

# R&D Pipeline – New Molecular Entities(\*)

| Phase 1<br>(Total:17)   |  | Phase 2<br>(Total:7)  |   | Phase 3<br>(Total:7)  | Registration<br>(Total:2)  |
|---|--|---|---|---|--|
| <b>SAR441344</b><br>Anti-CD40L mAb<br>Multiple Sclerosis                          | <b>BIVV001</b> <sup>(4)</sup><br>rFVIII Fc – vWF – XTEN <sup>(5)</sup><br>Hemophilia A       | <b>SAR440340</b> <sup>(**)</sup><br>Anti-IL33 mAb<br>Atopic Dermatitis                      | <b>SAR422459</b> <sup>(**)(12)</sup><br>ABCA4 gene therapy<br>Stargardt Disease         | <b>isatuximab</b><br>Anti-CD38 mAb<br>3L Relapsing Refractory MM (ICARIA)               | <b>cemiplimab</b> <sup>(**)</sup><br>PD-1 inhibitor mAb<br>Advanced CSCC (EU)              |
| <b>REGN5458</b> <sup>(1)</sup><br>Anti BCMA-CD3 bispecific mAb<br>RRMM            | <b>ST400</b> <sup>(6)</sup><br>ZFN Gene Editing Technology<br>Beta thalassemia               | <b>SAR156597</b><br>IL4/IL13 bi-specific mAb<br>Systemic Sclerosis                          | <b>HIV</b><br>Viral vector prime & rgp120 boost vaccine                                 | <b>avagliflozin</b><br>Neo GAA<br>Pompe Disease   | <b>Zynquista</b> <sup>TM(**)</sup><br>Oral SGLT-1&2 inhibitor<br>Type 1 Diabetes (U.S./EU) |
| <b>REGN4018</b> <sup>(1)</sup><br>Anti MUC16-CD3 bispecific mAb<br>Ovarian Cancer | <b>BIVV003</b> <sup>(6)</sup><br>ZFN Gene Editing Technology<br>Sickle Cell Disease          | <b>R</b> <b>olipudase alfa</b><br>rhASM<br>Acid Sphingomyelinase Deficiency <sup>(10)</sup> | <b>SP0232</b> <sup>(13)(**)</sup><br>Respiratory syncytial virus<br>Monoclonal Antibody | <b>venglustat</b><br>Oral GCS inhibitor<br>ADPKD <sup>(14)</sup>                        |  |
| <b>SAR408701</b><br>Maytansin-loaded anti-CEACAM5 mAb<br>Solid Tumors             | <b>SAR443060</b> <sup>(7)</sup><br>RIPK1 inh <sup>(8)</sup><br>Amyotrophic Lateral Sclerosis | <b>SAR339375</b> <sup>(11)</sup><br>miRNA-21<br>Alport Syndrome                             |   | <b>fitusiran</b><br>RNAi therapeutic targeting anti-thrombin<br>Hemophilia A and B      |  |
| <b>SAR439459</b><br>anti-TGFβ mAb<br>Advanced Solid Tumors                        | <b>SAR442168</b> <sup>(9)(**)</sup><br>BTK inhibitor<br>Multiple Sclerosis                   |   |   | <b>sutimlimab</b> <sup>(15)</sup><br>Anti Complement C1s mAb<br>Cold Agglutinin Disease |  |
| <b>SAR439859</b><br>SERD<br>Metastatic Breast Cancer                              | <b>Herpes Simplex Virus Type 2</b><br>HSV-2 vaccine  |   |   | <b>SAR341402</b><br>Rapid acting insulin<br>Type 1/2 Diabetes                           |  |
| <b>SAR442720</b> <sup>(2)</sup><br>SHP2 inhibitor<br>Solid Tumors                 | <b>Respiratory syncytial virus</b><br>Infants<br>Vaccines                                    |   |   | <b>efpeglenatide</b> <sup>(**)</sup><br>Long-acting GLP-1 agonist<br>Type 2 Diabetes    |  |
| <b>SAR440234</b><br>T cell engaging multi spe mAb<br>Leukemia                     | <b>Next Gen PCV</b><br>Pneumococcal Conjugate<br>Vaccines                                    |   |   |   |  |
| <b>SAR441000</b> <sup>(3)</sup><br>Cytokine mRNA<br>Melanoma                      |  |   |   |   |  |

**R** Registrational Study (other than Phase 3)

**O** Opt-in rights products for which rights have not been exercised yet

|  |   |
|--|---|
|  Immuno-inflammation  |  MS & Neuro                  |
|  Oncology             |  Diabetes                    |
|  Rare Diseases        |  Cardiovascular & metabolism |
|  Rare Blood Disorders |  Vaccines                    |

(1) Regeneron product for which Sanofi has opt-in rights  
 (2) Developed in collaboration with REVOLUTION Medicines; also known as RMC-4630  
 (3) Developed in collaboration with BioNtech  
 (4) Sanofi Product for which Sobi has opt-in rights  
 (5) Recombinant Coagulation Factor VIII Fc – von Willebrand Factor – XTEN Fusion protein  
 (6) Developed in collaboration with Sangamo  
 (7) Also known as DNL747  
 (8) Receptor-interacting serine/threonine-protein kinase 1  
 (9) Also known as PRN2246

(10) Also known as Niemann Pick type B  
 (11) Regulus product for which Sanofi has decided to opt-in  
 (12) Identification of out-licensing partner ongoing  
 (13) Also known as MEDI8897  
 (14) Autosomal Dominant Polycystic Kidney Disease  
 (15) Also Known as BIVV009  
 (\*) Phase of projects determined by clinicaltrials.gov disclosure timing  
 (\*\*) Partnered and/or in collaboration – Sanofi may have limited or shared rights on some of these products

# Additional Indications(\*)

Pipeline charts as communicated at full-year results meeting dated February 7, 2019

| Phase 1<br>(Total:5)  |  | Phase 2<br>(Total:17)   |  | Phase 3<br>(Total:23)  |   | Registration<br>(Total:3) |  |
|---|--|---|--|--|---|---------------------------|--|
| <b>O</b> <b>cemiplimab<sup>(**)</sup> + REGN4018<sup>(1)</sup></b><br>PD-1 inhibitor mAb + Anti-MUC16-CD3 bispecific mAb - Ovarian Cancer | <b>dupilumab<sup>(**)</sup></b><br>Anti-IL4Rα mAb<br>Grass Immunotherapy                                       | <b>isatuximab + cemiplimab<sup>(**)</sup></b><br>Anti-CD38 mAb + PD-1 inhibitor mAb<br>Advanced Malignancies    | <b>dupilumab<sup>(**)</sup></b><br>Anti-IL4Rα mAb<br>Asthma 6 - 11 years old             | <b>isatuximab</b><br>Anti-CD38 mAb<br>Newly Diagnosed MM Te <sup>(6)</sup> (GMMG)                  | <b>dupilumab<sup>(**)</sup></b><br>Anti-IL4Rα mAb<br>Asthma 12y+ (EU)                         |                           |  |
| <b>SAR439859</b><br>SERD + Palbociclib<br>Metastatic Breast Cancer  | <b>R</b> <b>sarilumab<sup>(**)</sup></b><br>Anti-IL6R mAb<br>Polyarticular Juvenile Idiopathic Arthritis       | <b>isatuximab + cemiplimab<sup>(**)</sup></b><br>Anti-CD38 mAb + PD-1 inhibitor mAb<br>Lymphoma                 | <b>dupilumab<sup>(**)</sup></b><br>Anti-IL4Rα mAb<br>Nasal Polyposis                     | <b>isatuximab</b><br>Anti-CD38 mAb<br>1L Newly Diagnosed MM Tt <sup>(6)</sup> (IMROZ)              | <b>Dupixent<sup>®</sup>(**)</b><br>dupilumab<br>Atopic Dermatitis 12 – 17 years old (U.S./EU) |                           |  |
| <b>SAR439459 + cemiplimab<sup>(**)</sup></b><br>Anti-TGFβ mAb + PD-1 inhibitor mAb<br>Advanced Solid Tumors                               | <b>sarilumab<sup>(**)</sup></b><br>Anti-IL6R mAb<br>Systemic Juvenile Arthritis                                | <b>isatuximab + atezolizumab<sup>(**)</sup></b><br>Anti-CD38 mAb + PD-L1 inhibitor mAb<br>Advanced Malignancies | <b>Dupixent<sup>®</sup>(**)</b><br>dupilumab<br>Atopic Dermatitis 6 – 11 years old       | <b>Cerdelga<sup>®</sup></b><br>eliglustat<br>Gaucher Type 1, switch from ERT - Pediatric           | <b>Praluent<sup>®</sup>(**)</b><br>alirocumab<br>CV events reduction (U.S./EU)                |                           |  |
| <b>sutimlimab<sup>(2)</sup></b><br>Anti Complement C1s mAb<br>Idiopathic Thrombocytopenic Purpura   | <b>SAR440340<sup>(**)</sup></b><br>Anti-IL33 mAb<br>COPD   | <b>isatuximab + atezolizumab<sup>(**)</sup></b><br>Anti-CD38 mAb + PD-L1 inhibitor mAb<br>Solid Tumors          | <b>Dupixent<sup>®</sup>(**)</b><br>dupilumab<br>Atopic Dermatitis 6 months - 5 years old | <b>Aubagio<sup>®</sup></b><br>teriflunomide<br>Relapsing Multiple Sclerosis - Pediatric            |   |                           |  |
| <b>SAR443060<sup>(3)</sup></b><br>RIPK1 inh <sup>(4)</sup><br>Alzheimer's Disease   | <b>SAR440340<sup>(**)</sup></b><br>Anti-IL33 mAb<br>Asthma   | <b>venglustat</b><br>Oral GCS inhibitor<br>Fabry Disease  | <b>dupilumab<sup>(**)</sup></b><br>Anti-IL4Rα mAb<br>Eosinophilic Esophagitis            | <b>Lemtrada<sup>®</sup></b><br>alemtuzumab<br>Relapsing Remitting Multiple Sclerosis - Pediatric   |   |                           |  |
|   | <b>dupilumab<sup>(**)</sup> + AR101</b><br>Anti-IL4Rα mAb<br>Peanut Allergy - Pediatric                        | <b>venglustat</b><br>Oral GCS inhibitor<br>Gaucher Type 3   | <b>sarilumab<sup>(**)</sup></b><br>Anti-IL6R mAb<br>Giant Cell Arteritis                 | <b>Zynquista<sup>™</sup>(**)</b><br>Oral SGLT-1&2 inhibitor<br>Type 2 Diabetes                     |   |                           |  |
|   | <b>R</b> <b>cemiplimab<sup>(**)</sup></b><br>PD-1 inhibitor mAb<br>Advanced Basal Cell Carcinoma               | <b>venglustat</b><br>Oral GCS inhibitor<br>Gaucher related Parkinson's Disease                                  | <b>sarilumab<sup>(**)</sup></b><br>Anti-IL6R mAb<br>Polymyalgia Rheumatica               | <b>Zynquista<sup>™</sup>(**)</b><br>Oral SGLT-1&2 inhibitor<br>Worsening Heart Failure in Diabetes |   |                           |  |
|   | <b>isatuximab + cemiplimab<sup>(**)</sup></b><br>Anti-CD38 mAb + PD-1 inhibitor mAb<br>Relapsing Refractory MM | <b>Rabies VRVg</b><br>Purified vero rabies vaccine  | <b>cemiplimab<sup>(**)</sup></b><br>PD-1 inhibitor mAb<br>1L NSCLC                       | <b>Praluent<sup>®</sup>(**)</b><br>alirocumab<br>LDL-C reduction - Pediatric                       |   |                           |  |
|   |  | <b>SP0173 Tdap booster US</b><br>Tdap booster   | <b>cemiplimab<sup>(**)</sup> + chemotherapy</b><br>PD-1 inhibitor mAb<br>1L NSCLC        | <b>Fluzone<sup>®</sup> QIV HD</b><br>Quadrivalent inactivated<br>Influenza vaccine - High dose     |   |                           |  |
|   |  |   | <b>cemiplimab<sup>(**)</sup></b><br>PD-1 inhibitor mAb<br>2L Cervical Cancer             | <b>Men Quad TT</b><br>Advanced generation meningococcal<br>ACYW conjugate vaccine                  |   |                           |  |
|   |  |   | <b>isatuximab</b><br>Anti-CD38 mAb<br>1-3L Relapsing Refractory MM (IKEMA)               | <b>Pediatric pentavalent vaccine</b><br>DTP-Polio-Hib<br>Japan                                     |   |                           |  |
|   |  |   |  | <b>Shan 6</b><br>DTP-HepB-Polio-Hib<br>Pediatric hexavalent vaccine                                |   |                           |  |

- Immuno-inflammation
- Oncology
- Rare Diseases
- Rare Blood Disorders
- MS & Neuro
- Diabetes
- Cardiovascular & metabolism
- Vaccines

- R** Registrational study (other than Phase 3)
- O** Opt-in rights products for which rights have not been exercised yet

(1) Regeneron product for which Sanofi has opt-in rights  
 (2) Also known as BIVV009  
 (3) Also known as DNL747  
 (4) Receptor-interacting serine/threonine-protein kinase 1  
 (5) Transplant eligible  
 (6) Transplant ineligible  
 (\*) Phase of projects determined by clinicaltrials.gov disclosure timing  
 (\*\*) Partnered and/or in collaboration - Sanofi may have limited or shared rights on some of these products

# Pipeline Movements Since Q3 2018

Pipeline charts as communicated at full-year results meeting dated February 7, 2019

## Additions

### Registration

### Phase 3

**Shan 6**  
DTP-HepB-Polio-Hib  
Pediatric hexavalent vaccine

### Phase 2

**SAR440340<sup>(\*\*)</sup>**  
Anti-IL33 mAb  
Atopic Dermatitis

**isatuximab + cemiplimab<sup>(\*\*)</sup>**  
Anti-CD38 mAb + PD-1 inhibitor mAb  
Lymphoma

**isatuximab + atezolizumab<sup>(\*\*)</sup>**  
Anti-CD38 mAb + PD-L1 inhibitor mAb  
Solid Tumors

### Phase 1

**SAR441344**  
Anti-CD40L mAb  
Multiple Sclerosis

**SAR443060**  
RIPK1 inhibitor  
Amyotrophic Lateral Sclerosis

**SAR443060**  
RIPK1 inhibitor  
Alzheimer's Disease

**SAR441000**  
Cytokine mRNA  
Melanoma



**REGN5458**  
Anti BCMA-CD3 bispecific mAb  
RRMM

**BIVV003**  
ZFN Gene Editing Technology  
Sickle Cell Disease

**Next Gen PCV**  
Pneumococcal Conjugate  
Vaccines

# Pipeline Movements Since Q3 2018

## Removals

### Registration

### Phase 3

**cemiplimab<sup>(\*\*)</sup> + ipilimumab**  
 PD-1 inhibitor mAb + CTLA4 mAb  
 1L NSCLC ≥ 50% PDL1+

**mavacamten<sup>(\*\*)</sup>**  
 Myosin inhibitor  
 Obstructive Hypertrophic Cardiomyopathy

### Phase 2

**GZ389988**

TRKA antagonist  
 Osteoarthritis

Combination  
**ferroquine / OZ439<sup>(\*\*)</sup>**  
 Antimalarial

**ALX0171**

Anti RSV Nanobody  
 Respiratory Syncytial Virus

**SAR425899**

GLP-1/GCG dual agonist  
 Obesity/Overweight In T2D

**mavacamten<sup>(\*\*)</sup>**

Myosin inhibitor  
 Non-Obstructive Hypertrophic Cardiomyopathy

**SAR407899**

rho kinase  
 Microvascular Angina

### Phase 1

**SAR439794<sup>(\*\*)</sup>**

TLR4 agonist  
 Peanut Allergy

**SAR438335**

GLP-1/GIP dual agonist  
 Type 2 Diabetes



**REGN3767**

Anti LAG-3 mAb  
 Advanced Cancers



**REGN4659**

Anti-CTLA-4 mAb  
 Cancer

**SAR228810<sup>(\*\*)</sup>**

Anti-protofibrillar AB mAb  
 Alzheimer's Disease

**SAR440181<sup>(\*\*)</sup>**

Myosin activation  
 Dilated Cardiomyopathy

**SAR247799**

S1P1 agonist  
 Cardiovascular indication



**cemiplimab<sup>(\*\*)</sup> + REGN4659**

PD-1 inhibitor mAb + Anti-CTLA-4 mAb  
 NSCLC



**cemiplimab<sup>(\*\*)</sup> + REGN3767**

PD-1 inhibitor mAb + anti LAG-3 mAb  
 Advanced Cancers

**UshStat<sup>®(1)</sup>**

Myosin 7A gene therapy  
 Usher Syndrome 1B