Further expanding one of the deepest pipeline in the sector with

DUAL ACTION LRRC15-TARGETING MONOCLONAL ANTIBODY FROM UCLA

April 2022

Riccardo Canevari
CEO, Radiopharm Theranostics Ltd

RAD
RADIOPHARM THERANOSTICS

INVESTMENT HIGHLIGHTS

RAD
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In-licensing from UCLA
DUAL ACTION LRRC15-TARGETING MONOCLONAL ANTIBODY

Sign on agreement	Industry standard, low nominal value
Development milestones	Phase II, Phase III, FDA & EMA approval
Royalties	Low single digit

LRRC15-targeting antibody "DUNP19" holds the potential of first in class therapy in different solid tumor types.

THE ROAD AHEAD

mAb manufacturing
Less than 6 months for cGMP

Phase 1 DUNP19
12month to be started

Lead indication: Osteosarcoma (OS)
high unmet need, orphan status, fast approval & limited competition

THE TECHNOLOGY & MoA

LRCC15 expression is produced by cancer cells AND the surrounding tumour micro-environment, but not by healthy normal tissues.

LRRC15 production is very high in aggressive and treatment-resistant tumours.

The LRRC15-targeted radiopharmaceutical therapy has unique “dual action,” i.e. targeting both the tumour cells and the surrounding environment (stroma).

The radionuclide carrying LRRC15-targeting antibody “DUNP19” holds the potential of first in class therapy in a range of solid tumour types.

Osteosarcoma has a high unmet medical need and impacts young adult population most commonly, which is the first disease against which this antibody will be tested.

INVENTOR & INSTITUTION

Dr. David Ulmert, MD, PhD

Dr Ulmert obtained his degrees from Lund University, Sweden. He is currently lab head, faculty member and director of the preclinical theranostics program at the department of molecular and medical, UCLA.

Prior to joining UCLA, Dr. Ulmert spent 9 years at MSKCC where he served as the technical director of Ludwig Center for Cancer Immunotherapy between 2014-2018. In addition, Dr. Ulmert holds a position as lab head at the department of oncology at Lund University, Sweden.

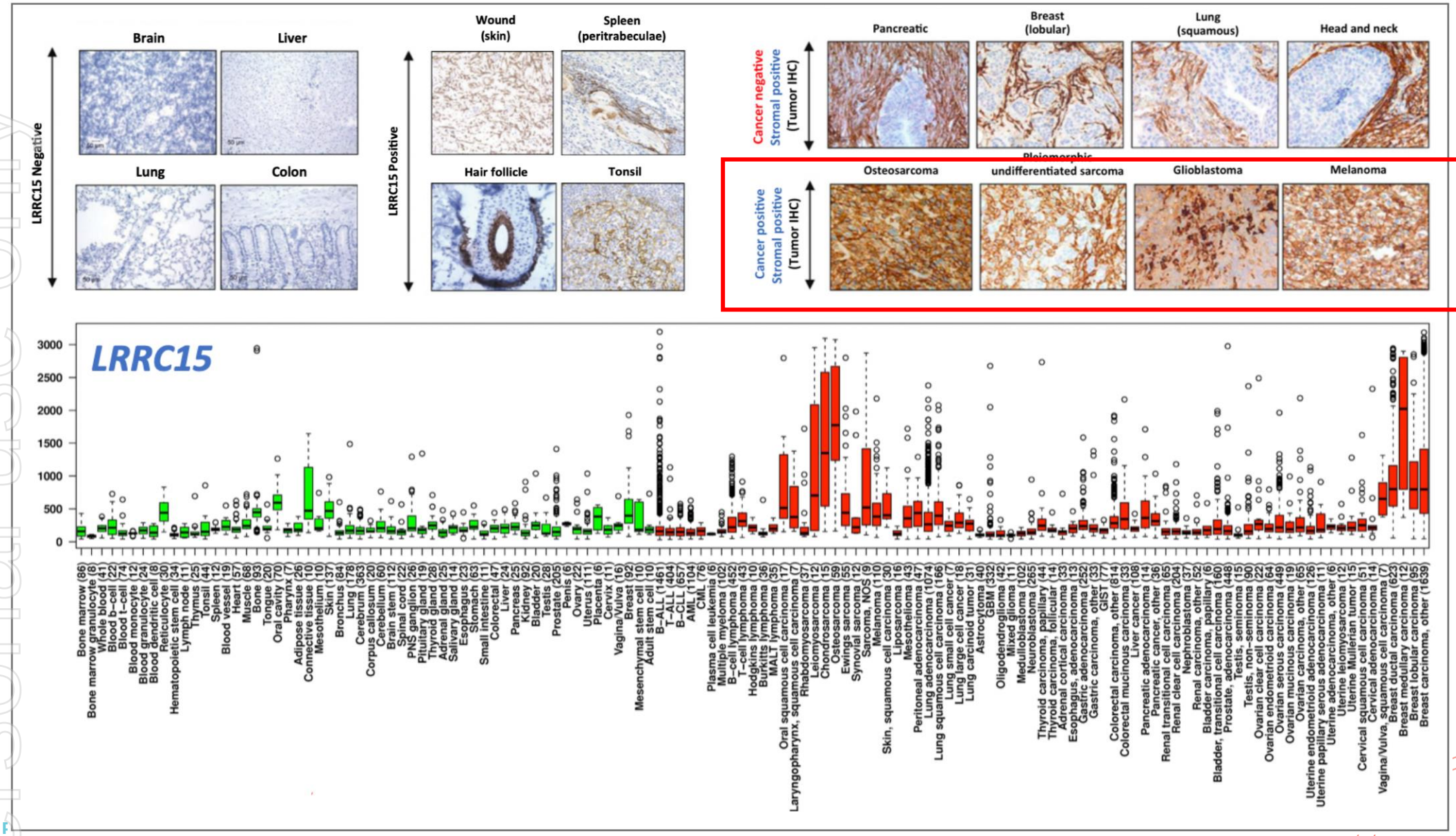
His research focus on development of multimodal vehicles targeting biomarkers related to progression and treatment resistance in oncological diseases. Several of the inventions developed by his teams are currently being evaluated in clinical trails.

Dr. Ulmert has co-founded biotech start-ups (Diaprost and Pharma15) that have successfully out-licensed several radiotheranostic and immunotherapeutic compounds. He serves as a scientific advisor to several pharmaceutical companies, including RAD.

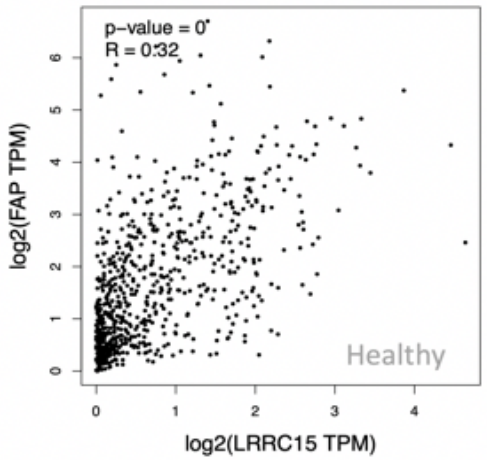
UCLA

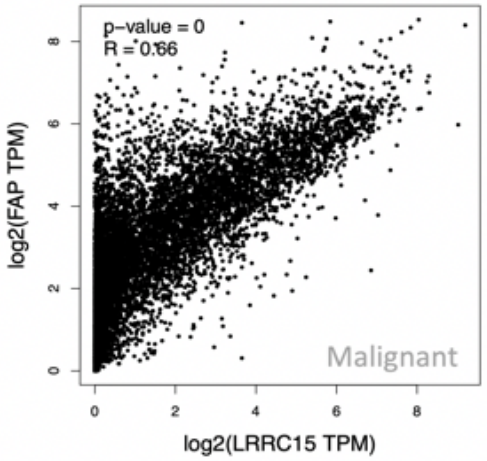
- The **University of California, Los Angeles** (**UCLA**)
  - UCLA is frequently **ranked among the best universities in the United States** by major college and university rankings.
  - As of October 2021, 27 Nobel laureates, five Turing Award winners, two Chief Scientists of the U.S. Air Force and one Fields Medalist have been affiliated with UCLA as faculty, researchers or alumni.
  - Among the current faculty members, 55 have been elected to the National Academy of Sciences, 32 to the National Academy of Engineering, 41 to the National Academy of Medicine and 156 to the American Academy of Arts and Sciences.
  - The university was elected to the Association of American Universities in 1974.

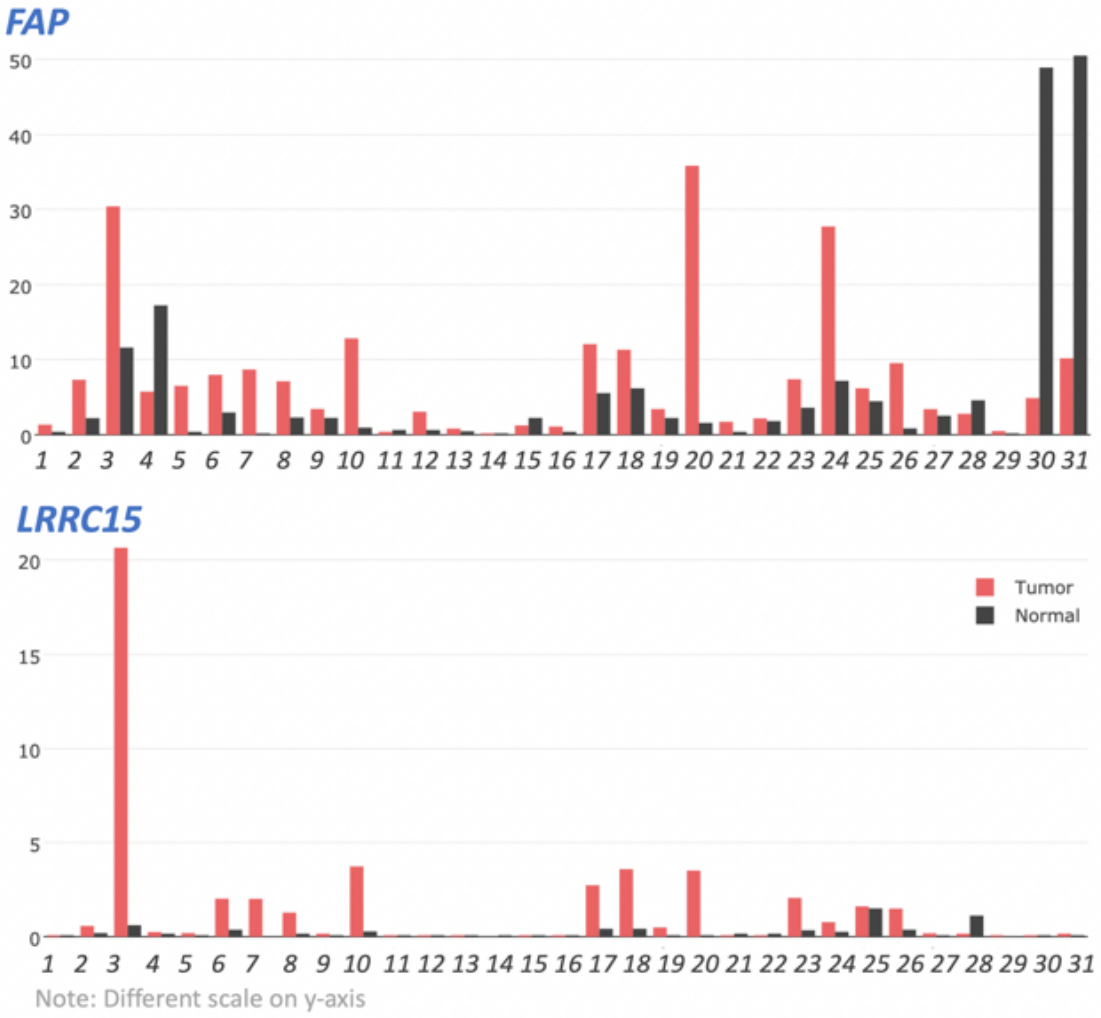
PRECLINICAL DATA – THE TARGET:
Leucin Rich Repeat Containing Protein 15 (LRRC15)



PRECLINICAL DATA – THE TARGET:
LRRC15 has very limited expression in Healthy tissues



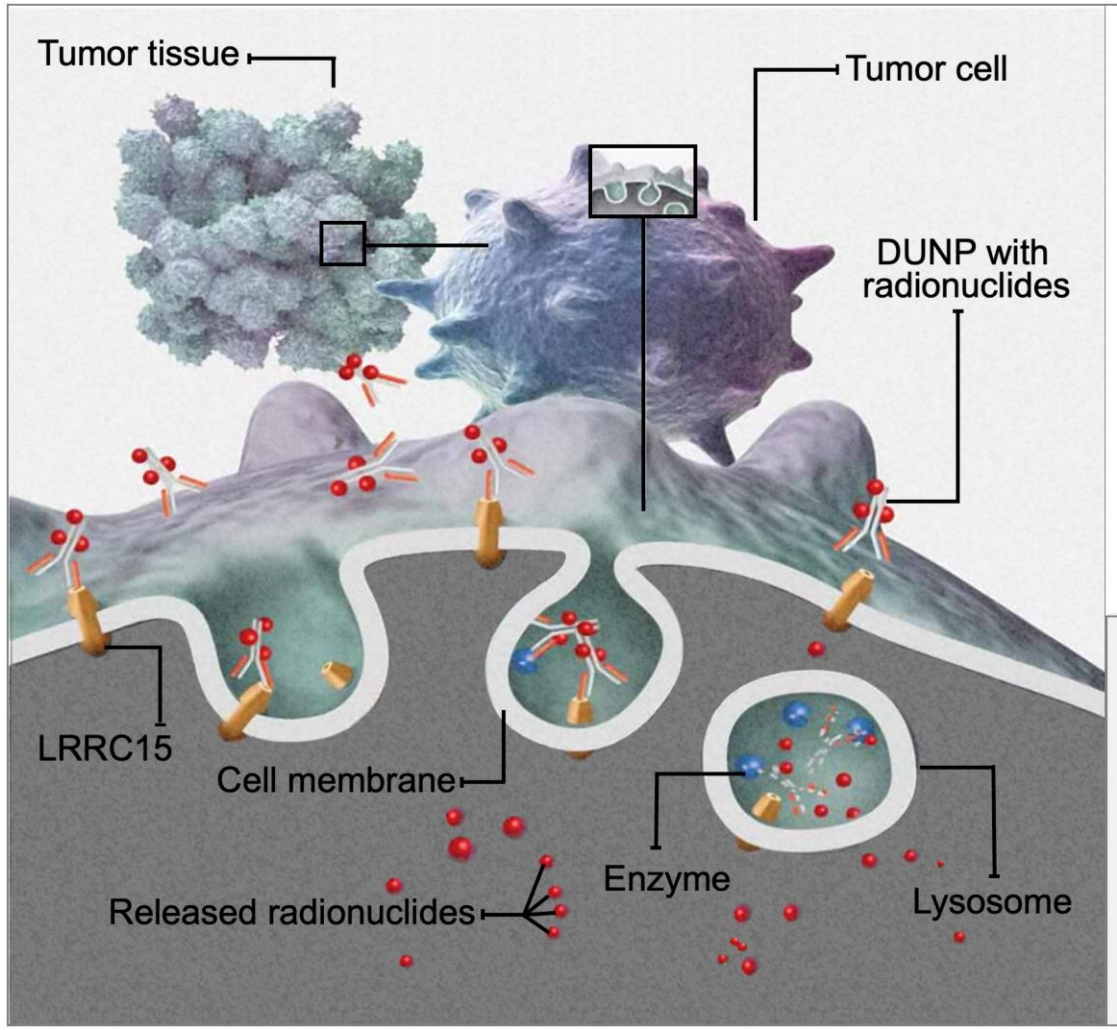


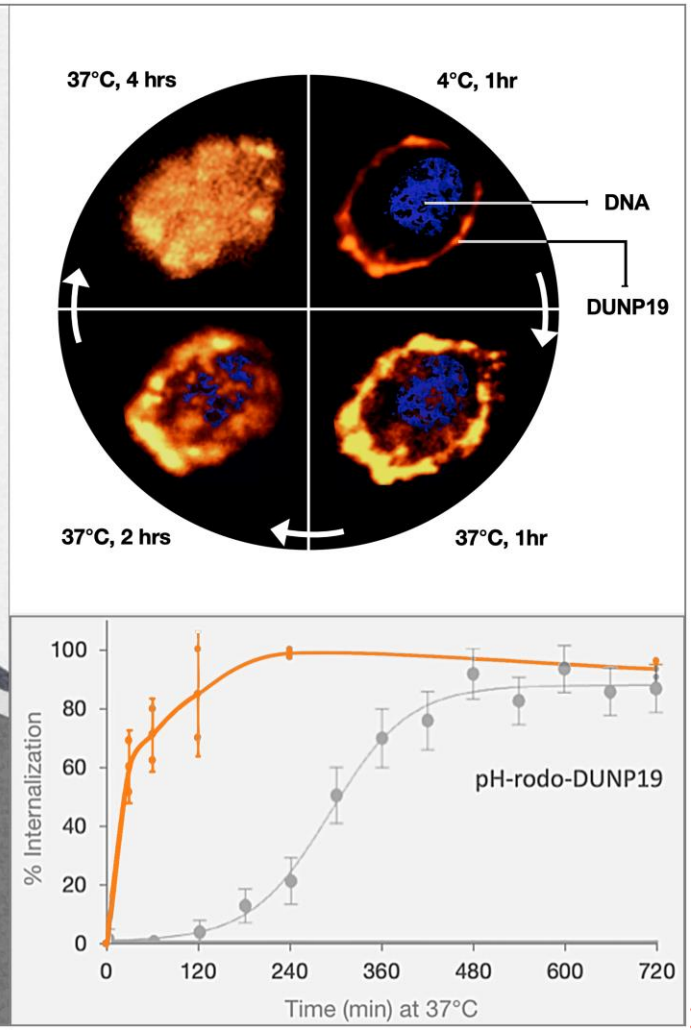


1. Adrenocortical carcinoma
2. Bladder Urothelial Carcinoma
3. Breast invasive carcinoma
4. Cervical/endocervical carcinoma
5. Cholangio carcinoma
6. Colon adenocarcinoma
7. Lymphoid neoplasm/B-cell lymphoma
8. Esophageal carcinoma
9. Glioblastoma multiforme
10. Head and neck squamous cell carcinoma
11. Renal chromophobe
12. Renal clear cell carcinoma
13. Renal papillary cell carcinoma
14. Acute Myeloid Leukemia
15. Lower grade glioma
16. Hepatocellular carcinoma
17. Lung adenocarcinoma
18. Lung Squamous cell carcinoma
19. Ovarian serous cystadenocarcinoma
20. Pancreatic adenocarcinoma
21. Pheochromocytoma
22. Prostate adenocarcinoma
23. Rectum adenocarcinoma
24. Sarcoma
25. Cutaneous melanoma
26. Stomach adenocarcinoma
27. Testicular Germ cell tumors
28. Thyroid carcinoma
29. Thymoma
30. Endometrial carcinoma
31. Uterine carcinosarcoma

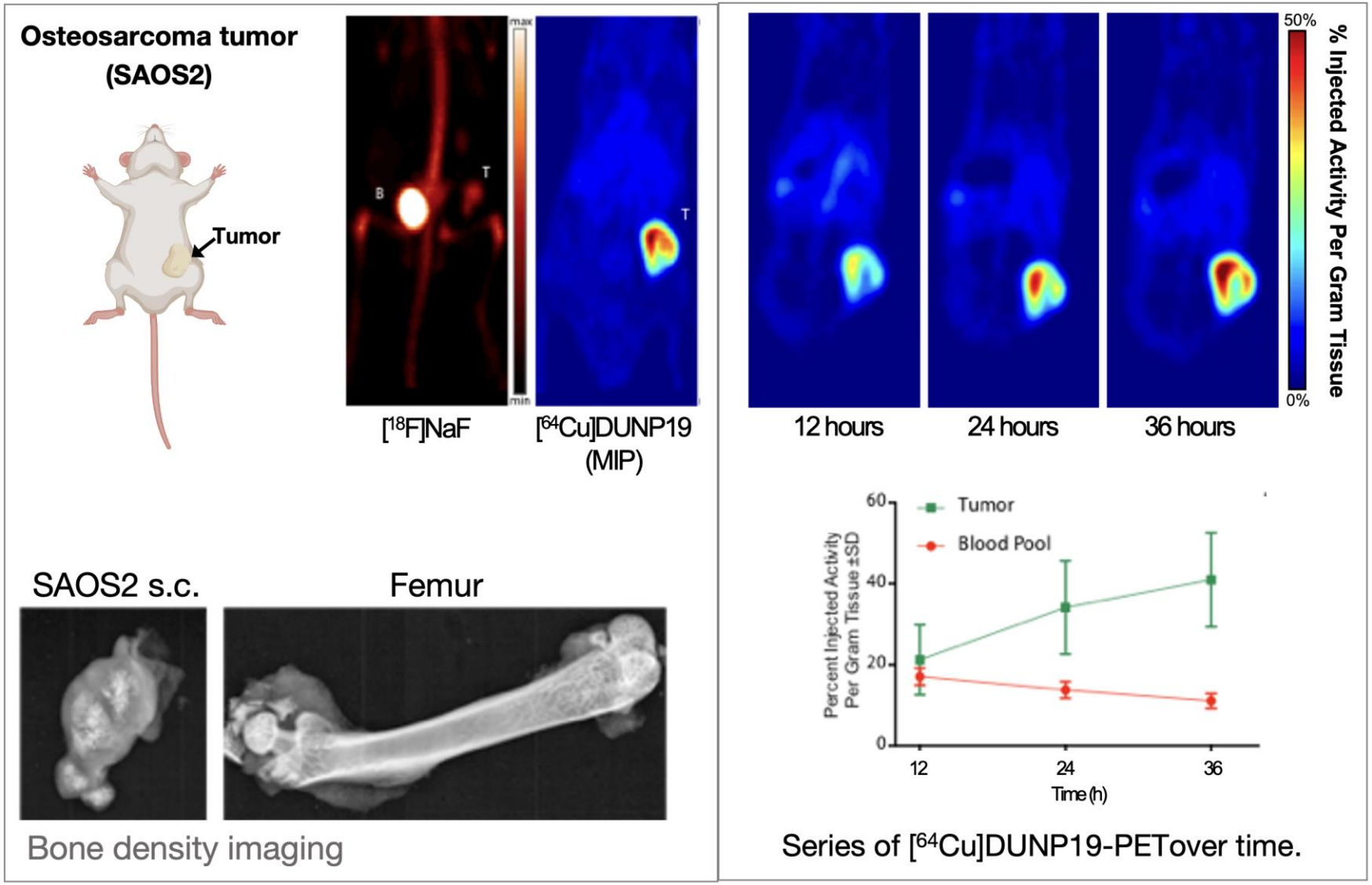
PRECLINICAL DATA – THE MOLECULE:
Humanized Monoclonal Antibody DUNP19

Unique MoA and very fast internalization



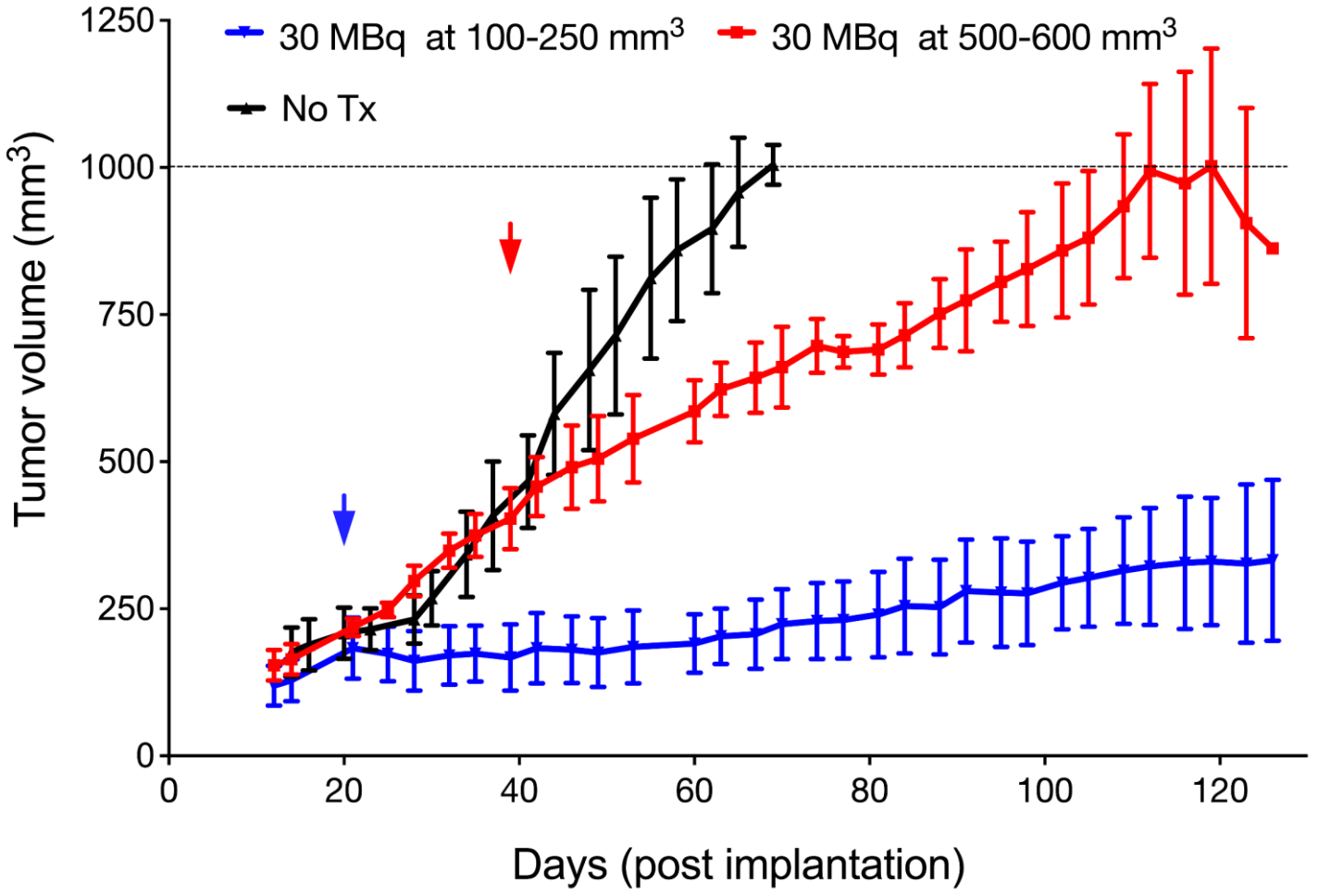


PRECLINICAL DATA:
mAb DUNP19 in Osteosarcoma in vivo model



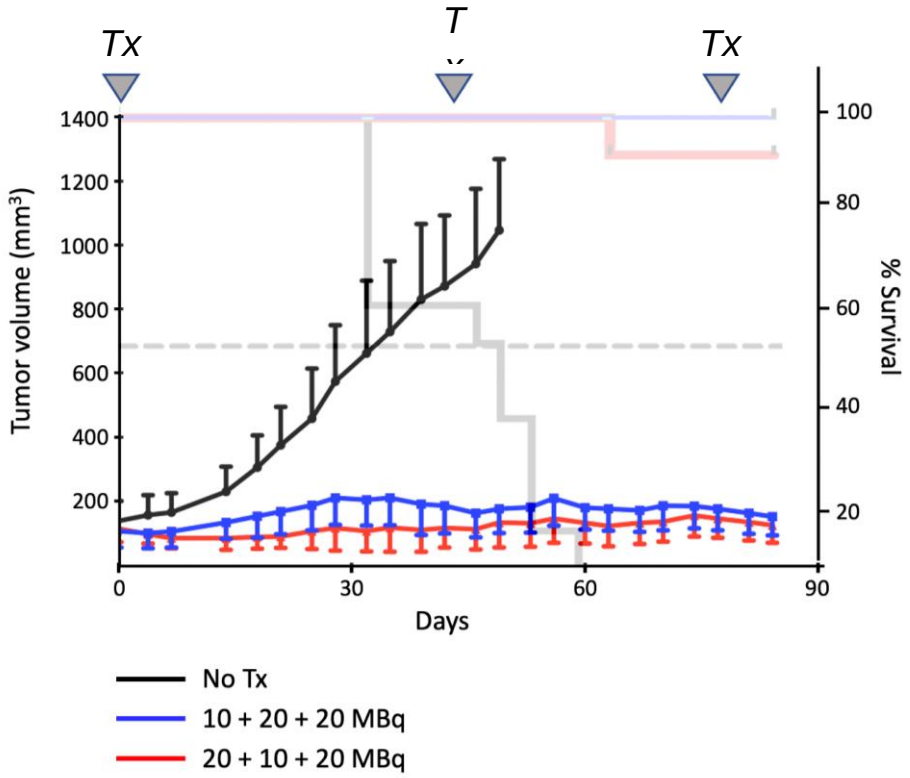
PRECLINICAL DATA:
mAb DUNP19 in Osteosarcoma in vivo model

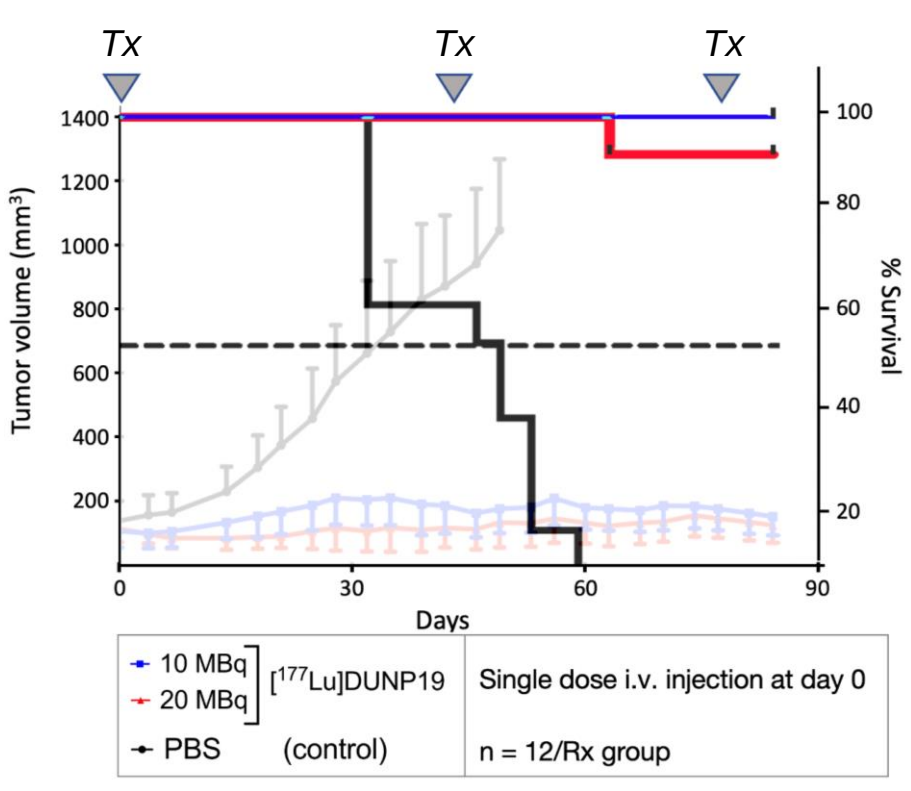
Osteosarcoma - single dose



PRECLINICAL DATA:
mAb DUNP19 in Osteosarcoma in vivo model

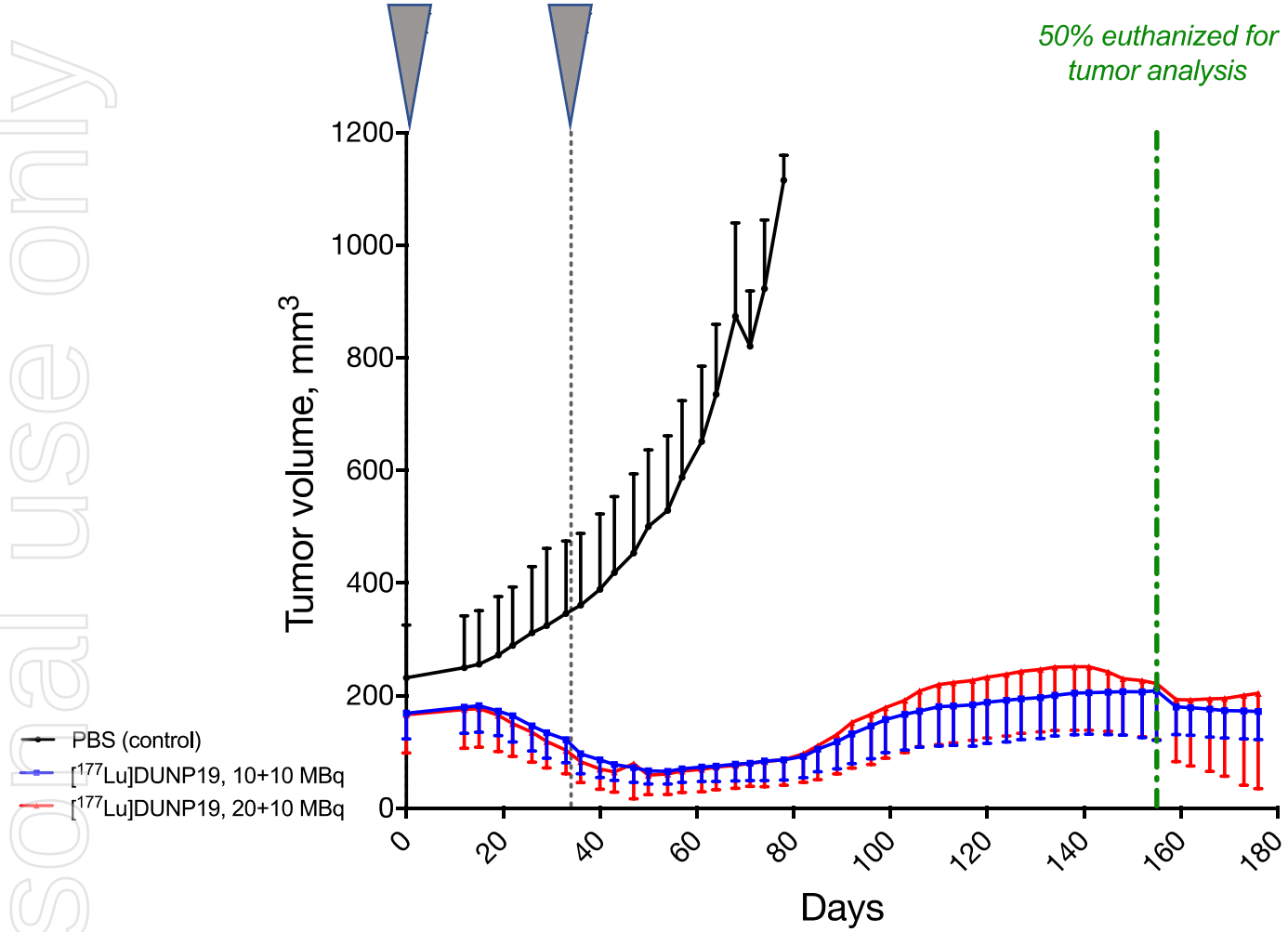
Osteosarcoma - multiple doses

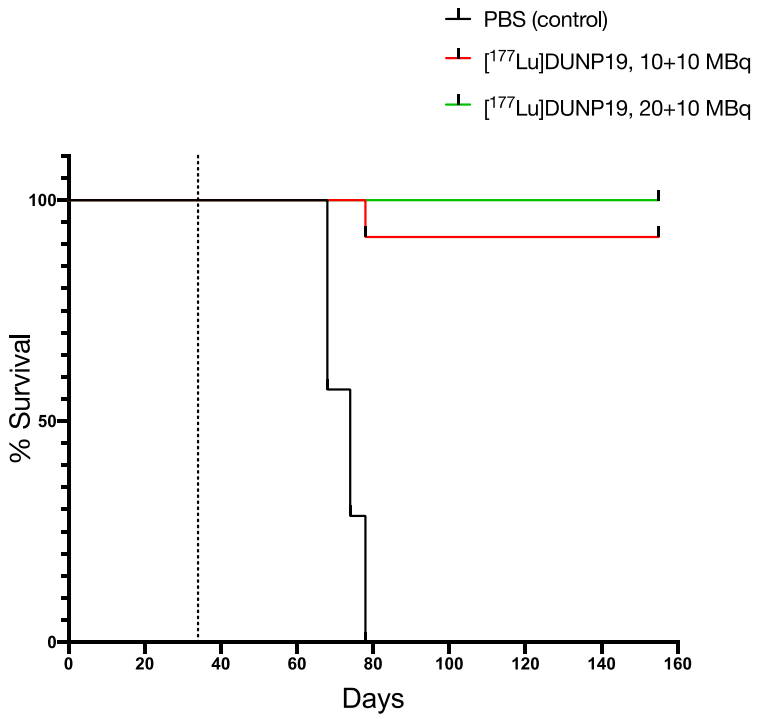




PRECLINICAL DATA:
mAb DUNP19 in Glioblastoma in vivo model

U118 (GBM) s.c. tumors





CLINICAL DEVELOPMENT PLAN: OVERVIEW

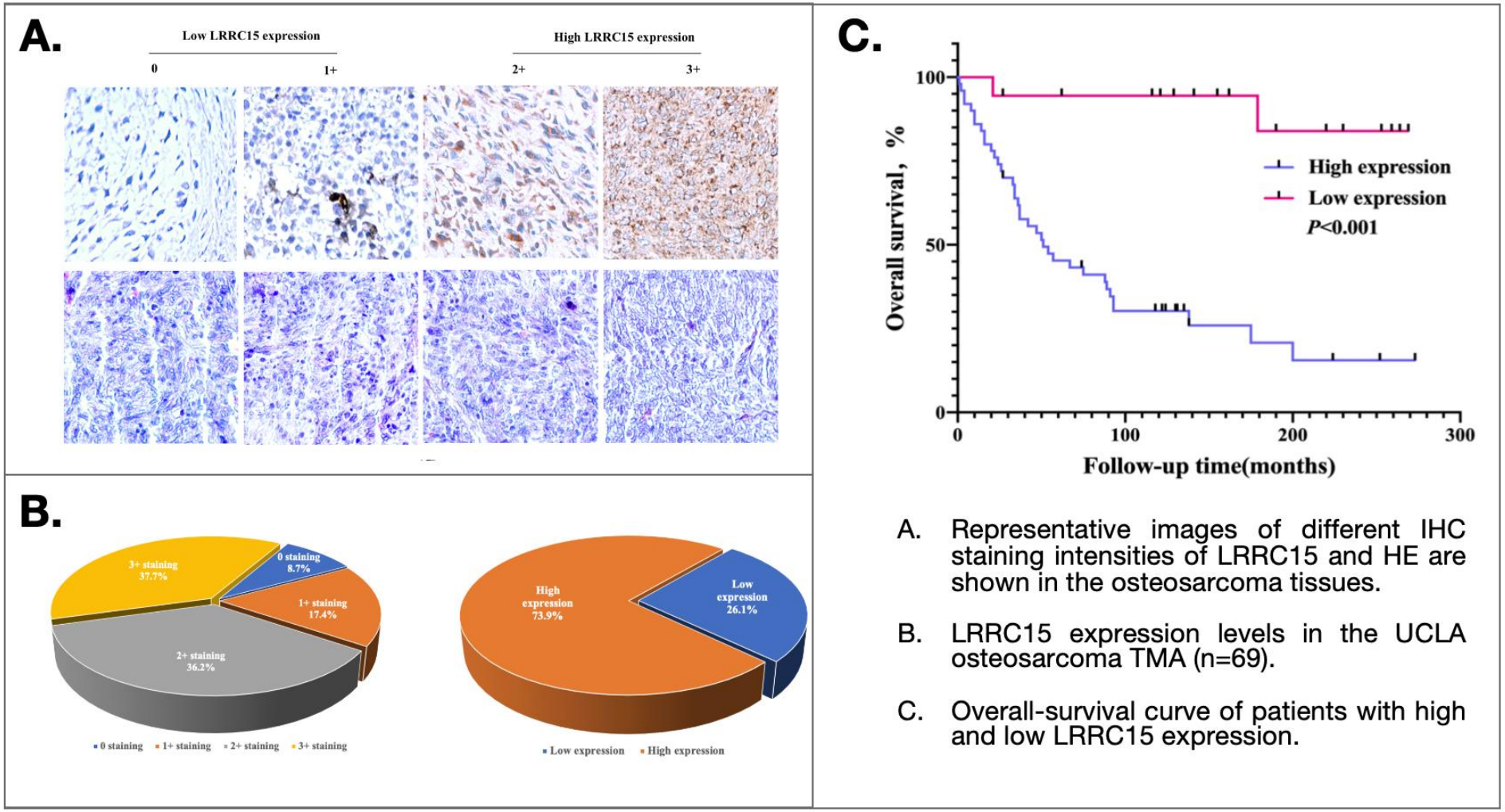
LRCC expression in multiple tumor types → Pancreatic, Breast, Glioblastoma, Osteosarcoma....

First indication selected: OSTEOSARCOMA

- → High unmet medical need
- → Orphan indication *(faster regulatory process)*
- → No competition *(no radiopharmaceutical trial ongoing)*

Phase 1 in young ADULTS with metastatic OS

CLINICAL DEVELOPMENT PLAN:
High unmet need when LRRC15 is highly expressed



A. Representative images of different IHC staining intensities of LRRC15 and HE are shown in the osteosarcoma tissues.

B. LRRC15 expression levels in the UCLA osteosarcoma TMA (n=69).

C. Overall-survival curve of patients with high and low LRRC15 expression.

Cui et al. J. Orthop.Res, 2020.

Osteosarcoma (OS): LRRC15

- Primarily a disease of children and adolescents
  - 8th most common cancer in children
- Painful, disfiguring, and often rapidly fatal:
  - 8% originate in face
  - one of the very few cancers that metastasizes to the face

Treatment is wide surgical excision of bone and highly toxic, intra-arterial chemotherapy cocktails

MARKET & COMPETITION

RADIOPHARM THERANOSTICS

KEY STATISTICS FOR OSTEOSARCOMA

Osteosarcoma is **linked to very poor prognosis**

Each year, about **1,000 new cases** are diagnosed in USA

Most osteosarcomas occur in children, teens, and young adults **between the ages of 10 and 30.**

THERAPEUTIC OPTIONS

Surgery

Chemotherapy

External Beam radiation

COMPETITION

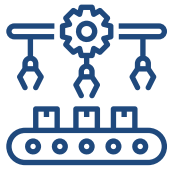
No targeted therapies approved in Osteosarcoma by FDA

No radiopharmaceutical therapies reported to be in clinical development yet

www.cancer.org

MANUFACTURING & IP

mAb manufacturing



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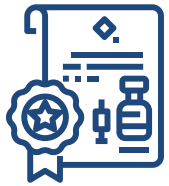

- First patent number 63/003,598 filed 18 Mar 2020
- Patent number P-594449-PC claims priority
- Worldwide coverage
- Expected loss of exclusivity March 2041

SUMMARY

- High potential radiopharmaceutical therapy in-licenced by top institution (UCLA)
- Targeting LRCC15, expressed in multiple tumor types
- Unique DUAL ACTION against the tumor and its microenvironment
- Potential first in class in high unmet medical need disease (Osteosarcoma)
- No / very limited competition
- Good financial terms

SEER 13. Deaths come from U.S. Mortality

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