POSEIDA THERAPEUTICS

The Next Wave of Cell and Gene Therapies with the Capacity to Cure

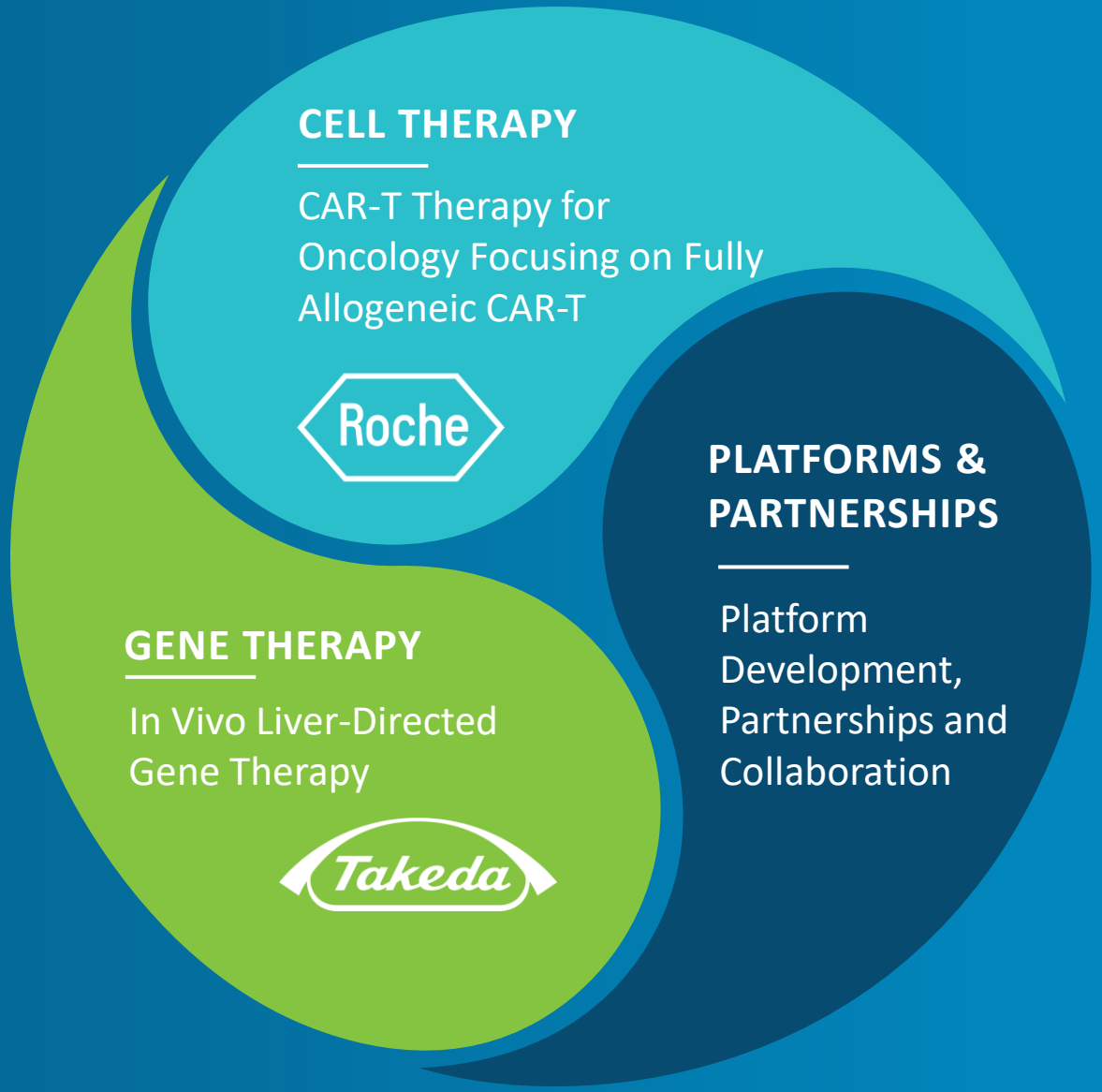
August 3, 2022

Disclaimer

This presentation and any accompanying oral commentary contain "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995, as amended. Forward-looking statements are statements that are not historical facts and include, without limitation, statements related to future events; our future financial performance or condition; business strategy; expected timing and plans with respect to development milestones, clinical trials, and regulatory activities; estimated market opportunities for product candidates; statements regarding the upfront payment and other potential fees, milestone and royalty payments we may receive pursuant to our collaboration agreements; and future results of anticipated development efforts. Words such as "expect(s)," "feel(s)," "believe(s)," "will," "may," "anticipate(s)", “potentially” or negative of these terms or similar expressions are intended to identify forward-looking statements. These forward-looking statements are based on management's current expectations of future events only as of the date of this presentation and are subject to a number of important risks and uncertainties that could cause actual results to differ materially and adversely from those set forth in or implied by such forward-looking statements. These risks and uncertainties include, but are not limited to: the fact that collaboration agreements may not become effective based on HSR Act clearance, of the effectiveness may be substantially delayed, or may be terminated early; the fact that we will have limited control over the efforts and resources our collaborators devote to advancing development programs under our collaboration agreements and Poseida may not receive the potential fees and payments under some collaboration agreements or fully realize the benefits of such collaboration; risks and uncertainties associated with conducting clinical trials; whether any of our product candidates will be shown to be safe and effective; our ability to finance continued operations; our reliance on third parties for various aspects of our business; competition in our target markets; our ability to protect our intellectual property; our ability to retain key scientific or management personnel; and other risks and uncertainties described in our filings with the Securities and Exchange Commission, including under the heading “Risk Factors”. Except as required by law, we assume no obligation to update these forward-looking statements, or to update the reasons why actual results could differ materially from those anticipated in the forward-looking statements, even if new information becomes available in the future.

POSEIDA THERAPEUTICS

On a Mission to Redefine Cell and Gene Therapy For Patients with Cancer, Rare Diseases and Beyond



POSEIDA THERAPEUTICS

We Are the Next Wave of Genetic Engineering

Broad differentiated in-house technology platforms have the potential to develop treatments in many therapeutic segments and disease indications.

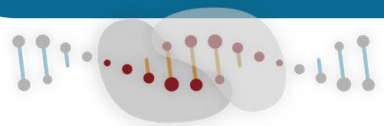
Super piggyBac®

- Non-viral system
- Highly efficient technology to add DNA to genome
- Large genetic cargo capacity
- Broad range of cells
- Advantages in tolerability, potency, speed to clinic and costs

GENE INSERTION

Cas-CLOVER™

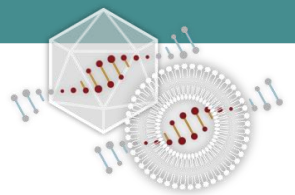
- Highly precise site-specific nucleases
- Ability to edit resting T cells while maintaining desirable T_{SCM} characteristics
- Major advantages:
  - tolerability
  - ease of design
  - low cost
  - multiplexing ability



GENE EDITING

Nanoparticles AAV Vectors

- Delivers long-term stable gene expression
- Non-viral and viral delivery of DNA and proteins both ex vivo and in vivo
- Ability to deliver to multiple cell types and target specific tissues



GENE DELIVERY

Our focus on innovation continues with ongoing improvements to all our platforms including progress on site-specific Super piggyBac for precise gene editing and insertion highlighted at 2022 R&D day

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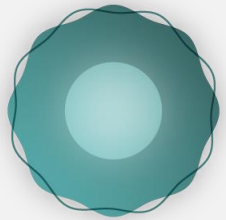
Disruptive Innovation in CAR-T

Allogeneic CAR-T Therapy for Oncology

Cell Type Matters

T_{SCM} Cell



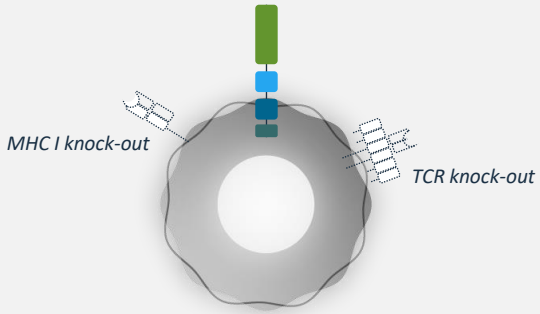
Stem Cell Memory

- Self-renewing
- Long lived
- Multipotent

T_{SCM} is the ideal cell type for CAR-T due to greater safety and durability

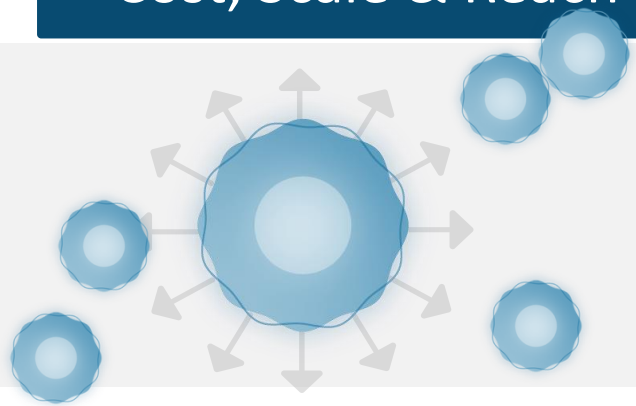
piggyBac® is the ideal non-viral gene insertion technology

Fully Allogeneic CAR-T



Addressing both Graft v Host and Host v Graft alloreactivity with **Cas-CLOVER Gene Editing**

Cost, Scale & Reach



Booster Molecule technology with the potential to deliver 100's of doses translating into low cost and broader patient and commercial reach

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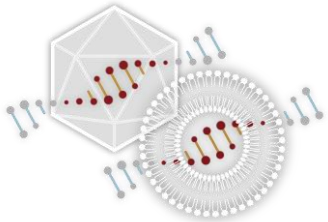
Disruption in Gene Therapy

In Vivo Gene Therapy for Rare Diseases and Hard-to-Treat Juvenile Populations

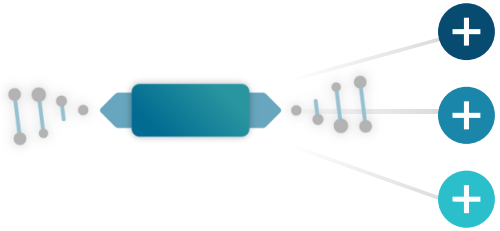
Fully Integrating

piggyBac integrates into DNA enabling the potential for single treatment cures



Addressing Challenges of Viral Delivery

piggyBac and **Nanoparticle** technology can address limitations of AAV



Broad Application

piggyBac cargo capacity addresses more indications and piggyBac can treat juvenile populations

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Announcing Our Global Partnership with Roche*

Broad Platform Technology Delivers Powerful Strategic Partnerships

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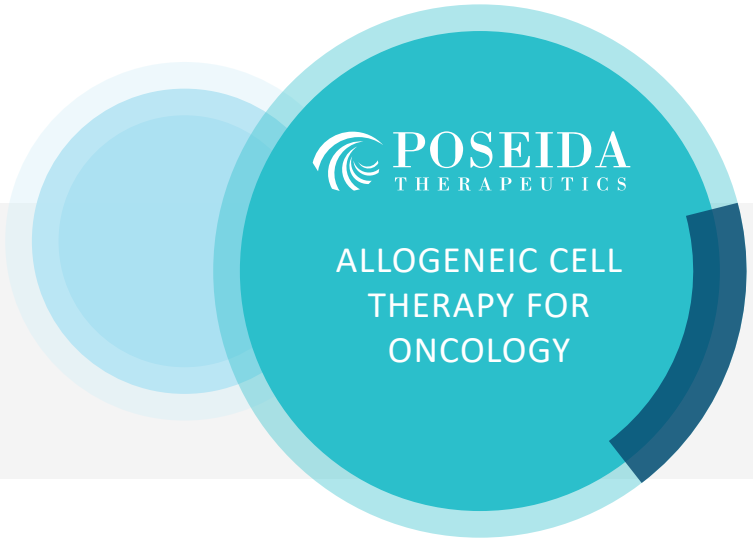
Strong innovation engine and powerful platform technologies may enable partnerships in multiple areas



Roche

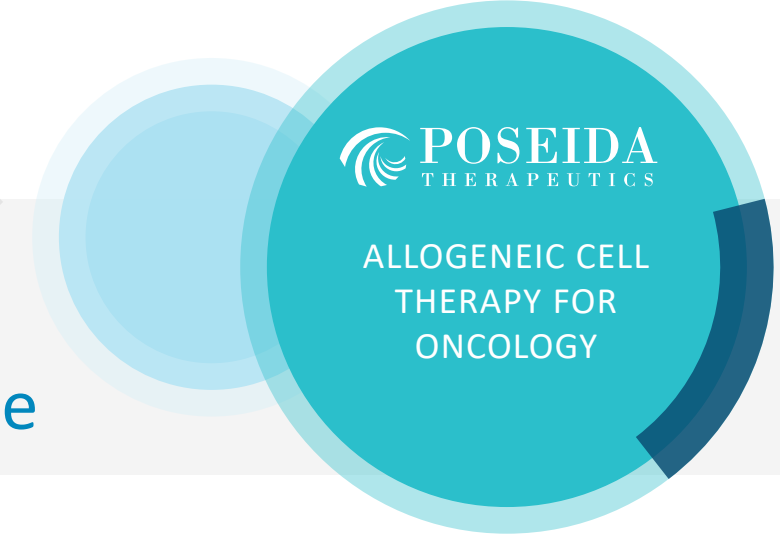
Partnership with Roche focused on allogeneic CAR-T for heme malignancies

PLATFORMS, PARTNERSHIPS & FUTURE

Takeda

Partnership with Takeda executed in October 2021 focused on in vivo Liver- and HSC- directed Gene Therapies

** Execution of collaboration with Roche is subject to regulatory clearance. Closing expected in Q3 or Q4 of 2022.*



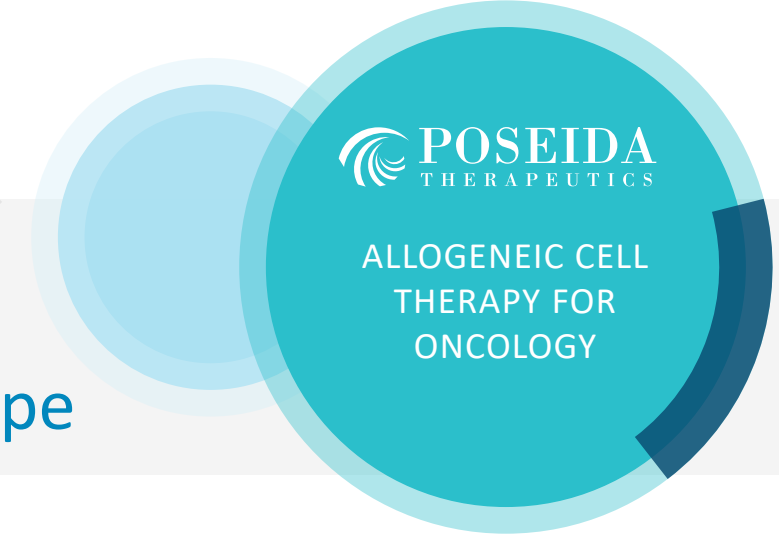
Strategic Rationale

Roche

Partnership with Roche focused on allogeneic CAR-T for heme malignancies

- Roche is one of the most scientifically discerning companies in pharma and a leader in oncology and hematologic malignancies
- Broad scope across hematologic malignancies drives alignment and leverages synergies and brings strong partner in competitive space
- Poseida retains rights to platform technologies for allogeneic T cell solid tumor applications including P-MUC1C-ALLO1 and P-PSMA-ALLO1
- Deal expected to deliver significant upfront and near-term non-dilutive capital

** Subject to regulatory clearance – expected to close Q3-Q4 of 2022*

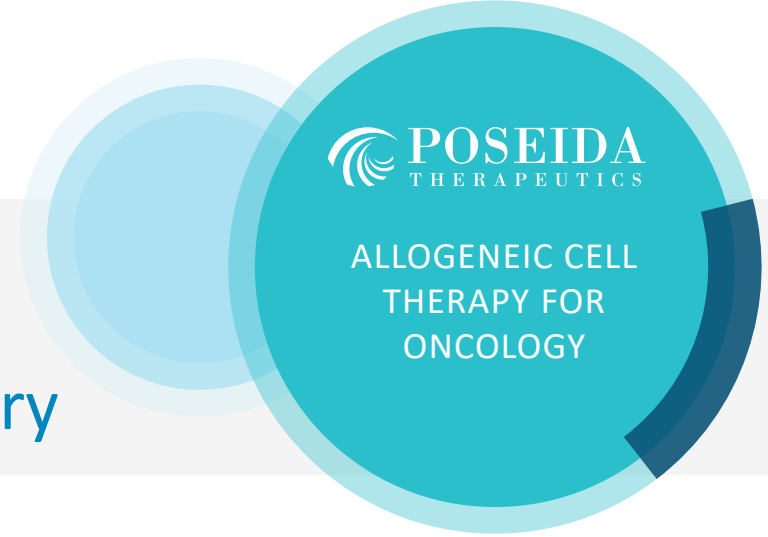


Collaboration Scope

Roche

Partnership with Roche focused on allogeneic CAR-T for heme malignancies

- Broad strategic partnership in allogeneic CAR-T for hematologic malignancies
- Exclusive license to P-BCMA-ALLO1 and P-CD19CD20-ALLO1 programs
- Exclusive option to P-CD70-ALLO1 and P-BCMACD19-ALLO1 programs
- Research collaboration with initial two-year term and right for Roche to nominate 6 additional product candidates in hematologic malignancies
- Roche responsible for all late-stage development and commercialization worldwide of licensed programs
- Option for non-exclusive license for certain Poseida technologies for other limited applications



Economic Summary

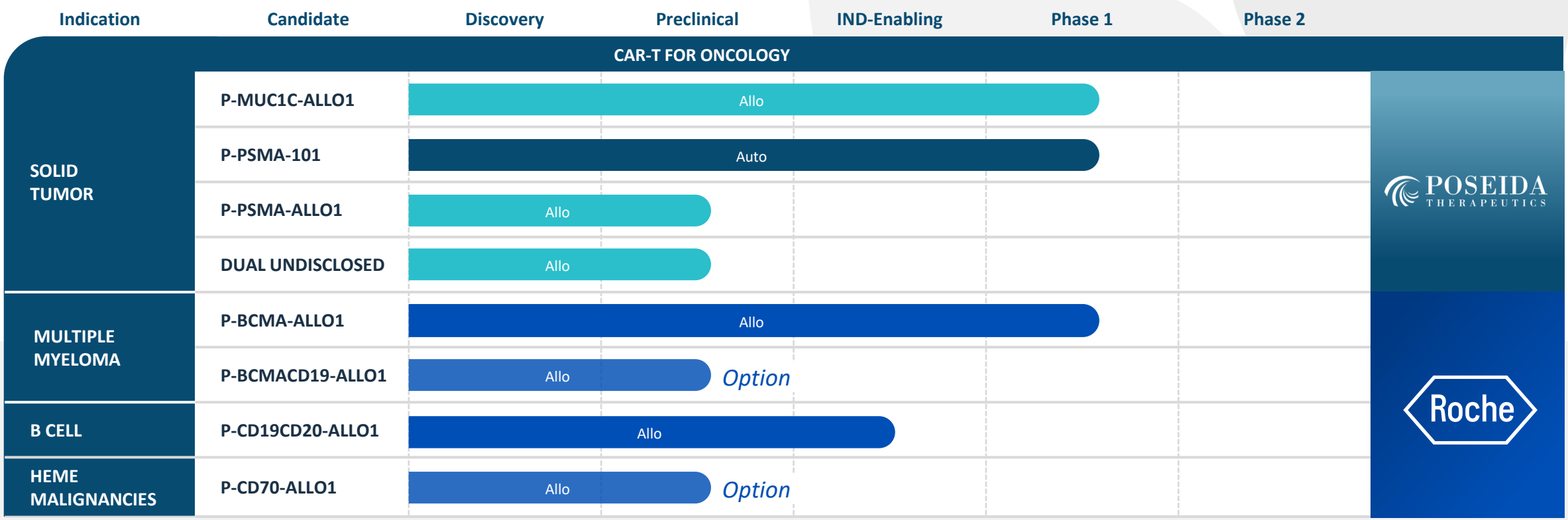
Roche

Partnership with Roche focused on allogeneic CAR-T for heme malignancies

- Upfront payment of $110 million expected to be received in 2H 2022
- Up to $110 million in near-term fees and milestone and other payments Poseida believes are highly achievable
- Roche to take over development and expense after Phase 1 for licensed programs
- Development and commercial milestones per program
- Potential aggregate payments assuming full success up to $6 billion plus tiered royalties on net sales up to low double digits

Cell Therapy Pipeline

Primary Focus on Allogeneic CAR-T for Solid and Liquid Tumors



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Strategic Partnership with Takeda in In Vivo Gene Therapy

Partnership in Liver- and HSC- Directed In Vivo Gene Therapy with Takeda Validates Approach, Generates Resources – While Preserving Large Gene Therapy Opportunity for Poseida

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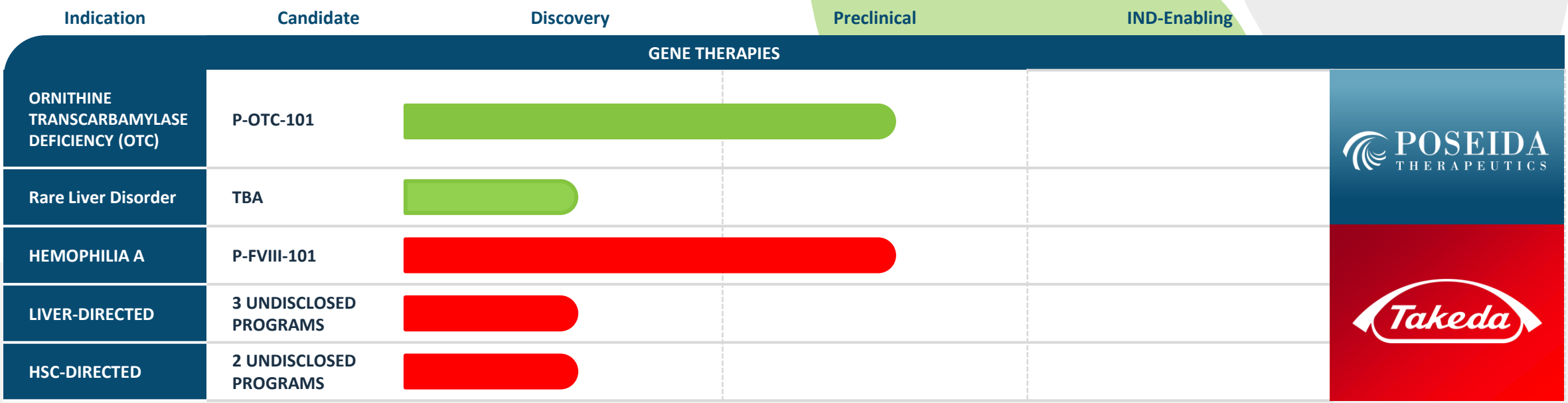
Takeda

- Poseida retains rights to P-OTC-101 and all other liver- and HSC- directed targets not subject to collaboration
- Poseida retains rights to in vivo gene therapy for all other tissue types
- Poseida retains right to all ex vivo gene therapy applications

- Strategic Partnership in In Vivo Gene Therapy for Rare Diseases
  - Six initial disease targets including P-FVIII-101 for Hemophilia A
  - Option to add 2 additional targets
- Broad technology access for specific targets
- Up to $3.6 Billion in potential milestones plus royalties

Gene Therapy Pipeline

In Vivo Liver-Directed and HSC-Directed Gene Therapy



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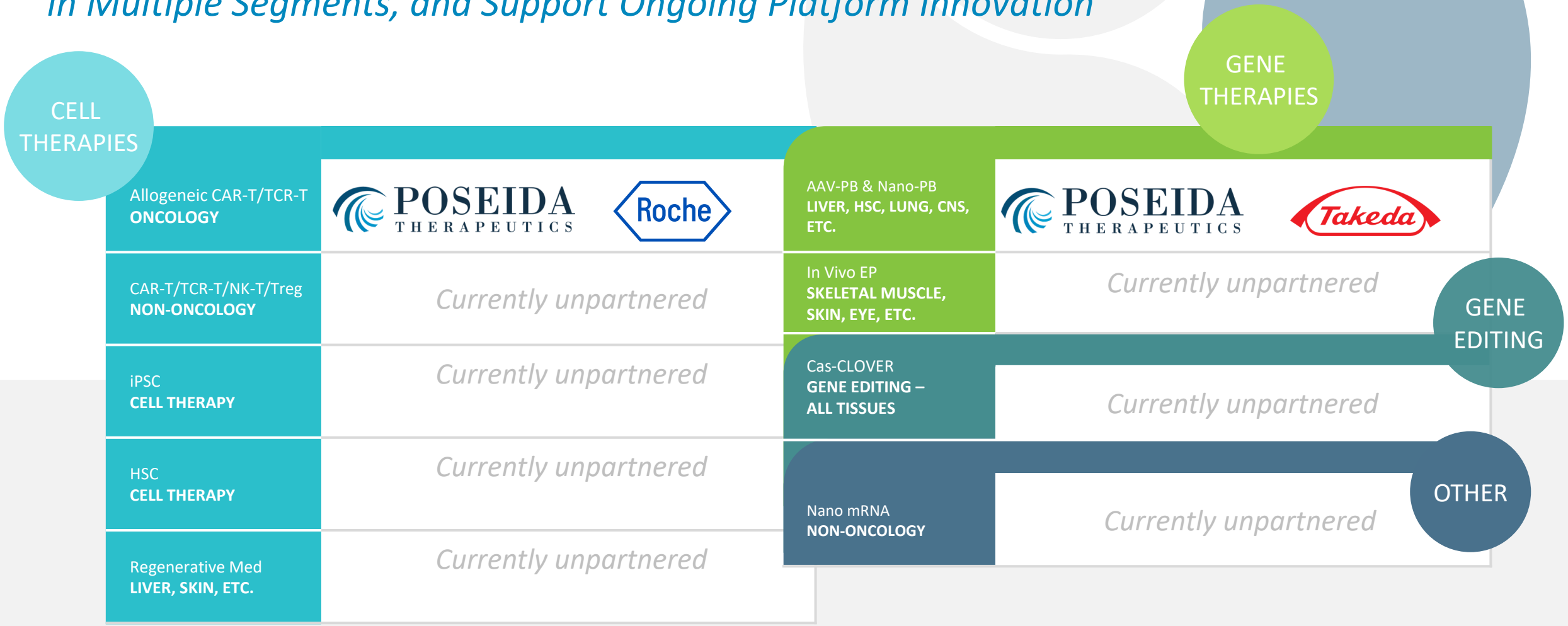
We're Just Beginning to Tap the Potential

Strategic Partnerships Power Our Pipeline, Validate Our Unique Technology in Multiple Segments, and Support Ongoing Platform Innovation



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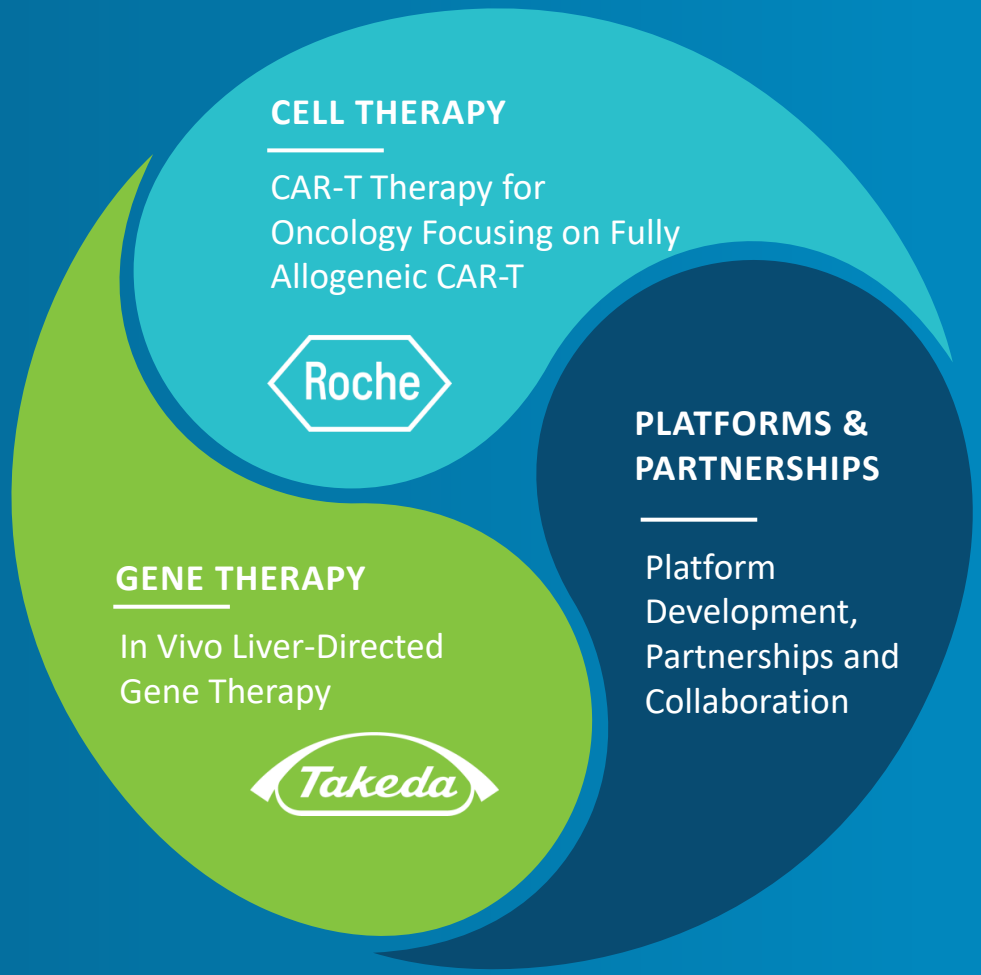
Focused on Key Priorities to Drive Value Creation

Working to Create Single-Treatment Cures for Cancer, Genetic Diseases and Beyond

- **Strong Validating and Empowering Strategic Collaborations and Partnership with Roche and Takeda**
- **Cell therapy focus on novel fully allogeneic high-T_{SCM} CAR-T approach in liquid and solid tumors**
- **Gene therapy focus on single treatment cures addressing the shortcomings of AAV and other approaches**
- **Innovation on platforms continues including emerging Site Specific Super piggyBac**



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Thank You

The Next Wave of Cell & Gene Therapies with the Capacity to Cure