RELAY THERAPEUTICS

Genentech Global Collaboration for RLY-1971

December 2020

Disclaimer

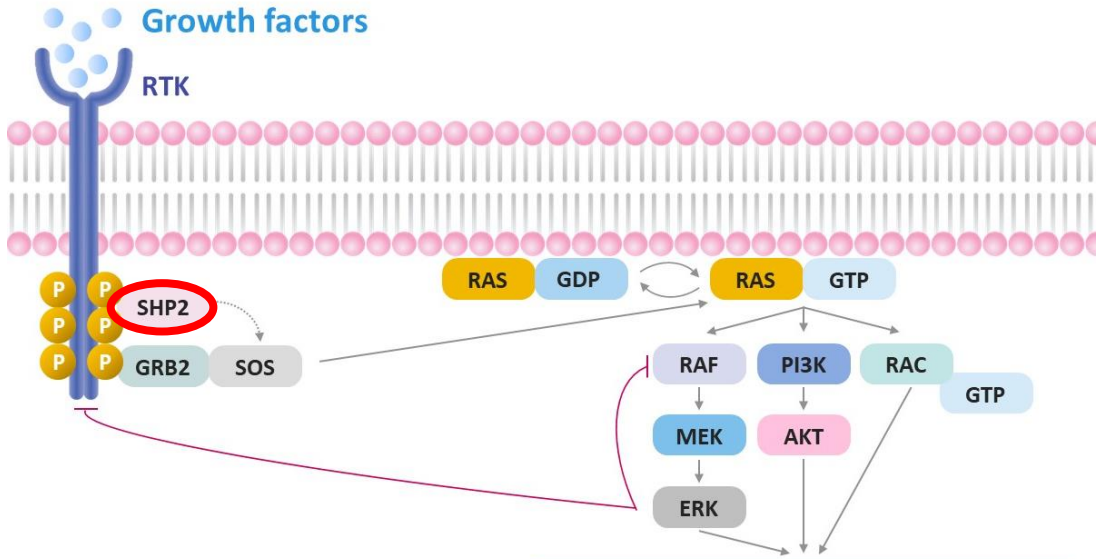
This presentation contains forward-looking statements and information about our current and future prospects and our operations and financial results, which are based on currently available information. All statements other than statements of historical facts contained in this presentation, including statements regarding our strategy, future financial condition, future operations, projected costs, prospects, plans, objectives of management and expected market growth, are forward-looking statements. In some cases, you can identify forward-looking statements by terminology such as ‘‘aim,’’ ‘‘anticipate,’’ ‘‘assume,’’ ‘‘believe,’’ ‘‘contemplate,’’ ‘‘continue,’’ ‘‘could,’’ ‘‘design,’’ ‘‘due,’’ ‘‘estimate,’’ ‘‘expect,’’ ‘‘goal,’’ ‘‘intend,’’ ‘‘may,’’ ‘‘objective,’’ “opportunity,” ‘‘plan,’’ ‘‘predict,’’ ‘‘positioned,’’ ‘‘potential,’’ ‘‘seek,’’ ‘‘should,’’ ‘‘target,’’ ‘‘will,’’ ‘‘would’’ and other similar expressions that are predictions of or indicate future events and future trends, or the negative of these terms or other comparable terminology. These forward-looking statements include statements about the expected strategic benefits of our collaboration with Genentech; the receipt of upfront and near-term payments and potential milestone and royalty payments under the collaboration; the potential of RLY-1971, including in combination with Genentech’s KRAS G12C and other therapies; the potential therapeutic benefits of inhibiting KRAS G12C and SHP2 in combination; the initiation, timing, progress and results of our current and future clinical trials and current and future preclinical studies of our product candidates; our ability to successfully establish or maintain collaborations or strategic relationships for our product candidates; and the implementation of our business model and strategic plans for our business, current product candidates and any future product candidates.

Actual results or events could differ materially from the plans, intentions and expectations disclosed in the forward-looking statements we make due to a number of risks and uncertainties. These and other risks, uncertainties and important factors are described in the section entitled "Risk Factors" in our Quarterly Report on Form 10-Q for the quarter ended September 30, 2020, as well as any subsequent filings with the Securities and Exchange Commission. Any forward-looking statements represent our views only as of the date of this presentation and we undertake no obligation to update or revise any forward-looking statements, whether as a result of new information, the occurrence of certain events or otherwise. We may not actually achieve the plans, intentions or expectations disclosed in our forward-looking statements, and you should not place undue reliance on our forward-looking statements. No representations or warranties (expressed or implied) are made about the accuracy of any such forward-looking statements.

Certain information contained in this presentation relates to or is based on studies, publications, surveys and other data obtained from third-party sources and our own internal estimates and research. While we believe these third-party studies, publications, surveys and other data to be reliable as of the date of this presentation, we have not independently verified, and make no representation as to the adequacy, fairness, accuracy or completeness of, any information obtained from third-party sources. In addition, no independent source has evaluated the reasonableness or accuracy of our internal estimates or research and no reliance should be made on any information or statements made in this presentation relating to or based on such internal estimates and research.

RLY-1971 – Optimized Pharmacology for an Attractive Cancer Target

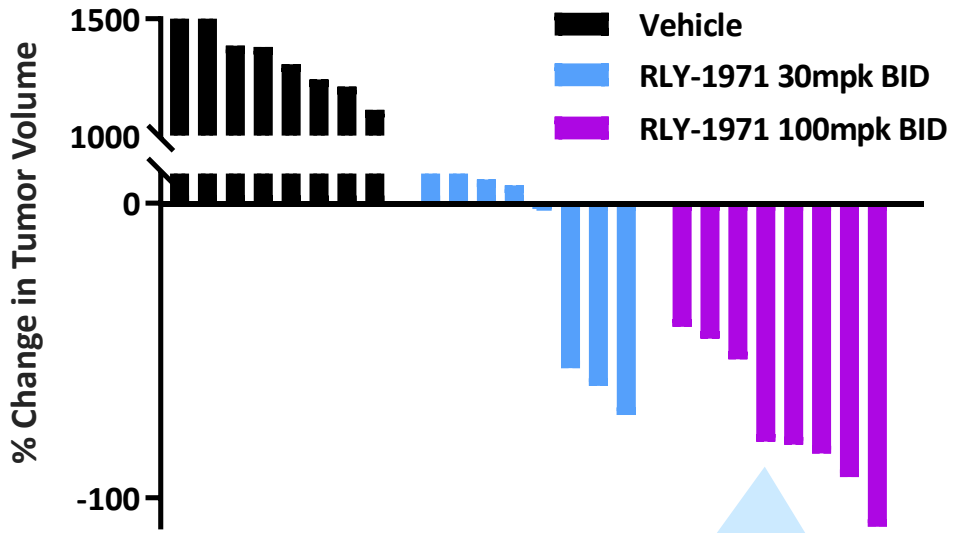
SHP2 is a recurrently mutated oncogenic phosphatase



Growth, proliferation, survival, migration, metabolic adaptation

KRAS G12C mutant NSCLC xenograft

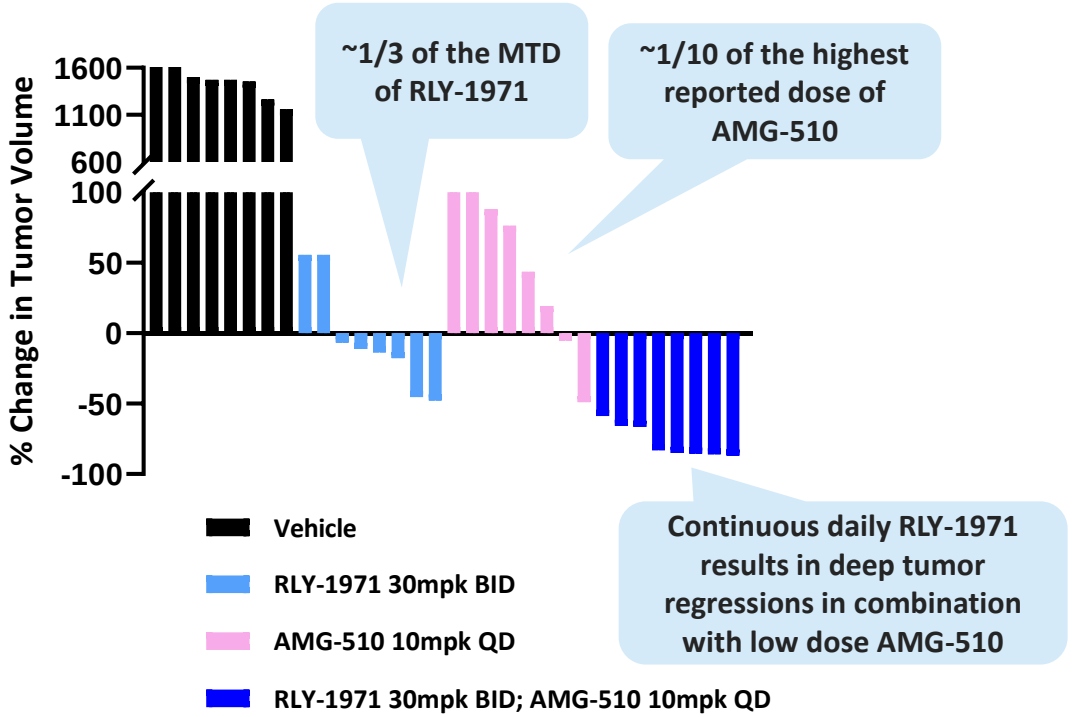
NCIH358 cell line



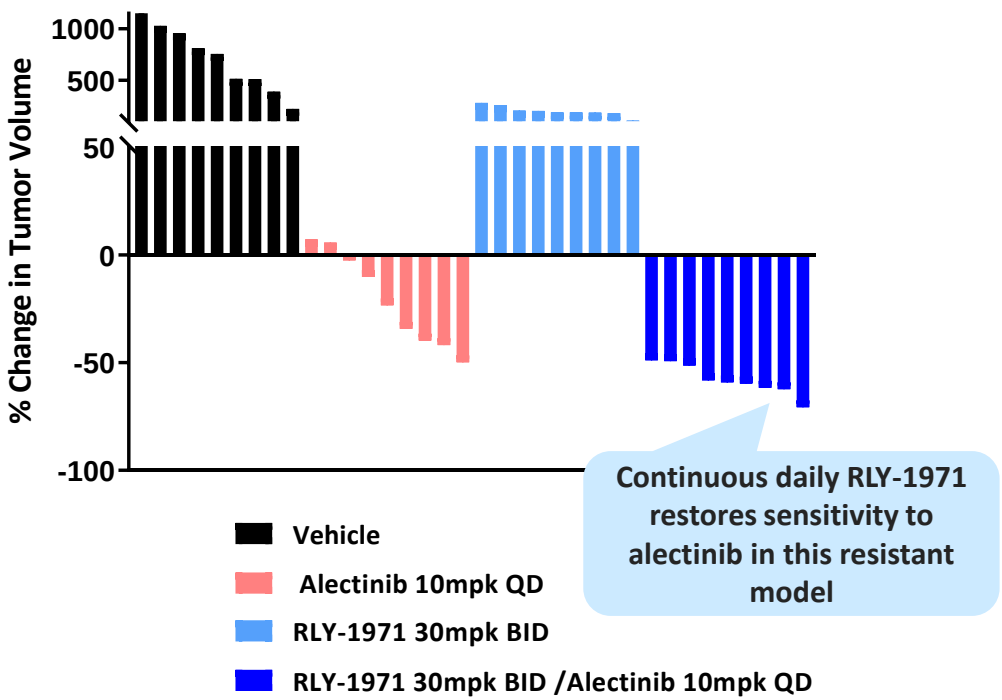
Deep tumor regressions achieved with a continuous daily dose of RLY-1971

RLY-1971 Pre-Clinical Data Demonstrate Potential Utility in Multiple Combinations

KRAS G12C xenograft + KRAS G12Ci
NCI-H358 cell line



ALKi resistant NSCLC xenograft + ALKi
NCI-H3122 cell line



In vivo proof-of-concept that RLY-1971 synergizes with other targeted agents and can suppress or overcome resistance

Genentech Global Collaboration for RLY-1971

- RLY-1971's potent, continuous once daily profile optimally positions it to unlock value via combinations
- Potential for multiple combinations with Genentech's pipeline, including its clinical stage KRAS G12C inhibitor, GDC-6036
- Genentech's global footprint and deep expertise in oncology make them the perfect partner
- Relay Tx retains ability to combine RLY-1971 with its lead assets, RLY-4008 and RLY-PI3K1047 program
- Provides meaningful economics on RLY-1971, including option for US cost-profit share
- Increases scale, scope, and speed of globally developing and commercializing RLY-1971

Relay Tx and Genentech – Key Deal Terms

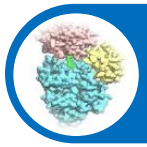
	Exclusive License	Profit Share
Upfront and Near-term	$75M upfront $25M in potential near-term payments	$75M upfront $10M in potential near-term payments
Milestones	Up to $695M in total milestones	Up to $410M in total milestones
Royalties	Low-to-mid teen royalties on global net sales	Low-to-mid teen royalties on OUS net sales
US Cost/ Profit Share	N/A	Relay Tx shares 50% of US profits and 50% of US development costs Relay Tx can opt out and revert to exclusive license
Additional Royalties	Eligible to receive additional royalties upon approval of RLY-1971 and GDC-6036 in combination	Eligible to receive additional royalties upon approval of RLY-1971 and GDC-6036 in combination

Opt-in option

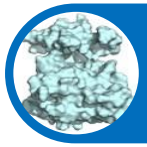
Relay Tx retains the ability to combine RLY-1971 with RLY-4008 and RLY-PI3K1047 programs

Upcoming Milestones and Financials

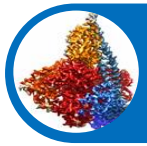
Key Milestones



RLY-1971 (SHP2) — Future updates coordinated with Genentech



RLY-4008 (FGFR2) — Clinical update expected in 2021



RLY-PI3K1047 (PI3Kα) — IND enabling studies expected in 2021

Financials

$713M

Cash & cash equivalents as of the end of Q3 2020

(not including the $75M in upfront from Genentech collaboration)

Future opportunities across other therapeutic areas, including genetic diseases, precision immunology, and precision neuroscience