

Adjuvance 2021:

**Progressing adjuvant and vaccine
development**

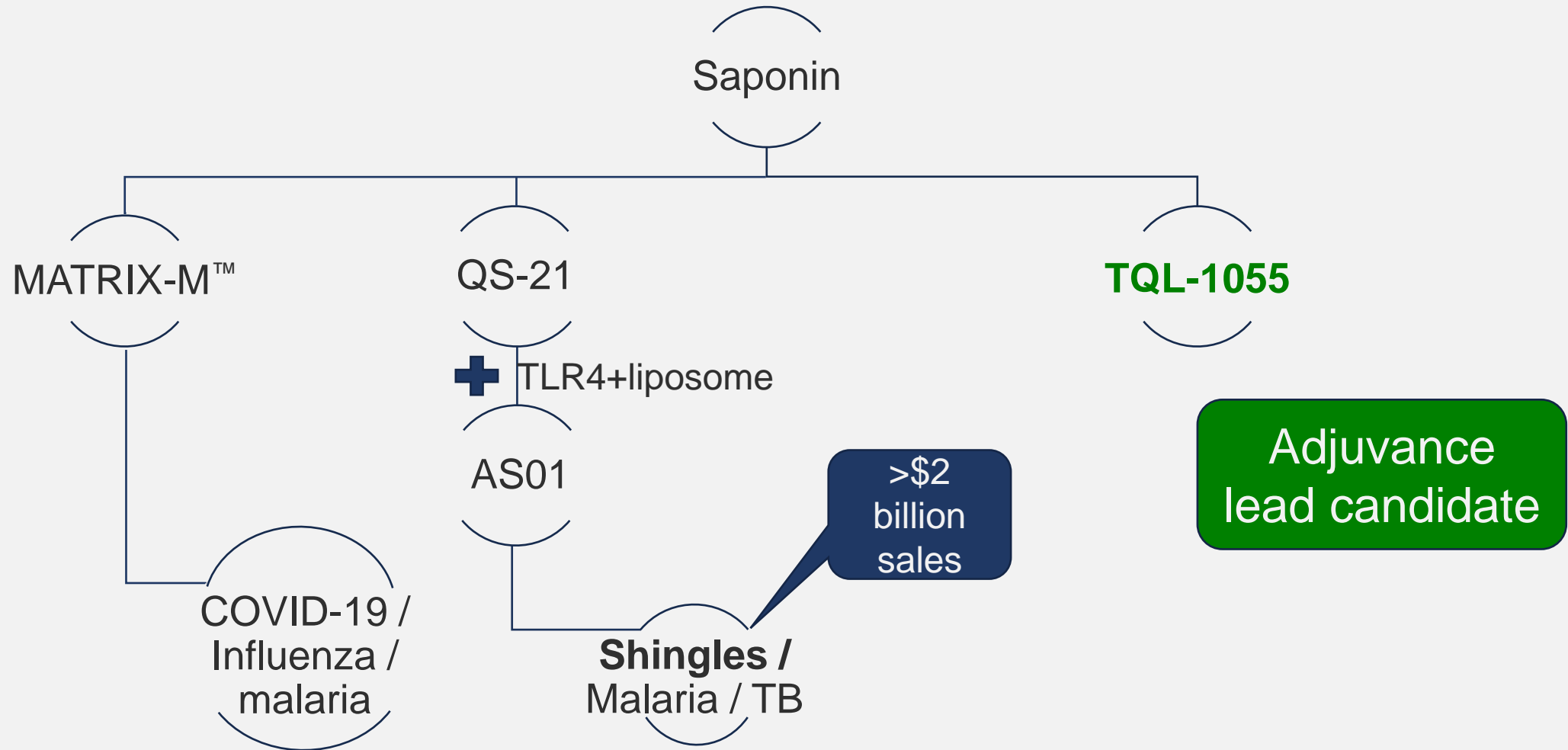


Enhancing Immunity

Adjuvance at a glance

- Developing next-generation saponin adjuvants and vaccines
 - Strong immune stimulation
 - Favorable tolerability and manufacturing
- **TQL-1055** Phase 1 results with pertussis vaccine; Phase 1 with zoster vaccine and partnered COVID-19 in 2022
- Dual value
 - Adjuvant platform out-licensing
 - Internal vaccine development
- Adjuvant platform discussions with > 20 partners
- Adjuvant & vaccine expertise on team & boards
- Series B financing H2 2021

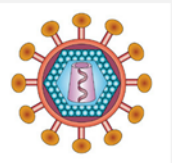
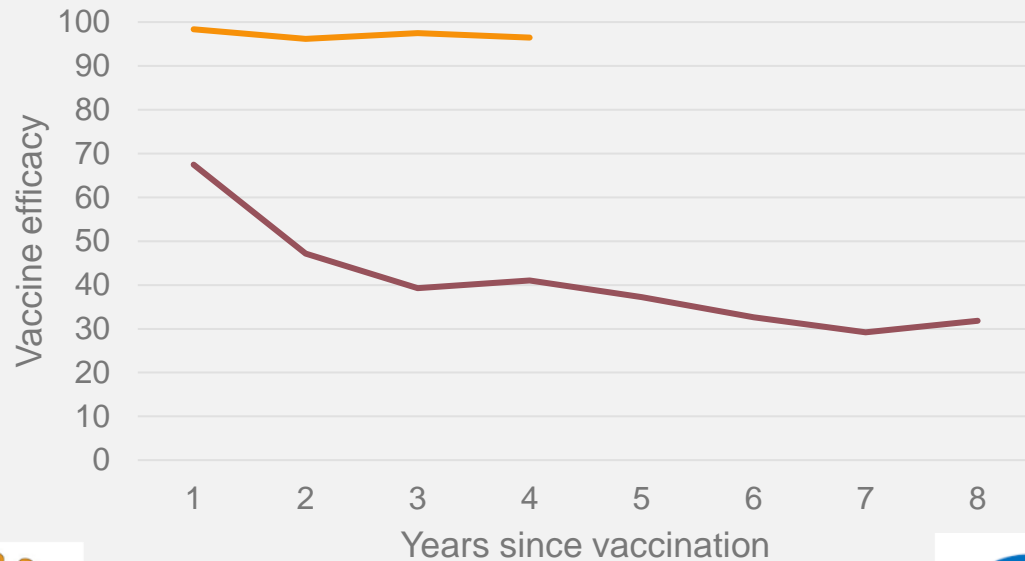
Saponin adjuvants are proven in high-value and global health vaccines



Some saponin adjuvants present a mixed profile

Highly effective

Shingles vaccine efficacy comparison



— Live attenuated Zostavax®

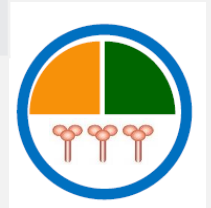
— Recombinant AS01 adjuvant Shingrix®



Poor tolerability

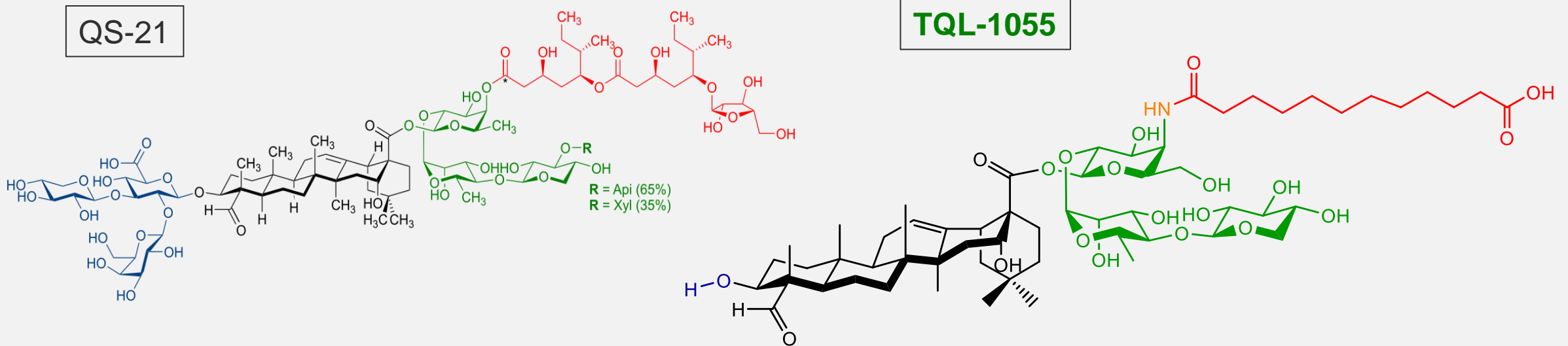
Shingles vaccine tolerability comparison

Adverse Event (AE)	Placebo	Adjuvanted shingles vaccine
Any solicited AE	34% (32-35)	84% (83-86)
Solicited local AE	12% (11-13)	81% (80-82)

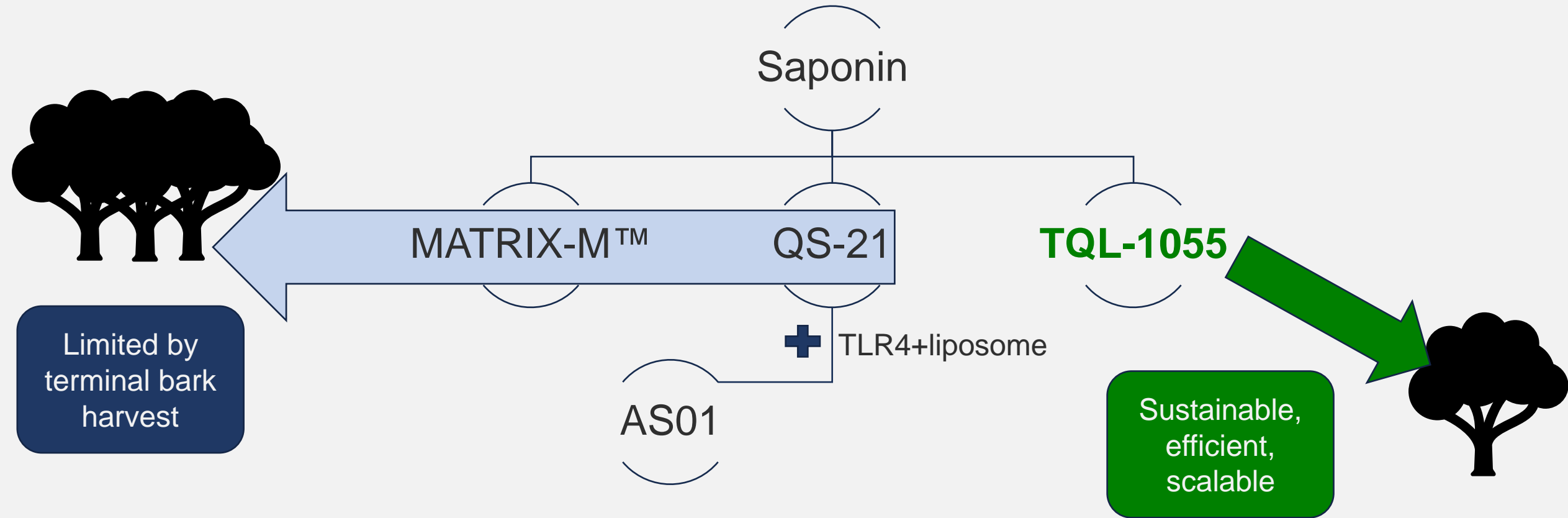


TQL-1055: Optimized saponin adjuvant

- Simplified, stabilized version of QS-21
- Semi-synthetic entity designed to improve tolerability



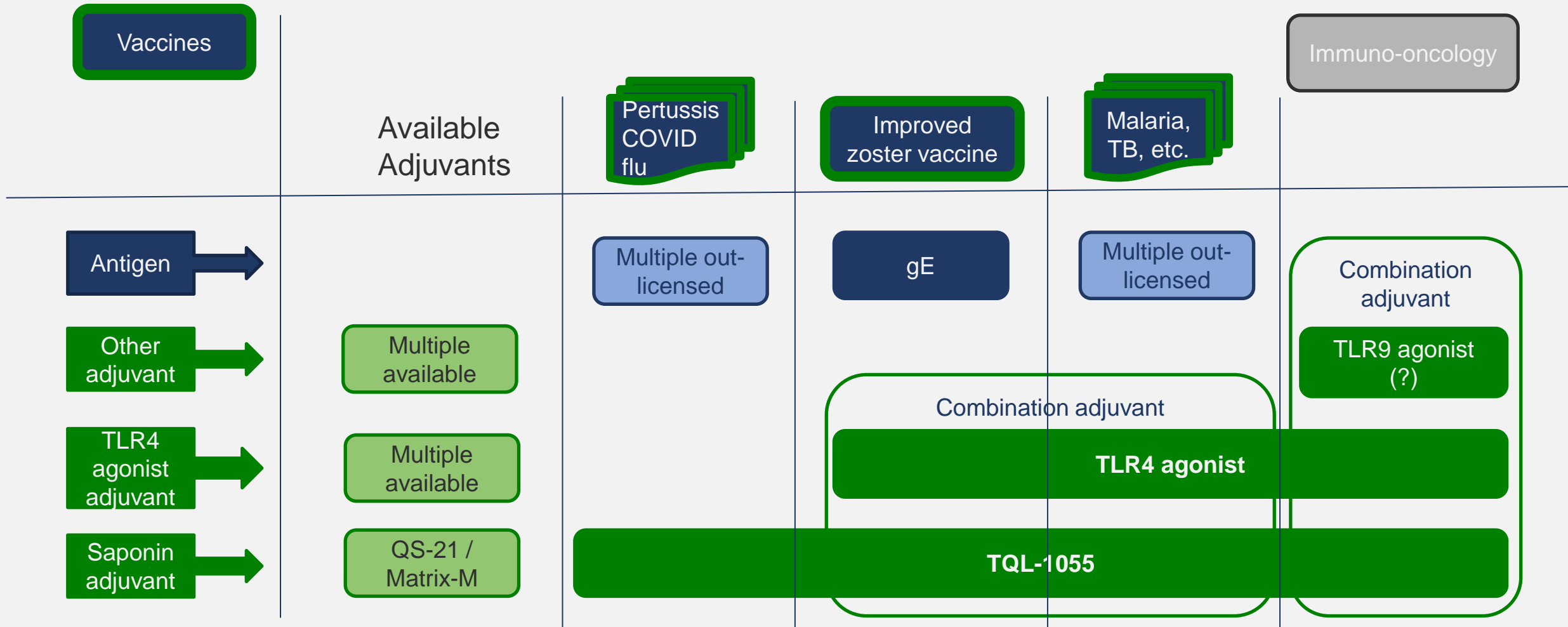
Sustainability and manufacturing efficiency limits



TQL-1055 has multiple advantages

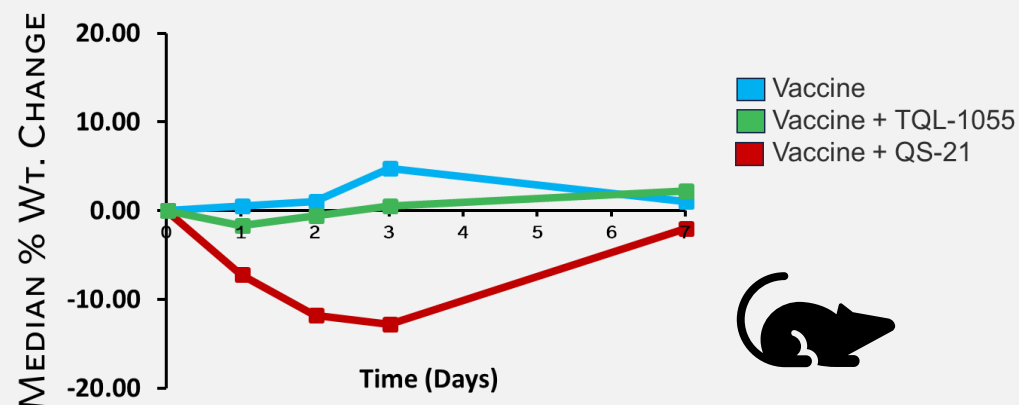
	Other saponins	TQL-1055
Adjuvanticity	Excellent	Excellent
Tolerability	Poor	Improved
Source materials	Limited	Expanded
Yield	Low	Increased
Purity	Mixed	High
Stability	Limited	Increased
Manufacturing efficiency	Low	Increased
Doses per year	Limited	~3B
Regulatory	Accepted	Phase 1 clinical results

Foundation of value is next generation saponin adjuvant, **TQL-1055**



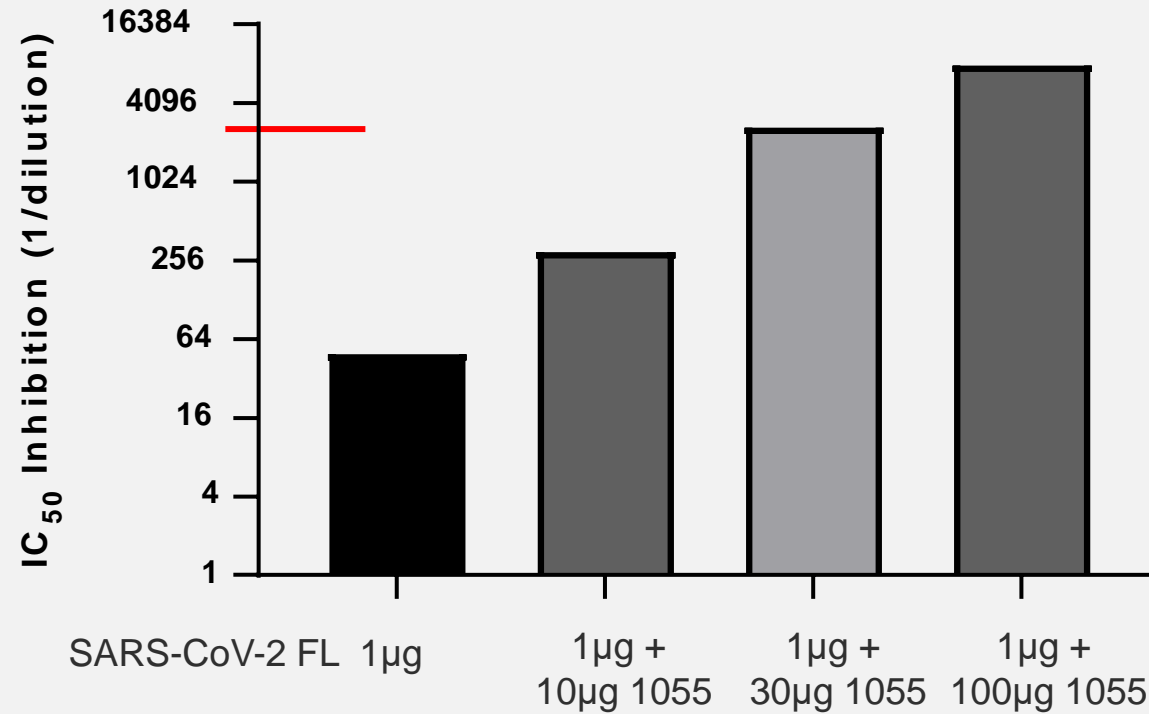
TQL-1055: Improved tolerability

- Hemolysis associated with QS-21, but not TQL-1055
- Weight loss associated with QS-21 containing vaccines, but not vaccine containing TQL-1055
- NOAEL of > 2000 mcg/dose



TQL-1055: Functional response in COVID

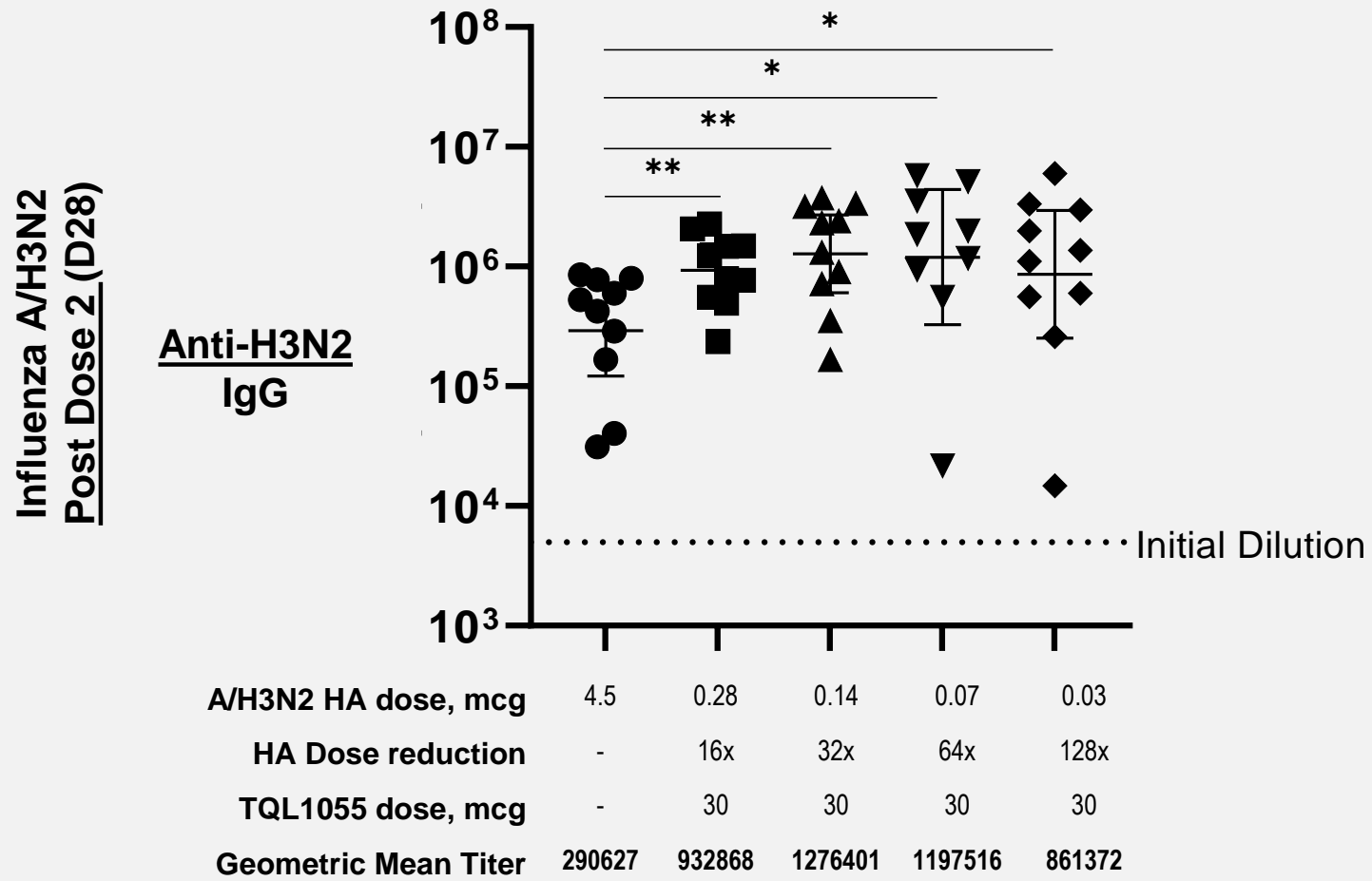
SARS-CoV-2 sVNT IC₅₀ Inhibition:
S.C. Injection



After a second dose



TQL-1055: Influenza response with 128-fold less antigen

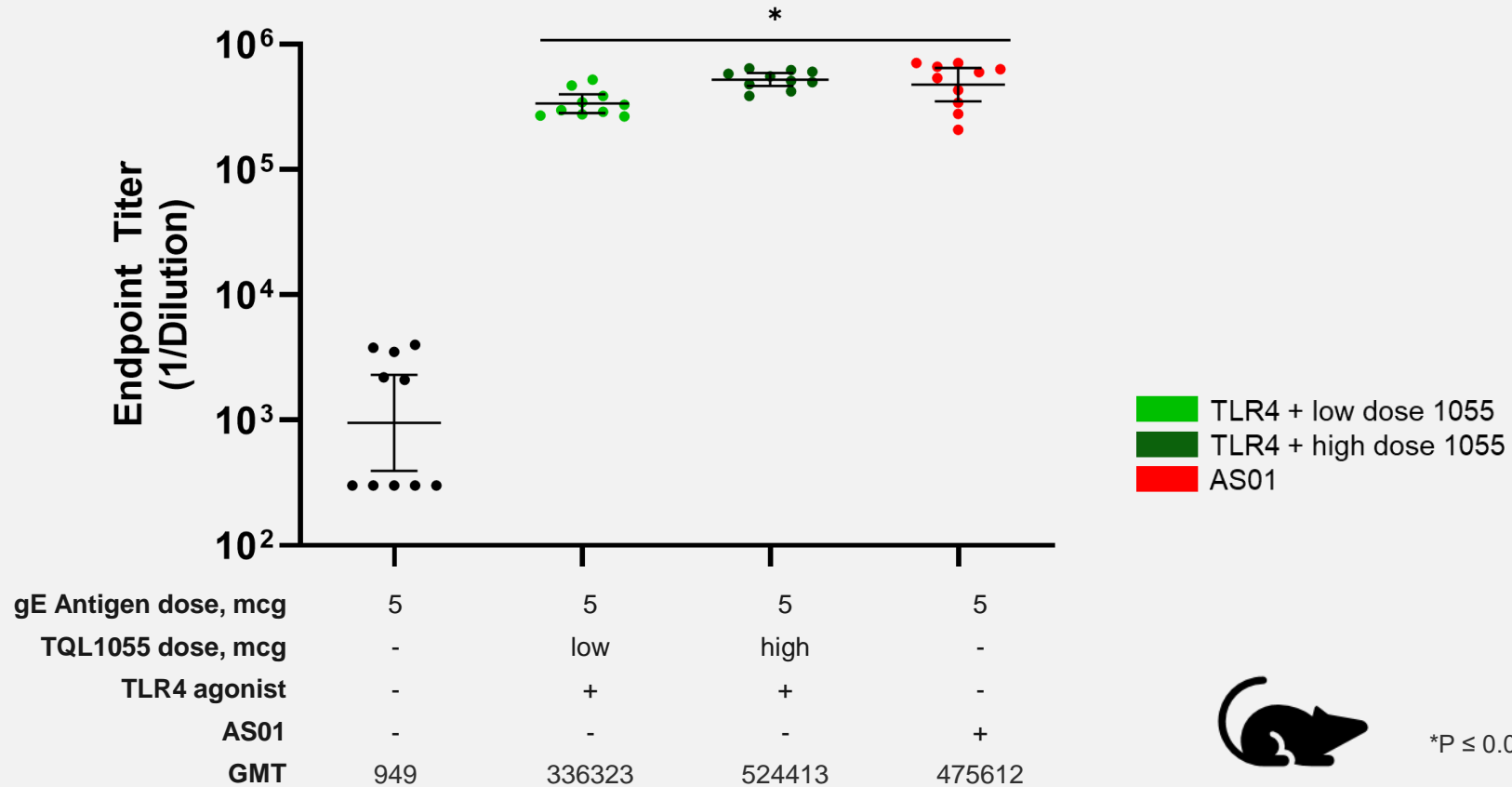


****P ≤ 0.0001; ***P ≤ 0.001; **P ≤ 0.01; *P ≤ 0.05

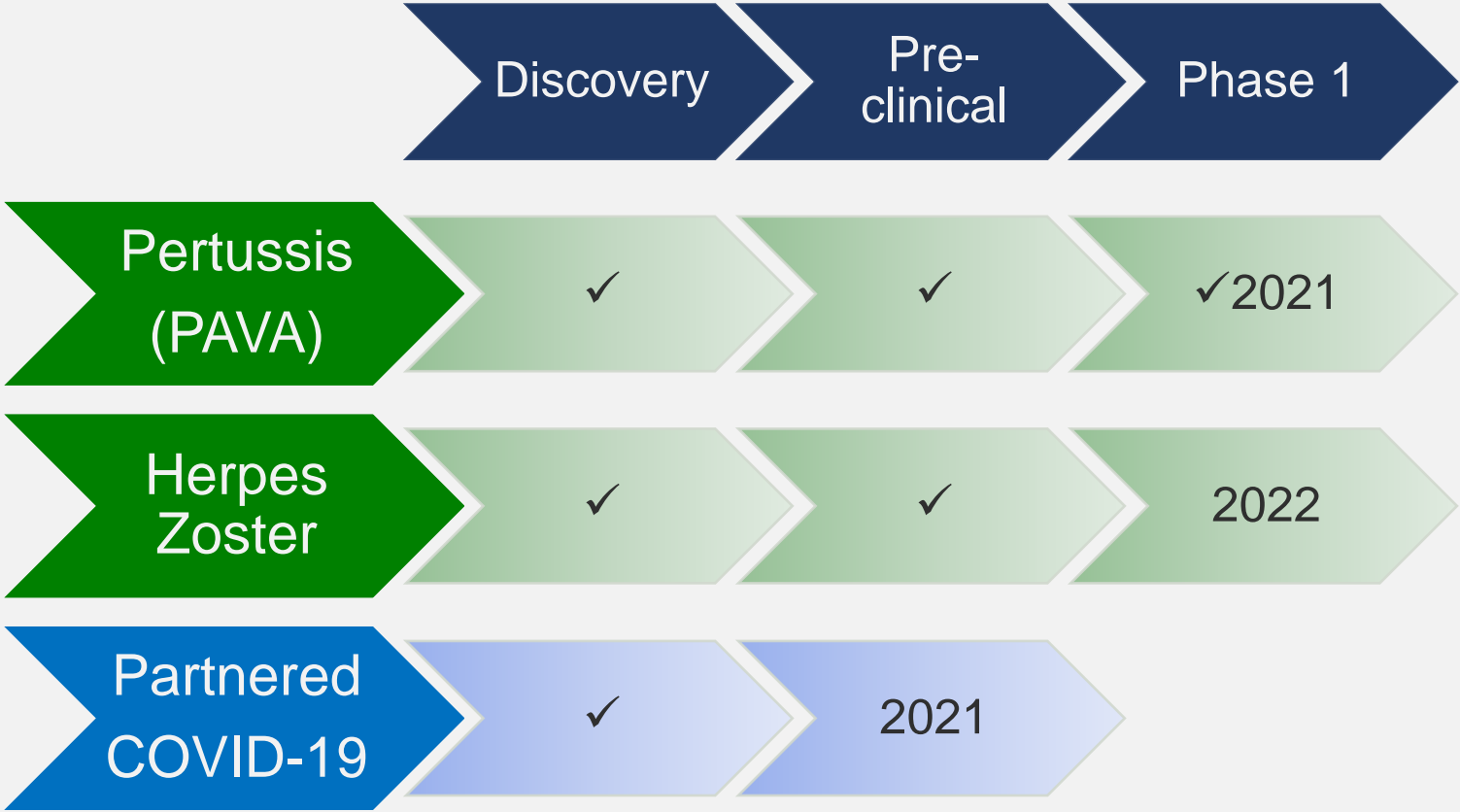


TQL-1055 combined with TLR4 elicits response similar to AS01

Post Dose 2 (Day 28)



Pipeline of vaccine candidates



Pertussis acellular vaccine adjuvanted (PAVA)

Phase 1

Interim Data Summary and Conclusions

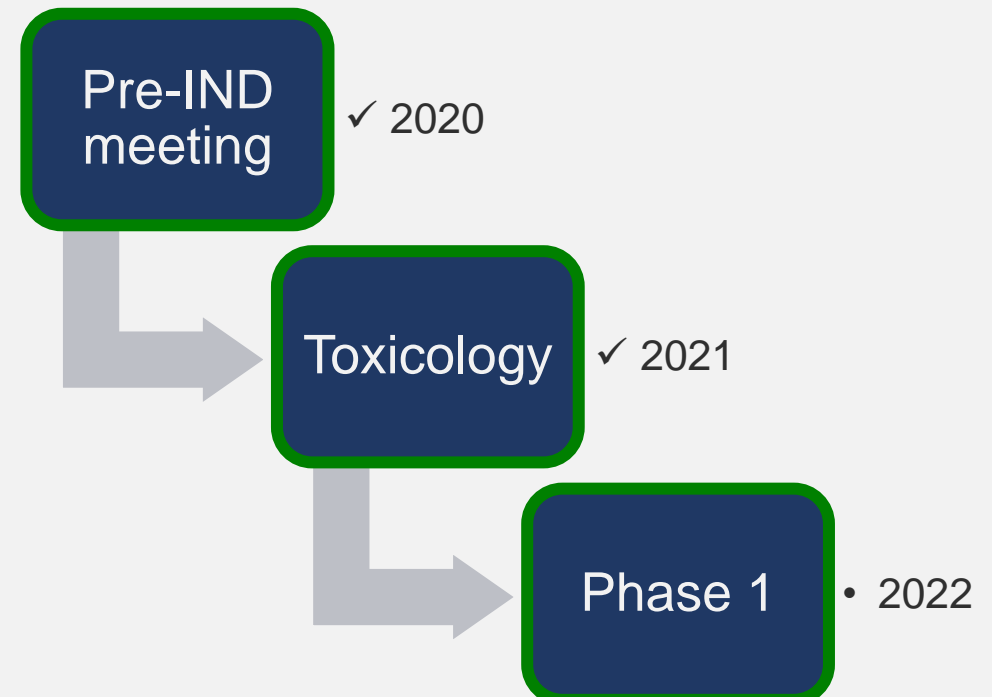
- Study enrolled 72 healthy adults 18 – 50 years of age; >3 year post pertussis booster
- Escalating TQL-1055 doses from 25 – 800 mcg with a commercial pertussis vaccine
- Control = commercial pertussis vaccine alone
- PAVA was well tolerated at doses up to 800 mcg
- PAVA's safety profile was similar to the commercial vaccine
- Local and systemic reactions were predominantly mild
- An anti-pertussis toxin response was observed in all groups 28 days after the single dose

Improved herpes zoster vaccine

Our promise:
Better tolerated herpes zoster vaccine

Adverse Event (AE)	Placebo	Shingrix®
Any solicited AE	34% (32-35)	84% (83-86)
Solicited local AE	12% (11-13)	81% (80-82)

Our progress:
Phase 1 planned for 2022



Experienced Management Team



Tyler Martin, MD, CEO

Accomplished adjuvant and vaccine developer
FluAd® with MF59; Heplisav® with CpG 1018

Sean Bennett, MD/PhD, CMO

Aeras, Dynavax, Aimmune, PaxVax, Emergent



Pat Frenchick, PhD, CSO

Adjuvant immunologist



Melissa Malhame, MBA, VP Business Development

Merck, Dynavax, Gavi, The Vaccine Alliance



Stephan Schulze, MBA, CFO

Experience with public and private life science companies



Scientific Advisory Board



Stanley Plotkin, MD, Chairman

- Formerly Professor, Penn & Wistar Institute
- Executive Advisor, Sanofi Pasteur
- Chair, Infectious Disease Committee, AAP
- Chair, MID Research Committee, NIH
- Editor, Vaccines
- Developer of rubella vaccine
- Co-Developer: polio, rabies, varicella, rotavirus, cmv



Margaret Liu, MD

- Pioneer of nucleic-acid vaccine development
- Adjuvance director



Greg Poland, MD

- Director, Mayo Clinic Vaccine Research Group
- Editor in Chief, Vaccine



Phil Livingston, MD

- Cancer Vaccine Pioneer, MSKCC
- Adjuvance Co-Founder

Board of Directors



Tyler
Martin, MD,
Chairman



Isaac
Cheng, MD
• Morningside
Ventures



Margaret
Liu, MD
• Nucleic-acid
vaccine
pioneer,
global health
expert



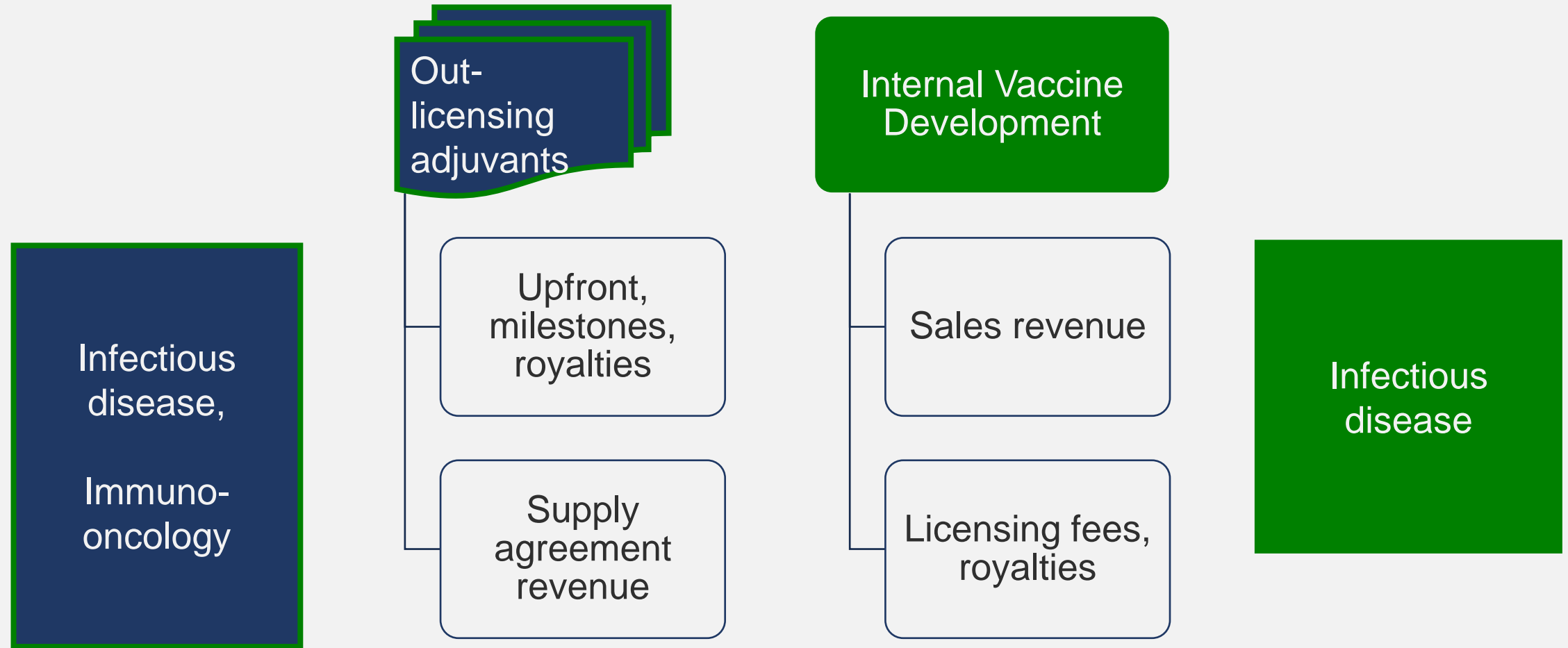
Stephen
Dilly,
MBBS/PhD
• CEO Sierra
Oncology,
Former CEO
Aimmune,
Former
CMO Chiron



Ken Kelley
• Former CEO
PaxVax

Company Value

Dual approach to value creation:



Development Plan

TQL-1055

- ✓ IND enabling studies
- ✓ GMP manufacture
- ✓ First in human trial
 - ✓ Dose escalating RCT in infectious disease
- Available for out-licensing partnerships
 - Several under discussion
- Out-license with supply agreement
- Target: infectious diseases

TQL-1055 combination adjuvant(s)

- IND enabling studies (planned 2021)
- ✓ GMP manufacture
- First in human trial (planned 2022)
 - Dose escalating RCT in infectious disease
- Internal product development focused
- Potential out-license with supply agreement
- Targets: infectious disease, immuno-oncology, neurobiology, substance abuse vaccines, allergy vaccines

Finances

- Adjuvance is pre-revenue
- Awarded \$3.5 M in non-dilutive grants/contracts
- Out-licensing partnerships under discussion
- Closed \$24 M paid-in capital (\$20 M Series A round in 2019)

Thank you!

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Enhancing Immunity