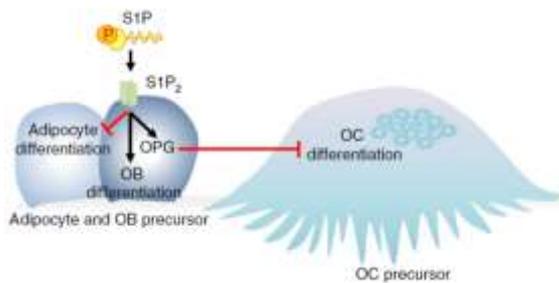


# OsteoProtect

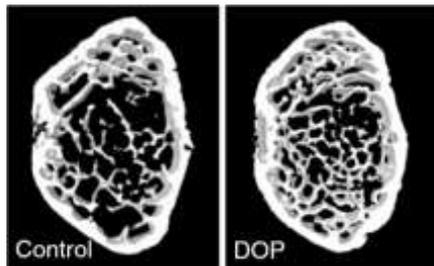
## Treatment of osteoporosis by inhibitors of sphingosine-1-phosphatase (S1P)-lyase

### Invention

There are currently 200 million people suffering from osteoporosis worldwide. Low bone mass and deteriorating bone quality lead to an increased risk of fractures, high morbidity and increased mortality.



Schematic overview of role of S1P in bone formation: S1P binds to S1P2-receptor, thereby, via osteoprotegerin (OPG), inhibiting osteoclast differentiation



Micro-CT-analysis of femur of 16 w mice untreated/treated with DOP for 8 w showing significantly stronger bone formation in DOP-treated animals

The compound showed clear therapeutic potential in mouse models of genetic and hormonal (estrogen deficiency) osteoporosis. Another compound might be LX2931. S1P blood concentration was also an indicator of bone health in a study with over 4000 human individuals.

### Commercial Opportunities

The invention is offered for licensing.

### Current Status

*In vivo* data are available (see publication below). A patent application has been filed.

### Relevant Publications

Weske, S. et al. (2018): Targeting sphingosine-1-phosphate lyase as an anabolic therapy for bone loss. *Nat. Med.* 24(5): 667-678.

An invention of the University of Duisburg-Essen.

### Competitive Advantages

- Novel approach for treating reduced bone density/stability
- Specific inhibitors identified
- *In vivo* data available

### Technology Readiness Level

123456789

Technology validated in relevant environment

### Industries

- Medical Industry
- Pharmaceutical Industry

### Ref. No.

4955

### Contact

Dr. Constanze Vogel  
E-Mail: [cv@provendis.info](mailto:cv@provendis.info)  
Phone: +49(0)208-94105-41

