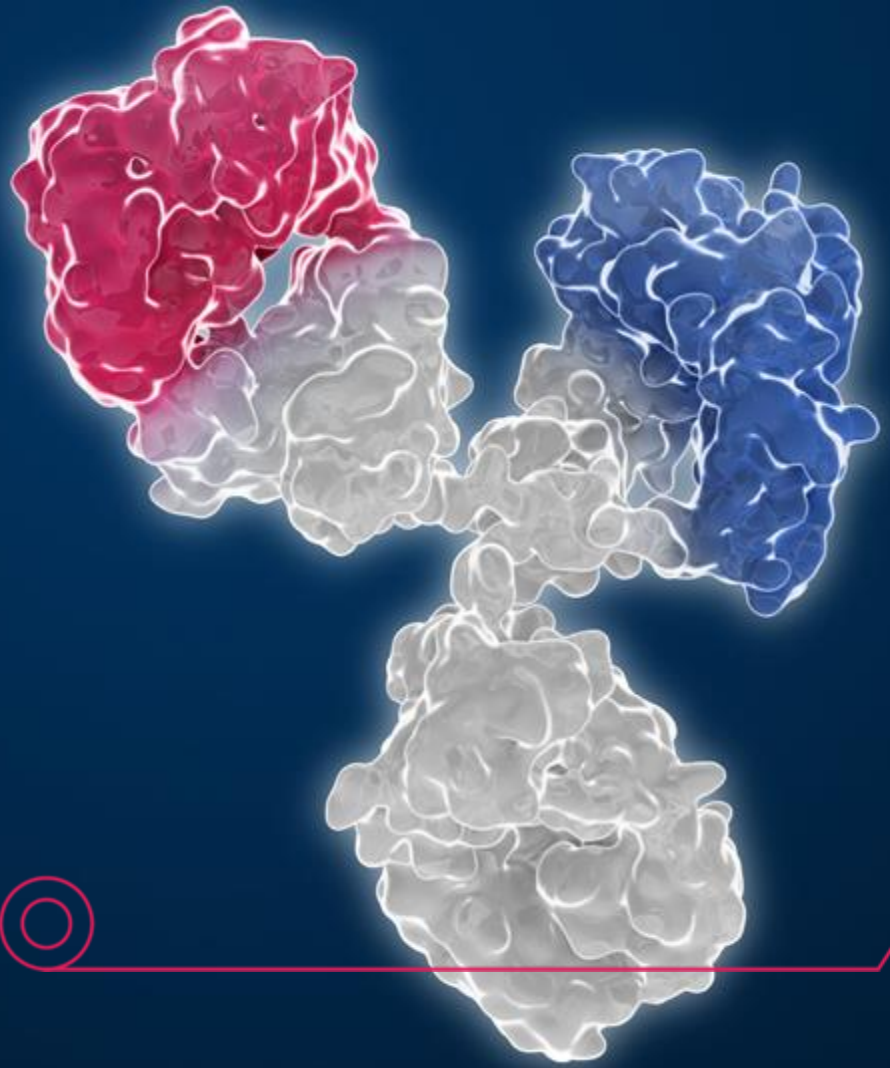


REGENERON

SCIENCE TO MEDICINE®

JP MORGAN 2019

JANUARY 7TH

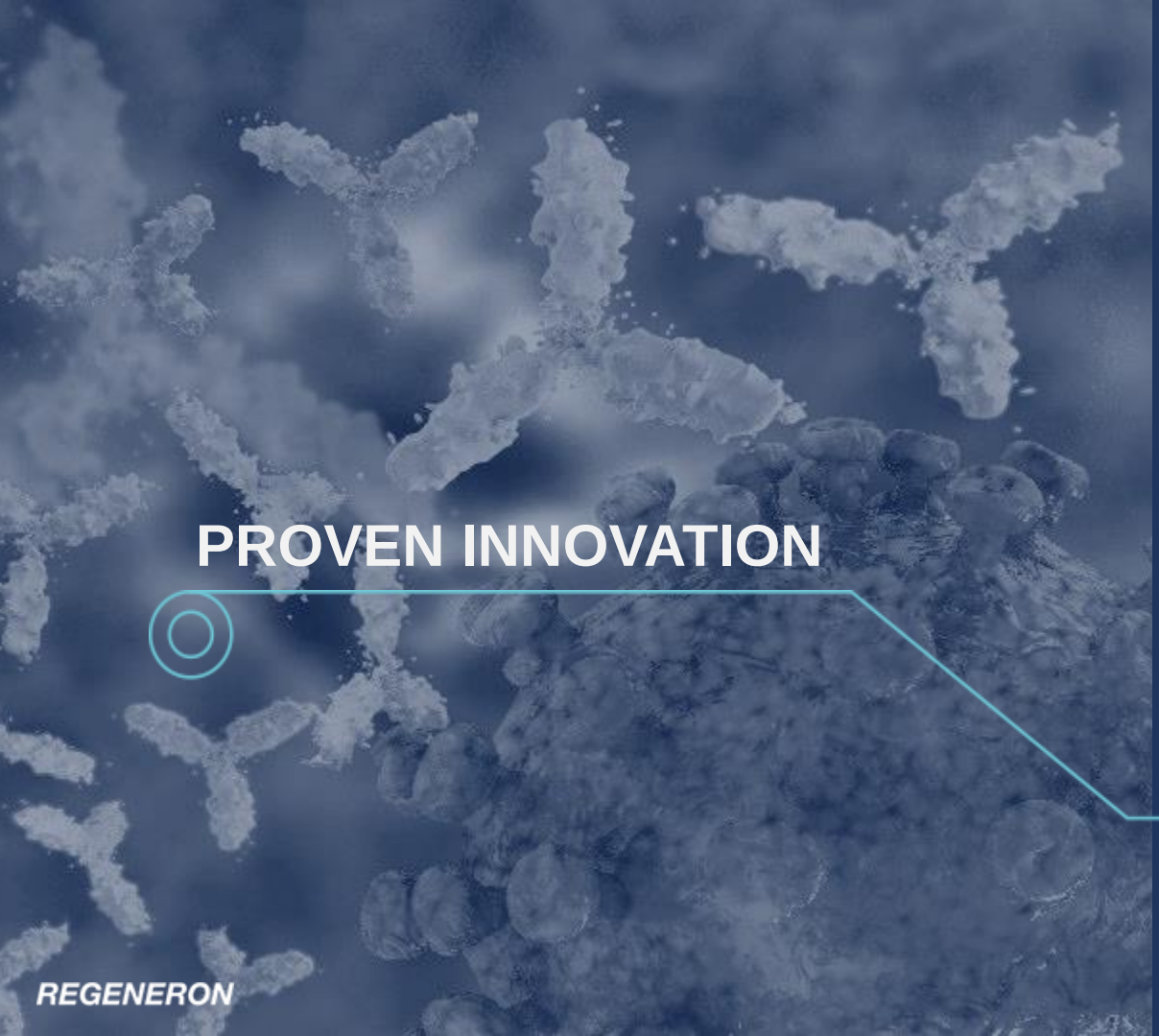
LEONARD S. SCHLEIFER MD, PHD
PRESIDENT & CEO

GEORGE D. YANCOPOULOS MD, PHD
PRESIDENT & CSO

NOTE REGARDING FORWARD-LOOKING STATEMENTS AND NON-GAAP FINANCIAL MEASURES

This presentation includes forward-looking statements that involve risks and uncertainties relating to future events and the future performance of Regeneron Pharmaceuticals, Inc. ("Regeneron" or the "Company"), and actual events or results may differ materially from these forward-looking statements. Words such as "anticipate," "expect," "intend," "plan," "believe," "seek," "estimate," variations of such words, and similar expressions are intended to identify such forward-looking statements, although not all forward-looking statements contain these identifying words. These statements concern, and these risks and uncertainties include, among others, the nature, timing, and possible success and therapeutic applications of Regeneron's products, product candidates, and research and clinical programs now underway or planned, including without limitation EYLEA® (aflibercept) Injection, Dupixent® (dupilumab) Injection, Praluent® (alirocumab) Injection, Kevzara® (sarilumab) Injection, Libtayo® (cemiplimab) Injection, fasinumab, evinacumab, Regeneron's immuno-oncology programs (including its costimulatory bispecific portfolio), Regeneron's earlier-stage product candidates, and the use of human genetics in Regeneron's research programs; the extent to which the results from Regeneron's research programs or preclinical testing may lead to advancement of product candidates to clinical trials or therapeutic applications; unforeseen safety issues resulting from the administration of products and product candidates in patients, including serious complications or side effects in connection with the use of Regeneron's product candidates in clinical trials; the likelihood and timing of possible regulatory approval and commercial launch of Regeneron's late-stage product candidates and new indications for marketed products, including without limitation EYLEA, Dupixent, Praluent, Kevzara, Libtayo, fasinumab, and evinacumab; the likelihood and timing of achieving any of the anticipated milestones described in this presentation; the extent to which the results from the research and development programs conducted by Regeneron or its collaborators may be replicated in other studies and lead to therapeutic applications; ongoing regulatory obligations and oversight impacting Regeneron's marketed products (such as EYLEA, Dupixent, Praluent, Kevzara, and Libtayo), research and clinical programs, and business, including those relating to patient privacy; determinations by regulatory and administrative governmental authorities which may delay or restrict Regeneron's ability to continue to develop or commercialize Regeneron's products and product candidates; competing drugs and product candidates that may be superior to Regeneron's products and product candidates; uncertainty of market acceptance and commercial success of Regeneron's products and product candidates and the impact of studies (whether conducted by Regeneron or others and whether mandated or voluntary) on the commercial success of Regeneron's products and product candidates; the availability and extent of reimbursement of the Company's products from third-party payers, including private payer healthcare and insurance programs, health maintenance organizations, pharmacy benefit management companies, and government programs such as Medicare and Medicaid; coverage and reimbursement determinations by such payers and new policies and procedures adopted by such payers; the ability of Regeneron to manufacture and manage supply chains for multiple products and product candidates; the ability of Regeneron's collaborators, suppliers, or other third parties to perform filling, finishing, packaging, labeling, distribution, and other steps related to Regeneron's products and product candidates; unanticipated expenses; the costs of developing, producing, and selling products; the ability of Regeneron to meet any of its sales or other financial projections or guidance and changes to the assumptions underlying those projections or guidance, including financial guidance relating to Sanofi collaboration revenue, non-GAAP unreimbursed R&D, non-GAAP SG&A, effective tax rate, and capital expenditures; risks associated with intellectual property of other parties and pending or future litigation relating thereto, including without limitation the patent litigation proceedings relating to EYLEA, Dupixent, and Praluent, the ultimate outcome of any such litigation proceeding, and the impact any of the foregoing may have on Regeneron's business, prospects, operating results, and financial condition; and the potential for any license or collaboration agreement, including Regeneron's agreements with Sanofi, Bayer, and Teva Pharmaceutical Industries Ltd. (or their respective affiliated companies, as applicable), to be cancelled or terminated without any further product success. A more complete description of these and other material risks can be found in Regeneron's filings with the U.S. Securities and Exchange Commission, including its Form 10-K for the fiscal year ended December 31, 2017 and its Form 10-Q for the quarterly period ended September 30, 2018, including in each case in the section thereof captioned "Item 1A. Risk Factors." Any forward-looking statements are made based on management's current beliefs and judgment, and the reader is cautioned not to rely on any forward-looking statements made by Regeneron. Regeneron does not undertake any obligation to update publicly any forward-looking statement, including without limitation any financial projection or guidance, whether as a result of new information, future events, or otherwise.

This presentation uses non-GAAP unreimbursed R&D and non-GAAP SG&A, which are financial measures that are not calculated in accordance with U.S. Generally Accepted Accounting Principles ("GAAP"). These non-GAAP financial measures are computed by excluding certain non-cash and other items from the related GAAP financial measure. Non-GAAP adjustments also include the income tax effect of reconciling items. The Company makes such adjustments for items the Company does not view as useful in evaluating its operating performance. For example, adjustments may be made for items that fluctuate from period to period based on factors that are not within the Company's control, such as the Company's stock price on the dates share-based grants are issued. Management uses these and other non-GAAP measures for planning, budgeting, forecasting, assessing historical performance, and making financial and operational decisions, and also provides forecasts to investors on this basis. Additionally, such non-GAAP measures provide investors with an enhanced understanding of the financial performance of the Company's core business operations. However, there are limitations in the use of these and other non-GAAP financial measures as they exclude certain expenses that are recurring in nature. Furthermore, the Company's non-GAAP financial measures may not be comparable with non-GAAP information provided by other companies. Any non-GAAP financial measure presented by Regeneron should be considered supplemental to, and not a substitute for, measures of financial performance prepared in accordance with GAAP. A reconciliation of the Company's full year 2019 non-GAAP to GAAP financial guidance is provided on slide 12.



PROVEN INNOVATION

WHERE WE ARE

REGENERON

KEY MILESTONES AND ACHIEVEMENTS

2018

RESEARCH & DEVELOPMENT

Key Regulatory Approvals*	Key Regulatory Filings	Clinical Trial Readouts	Ph2 and Ph3 Trial Initiations	INDs & Ph1 Trial Initiations
LIBTAYO Advanced CSCC	**EYLEA** Diabetic Retinopathy	**DUPIXENT** Ph3 Chronic Rhinosinusitis with Nasal Polyps	**DUPIXENT** Ph2/3 Eosinophilic Esophagitis Ph2 Grass Allergy Ph2 Peanut Allergy Ph2/3 AD in peds (6 mo – 5 yr)	**REGN4018 (MUC16xCD3)** Ovarian Cancer
DUPIXENT Moderate-to-severe Asthma	**DUPIXENT** Atopic Dermatitis in adolescents	**LIBTAYO** Ph1 Non Small Cell Lung Cancer	**REGN3500 (IL-33)** Ph2 Chronic Obstructive Pulmonary Disease Ph2 Asthma Ph2 Atopic Dermatitis	**REGN5458 (BCMAxCD3)** Multiple Myeloma
EYLEA Q12 week dosing in wAMD after one year of effective therapy	**PRALUENT** Cardiovascular Risk Reduction	**REGN1979 (CD20xCD3)** PoC in Follicular Lymphoma & Diffuse Large B-Cell Lymphoma	**KEVZARA** Ph3 Polymyalgia Rheumatica Ph3 Giant Cell Arthritis	**REGN4659 (CTLA-4)** Cancer
		Fasinumab (NGF) Ph3 Osteoarthritis		**REGN5069 (GFRα3)** Pain
		Pozelimab (C5) Ph1 in Healthy Volunteers		**REGN4461 (LEPR)** Metabolic Disease

Infectious Disease Delivered REGN-EB3 to the Democratic Republic of the Congo for use in Ebola patients
Genetics Sequenced 500k human exomes to date
New Partnerships/Collaborations UK Biobank consortium, bluebird bio, Alnylam, Zoetis

COMMERCIAL

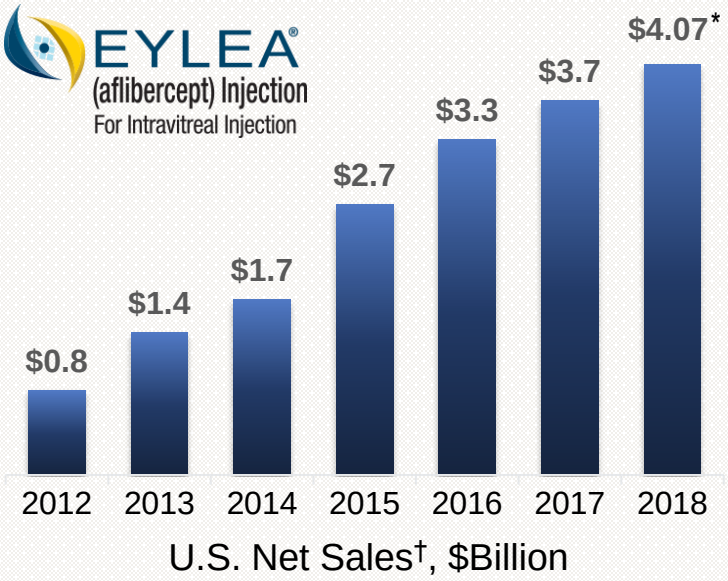
US EYLEA Net sales of ~$4.07 Billion†; ~10% year-over-year growth
DUPIXENT Annualizing in excess of $1.0 Billion, based on 3Q18 worldwide net sales; Atopic Dermatitis launch continues to accelerate; Asthma launch progressing well, particularly among allergists
LIBTAYO Physician interest and market uptake are encouraging
PRALUENT Working with payers to improve access and lower cost to patients

REGENERON

* Please see full Prescribing Information for all approved products
† Based on preliminary unaudited fiscal 2018 results; preliminary unaudited 4Q18 U.S. EYLEA net sales of $1.07 Billion

This slide includes pipeline drug candidates currently undergoing clinical testing in a variety of diseases. The safety and efficacy of these drug candidates have not been evaluated by any regulatory authorities for the disease categories described here.

EYLEA®: STRENGTHENING MARKET LEADERSHIP POSITION



Building on leadership position in wAMD and diabetic eye disease, both of which are increasing in prevalence

- We believe there are no near-term potential agents that can provide substantially different dosing flexibility, duration or visual gains than are already achievable with EYLEA

Label expansions and line extensions

Innovating next generation therapeutics

Our strategy is to maximize EYLEA growth opportunities and develop next generation therapeutics

* Based on preliminary unaudited fiscal 2018 results; preliminary, unaudited 4Q18 U.S. EYLEA net sales of $1.07 Billion
† Outside the United States, EYLEA net product sales comprise sales by Bayer in countries other than Japan and sales by Santen Pharmaceutical Co., Ltd. in Japan under a co-promotion agreement with an affiliate of Bayer

EYLEA®: LEADING OPHTHALMOLOGY INNOVATION

Opportunities in Diabetic Eye Diseases

Diabetic Macular Edema (DME)

- Targeted commercial strategy to increase anti-VEGF penetration

Diabetic Retinopathy (DR) without DME – PDUFA date May 13, 2019

- Phase 3 PANORAMA study shows potential to change clinical practice
  - *65-80% of EYLEA-treated patients experienced ≥ two-step improvement from baseline on the Diabetic Retinopathy Severity Scale (DRSS) vs. 15% sham (p<0.0001)*
  - *72-76% reduction in vision-threatening complications (VTCs) and center-involved diabetic macular edema (CI-DME): (10-11% EYLEA vs. 41% sham, p<0.001)*
- Of the 3.5M people in the U.S. with DR without DME, ~1M individuals have moderate-to-severe disease and are at greatest risk

Next Generation Strategy

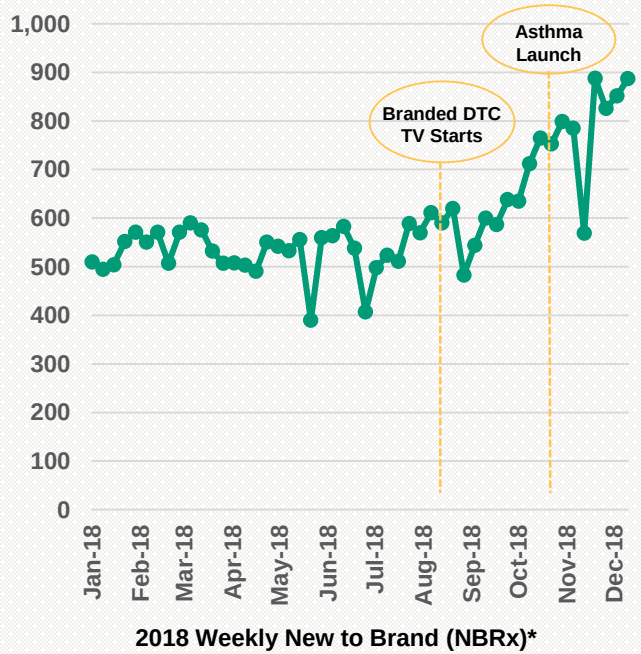
Our strategy is to make even better treatments than our market-leading anti-VEGF therapy, EYLEA

- **High Dose Formulation of EYLEA**
- **Other new molecular entities and gene therapies**

This slide includes pipeline drug candidates currently undergoing clinical testing in a variety of diseases. The safety and efficacy of these drug candidates have not been evaluated by any regulatory authorities for the disease categories described here.

DUPIXENT®: BUILDING LEADERSHIP IN ATOPIC DERMATITIS AND LAUNCHING IN ASTHMA

DUPIXENT® (dupilumab) Injection



2018 Weekly New to Brand (NBRx)*

Atopic Dermatitis: Practice-Changing Advance in Management

In the U.S., less than 15% of adult AD patients with the greatest need have used DUPIXENT

High persistence and compliance indicate patient and physician satisfaction

Ex-U.S. launch in early stage and progressing well

Encouraging prescription trends following commencement of DTC TV campaign in 3Q18

Moderate-to-Severe Asthma: High Unmet Need

Only asthma biologic approved for:

- Self administration
- Moderate-to-severe asthma with an eosinophilic phenotype
- Oral corticosteroid-dependent asthma regardless of phenotype
- AD patients with comorbid asthma

Consistent and clinically meaningful improvements in lung function, asthma attacks and oral steroid sparing

Up to 900K patients (≥12 years) in the U.S. with moderate-to-severe asthma may be suitable for biologic therapy

Encouraging initial prescription trends, particularly among allergists treating asthma

REGENERON

* Source: IQVIA
Please see full Prescribing Information for all approved products

DUPIXENT®: DELIVERING ON THE "PIPELINE IN A PRODUCT" PROMISE

APPROVED INDICATIONS	Atopic Dermatitis	Approved in Adults
	Moderate-to-Severe Asthma	Approved in Adults and Adolescents
NEAR-TERM OPPORTUNITIES	Atopic Dermatitis in Adolescents (12-17 years)	sBLA submitted, PDUFA date March 11, 2019
	Atopic Dermatitis in Pediatrics (6-11 years)	Ph3 readout expected in 2019
	Chronic Rhinosinusitis with Nasal Polyps (CRSwNP)	Two Positive Ph3 studies reported 2H18 sBLA filing expected in 1Q19
	Eosinophilic Esophagitis	Positive Ph2 results; Pivotal trial initiated 3Q18
	Chronic Obstructive Pulmonary Disease (COPD)	Initiate Ph2/3 in 2019
LONGER-TERM OPPORTUNITIES	Pediatric Asthma (6-11 years)	Ph3 ongoing
	Food Allergies	Ph2 in Peanut Allergy initiated; more planned
	Airborne Allergies	Ph2 in Grass Allergy initiated
	Combinations with REGN3500 (IL-33)	Ph2 initiated in AD and Asthma

This slide includes pipeline drug candidates currently undergoing clinical testing in a variety of diseases. The safety and efficacy of these drug candidates have not been evaluated by any regulatory authorities for the disease categories described here.

LIBTAYO®: NEW HOPE FOR PATIENTS WITH ADVANCED CSCC

Cutaneous squamous cell carcinoma (CSCC) is the second most common form of skin cancer (after Basal Cell Carcinoma) and is responsible for an estimated 7,000 deaths per year in the U.S.; prior to LIBTAYO there were no approved therapies for advanced disease

Despite thousands of trials by others, Regeneron is the first to identify advanced CSCC as perhaps the most responsive solid tumor to immunotherapy

LIBTAYO is now the only approved treatment option for advanced CSCC, a life-threatening condition

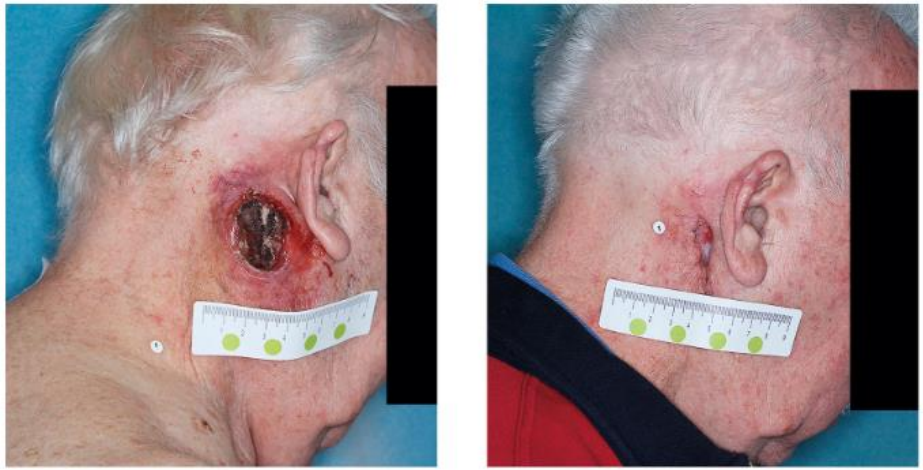
The NEW ENGLAND JOURNAL of MEDICINE

June 2018 NEJM publication details pivotal Phase 2 study results in 59 metastatic CSCC patients:

- Primary endpoint: 47.5% Overall Response Rate by independent review
- Durable Disease Control Rate of 61%
- Median duration of response and progression-free survival have not been reached
- LIBTAYO was associated with adverse events similar to other PD-1 inhibitors

LIBTAYO® (cemiplimab-rwlc) Injection 350 mg

Patient in Phase 2 Study



Baseline | Week 8

An 83-year-old patient who had undergone multiple surgeries for CSCC, at baseline and after 8 weeks of treatment with LIBTAYO

2019 GOALS AND MILESTONES

KEY REGULATORY APPROVALS & SUBMISSIONS

EYLEA FDA decision on sBLA for the treatment of Diabetic Retinopathy (PDUFA date May 13, 2019); re-submission of Prior-Approval Supplement (PAS) for pre-filled syringe
DUPIXENT FDA decision on sBLA for expanded Atopic Dermatitis indication in adolescent patients 12–17 years of age (PDUFA date March 11, 2019); EMA decision on regulatory application for Asthma; file sBLA for Chronic Rhinosinusitis with Nasal Polyps (CRSwNP)
LIBTAYO EMA decision for advanced cutaneous squamous cell carcinoma (CSCC)
PRALUENT FDA (PDUFA date April 28, 2019) and EMA decisions on applications for Cardiovascular Risk Reduction; FDA decision on sBLA for first-line treatment of Hyperlipidemia (PDUFA date April 29, 2019)

CLINICAL PROGRESS

EYLEA Initiate a study of higher dose formulations of aflibercept
DUPIXENT Continue enrollment in pivotal eosinophilic esophagitis (EoE) study; Initiate Ph2/3 program in Chronic Obstructive Pulmonary Disease (COPD)
LIBTAYO Continue enrollment in NSCLC and various other studies
REGN1979 (CD20xCD3) Initiate potentially pivotal Ph2 study in Follicular Lymphoma (FL) and potentially pivotal Ph2 study in Diffuse Large B-Cell Lymphoma (DLBCL)
Fasinumab (NGF) Continue patient enrollment in Ph3 long-term safety study and Ph3 efficacy studies in Osteoarthritis
Pozelimab (C5) Initiate Ph2 in Paroxysmal Nocturnal Hemoglobinuria (PNH)

KEY DATA READOUTS

DUPIXENT Report results from Ph3 study for Atopic Dermatitis in pediatric patients 6–11 years of age
REGN3500 (IL-33) Report results from Ph2 Asthma study
Trevogrumab (GDF8) + Garetosmab (Activin-A) Report results from multi-dose portion of Ph1 study

NEW INDs

Expect to advance 4-6 new molecules into clinical development (including more CD3 & CD28 bispecifics)

REGENERON

This slide includes pipeline drug candidates currently undergoing clinical testing in a variety of diseases. The safety and efficacy of these drug candidates have not been evaluated by any regulatory authorities for the disease categories described here.

2019 FINANCIAL GUIDANCE*

Sanofi Collaboration Revenue: **Reimbursement of Regeneron Commercialization-Related Expenses**	**$510 – 560MM**
Non-GAAP unreimbursed R&D†	**$1,590 – 1,710MM**
Non-GAAP SG&A†	**$1,500 – 1,600MM**
Effective Tax Rate	**14 – 16%**
Capital Expenditures	**$410 – 490MM**

* As of January 7, 2019. The guidance does not assume the completion of any significant business development transaction that had not been completed as of the date of the guidance. Regeneron does not undertake any obligation to update publicly any financial projection or guidance, whether as a result of new information, future events, or otherwise

† Please refer to slide 2 for important information regarding non-GAAP financial measures and to slide 12 for a reconciliation of these measures to GAAP financial measures

RECONCILIATION OF FULL YEAR 2019 NON-GAAP TO GAAP FINANCIAL GUIDANCE

(in millions)	Projected Range Low	High
GAAP unreimbursed R&D*	$ 1,855	$ 2,000
R&D: Non-cash share-based compensation expense	(265)	(290)
Non-GAAP unreimbursed R&D	$ 1,590	$ 1,710
GAAP SG&A	$ 1,700	$ 1,830
SG&A: Non-cash share-based compensation expense	(200)	(230)
Non-GAAP SG&A	$ 1,500	$ 1,600

* Unreimbursed R&D represents R&D expenses reduced by R&D expense reimbursements from the Company's collaborators and/or customers

PORTFOLIO & PIPELINE

PHASE 1

- **REGN4461** *(LEPR)*
- **Pozelimab** *(C5)*
- **Trevogrumab** *(GDF8)* + **Garetosmab** *(Activin-A)*
- **Cemiplimab*** *(PD-1)*
- **REGN4659** *(CTLA-4)*
- **REGN3767** *(LAG-3)*
- **REGN1979** *(CD20xCD3 bispecific)*
- **REGN5458*** *(BCMAxCD3 bispecific)*
- **REGN4018*** *(MUC16xCD3 bispecific)*
- **REGN1908-1909** *(Feld1)*
- **REGN5069** *(GFRα3)*
- **REGN3048-3051** *(MERS virus)*
- **REGN-EB3** *(Ebola virus)*

PHASE 2

- **Garetosmab** *(Activin-A)*
- **Evinacumab** *(ANGPTL3)*
- **Cemiplimab*** *(PD-1)*
- **REGN3500*** *(IL-33)*
- **Dupilumab*** *(IL-4R)*
- **Sarilumab*** *(IL-6R)*

PHASE 3

- **Evinacumab** *(ANGPTL3)*
- **Alirocumab*** *(PCSK9)*
- **Cemiplimab*** *(PD-1)*
- **Dupilumab*** *(IL-4R)*
- **Sarilumab*** *(IL-6R)*
- **Fasinumab†** *(NGF)*
- **Aflibercept** *(VEGF Trap)*

IMMUNOLOGY & INFLAMMATORY DISEASES | CARDIOVASCULAR/ METABOLIC DISEASES | ONCOLOGY | INFECTIOUS DISEASES | OPHTHALMOLOGY | PAIN | RARE DISEASES

REGENERON

* IN COLLABORATION WITH SANOFI
† IN COLLABORATION WITH TEVA AND MITSUBISHI TANABE

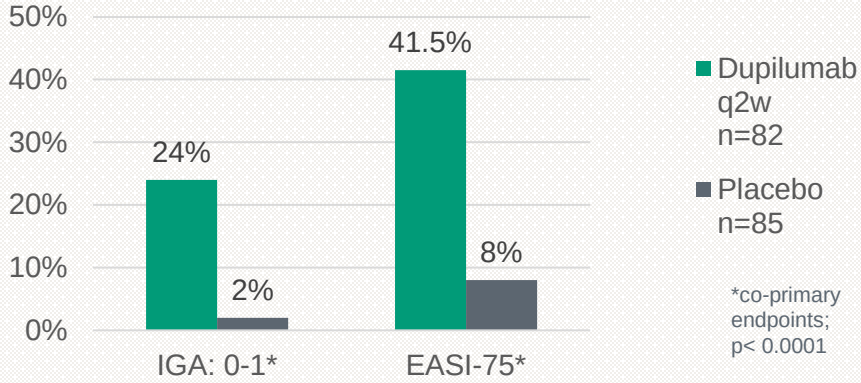
This slide includes pipeline drug candidates currently undergoing clinical testing in a variety of diseases. The safety and efficacy of these drug candidates have not been evaluated by any regulatory authorities for the disease categories described here.

DUPIXENT®: DELIVERING ON THE "PIPELINE IN A PRODUCT" PROMISE

ADOLESCENT AND PEDIATRIC ATOPIC DERMATITIS – HIGH DISEASE BURDEN WITH LIMITED TREATMENT OPTIONS

Adolescent Atopic Dermatitis (Ages 12 – 17 years)

Positive Ph3 data reported; PDUFA date March 11, 2019

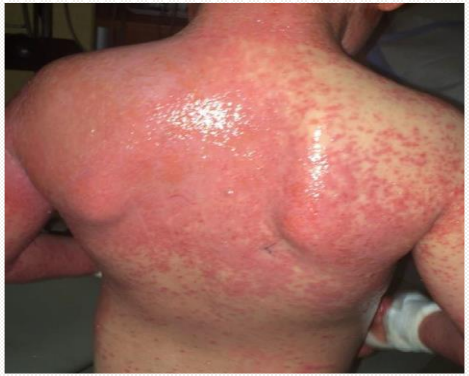


- Overall rate of treatment-emergent adverse events was comparable between the dupilumab group (72%) and placebo (69%). The rate of overall infections and infestations was numerically lower in the dupilumab group (11%) vs. placebo (20%)
- No SAEs or events leading to discontinuation in the treatment group

IGA: Investigator's Global Assessment, EASI: Eczema Area and Severity Index

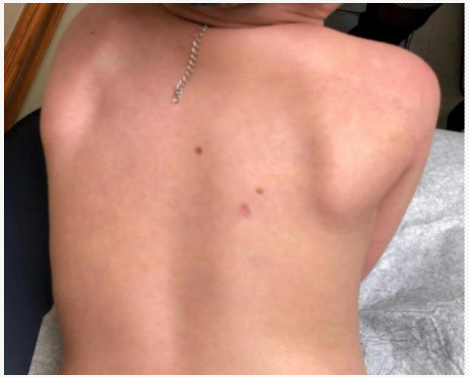
Before DUPIXENT

Prior treatments included cycles of prednisone, oral anti-Staph antibiotics, triamcinolone and chronic daily sedating antihistamines



After DUPIXENT

Patient had significantly improved overall disease severity, skin clearing and reduced itching



REGENERON

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For illustrative purposes only. Results are not representative of all patients; and individual results vary.

DRIVEN BY DISCOVERY

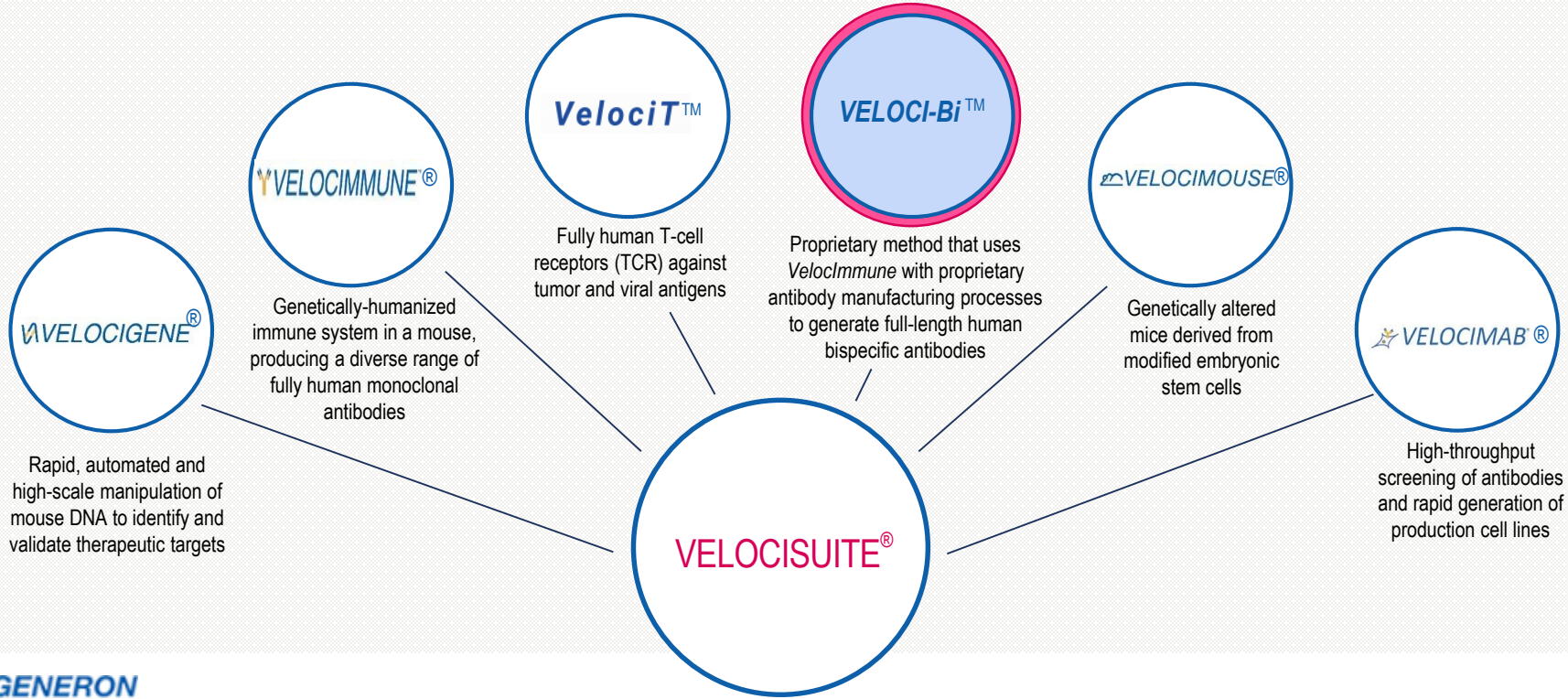
REGENERON'S IO STRATEGY

REGENERON

REGENERON'S IO STRATEGY IS BUILT ON A DEEP FOUNDATION OF SCIENCE AND TECHNOLOGY

619 manuscripts published, **9,351** patent applications filed and **4,945** patents issued over the last 10 years

500,000 exomes sequenced by Regeneron Genetics Center (RGC)



LIBTAYO®: THE FOUNDATION OF OUR IO STRATEGY

LIBTAYO® (cemiplimab-rwlc) Injection 350 mg

CSCC: THE FIRST OF MANY POTENTIAL APPROVALS

LIBTAYO is the first and only FDA-approved therapy for patients with advanced CSCC; potentially pivotal study in BCC ongoing

We plan to be a major player in indications where PD-1 inhibition has shown activity

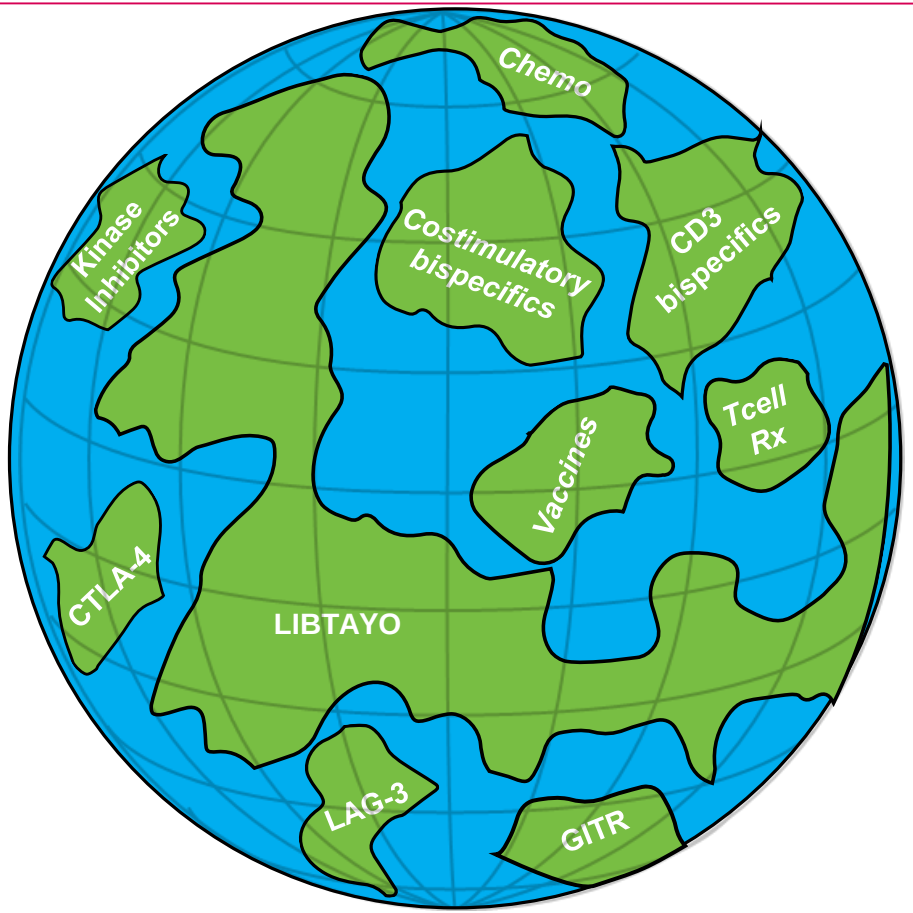
We have a comprehensive and differentiated IO strategy with LIBTAYO at the core

DEVELOPMENT STRATEGY

Maximize Skin Cancer Opportunity	2L Basal Cell Carcinoma (BCC) – Ph2 (potentially pivotal) ongoing CSCC – Ph3 adjuvant trial to start in 1H19; neo-adjuvant studies to follow Melanoma – regulatory discussions anticipated in 1H19
Non Small Cell Lung Cancer (NSCLC)	1L NSCLC Monotherapy (≥50% PD-L1) (n=700) – Ph3 ongoing 1L NSCLC Combination therapy (non-squamous and squamous, stratified by PD-L1 status) – Ph3 amended • LIBTAYO + Chemo vs. Chemo
HPV Positive Cancers	2L Cervical Cancer – Ph3 ongoing
Additional Solid & Liquid Tumor Indications	Pediatric Glioblastoma (GBM) – Ph1/2 initiated 1L Classical Hodgkin Lymphoma – Ph1 anticipated in 2019
Combinations	Immune modulators, vaccines, cell therapies, kinase inhibitors, chemotherapy and bispecifics

This slide includes pipeline drug candidates currently undergoing clinical testing in a variety of diseases. The safety and efficacy of these drug candidates have not been evaluated by any regulatory authorities for the disease categories described here.

REGENERON'S IO STRATEGY CONNECTS MULTIPLE INDIVIDUAL PIECES…

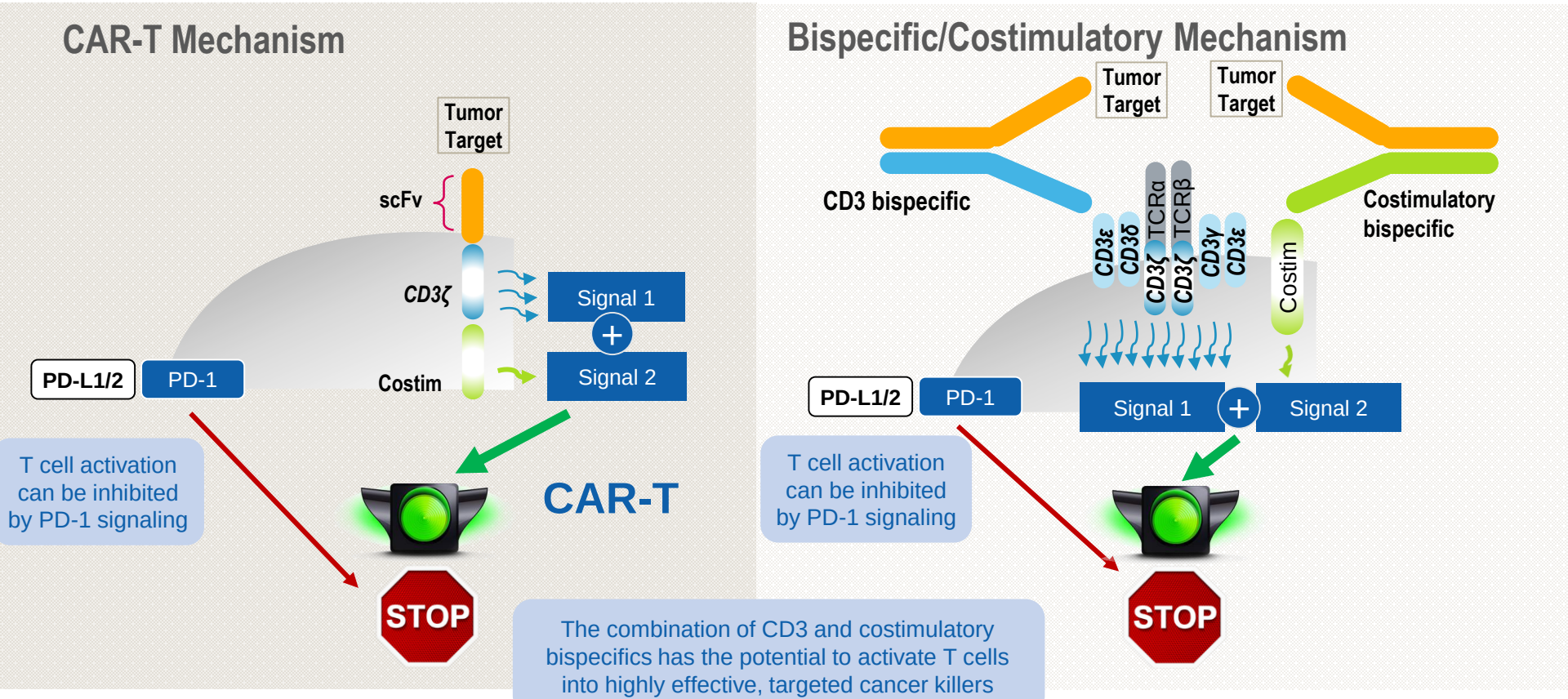


…LOGICALLY AND RATIONALLY INTO A COHESIVE WHOLE

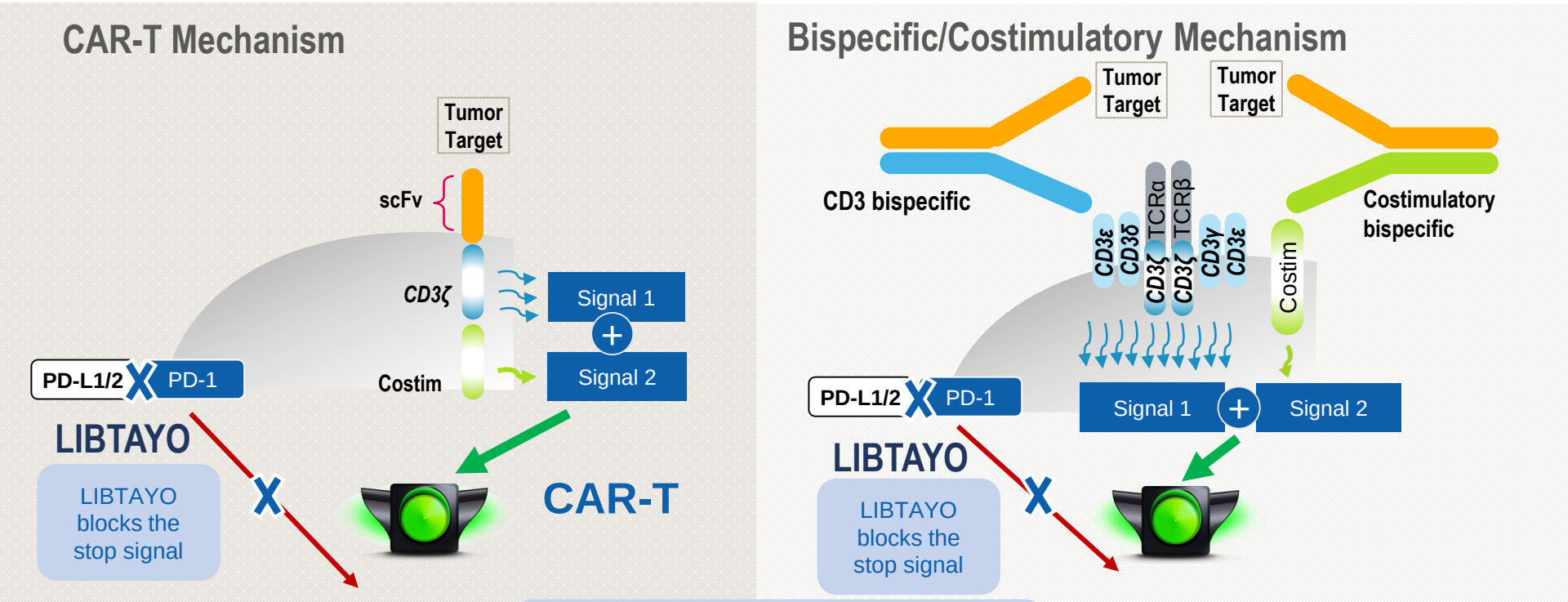
...like pieces in a puzzle, bringing order to chaos

Regeneron's IO puzzle is evolving and not yet complete; based on science and experimental data, the shape, components and configuration may change

REGENERON'S CD3 & COSTIMULATORY BISPECIFICS ARE OFF-THE-SHELF DRUGS WITH POTENTIAL TO TURN PATIENTS' T CELLS INTO CAR-T-LIKE CANCER KILLERS



REGENERON'S CD3 & COSTIMULATORY BISPECIFICS ARE OFF-THE-SHELF DRUGS WITH POTENTIAL TO TURN PATIENTS' T CELLS INTO CAR-T-LIKE CANCER KILLERS

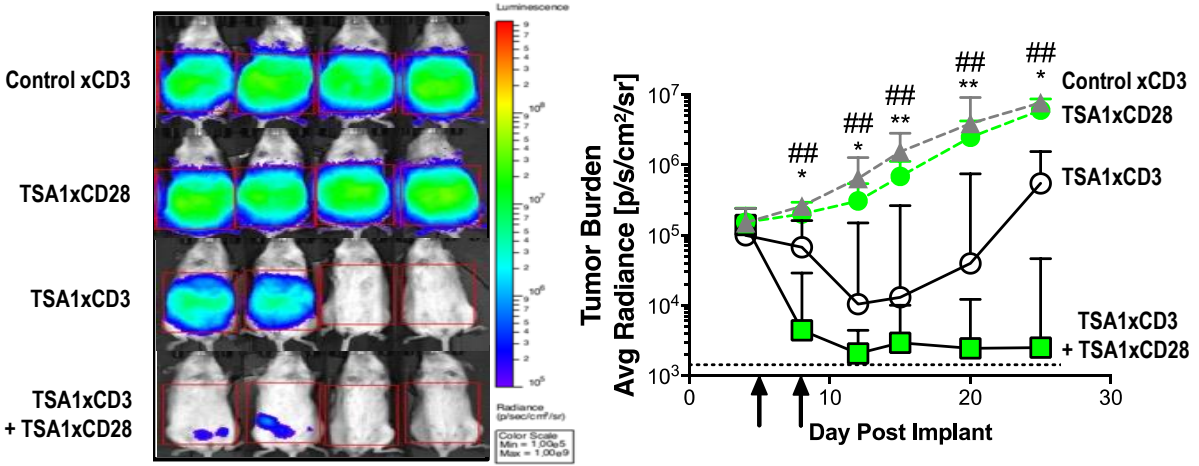


Using LIBTAYO to block PD-1 signaling can further enhance the efficacy of CD3 and costimulatory bispecifics

ADDING COSTIMS TO CD3 BISPECIFICS OR TO ANTI-PD-1 SHOWS SYNERGY IN PRECLINICAL TUMOR MODELS

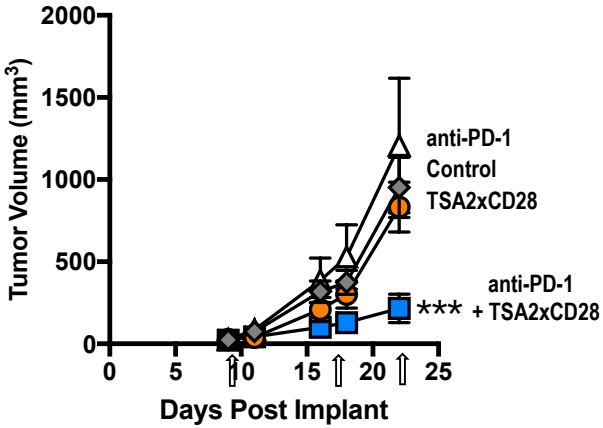
TSA1xCD3 + TSA1xCD28

in vivo xenogeneic humanized TSA1 mouse model



anti-PD-1 + TSA2xCD28

in vivo syngeneic humanized TSA2 mouse model



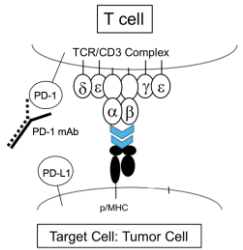
TSA = Tumor Specific Antigen

- Unlike superagonist CD28 mAbs, our CD28 bispecifics have no toxicity, and little or no activity on their own, but when clustered on cells expressing their target, activate signal 2 and synergize with signal 1 (via CD3 bispecific) and/or anti-PD-1
- In 2019, Regeneron plans to advance two distinct CD28 bispecific antibodies into clinical development

REGENERON'S IO STRATEGY IS BASED ON RATIONAL COMBINATIONS

Anti-PD-1 Responsive Tumors
TCR binds tumor MHC/peptide

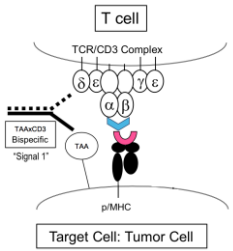
Anti-PD-1 mAb monotherapy or combination



- Block T cell inhibition with LIBTAYO (anti-PD-1) monotherapy
- Enhance with combinations: chemotherapy, other immune modulators (e.g., CTLA-4, LAG-3, GITR), kinase inhibitors, vaccines, costimulatory bispecifics, etc.

Anti-PD-1 Unresponsive Tumors
TCR does not recognize tumor MHC/peptide

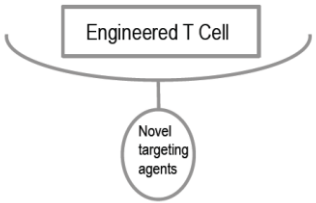
CD3 bispecific alone, or in combination with PD-1 and/or costims



- Initiate immune response with a CD3 bispecific targeting tumor specific antigens (e.g., neoantigens bound to MHC) or tumor associated antigens on cells that are safe to ablate (e.g., CD20)
- Enhance response with anti-PD-1 and/or costimulatory bispecific directed against a tumor target

Additional Strategic Opportunities

CAR-T therapies alone or in combination



- Major collaboration with bluebird bio to empower and extend CAR-T therapies with novel tumor targeting moieties such as TCRs or reagents that bind peptide/ MHC complexes
- Can complement with soluble reagents such as anti-PD-1 and CD3 or costimulatory bispecifics

This slide includes pipeline drug candidates currently undergoing clinical testing in a variety of diseases. The safety and efficacy of these drug candidates have not been evaluated by any regulatory authorities for the disease categories described here.

PUTTING THEORY INTO PRACTICE: REGN1979, OUR EXCLUSIVELY-OWNED CD20xCD3 BISPECIFIC ANTIBODY, DEMONSTRATES HIGH ORR/CR

Data presented at the 2018 American Society of Hematology (ASH) Annual Meeting

Relapsed/ Refractory Follicular Lymphoma (R/R FL) Grade 1-3a

	REGN1979 dose groups		
	<5 mg (n=7)	≥5-≤12 mg (n=5)	≥18-≤40 mg (n=5)
ORR	1/7 (14%)	**5/5 (100%)**	**5/5 (100%)**
CR	1/7 (14%)	**4/5 (80%)**	**4/5 (80%)**
PR	0/7 (0%)	1/5 (20%)	1/5 (20%)
Responding patients who did not progress during study treatment, n/N (% of responders)	1/1 (100%)	4/5 (80%)	5/5 (100%)

Relapsed/ Refractory Diffuse Large B-Cell Lymphoma (R/R DLBCL)

	REGN1979 dose groups		
	<5 mg (n=15)	≥5-≤12 mg (n=11)	≥18-≤40 mg (n=10)
ORR	3/15 (20%)	**2/11 (18%)**	**6/10 (60%)**
CR	0/15 (0%)	**1/11 (9%)**	**2/10 (20%)**
PR	3/15 (20%)	1/11 (9%)	4/10 (40%)
Responding patients who did not progress during study treatment, n/N (% of responders)	1/3 (33%)	1/2 (50%)	3/6 (50%)

Initiating potentially pivotal studies in 2019

In our dose escalation Ph1 study, treatment with ≥5 mg of REGN1979 demonstrated 100% ORR and 80% CR in 10 pts with R/R FL

At higher doses in R/R DLBCL we are seeing response rates that make us optimistic about achieving activity comparable to CAR-Ts

At doses tested, REGN1979 was well-tolerated in B-NHL: 75% patients had Grade 3/4/5 AEs, no DLTs, 3% discontinued due to AE, no discontinuations due to CRS or immune-related events, no clinically significant neurotoxicity (no seizures/ encephalopathy), 1 death due to related AE*

Safety and toxicity profile is encouraging and supports further dose escalation

* gastric perforation in patient with gastric wall lymphoma

REGENERON

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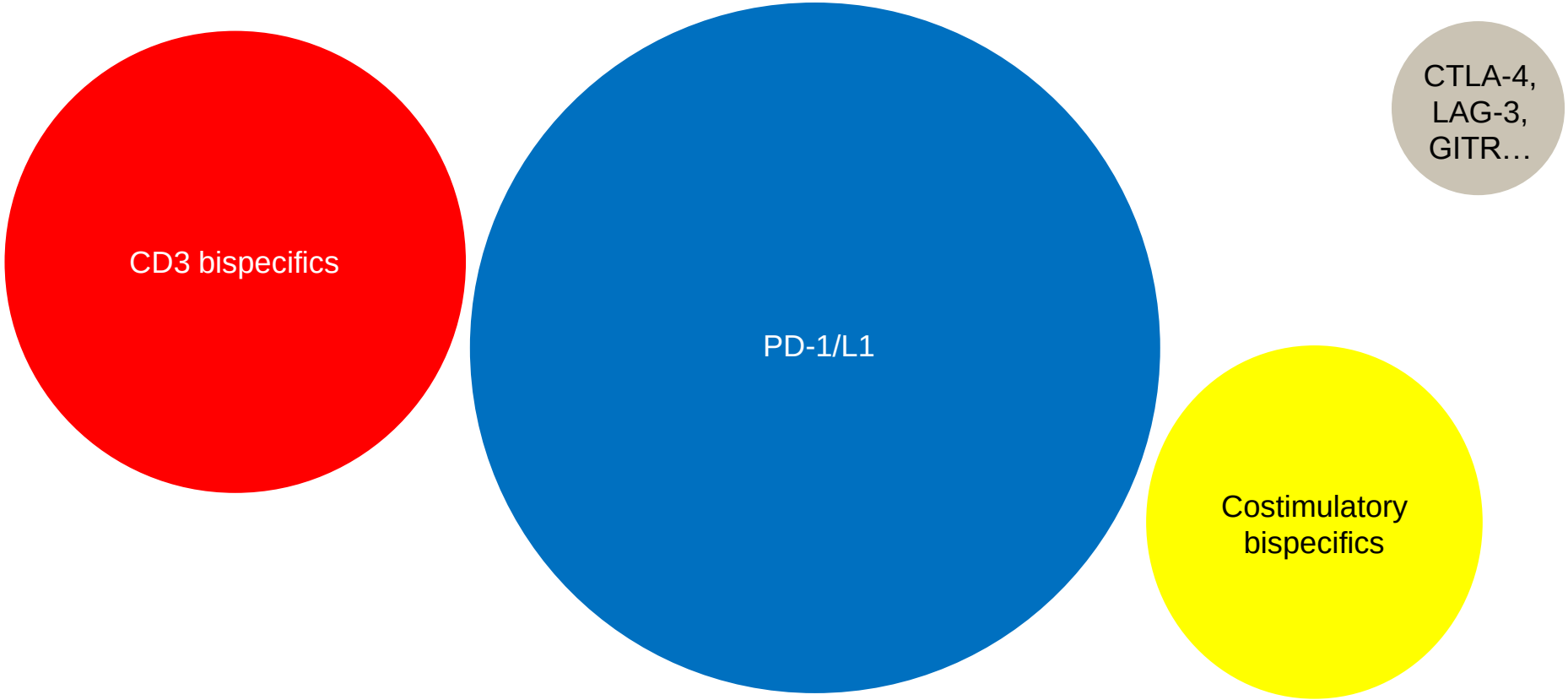
BROADENING OUR IMMUNO-ONCOLOGY PIPELINE

Pre-IND	Clinical Development	LIBTAYO Potential Indications	Approved
TSAxCD28 Solid Tumor	**REGN1979 (CD20xCD3)** B-Cell NHL	**LIBTAYO** NSCLC, Cervical, BCC, Pediatric	**LIBTAYO** CSCC
TSAxCD28 B cell malignancy	**REGN5458 (BCMAxCD3)** Multiple Myeloma	**LIBTAYO + REGN1979 (CD20xCD3)** B-Cell NHL	
GITR Solid tumors	**REGN4018 (MUC16xCD3)** Ovarian Cancer		
And More To Come HLA/peptide (tumor and viral), etc.	**REGN4659 (CTLA-4)** NSCLC		
	REGN3767 (LAG-3) Solid/hematologic malignancies		

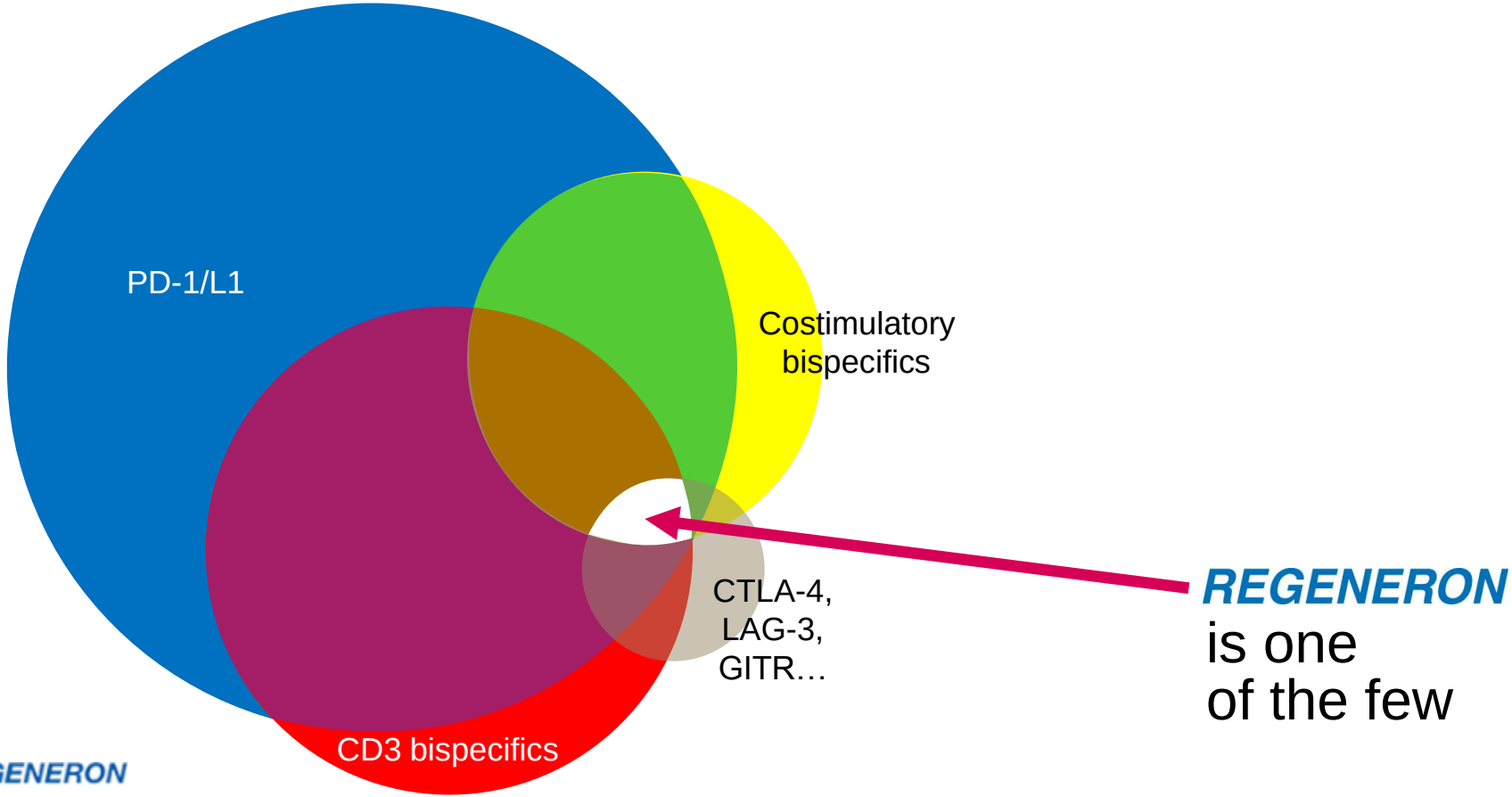
TSA = Tumor Specific Antigen

This slide includes pipeline drug candidates currently undergoing clinical testing in a variety of diseases. The safety and efficacy of these drug candidates have not been evaluated by any regulatory authorities for the disease categories described here.

MANY COMPANIES CAN DO ONE THING...



…FEW CAN DO MANY THINGS



THANK YOU

REGENERON