

# Enabling next-generation precision cancer therapy

Investor presentation

11 June 2024

## Becoming a world-leading supplier of alpha-emitters for cancer therapy

- Addressing a high-growth market for cancer therapy
- Innovative emerging supplier of alpha-emitters based on naturally occurring thorium
- Pilot plant set to qualify product and process in 2024
- Investment decision for commercial production in 2024/2025
- Evaluating fast-track to expedite market entry with lower initial volumes and significantly lower capex



Headquarters **Oslo** 

Established by Scatec Innovation **2017** 

Oslo Børs (TRMED), MCap **NOK ~250 million** 

Next industrial milestone
Pilot opening 2024



### **Enabling next-generation precision cancer therapy**



**Cancer is a leading cause of death** worldwide, accounting for around 10 million deaths per year



Radiotherapeutics represents one of the fastest growing cancer treatment options



Thor Medical enables a transformation of cancer care with **alpha-emitters for nextgeneration precision treatment** 







## Large market opportunity

### Radiotherapeutics represent a large market opportunity

#### **Global radiopharmaceutical market**

USD billion



- New cancer radiotherapeutics have reached sales in the **USD billions**
- Several hundred radiopharmaceuticals in development, creating strong future demand for radioactive compounds
- Next-generation precision cancer treatment focusing on targeted alpha therapy enabled by alpha-emitting radioisotopes
- **Pb-212 derived from parent isotope Th-228** is one of the most promising alpha-emitting radioisotopes



### A rapidly growing Th-228 market with USD billion potential



- Market with significant
   growth potential as it
   matures
- A single successful Th-228 based product can create a
   market worth several
   hundred million USD
- 15 assets in clinical trials, of which several are already in Phase 2



## Ongoing clinical trials alone require significant amount of Th-228, calls for fast-track alternative

Indicated demand for Th-228 from clinical trials alone (USDm)





are progressing with more than 15 clinical trials across various cancer treatments utilizing Th-228 as parent isotope for Ra-224 and Pb-212

### Signed significant LOIs with customers indicating 4-5x higher demand

- Signed three customer LOIs for ~70 GBq of annual deliveries
- **Customers progressing in clinical trials**, indicating requirements for volume earlier than initially expected
- Indicated demand from ongoing customer dialogues of >300 GBq annually







## Unique process and technology

#### Turning waste into next-generation cancer therapies





## Proprietary technology offering the world's purest radionuclides from natural decay of thorium

- **Delivering high purity Th-228**, parent isotope for Ra-224 and Pb-212, based on natural decay requiring no irradiation
- Natural decay chain **avoids radioactive contaminants** and impurities arising in irradiation-based processes
- **Proven and scalable** cost-effective separation method with 99.9% yield based on infinitely reusable Th-232 feedstock





## Sourcing of feedstock of natural thorium from multiple suppliers



- Th-232 is an infinitely reusable raw material for efficient production of medical isotopes
- Naturally occurring isotope decay requiring no irradiation, abundant and common biproduct in mining operations
- Thor Medical developing multiple feedstock suppliers for long term supply security
- Secured feedstock for start-up and operations of Pilot facility at Herøya





## Operational plans to drive value

### Pilot facilities at Herøya will verify process and product and prepare for industrial scale manufacturing

Pilot completion in 2H 2024 provides basis for:

- **Verification** of production process and technology
- 2 **Production** of customer samples
- <sup>3</sup> Scale-up to industrial manufacturing



### Aiming for fast-track to enable volume deliveries already in 2025

- Customers progressing with clinical trials are requesting commercial volumes of high-purity Th-228 as soon as possible
- Thor Medical has initiated feasibility study for a fast-track plant to deliver commercial volumes by the end of 2025
- Lower entry volumes but significantly reduced capex compared to a full-scale industrial plant
- Decision on possible fast-track to be taken upon successful start-up of the pilot plant and customer product acceptance



#### Fast-track to bridge pilot phase to full industrial-scale



- Pilot plant start-up 2H 2024 for product samples and customer qualification
- Fast-track to bridge commercial volumes to support customers during clinical trials, feasibility study initiated
- Further expansion to meet the expected growing demand

## Clear milestone roadmap set to de-risk investment and build substantial shareholder value

Value development illustration





### Goals for first phase of industrialisation







## Strong organization

### Strong team with solid track record

#### Dr. Alf Bjørseth\*

Chief Executive Officer

- Current CEO of Thor Medical
- Serial entrepreneur, former R&D director Hydro and CTO Elkem
- Ph.D. in physical chemistry from University of Oslo (UIO)

#### **Brede Ellingsæter**

Chief Financial Officer

- Current CFO Thor Medical
- Former CFO in Scatec Innovation and Elkem (Carbon Solutions Division)
- MSc from Norwegian School of Economics (NHH)

#### Dr. Sindre Hassfjell

Chief Technology Officer

- >30 years' experience in nuclear and radiochemistry scientific research
- Former project leader and Section head at IFE
- Ph.D. in Nuclear Science, University of Oslo (UIO)

#### **Astrid Liland**

VP EHS

- >20 years experience from Norwegian Radiation and Nuclear Safety Authority (DSA)
- Came from the position of Director for Department of Emergency Preparedness and Response in DSA
- MSc in nuclear chemistry, UiO







## Why invest in Thor Medical **We are enabling next-generation precision cancer treatments**

#### Major market opportunity

An early bet in a potential Th-228 billion-dollar market with significant short-term indicated demand for Th-228 from clinical trials alone

#### Unique, verified and scalable technology

Preparing for large-scale commercial supplies of the world's purest Thorium-228, based on verified proprietary technology

2

1

#### Clear operational roadmap

Pilot production, customer qualification and fast-track opportunity set to reduce risks and pathway to a reliable supply of thorium enabling FID for industrial-scale plant in 2025

5

#### Clear financial roadmap

Limited capital requirements through to final investment decision (FID) for highly profitable plant with revenue capacity of >NOK 400m and EBITDA >50% by 2030

#### Strong teams and supportive owners

Extensive experience in nuclear medicine and radiochemistry, founded in the Norwegian radiopharmaceutical cluster and backed by Scatec Innovation





Thor Medical is an emerging supplier of radionuclides, primarily alpha particle emitters, for medical use in cancer therapy. Its proprietary production technology requires no irradiation, and provides reliable, environmentally friendly, cost-efficient supply of alpha-emitters for the radiopharmaceutical industry.

Thor Medical HQ Karenslyst allé 9C NO-0278 Oslo, Norway

thormedical.no

### Appendix



#### Welcoming Mr Jasper Kurth as new CEO from August 2024



Joining Thor Medical fills me with immense excitement and anticipation. I am thrilled to be part of a team dedicated to revolutionizing healthcare and making a tangible difference in the lives of patients battling cancer. Together, we'll push boundaries, innovate relentlessly, and forge a brighter future in the fight against this devastating disease.

- Jasper Kurth

- Mr. Kurth joins Thor Medical from Bayer Pharmaceuticals, where he has spent his entire professional career
- He is currently General Manager Radiology Nordics in Stockholm
- Other previously held positions include:
  - Head of Business Operations & Strategy EMEA
  - Acting Head of Sub-Region Western Europe Radiology
  - Chief of Staff and Head of Training Radiology Europe

### The future is alpha

Alpha-particles yield better therapeutic performance with less side effects



#### Alpha ( $\alpha$ ) > Beta ( $\beta$ )

- Higher linear energy transfers

   → Greater therapeutic efficacy
- Shorter path ranges

   → less off-target toxicity damaging healthy cells in surrounding tissue
- Direct cell death through DNA destruction
   → breaks both DNA strands
- Short half-life  $\rightarrow$  no long-lived radioactivity in the patient
- No chemical toxicity



### Strong interest in Pb-212 as alpha-emitter

>10 companies working with >15 radiotherapeutic candidates





- 15 cancer therapy candidates in clinical development with Pb-212 or Ra-224, with the 3 most advanced already in Phase 2a
- 10+ candidates in pre-clinic/discovery
- Broad range of indications:
  - Prostate cancer
  - Melanoma
  - Solid tumors
  - Ovary
  - Colorectal
  - Pancreatic/breast
  - Neuroendocrine
  - Brain



## Steenkampskraal feedstock supply and technology cooperation – the highest concentration Th mine worldwide

- The Steenkampskraal Monazite Mine in South Africa considered to have the highest concentration of thorium globally
- Signed a Memorandum of Understanding for feedstock supply and technology cooperation in June 2024
- Targeting long-term partnership leveraging Thor Medical's expertise to efficiently produce valuable alpha-emitters from Steenkampskraal's mineral resources
- Refurbishment and construction start at the mine by end of 2024, with targeted production of thorium by end of 2025



