



# CMD21

February 5, 2021

*Play to Win*



# Forward looking statements

This document contains forward-looking statements as defined in the Private Securities Litigation Reform Act of 1995, as amended. Forward-looking statements are statements that are not historical facts. These statements include projections and estimates and their underlying assumptions, statements regarding plans, objectives, intentions and expectations with respect to future financial results, events, operations, services, product development and potential, and statements regarding future performance. Forward-looking statements are generally identified by the words “expects”, “anticipates”, “believes”, “intends”, “estimates”, “plans” and similar expressions. Although Sanofi’s management believes that the expectations reflected in such forward-looking statements are reasonable, investors are cautioned that forward-looking information and statements are subject to various risks and uncertainties, many of which are difficult to predict and generally beyond the control of Sanofi, that could cause actual results and developments to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. These risks and uncertainties include among other things, the uncertainties inherent in research and development, future clinical data and analysis, including post marketing, decisions by regulatory authorities, such as the FDA or the EMA, regarding whether and when to approve any drug, device or biological application that may be filed for any such product candidates as well as their decisions regarding labelling and other matters that could affect the availability or commercial potential of such product candidates, the fact that product candidates if approved may not be commercially successful, the future approval and commercial success of therapeutic alternatives, Sanofi’s ability to benefit from external growth opportunities, to complete related transactions and/or obtain regulatory clearances, risks associated with intellectual property and any related pending or future litigation and the ultimate outcome of such litigation, trends in exchange rates and prevailing interest rates, volatile economic and market conditions, cost containment initiatives and subsequent changes thereto, and the impact that COVID-19 will have on us, our customers, suppliers, vendors, and other business partners, and the financial condition of any one of them, as well as on our employees and on the global economy as a whole. Any material effect of COVID-19 on any of the foregoing could also adversely impact us. This situation is changing rapidly and additional impacts may arise of which we are not currently aware and may exacerbate other previously identified risks. The risks and uncertainties also include the uncertainties discussed or identified in the public filings with the SEC and the AMF made by Sanofi, including those listed under “Risk Factors” and “Cautionary Statement Regarding Forward-Looking Statements” in Sanofi’s annual report on Form 20-F for the year ended December 31, 2019. Other than as required by applicable law, Sanofi does not undertake any obligation to update or revise any forward-looking information or statements.

# Agenda CMD21 - part 2

<b>Emerging leadership in Immunology</b>	<b>John Reed</b>	Head of R&D
<b>Dupixent® leading in Type 2 Inflammatory Diseases</b>	<b>Brian Foard</b>	Head of Dupixent® Franchise
<b>Deepen Type 2 leadership</b>	<b>Naimish Patel</b>	Head of Development, Immunology & Inflammation
<b>Going above and beyond</b>	<b>Frank Nestle</b>	Head of Research, CSO
<b>Conclusion</b>	<b>John Reed</b>	Head of R&D
<b>Q&amp;A</b> <i>(also joining)</i>	<b>Paul Hudson</b> <b>Jean-Baptiste de Chatillon</b> <b>Bill Sibold</b> <b>Dietmar Berger</b>	CEO CFO Head of Specialty Care Head of Development, CMO



# Emerging leadership in Immunology

John Reed

Head of Research & Development



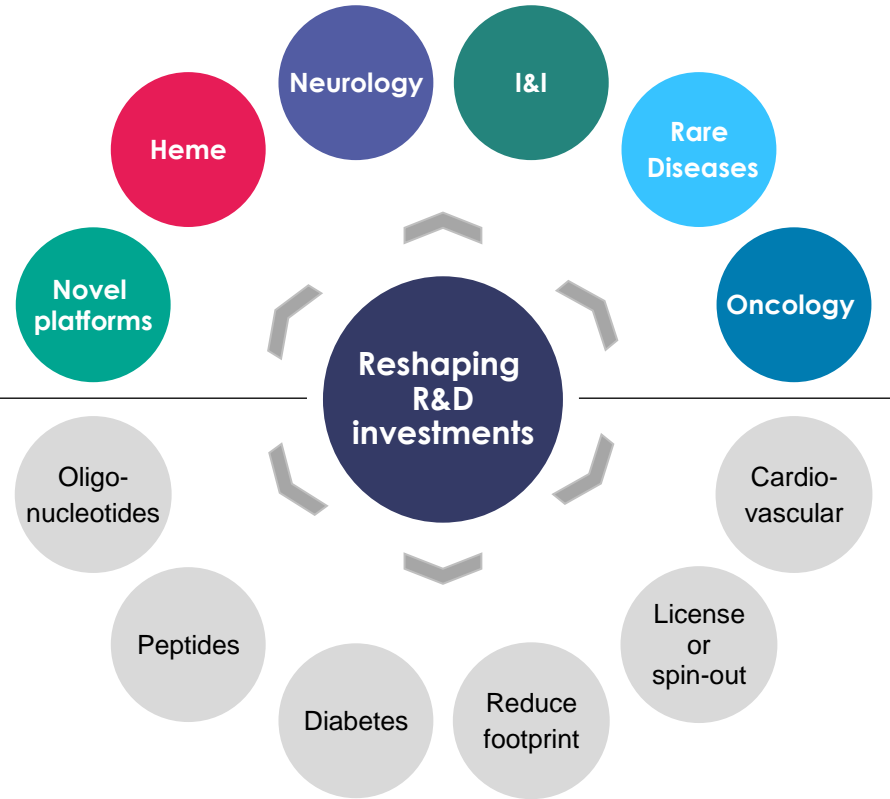
# Sanofi R&D transformation 2018-2020

Increased  
or  
reallocated

- Added 4 platforms by M&A: NANOBODY®; Synthorin™, Tailored Covalency; universal NK cell therapy
- Reallocated resources to immunology, oncology & hematology
- Bolstered biologics CMC

Reduced  
or  
Terminated

- Discontinued >30 research projects
- Exited DCV research
- Reduced overall fixed costs, despite M&A



# Sanofi's approach to R&D



## Pathways

Deep understanding  
of disease pathways



## Patients

Relentless  
patient focus



## Platforms

Expanded tools for  
drug discovery



Expanding capabilities



# Dupixent® leading in Type 2 Inflammatory Diseases

Brian Foard

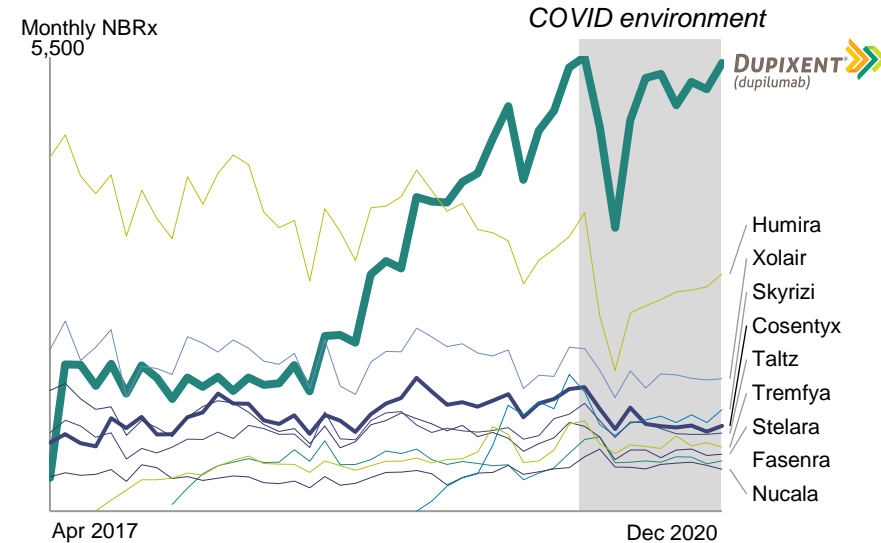
Head of Dupixent® Franchise



# Dupixent® - leading biologic in dermatology and respiratory

- Outstanding FY global sales performance, €3.5bn
- Accelerating demand across all approved indications: AD, asthma, and CRSwNP
- Dupixent® now launched in 47 countries with ~230K patients on therapy
- Data up to 3-years reinforces the well-established safety and efficacy profile in AD and asthma<sup>(3)</sup>

## #1 U.S. new patient biologic among specialists (1,2)



Dupixent® is in collaboration with Regeneron

(1) IQVIA NPA Patient Insights monthly data (mail, retail channels)

(2) Dermatologists, Allergists, Pulmonologists, Otolaryngologists (ENTs)

(3) LIBERTY AD OLE and LIBERTY ASTHMA TRAVERSE OLE



# Building a megabrand: Dermatology

## Unlocking the opportunity in Type 2 inflammatory diseases



### Atopic Dermatitis US

- First biologic approved in AD for ages 6+
- **~2.2 million** AD biologic eligible patients 6+
- **5.1%** AD biologic eligible patient penetration<sup>(1)</sup>

**~4.9 million** AD biologic eligible patients<sup>(2)</sup>

### AD Geographic Opportunity

- First biologic approved in AD for the EU (ages 6+) & Japan (ages 15+)
- **China:**
  - AD adolescent expected approval mid-2021
  - NRDL listing: access to **150K AD adult** patients, overtime **~900K**

### Dermatology Patient Opportunity<sup>(3)</sup>

Expected first submission in U.S.

2021e	<b>Prurigo Nodularis</b> <i>Currently no standard of care</i>	74k
2022e	<b>CSU</b> <i>Low competitive environment</i>	308k
2022e	<b>AD &lt; 6 years of age</b> <i>Age expansion</i>	75K
2022e	<b>CIndU-Cold</b> <i>Currently no standard of care</i>	25K
2023e+	<b>Bullous Pemphigoid</b> <i>Currently no standard of care</i>	27k

**~500k**

Source: Sanofi Epidemiology Analysis; AD: Atopic Dermatitis; CSU: Chronic spontaneous urticaria; CIndU-Cold: Chronic inducible urticaria-cold

(1) All ages (excl. <6y); US Patients on Treatment data through December 2020

(2) G8: US, Japan, Germany, France, Italy, Spain, United Kingdom and China

(3) Prurigo Nodularis, CSU, CIndU-Cold, and Bullous Pemphigoid are in clinical trials, Atopic Dermatitis <6 years of age is planned

# Building a megabrand: Respiratory

## Unlocking the opportunity in Type 2 inflammatory diseases



### Asthma U.S.

- Best-in-class Type 2 profile<sup>(1)</sup> approved 12Y+
- ~**900k** biologics eligible
- **17%** Asthma biologic penetration<sup>(2)</sup>
- **25%** Dupixent NBRx share for Q4<sup>(3)</sup>

**>1.9 million** biologic eligible patients in asthma<sup>(3)</sup>

### Asthma Geographic Opportunity

- Best-in-class Type 2 profile<sup>(1)</sup> approved 12Y+ in Europe and Japan
- **30%** dynamic patient market share in Japan – Dupixent **#1**<sup>(5)</sup>
- **32%** dynamic patient share in Germany – Dupixent **#1**<sup>(6)</sup>
- **China:** Asthma trial ongoing

### Respiratory Patient Opportunity<sup>(7)</sup>

Expected U.S. submission date

2019	<b>Chronic Sinusitis with NP</b> <i>16 markets launched</i>	90k
H1 2021	<b>Asthma 6-11 yrs of age</b> <i>Age expansion</i>	75k
2023e+	<b>Type 2 COPD</b> <i>Currently no approved biologic</i>	300k
2023e+	<b>Chronic Sinusitis without NP</b> <i>Currently no standard of care</i>	130k
2023e+	<b>Allergic Fungal Rhinosinusitis</b> <i>Currently no standard of care</i>	11k
		<b>~600k</b>

Source: Sanofi Epidemiology Analysis

(1) Pivotal clinical studies (DRI, QUEST, VENTURE, TRAVERSE)

(2) IQVIA Patients on Treatment data adjusted for all channels in Asthma indication through Nov 2020

(3) IQVIA Source of Business Sanofi adjusted for all channels in Asthma indication. Q4'20

(4) US, Japan, Germany, France, Italy, Spain & United Kingdom

(5) Japan local ATU data W8 Sep 2020; Naïve and switches

(6) IQVIA LRx-Database, Dupixent®, Source of Business, Indication Asthma, Data status January 2021, Observation period Nov 2020; Naïve and switches

(7) Chronic Sinusitis with NP is approved in certain jurisdictions, Type 2 COPD, Chronic Sinusitis without NP and Allergic Fungal Rhinosinusitis are ongoing clinical trials



# Deepen Type 2 leadership

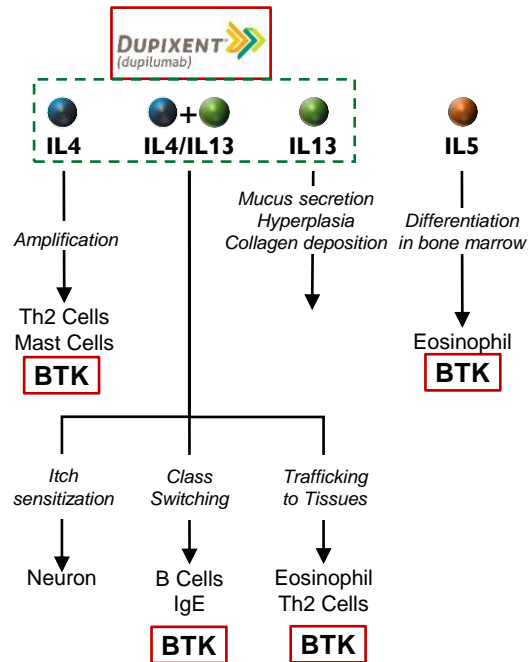
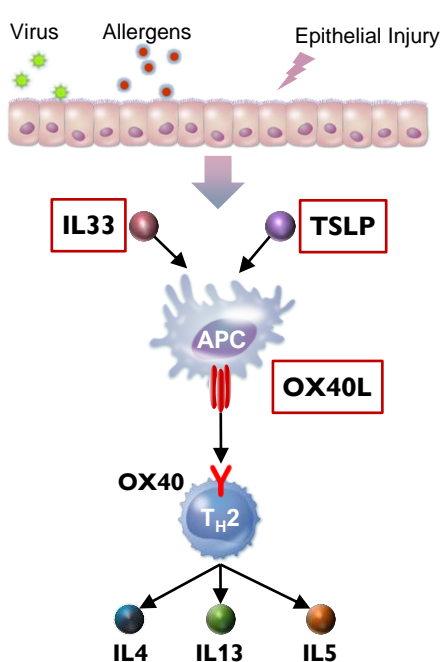
Naimish Patel

Head of Development,  
Immunology & Inflammation



# Leveraging deep understanding across Type 2 pathway

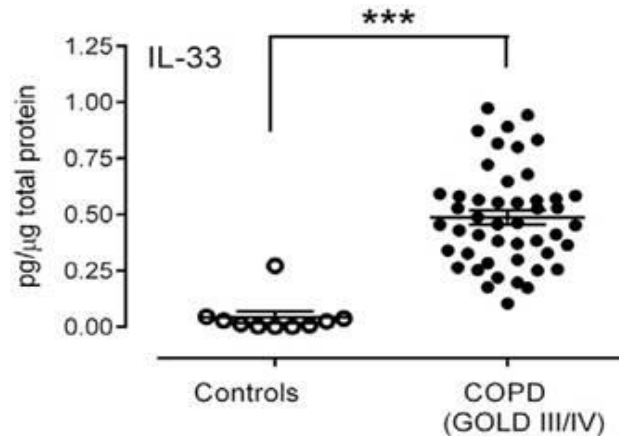
## Portfolio of assets broadly positioned at key pathway intervention points



- **Dupixent<sup>®</sup>**  
Treating Type 2 patients across multiple diseases (AD, asthma, CRSwNP)
- **BTKi**  
Addressing Type 2 allergic and mast-cell driven disease
- **Itepekimab<sup>(1)</sup> (aIL33 mAb)**  
Focused COPD in former smokers regardless of Type 2 status
- **Kymab<sup>(2)</sup> (aOX40L mAb)**  
Immunoregulatory mechanism for AD with mixed inflammation

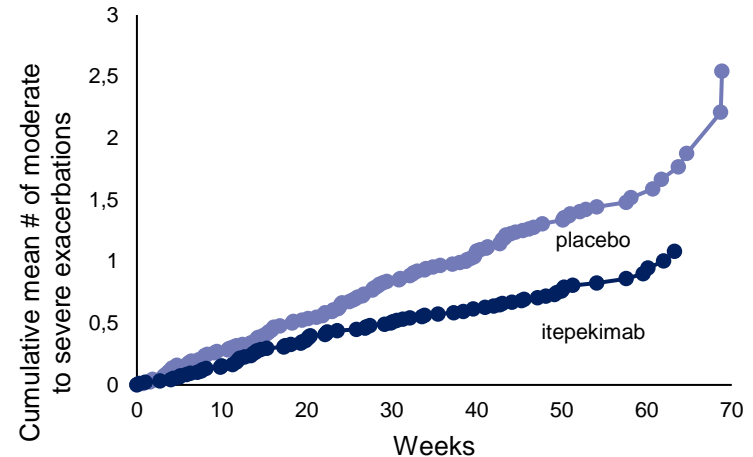
# Potential for 2 biologics in COPD, itepekimab and Dupixent<sup>®</sup>, to address >80%<sup>(2)</sup> of patients

IL-33 levels are elevated in lungs of former smokers with severe COPD



- Internal and published data link high IL-33 levels to former smokers<sup>(3)</sup>

Itepekimab COPD Phase 2:  
~40% exacerbation reduction in former smokers



- AERIFY<sup>(1)</sup> P3 trial first patient enrolled, data 2024
- Itepekimab well-tolerated in ph2 study

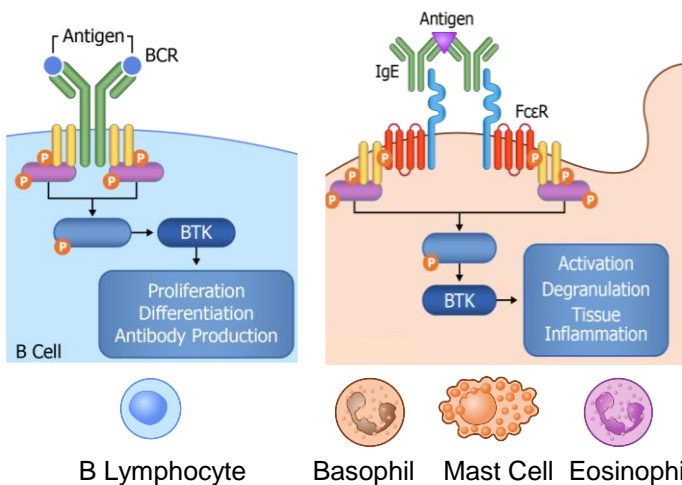
*Itepekimab to target an additional 40%<sup>(2)</sup> of COPD patients not targeted by Dupixent<sup>®</sup> Program*

COPD: Chronic Obstructive Pulmonary Disease  
\*\*\*p < 0.001 comparing groups as indicated in the figure  
Itepekimab is under investigation and not yet approved  
Itepekimab is developed in collaboration with Regeneron  
(1) AERIFY-1 on clinicaltrials.gov NCT04701983

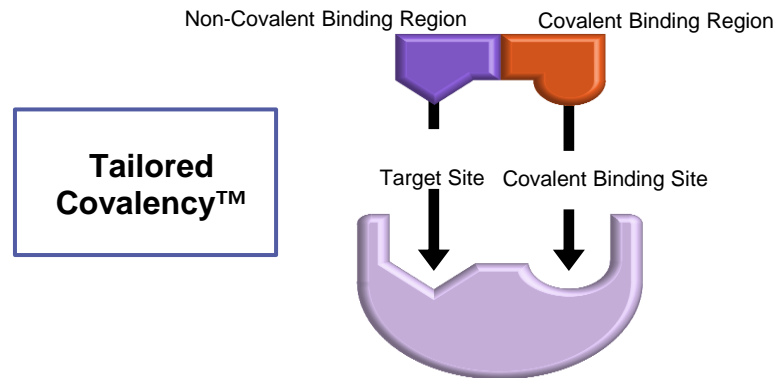
(2) Patient populations exclude never smokers; U.S. epidemiology estimates  
(3) Kearley et al., 2015, Immunity 42, 566-579  
(4) itepekimab and Dupixent<sup>®</sup> are assets under investigation for the treatment of COPD and are not approved by any regulators for this use.

# Rilzabrutinib 'pipeline in a product' – oral drug being investigated for allergic and autoantibody-driven diseases

BTK is critical for B cell signaling and activation of key Type 2 inflammatory cells



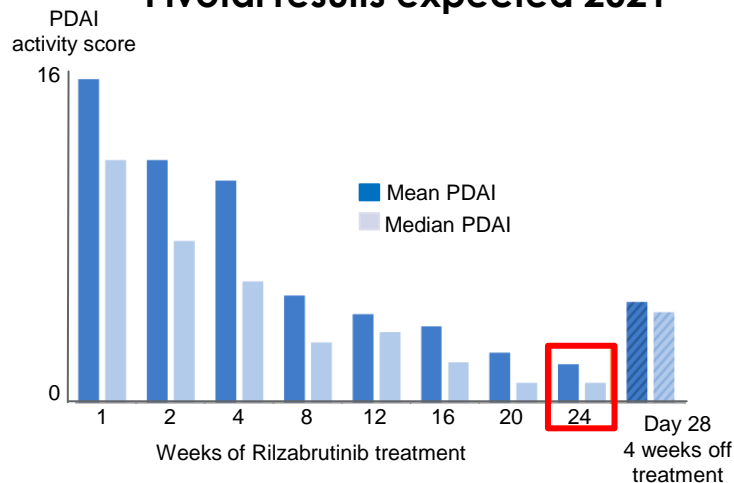
Ability to tailor residence time differentiates Rilzabrutinib



*Rilzabrutinib targets 2 key pathways with chemistry that aims to maximize efficacy/minimize exposure*

# Rilzabrutinib – Potential for meaningful benefit demonstrated in PV and ITP in Phase 2 studies

## Pemphigus Vulgaris (PV): Pivotal results expected 2021



- 67% of patients with minimal disease activity by 24 wks<sup>(1)</sup>

## Immune Thrombocytopenic Purpura (ITP): Pivotal results expected 2023

### Patients Achieving Platelet counts $\geq 50 \times 10^9/L$ (80% CI)

	Primary endpoint 2 Consecutive <sup>(1)</sup>	50% of platelet counts
Patients enrolled (N=47)	43% (34,52)	34% (26,43)
$\geq 12$ Week Treatment (n=36)	50% (40,60)	39% (29,50)
Initiated 400mg BID (n=32)	44% (33,55)	38% (27,49)
$\geq 12$ Week Treatment (n=26)	50% (38,62)	42% (31,55)

- 50% of heavily pre-treated patients reached primary endpoint<sup>(2)</sup>

## Rilzabrutinib was well tolerated in both PV and ITP studies

- Note: One patient dropped out of study after 8 weeks due to worsening pemphigus and was not included in PDAI score/CS usage calculation after 8 weeks; A secondary endpoint was PDAI – Pemphigus Disease Area Index; Open label study results presented at 2020 AAD virtual annual meeting.
- Primary endpoint was defined as 2 consecutive platelet counts  $\geq 50,000/\mu L$  without requiring rescue medication; Data as of May 5, 2020; Open label study results presented at 2020 EHA virtual annual meeting.
- Rilzabrutinib is an asset under investigation and is not approved by any regulators

# Rilzabrutinib target profile potentially differentiated and Phase 2 program in large indications planned for 2021

## Differentiated potential target profile in Type 2 and autoimmune disease

	Biologics	JAK's	Rilzabrutinib (target profile)
Oral		✓	✓
No black box warning	✓		✓
High efficacy	✓	✓	✓

## New programs for rilzabrutinib target Type 2 pathway

	U.S. population <sup>(1)</sup>	Phase 2 planned for 2021
Atopic dermatitis	2.2m	✓
Asthma	900k	✓
CSU	308K	✓

- Rilzabrutinib target profile supports potential for use in less severe patients

### *Pemphigus and Immune Thrombocytopenic Purpura pivotal trials ongoing*



BTKi: Bruton's Tyrosine Kinase inhibition  
 Rilzabrutinib is an asset under investigation and is not approved by any regulators

(1) Sanofi Epidemiology Analysis

(2) No head to head studies comparing the treatments referenced against the investigational treatment rilzabrutinib have been conducted. rilzabrutinib target profile is aspirational and comparisons with other therapies cannot be made at this time.



# Unparalleled portfolio to address major indications

		Atopic dermatitis	Asthma	COPD
Type 2 target				dupilumab
Type 2 plus	SC	Anti-OX40L	Anti- IL-13/TSLP	itepekimab
	Oral	IRAK4 degrader   rilzabrutinib	rilzabrutinib	

*Sanofi Immunology is focused on unmet needs in heterogenous patient populations*

Other than Dupixent® in AD and asthma, the assets listed here are under investigation for the stated indication and are not approved by any regulators. OX40L is an asset of Kymab Ltd. Sanofi has entered into an agreement to acquire Kymab. The closing of this transaction is subject to the expiration of an anti-trust waiting period and other customary closing conditions



# Going above and beyond

Frank Nestle

Head of Research,  
Chief Scientific Officer

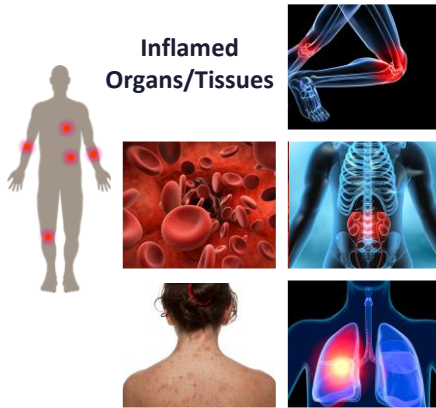


# Unlocking patient biology with Sanofi proprietary platforms

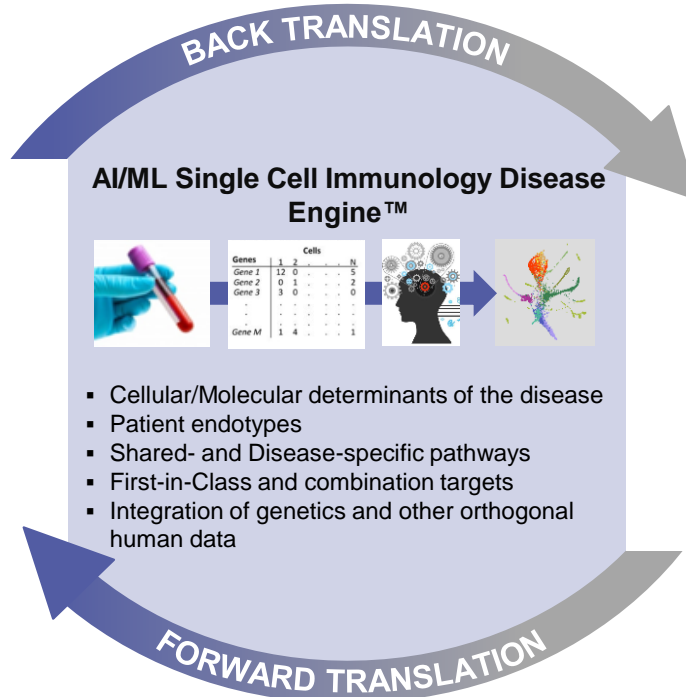
## Discovering novel treatment strategies through single-cell dissection of immune diseases and advanced AI/ML

### PRECISION IMMUNOLOGY

Focus on Patients and Human Immune Biology



Inflamed  
Organs/Tissues

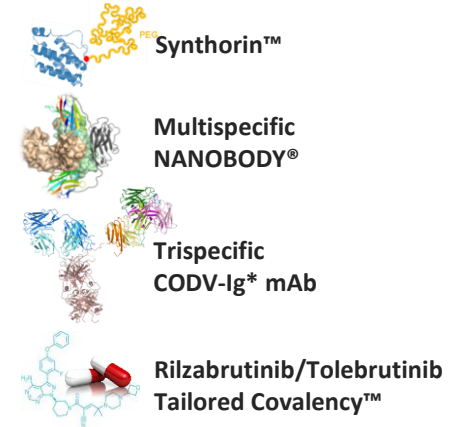


AI/ML Single Cell Immunology Disease Engine™

- Cellular/Molecular determinants of the disease
- Patient endotypes
- Shared- and Disease-specific pathways
- First-in-Class and combination targets
- Integration of genetics and other orthogonal human data

### PRECISION IMMUNE THERAPY

Novel  
Technology Platforms



Synthorin™

Multispecific  
NANOBODY®

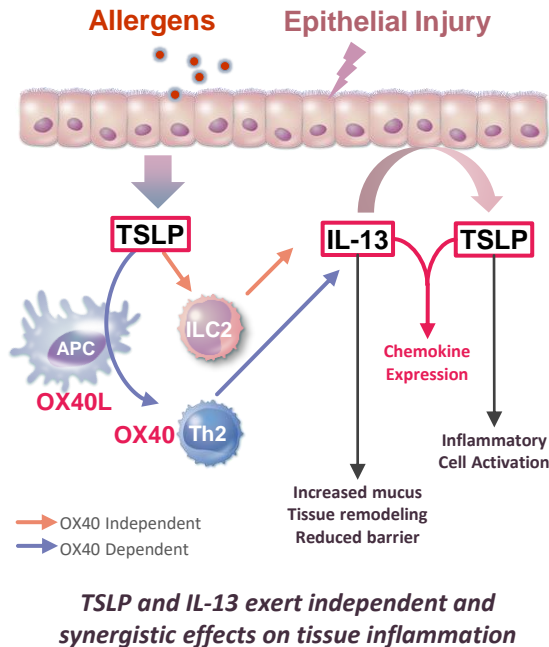
Trispecific  
CODV-Ig\* mAb

Rilzabrutinib/Tolebrutinib  
Tailored Covalency™

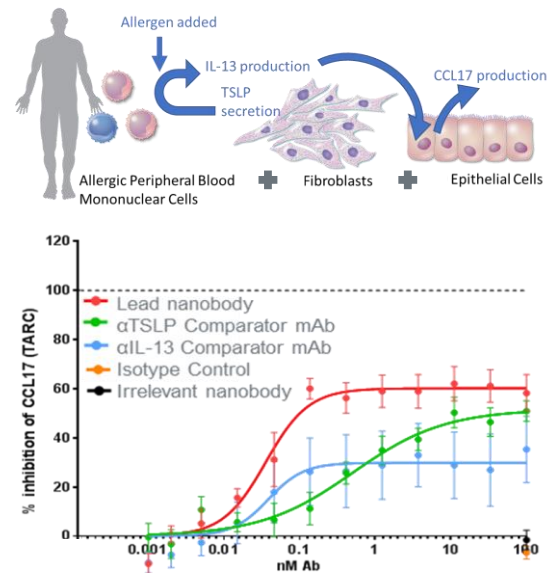
# Anti-IL-13/TSLP NANOBODY® - Next generation bispecific for Type 2 Inflammation

## Anti-IL-13/TSLP NANOBODY®

- Incorporates nanobodies against both TSLP and IL-13 into a single molecule
- Improved potency in preclinical models of allergic inflammation
- Superior efficacy of combined anti-IL-13 and anti-TSLP blockade on inhibition of CCL17 allergic chemokine production



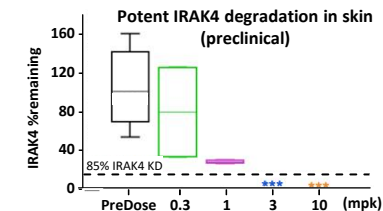
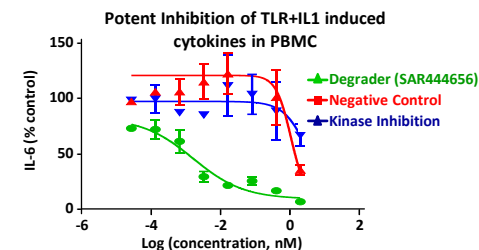
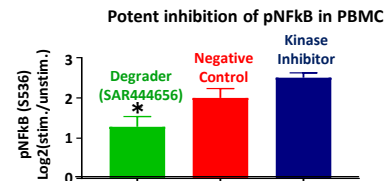
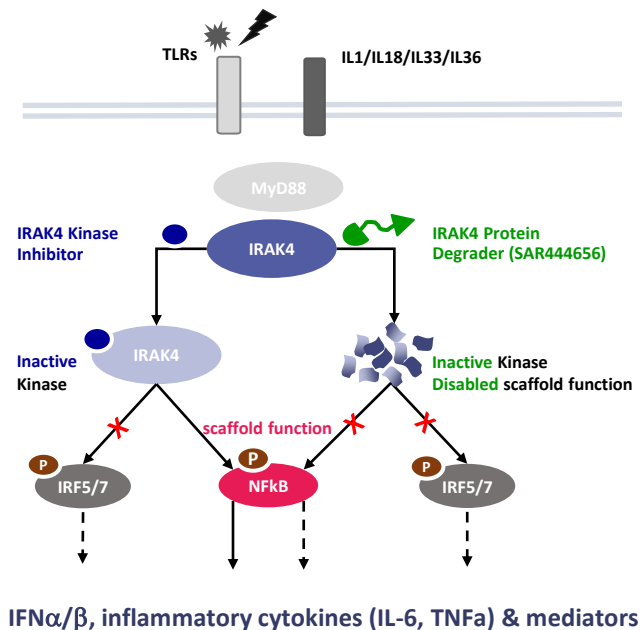
## Allergen-driven Chemokine Production in Tissue-Mimic Assay



**Planned to enter Phase 1 in 2021; Indication: Asthma**

# First-in-class IRAK4<sup>(1)</sup> oral protein degrader

- Degradation of IRAK4 protein abolishes its kinase activity and scaffold function
- IRAK4 protein degrader SAR444656 inhibits pNFkB and pro-inflammatory cytokines
- Potential for oral immunology pathway drug across multiple indications

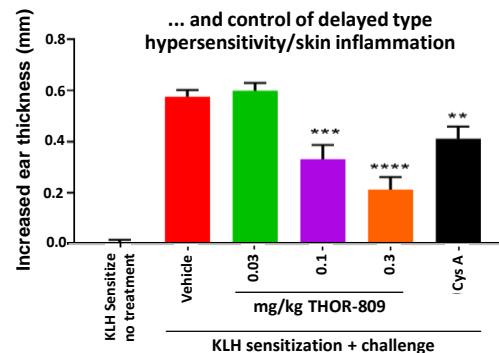
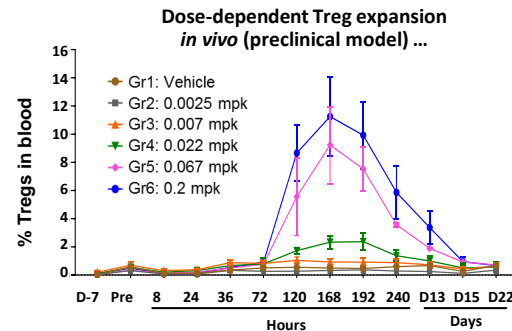
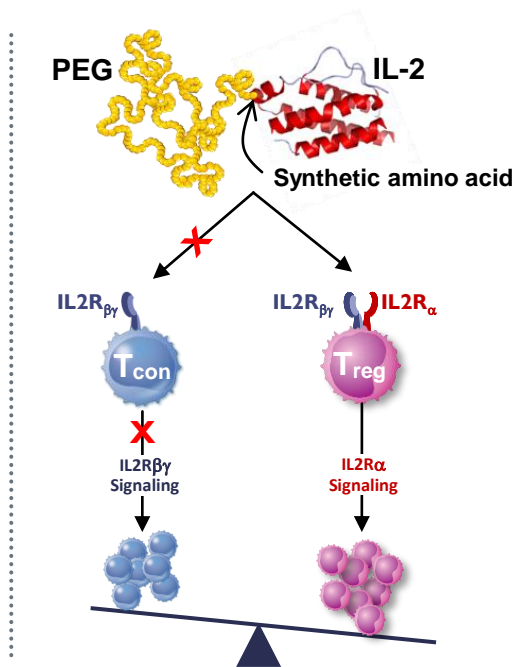


\* Significant difference to IRAK4 kinase in ANOVA with Dunnett's test  
 \*\*\* IRAK4 expression is below level of quantification

**Planned to enter the clinic in 2021; Indications: Atopic Dermatitis and Hidradenitis Suppurativa**

# THOR809 - Novel synthetic IL-2 targeting regulatory T cells to restore immune homeostasis

- Unique platform leverages synthetic biology technology
- Novel synthetic IL-2 with no binding to IL-2R $\beta$ : high Treg selectivity
- Expands and enhances suppressive capacity of Tregs in blood
- Controls inflammation in-vivo in preclinical model



*Planned to enter Phase 1 in 2021; potential to apply to a range of autoimmune diseases*



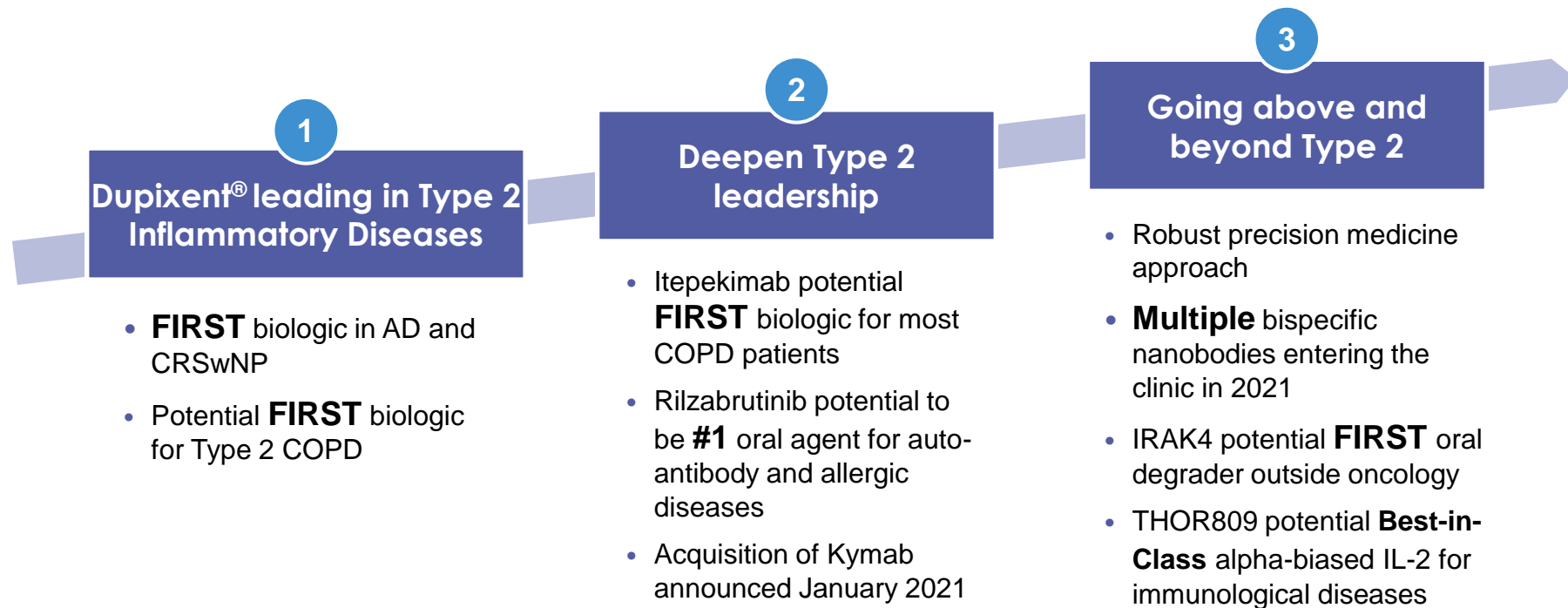
# Conclusion

John Reed

Head of Research & Development



# Sanofi gaining momentum in immunology





# Sanofi - Rich Immunology portfolio extending to other TAs

Dermatology	Respiratory	GI	Rheumatology	Hematology	Neurology	Oncology
Dupixent®	Dupixent®	Dupixent®	Kevzara®	Sutimlimab	Aubagio®	Libtayo®
KY-1005 <sup>(2)</sup>	Itepekimab	*Bispecific NANOBODY®	Rilzabrutinib	Rilzabrutinib	Tolebrutinib	Sarclisa®
Rilzabrutinib	Rilzabrutinib		Anti-CD40L mAb <sup>(4)</sup>	Isatuximab	Anti-CD40L mAb <sup>(4)</sup>	CD3xCD123 TCE
Topical BTKi	*anti-IL-13-TSLP NANOBODY®		*Bispecific NANOBODY®	BIVV020	BIVV020	CD3xCD28x CD38 TCE
*IRAK4 degrader <sup>(1)</sup>					Lemtrada®	THOR707
*Bispecific NANOBODY®					RIPK1i <sup>(3)</sup>	K-NK Kiadis <sup>(5)</sup>
RIPK1i <sup>(3)</sup>						Anti-TGF beta mAb
THOR809						*NKCE <sup>(7)</sup>

Type 2	Type 2+ mixed	Autoantibody	Immunoregulatory	Th1/Th17	Immunostimulatory
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GI: gastrointestinal; TCE: T cell engager; NKCE: NK cell engager  
 \*= preclinical  
 All assets except for Dupixent®, Libtayo®, and Sarclisa® are under investigation and are not approved by any regulators

- (1) In collaboration with Kymera
- (2) Kymab (aOX40L mAb) Sanofi has entered into an agreement to acquire Kymab. The closing of this transaction is subject to the expiration of an anti-trust waiting period and other customary closing conditions
- (3) In collaboration with Denali

- (4) In collaboration with Immunext
- (5) Pending closure of Kiadis acquisition
- (6) In collaboration with Sobi
- (7) In collaboration with Innate pharma

# Q&A session



**John Reed**  
Head of R&D



**Paul Hudson**  
CEO



**Brian Foard**  
Head of Dupixent® Franchise



**Jean-Baptiste de Chatillon**  
CFO



**Naimish Patel**  
Head of Development,  
Immunology & Inflammation



**Bill Sibold**  
Head of Specialty Care



**Frank Nestle**  
Head of Research, CSO



**Dietmar Berger**  
Head of Development, CMO



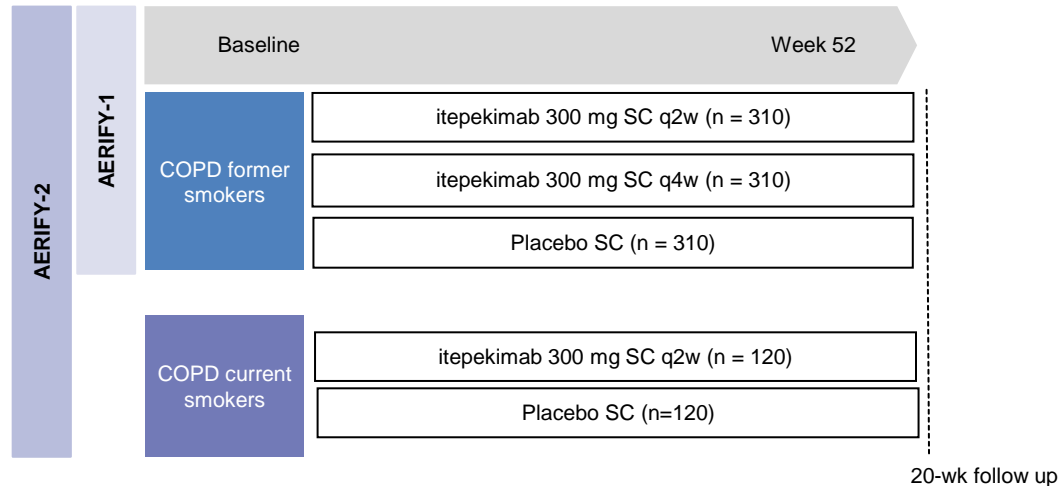
# Emerging leadership in Immunology

Appendices

February 5, 2021

SANOFI 

# Itepekimab pivotal program design for COPD: Focus on former smokers



- Primary endpoint is annual rate of moderate or severe acute exacerbation of COPD