CP201

About RDP Pharma AG

RDP Pharma (RDP) is a privately held biotech dedicated to the vision that their products will deliver valuable medicines to patients in need.
RDP's leadership team and board of directors are focused on getting their products into clinical trials and addressing the unmet medical needs of patients. The team comprises entrepreneurs, drug development experts, and biotech veterans. Their extensive experience ensures that the right questions are asked, the right experiments conducted, and the right clinical studies implemented.

About CP201

CP201 is an orally available enantiomer of the alkyl-lysophospholipid (ALP) edelfosine. It is a synthetic etherlipid. The asset is owned by RDP Pharma AG, Romanshorn, Switzerland. CP201 is close to entering phase 1 in healthy male volunteers.

Racemic edelfosine, the parent compound of CP201, was used in more than 1,300 cancer patients in phase 1 and 2 studies conducted in the 1980s/1990s. It revealed encouraging signs of clinical activity in various cancers (e.g. lung cancer, brain cancer) and in patients with multiple sclerosis (MS) whilst showing a favorable toxicity profile (mainly mild to moderate and reversible gastrointestinal adverse events, e.g. nausea). Multiple long-term administrations of edelfosine up to 2 years are documented. Other compounds belonging to the class of ALPs were also intensively tested in clinical trials (e.g. perifosine and miltefosine), and miltefosine got marketing approvals in the USA and European countries for the treatment of the parasitic disease leishmaniasis under the trade name of Impavido®. Edelfosine is the most potent of all anti-cancer ALPs and is the best-characterized representative of this compound class. To date, more than 1,400 papers have been published on edelfosine, mainly dealing with its multifarious mode of action.

ALPs such as edelfosine and CP201 are predominantly incorporated in the cholesterol/sphingolipid-rich bilayer cell membrane domains, known as lipid rafts, of malignant or inflamed cells whilst sparing healthy cells. In addition, ALPs are inserted in the intracellular membranes of the endoplasmatic reticulum (ER) and mitochondria, thereby inducing biophysical alterations in their organization. Lipid rafts play a critical role in membrane domain organization. Lipid rafts serve as sorting platforms and hubs for signal transduction proteins. Upon insertion, ALPs modify lipid rafts and normal signal transduction by up-and/or downregulation or modification of membrane-based receptors and ion channels, affecting growth regulatory cascades and signals that require a particular lipid domain used as a scaffold for assembly and/or function. Among other things, this leads to apoptosis of the malignant cell and expression of signaling molecules and their membrane-based receptors can be modified. Prominent examples are the interference with the CD95 (FAS) and the PI3K-Akt pathways.

In addition, ALPs were reported to directly affect the transcription of genes known to promote carcinogenesis and/or inflammation.

A non-clinical toxicology package compliant with current regulatory standards for CP201 was compiled. CP201 is ready for phase 1 in healthy volunteers, which is planned to start in the near future.

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Edelfosine and CP201 in Cancer

Edelfosine and CP201 showed strong anti-cancer activity in numerous preclinical in vitro and in vivo models in both hematological and solid tumors. It was also demonstrated that they prevent or reduce the formation of metastases in a mouse model. Moreover, edelfosine revealed anti-inflammatory activity in in vitro and in vivo models of autoimmune diseases, including multiple sclerosis, arthritis and colitis. Among other things, in these models, the drug demonstrated a beneficial impact on critical effectors and suppressors of the immune system.

We are confident that the ongoing and planned non-clinical experiments will be successful; thus the clinical studies with CP201 may be initiated relatively soon, as sufficient and appropriate clinical trial material is produced and the regulatory package of toxicity and safety studies is available.

Partnering with RDP

We are seeking partners/investors to support the development of CP201.

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