

2024 Phase I/IIb clinical trials

2025 Licensing Agreement

2026 New Drug Application

License

We are looking for a company interested in licensing and taking this asset to the market.