Amplifica: SASP Factor Drug for Hair Follicle Hyperactivity

Amplifica presents effective hair growth drugs comprised of either SASP factor AMP-303 or AMP-506 to induce hair follicle hyperactivity. Amplifica is offering a Common and Series A Preferred Stock Option with a pre-money valuation of $13 million.

Despite the estimated $6.19B global hair loss market size by 2030, there have been no FDA-approved medications to treat Androgenic Alopecia since Finasteride in 1997. The absence of such treatments leaves the needs of 65 million Americans, who warrant hair loss treatment, forsaken.

In Androgenic Alopecia, testosterone, an androgen, activates an androgen receptor that induces negative signaling and shortening of the anagen or growth phase of the hair follicle. The shorter anagen phase is responsible for hair thinning and shortening. Hair nevus is a naturally occurring skin condition where a segment of skin contains a higher density of specialized pigmented cells that induce long hair growth. Amplifica presents a novel methodology to isolate nevus-specific signaling molecules to hyperactivate hair follicle stem cells, thus bypassing the androgen-induced negative signaling responsible for Alopecia.

The signaling molecules in question are AMP-203, AMP-303, and AMP-506, a combination of AMP-203 and AMP-303. These adenosine monophosphate molecules are senescence-associated secretory phenotype (SASP) factors. SASP factors are responsible for the hair growth hyper-activation witnessed in nevus.

A xenograft model depicted the effect of drugs containing the AMP signaling molecules responsible for hair growth hyperactivation. Human hair follicles microdissected from a human donor were transplanted onto mice. Once the follicle cells were dormant, researchers injected the drug and negative control into the mice at the transplant sites. AMP-203, AMP-303, and AMP-506 demonstrated meaningful stimulation of the human hair cycle. Notably, AMP-506 stimulated 75-100% of hair follicles in 45% of test mice, and AMP-303 stimulated at least 50% of hair follicles in 60% of test mice. Additionally, AMP-506 and AMP-303 demonstrated statistically different average responses compared to the untreated and drug vehicle-treated controls. These strong responses warrant the anticipation of AMP-506 and AMP-303 advancing to clinical development subject to obtaining regulatory approvals.

Amplifica's AMP-303 drug is 1/2a ready, and the AMP-506 drug is in pre-clinical development. The AMP-303 will soon undergo a twelve-week, three-arm cohort study following patients using the drug post-transplant, during early-stage hair loss, or late-stage hair loss. The clinical study will occur in early 2023, and a similar study for AMP-506 will occur in late 2023. The AMP-303 approval estimate is late 2023.

Amplifica currently owns the IP for the method and composition of the novel drug treatment. Current FDA-approved alternatives include Propecia (Finasteride) and Rogaine (Minoxidil). However, these remedies do not present a reliable cure for hair loss. Despite R&D surrounding a cure for hair loss, the market remain attractive as Amplifica is unaware of any current meaningful developments.