SCOTTISH MORTGAGE INVESTMENT TRUST

Enveda: Finding Hidden Medicines in Nature

Summary:

The biotech company Enveda has developed a new approach to explore and 'decode' nature's chemistry. Its goal is to discover molecules that could underpin a new generation of blockbuster drugs. In this podcast, the firm's founder and chief executive, Viswa Colluru, explains how Enveda could become a trillion-dollar business, and Scottish Mortgage Investment Trust manager, Tom Slater, considers the risks and opportunities the company faces.

Background:

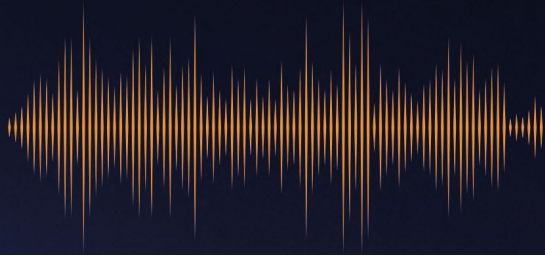
Scottish Mortgage first invested in Enveda in November 2024.

The US-headquartered company uses a proprietary artificial intelligence (AI) large language model to discover and develop new medicines from natural sources. At the time of writing, it has a pipeline of 12 drug candidates in various stages of development that could form the basis of new therapies to treat dermatitis, obesity, inflammation and chronic pain.

Enveda's founder, Viswa Colluru, has reimagined the drug discovery process from first principles based on his insight that natural molecular compounds should have a better safety profile than engineered ones.

"Healthcare is the biggest industry in the world, and if you can increase the odds of success in drug discovery, there are so many unmet needs that its opportunity is effectively unbounded," says Scottish Mortgage manager, Tom Slater.

Timecodes:



Glossary of terms (in order of mention):

Chronic myeloid leukaemia:
A type of blood cancer that affects white blood cells.

Nucleic acid vaccines:
Vaccines that use genetic material such as DNA or RNA to train the immune system.

Tumour immunotherapy:
Treatments that help the immune system recognise and attack cancer.

mRNA:
Messenger ribonucleic acid – a molecule that carries instructions to make proteins in a cell.

Statins:
Widely used drugs that lower cholesterol and reduce heart-disease risk.

Rapamycin:
A drug that affects the immune system and some ageing-related biological pathways.

Bezos regret minimisation hypothesis:
Amazon founder Jeff Bezos’s suggestion that faced with a decision, you project yourself into the future and ask if you'll regret *not* taking a leap now.

Natural product drug discovery:
Finding new medicines from compounds that occur in nature, such as plants or microbes.

A sequencing moment:
A breakthrough equivalent to DNA sequencing, which transformed genetics.

Metabolism:
The network of chemical reactions that keeps cells and bodies alive.

FDA:
The Food and Drug Administration – a US regulator.

Mass spectrometer:
A lab instrument that measures the mass of molecules to help identify them.

Inflammatory disease:
Diseases caused by an overactive immune response, such as some skin and bowel conditions.

Organoid system:
Miniature, lab-grown versions of human organs used to study disease.

Mouse models:
Laboratory mice bred or modified to mimic human diseases for research.

Deconvolute the mechanism:
Untangle and understand how a drug actually works in the body.

Genome:
The complete DNA code of an organism and the process of reading it.

GLP-1:
Glucagon-like peptide-1 – a natural hormone targeted by diabetes and weight-loss medicines.

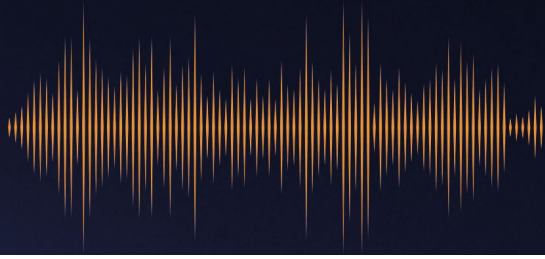
Venture incubation round:
Very early funding plus hands-on support from investors to get a company started.

Wet lab experiments:
Lab work involving real biological samples, liquids and chemicals rather than just computer models.

Contract research team:
An external lab hired by drug companies to run experiments and tests.

Underwriting of value:
How investors justify and quantify what a business should be worth.

Seed financing:
A startup's first significant round of outside investment.



SaaS:
Software as a service – software accessed online via a subscription.

Cost of capital:
How expensive it is for a company to raise money from investors or lenders.

Foundation models:
Very large AI models trained on broad data that can be adapted to many different tasks.

Testing the bounds of where value could accrue and be underwritten:
Testing where value will be created, and what can be credibly financed at an acceptable risk/price.

Stage one/two/three:
Increasingly large phases of human testing to check safety, dosing and effectiveness.

Power law distribution:
A pattern where a few winners are extremely big while most others are much smaller.