

Company snapshot

Arcarios is a drug company developing a product pipeline for prominent unmet medical need in bone and joint disease: restoring bone and/or cartilage. Arcarios uses its proprietary platform technologies, OsteoBLAST and ChondroBOOST, in identifying these disease-modifying therapeutics, resulting in the company's current broad IP portfolio. Arcarios' pipeline includes ARC-118, ARC-205, and BMP modulators.

Since incorporation, Arcarios has filed new IP, broadened its team, and signed a deal with a pharmaceutical company. Based on the strength of its IP and pipeline potential, the company has successfully amassed €11 million in funding, including a €4 million round of seed funding completed in September 2010, and almost €7 million non-dilutive funding.

Unmet medical need

Bone and joint diseases, such as osteoporosis (OP) and osteoarthritis (OA), are areas of high and unmet medical need that offer significant commercial potential. Currently, there is a lack of treatment to modify bone and joint diseases with meaningful benefit to patients. While most approved therapeutics and products in development for OA and OP target symptoms, Arcarios is dedicated to modifying bone and joint disease outcomes.

Osteoarthritis is the most common form of arthritis and is a leading cause of chronic disability worldwide. As of 2009, OA afflicted more than 81 million adults in seven of the world's major markets, with an increased aggregate health care cost of \$186 billion annually in the US alone.

Osteoporosis, increased fragility of bone with associated fracture risk, afflicts 200 million people worldwide, including about 30% of all postmenopausal women in the US and Europe. Ageing populations worldwide will result in a major increase in OP in men and in postmenopausal women. Direct costs of fractures exceed \$50 billion annually in the US and Europe.

Product pipeline

Arcarios' pipeline includes 2 pre-clinical programs ARC-118 and ARC-205 and a discovery program to identify modulators of BMP signaling.

ARC-118

Description	Polysulfated cyclodextrin for the treatment of <ul style="list-style-type: none"> Osteoarthritis of the knee Osteoarthritis of the hand
Mode of action	Dual mode of action <ul style="list-style-type: none"> Chondroprotective Anti-inflammatory
Market opportunity	Blockbuster markets <ul style="list-style-type: none"> Knee OA approximately 15% of a \$5 bln market Hand OA approximately 20% of a \$5 bln market
Strategic positioning	<ul style="list-style-type: none"> First in class and disease modifying Intra-articular and subcutaneous dosing regimens with high patient acceptance and compliance
Status	<ul style="list-style-type: none"> In pre-clinical development Preparing Phase I/II clinical program in knee OA First in man H2 2012

Founded

July 2010

Focus

Disease modifying drugs
Bone and joint disorders

Funding

Seed investment > 4 mln
Non-dilutive > 7 mln

Opportunity

- No disease modifiers in OA available
- Only Forteo has bone rebuilding capacities for OP
- Many OP drugs have serious side effects

Market size

Bone diseases

- 9 bln sales in 2009
- CAGR 3.5%

"The need for anabolics continues"

Joint diseases

- 5 bln sales in 2010
- CAGR 3.2%

"The wait for a DMOAD continues"

ARC-205

Description	Recombinant fusion protein for treatment of bone diseases: <ul style="list-style-type: none"> • Multiple myeloma • Osteoporosis
Mode of action	Novel, but validated mode of action: <ul style="list-style-type: none"> • Inhibition of activin receptor • Mediated by its natural inhibitor follistatin
Market opportunity	Blockbuster market: <ul style="list-style-type: none"> • Osteoporosis market exceeds \$9 bln
Strategic positioning	<ul style="list-style-type: none"> • First in class and bone anabolic • Dosing and treatment regimen with high patient compliance
Status	<ul style="list-style-type: none"> • Lead molecule identified • Preparing for preclinical development • First in man: H1 2014

BMP modulators

The company has identified several lead series on the basis of a phenotypic screen that show promising *in vitro* activity. One of those series has been optimized and the first SAR has been established.

Platform technologies

Two technology platforms originating from Profs. Frank Luyten (KU Leuven) and Hans van Leeuwen (Erasmus MC) form the basis of the Company's expertise and tools in bone and joint diseases and allow the identification of disease modifying therapeutics.

ChondroBOOST

The progressive loss of articular cartilage is one of the hallmarks of osteoarthritis (OA) and results from an imbalance between the repair (anabolic) and destructive (catabolic) processes. ChondroBOOST combines several *in vitro* and *in vivo* assets/assays into a highly effective research engine that enables the rapid identification of novel structures modifying drugs in the field of osteoarthritis.

OsteoBLAST

Arcarios has developed a drug development platform that allows the identification and optimization of new therapeutic compounds for bone diseases. The platform is based on *in vitro* assays that mimic the differentiation and function of human osteoblasts, which are the cells responsible for bone rebuilding.

Management team

T. Trimborn, PhD
Chief Executive Officer

E. van Hoogdalem, PhD
Chief Medical Officer

G. Maertens
Director Finance

G. De Wilde, PhD
Director R&D

Board of Directors

L. van Wersch, Chairman
Former VP Proctor&Gamble

H. de Vries
Erasmus Biomedical Fund

E. van Wezel
Biogeneration Ventures

E. Coutanceau
Credit Agricole Private Equity

R. Moons
BNP Paribas Fortis

D. Dumont
LRM

W. Dalemans
Tigenix

Advisory Board

R. Baron, Chairman
Professor at Harvard

L. Adorini, PhD
CSO Intercept Pharma

Prof. H. van Leeuwen
Erasmus Medical Center

Prof A. Verbruggen
University Gent

Prof. F. Luyten
KU Leuven

Contact Information

T. Trimborn, CEO
t.trimborn@arcarios.com