KinN Therapeutics AS

- from idea to CRO

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KinN Therapeutics AS
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KinN Therapeutics AS

- Excellent *in vitro* work being performed for leukemia in Norway

- However, standard treatment for acute myeloid leukemia has been the same since introduced in 1973
  - 5 year survival of patients >65 years is 5%

- Large need for research to bridge the gap between clinical trials and cell culture experiments
**KinN Therapeutics AS**

- Emmet Mc Cormack recruited as post-doc (2003)
  - Preclinical models of leukemia
    - Cell lines
    - Patient derived material
  - Develop preclinical imaging platform
    - Monitor disease development
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- Post-doc period of Mc Cormack
  - Developed preclinical mouse models for human leukemia
  - Bought second ART inc. Optix imager in the world
    ✓ Consultant for ART inc.
    ✓ UoB Beta-site in Europe
    ✓ Client demonstrations

- Sponsored research
- No net profit
  ✓ Possible to do contract research
KinN Therapeutics AS

- Contacted by Unifob AS for commercialization (2007)
  - Research company owned by UoB and the Foundation for University Research

- Established a preclinical project CRO
  - Run by Prof. Mc Cormack, facilitated by Prof. Gjertsens lab
    - Use UoB facilities
    - Pay as external user
KinN Therapeutics AS

• June 2007
  • 1 veterinarian, 1 research technician hired
    ✓ Contact with pharmaceutical industry

• December 2007
  • 4 contracts running
    ✓ 2 of top ten public trading pharma companies
    ✓ 750 000 NOK profit

• Viable business
  • Break out from UniFob platform
  • Independent CRO with two owners
KinN Therapeutics AS

- Kinn Therapeutics AS established in 2003
  - Intellectual property of cyclic AMP inhibitor
- Bought from Prof. Døskeland and Prof. Fladmark in 2008
  - Prof. Gjertsen and Prof. Mc Cormack as shareholders
  - Restructured to KinN Therapeutics AS
KinN Therapeutics AS

- Runs at Haukeland Campus
  - EU-projects
    - Companies
    - Scientific groups outsourcing preclinical work
  - Public trading pharma companies
  - Novartis, Johnson&Johnson
  - Smaller biotech and startup companies

- Alternative to traditional academic route after higher research education
  - Keep research activity in West Norway
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UoB Infrastructure available

- **Optical Imaging**
  - Bruker (formerly Carestream) In-Vivo MS FX PRO
    - Bioluminescence, Multispectral fluorescence + X-ray
  - 3 ART Inc. Optix™ Systems (MX3, MX and SX)
    - Time-domain optical imaging, fluorescence, bioluminescence
  - PerkinElmer IVIS SpectrumCT (Available Q4 2013)
    - Bioluminescence, Multispectral fluorescence + CT

- **Ultrasound** – VisualSonics Vevo® 2100
- **MRI** – Pharmascan 70/16 AS, Bruker Biospin MRI GmpH
  - 7T horizontal superconducting magnet
- **PET/CT** – Medisio Ltd. nanoScan
  - Currently available probes – $^{18}$FDG, $^{18}$FLT, $^{18}$FMISO
  - Custom probes available on request
KinN Therapeutics AS

- KinN Therapeutics AS does
  - *in vitro* screening, efficacy and combinational studies
  - *In vivo* ADME, dosing finding studies and MTD
  - *In vivo* preclinical efficacy in Heme and solid models available as
    - Cell line s.c. models with caliper and preclinical imaging
    - Orthotopic and metastatic xenograft with preclinical imaging
    - Primary patient xenografts with preclinical imaging
    - Model Development – tailored to the clients needs
## KinN Therapeutics AS

### Metastatic Models and imaging modalities

<table>
<thead>
<tr>
<th>Indication</th>
<th># Cell line</th>
<th># PDX models</th>
<th>Imaging modality</th>
</tr>
</thead>
<tbody>
<tr>
<td>AML (Acute Myeloid Leukemia)</td>
<td>10</td>
<td>&gt;30 reproducible models</td>
<td>Optical PET/CT</td>
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<tr>
<td>CML (Chronic Myeloid Leukemia)</td>
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<td>3 reproducible models</td>
<td>PET/CT Ultrasound</td>
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<td>MDS (Myelodysplastic Syndrome)</td>
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<tr>
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<tr>
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<td>Optical MR</td>
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<tr>
<td>Prostate</td>
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<tr>
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<tr>
<td>Melanoma</td>
<td>2</td>
<td>-</td>
<td>Optical</td>
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</tbody>
</table>

Additional models available upon request
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What advantages do we offer?

- **Model Development:** Tailored to clients' specific scientific objective
- **Clinically relevant preclinical models** of Leukaemia and orthotopic, metastatic models of cancer
- **Toxicity drug evaluation** and preclinical efficacy
- **State-of-the-ART Preclinical imaging** - permitting spatio-temporal and functional imaging of cancer
- **High level of expertise in model development and oncology**