



**Novel Biologic RNA Therapeutics**

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# Growing Market Opportunity

- RNA based therapy is a validated approach with the approval of eight drugs by the FDA
- **Four ASO** drugs and **two siRNA** drugs approved by the FDA in recent years
- Eight RNA based COVID-19 vaccines in pre-clinical or phase 1 trials



# AimRNA's Differentiated Solution & Benefits of Bioengineered RNAs

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- Novel technology & streamlined platform to produce a wide variety of biologic RNA molecules including ncRNA , miRNAs, siRNAs, aptamers, ASOs, sRNAs, etc.
  - Larger yield / scale – tens milligrams of pure RNAs from 1 L of fermentation
  - Cost effective
- Biologic RNAs are more effective than synthetic counterparts
  - Folded & tolerated within living cells
  - Higher activity than synthetic counterparts
  - “Prodrug” strategy
- Enables in-house development of biologic RNA therapeutics to combat various diseases including lethal cancers

## Biological RNAs (made in LIVING cells)

- Large scale (mg RNA/L culture)
- No/minimal natural modifications
- Variable lengths (e.g., 20-300 nt)
- Folded in living cells
- Tolerated by cells; safety needs more extensive studies
- More affordable with greatly reduced cost of goods

## Synthetic RNAs (by chemical synthesis)

- Large scale (automated)
- ❑ Extensive chemical modifications
- ❑ Variable with desired short length (e.g., <60 nt)
- ❑ Under chemical environment; proper folding?
- ❑ Size, sequence and modifications affect safety
- ❑ Less affordable; expensive with increased size)

# AIMRNA34 Reduces Tumor Burden in Lung Cancer Mouse Models

s.c. xenograft tumor model

Control

1 2 3 4 5 6



BERA34

1 2 3 4 5 6



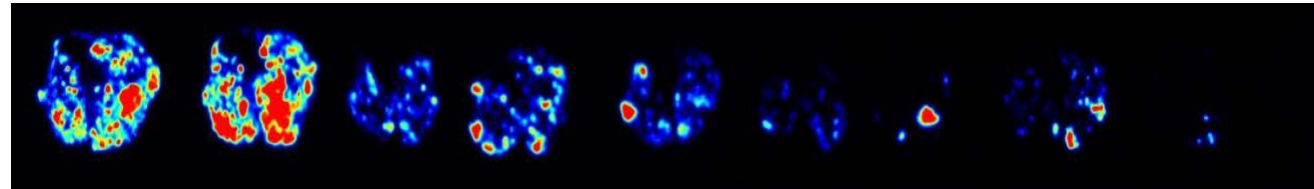
Wang et al., JPET, 354:131 (2015)

Metastatic lung tumor model

0 30,000

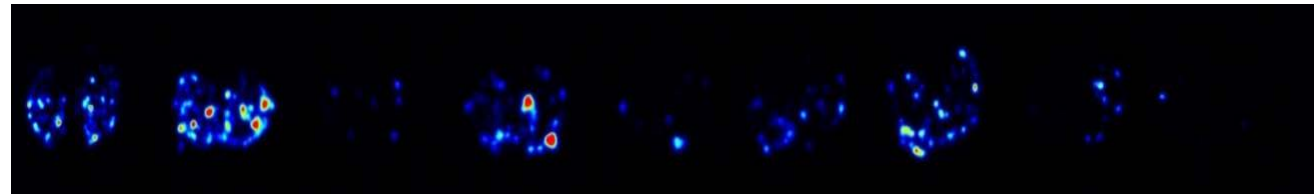
Control

1 2 4 7 8 5 6 9 3



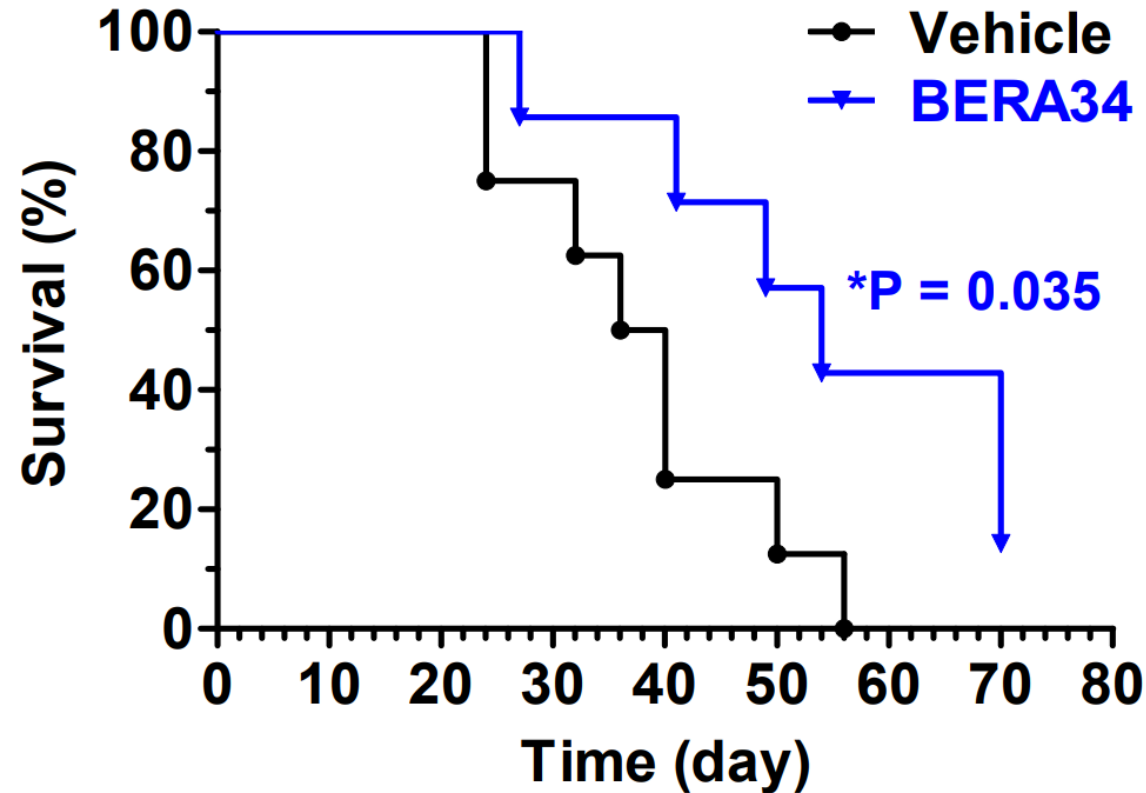
AIMRNA34

19 15 14 13 16 12 11 18 17



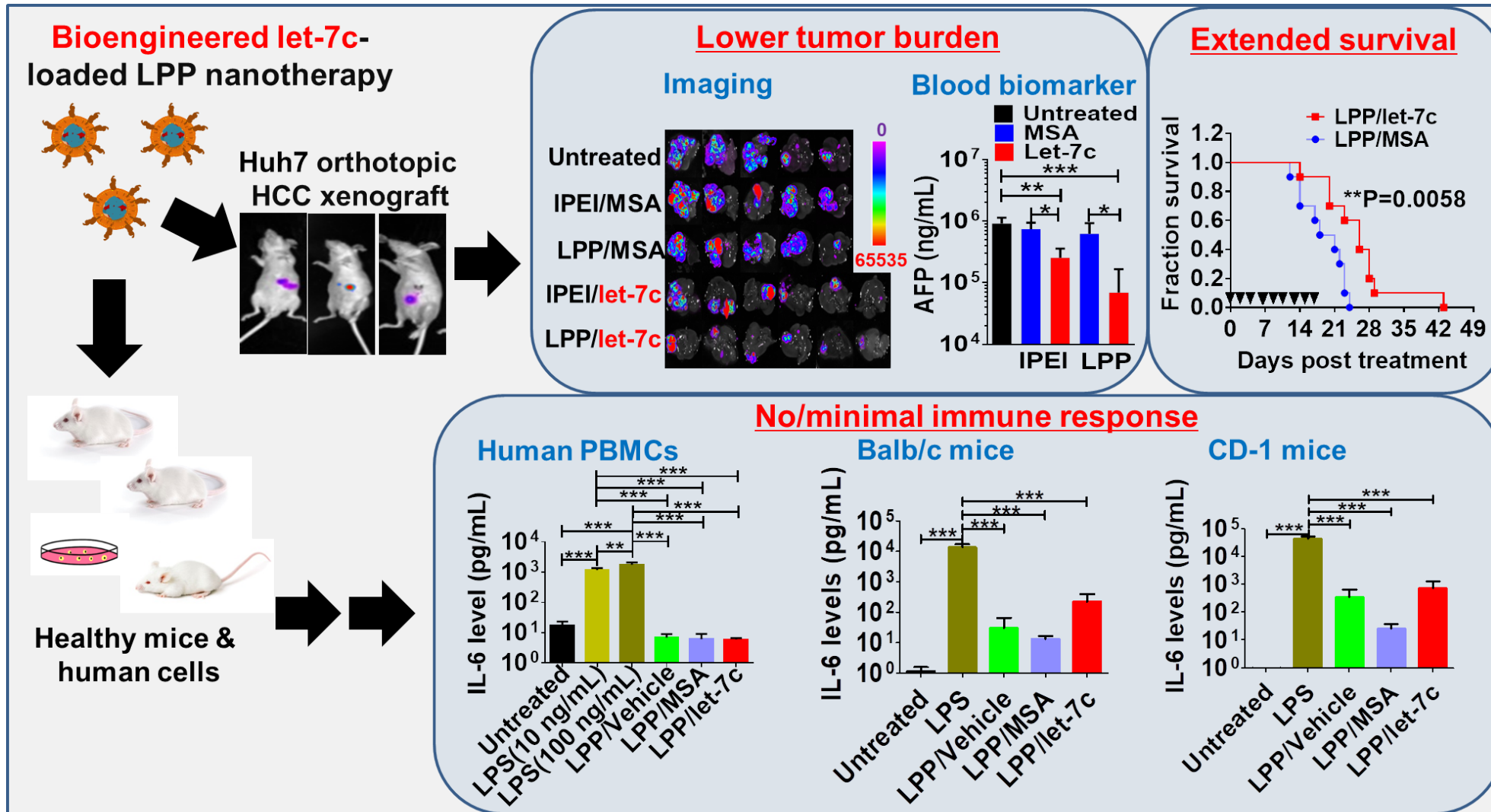
Ho et al., JPET, 365:494 (2018)

# AIMRNA34 Improves Overall Survival of Tumor Bearing Mice

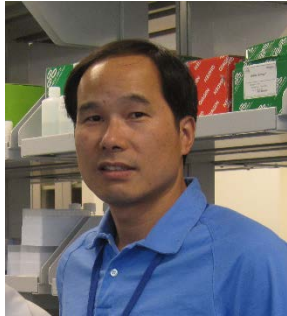


Jian et al. Oncotarget (2017)

# AIMRNA7 for the treatment of HCC



# Team



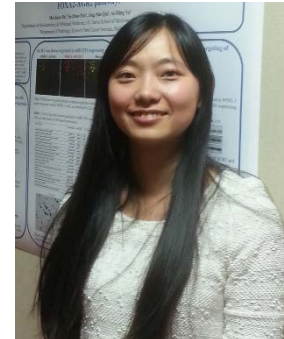
**Aiming Yu, Ph.D. – Founder & President**

**20+ years of experience in drug development, DM/PK/PD, miRNA research, and cancer therapy.**



**Neelu Batra, Ph.D. – Scientist**

**5+ years in cancer therapy and RNA bioengineering technology.**



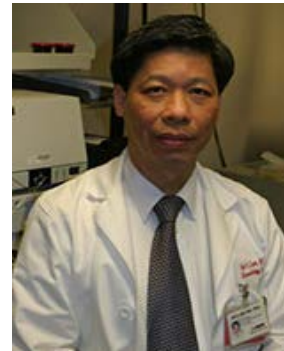
**Meijuan Tu, Ph.D. – Scientist**

**9+ years experience in pharmaceutical sciences and 4+ years in RNA based cancer therapy.**



**Primo N. Lara, M.D. – Advisor**

**Physician Scientist – 25+ years of experience in clinical practice and research on new therapies.**



**Kit S. Lam, M.D., Ph.D. – Advisor**

**Physician Scientist – 38+ years of experience in anti-cancer drug development, drug delivery, imaging, etc.**



## Intellectual Property

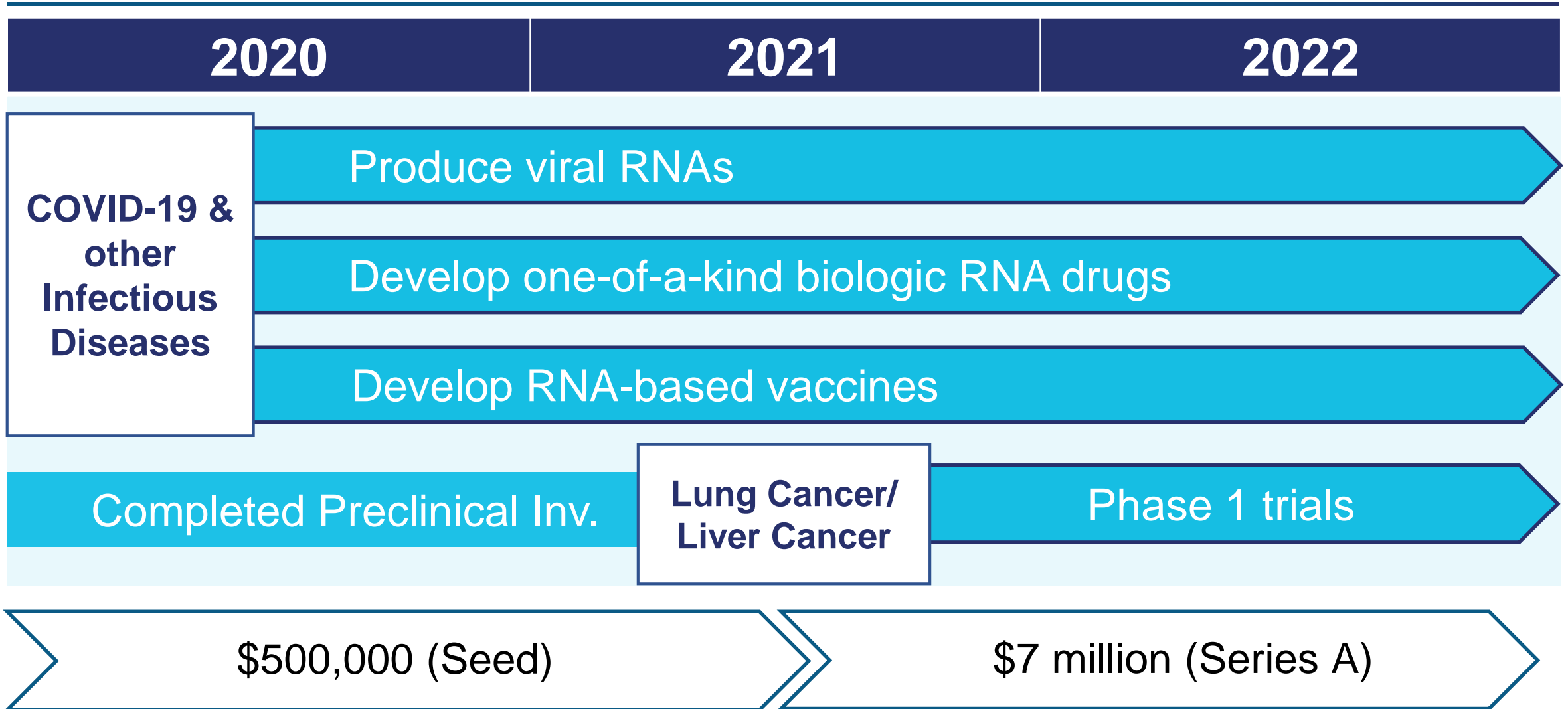
- ✓ Strong IP protection for RNA production platform technology and BERA drug candidates
- ✓ Exclusive right to license patent from UC Davis

## Regulatory

- ✓ Production at the GMP facility at UC Davis
- ✓ Gathering GLP pharm/tox data ahead of pre-IND meeting with FDA

Raising \$500,000 to fund IND-enabling studies

# AimRNA's Emerging Pipeline



# AimRNA

- Novel RNA bioengineering platform technology
- One-of-a-kind biological RNA molecules
- Lead candidates for cancer therapy

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