Roche Group development pipeline

Marketed products development programmes

Roche Pharma global development programmes

Roche Pharma research and early development (pRED)

Genentech research and early development (gRED)

Spark

Changes to the development pipeline

Q1 2024 update

New to phase I

New to phase II

New to phase III

2 AIs:
RG6058 tiragolumab + Tecentriq - NSCLC adj.
RG7716 Vabysmo - myopic choriodial neovascularization (CNV)

New to registration

1 AI (US):
RG3625 TNKase - stroke

Removed from phase I

4 NMEs:
RG6526 camonsertib - solid tumors
RG6185 belvarafenib + Cotellic ± T - solid tumors
RG6286 NME - CRC
RG6163 NME - psychiatric disorders

Removed from phase II

Removed from phase III

1 AI:
RG6168 Enspryng - myasthenia gravis

Approvals

2 AI (US):
RG3648 Xolair - food allergy
RG7853 Alecensa - ALK+ NSCLC adj.

Status as of April 17, 2024

Roche Group development pipeline

Phase I (48 NMEs + 8 AIs)

RG6026	Columvi monotherapy + combos	heme tumors
RG6058	tiragolumab combos	solid tumors
RG6076	englumafusp alfa combos	heme tumors
RG6114	inavolisib	solid tumors
RG6160	cevostamab	r/r multiple myeloma
RG6171	giredestrant monotherapy + combos	solid tumors
RG6194	runimotamab	breast cancer
RG6234	forimtamig monotherapy + combos	multiple myeloma
RG6279	eciskafusp alfa ± T	solid tumors
RG6292	vopikitug combos	solid tumors
RG6323	efbalropoendekin alfa (IL15/IL15Ra-Fc) ± T	heme & solid tumors
RG6330	divarasib monotherapy + combos	solid tumors
RG6333	CD19 x CD28 + Columvi	r/r NHL
RG6344	BRAF inhibitor (3)	solid tumors
RG6411	-	solid tumors
RG6433	migoprotafib (SHP2i) combos	solid tumors
RG6440	anti-latent TGF-β1 (SOF10)	solid tumors
RG6457	WRN covalent inhibitor	solid tumors
RG6468	-	solid tumors
RG6512	FIXa x FX	Hemophilia
RG6524	DLL3 trispecific	solid tumors
RG6537	AR degrader	mCRPC
RG6538[1]	P-BCMA-ALLO1	heme tumors
RG6596[2]	HER2 TKI	HER2+ BC
RG6614	USP1 inhibitor	solid tumors
RG7827	FAP-4-1BBL combos	solid tumors
RG7828	Lunsumio monotherapy + combos	heme tumors

CHU	glypican-3 x CD3	solid tumors
CHU	codrituzumab	HCC
CHU	CD137 switch antibody	solid tumors
CHU	RAS inhibitor	solid tumors
CHU	SPYK04	solid tumors
CHU	anti-CLDN6 trispecific	CLDN6+ solid tumors
CHU	ROSE12	solid tumors
RG6107	PiaSky (crovalimab)	lupus nephritis
RG6287	-	immunology
RG6315	-	fibrosis
RG6382	-	SLE
RG6418*	selnoflast	inflammation
RG6421	TMEM16A potentiator	cystic fibrosis
RG7828	Lunsumio	SLE
CHU	anti-HLA-DQ2.5 x gluten peptides	celiac disease
CHU	RAY121	Immunology
RG6006	zosurabalpin	bacterial infections
RG6436***	LepB inhibitor	complicated urinary tract infection
RG6449	HBsAg MAb	chronic hepatitis B
RG6640[3]	GLP-1/GIP RA (CT-388)	obesity +/- T2D
RG6652[3]	GLP-1 RA (CT-996)	obesity +/- T2D
RG6035	Brainshuttle™ CD20	multiple sclerosis
RG6182	MAGL inhibitor	multiple sclerosis
RG6289	gamma-secretase modulator	Alzheimer's
RG6120	zifibancimig	nAMD
RG6209	-	retinal disease
RG6351	-	retinal disease
RG7921	-	RVO
CHU	REVN24	acute diseases

Phase II (20 NMEs + 10 AIs)

RG6058	tiragolumab + T	NSCLC
	tiragolumab + T + chemo	NSCLC periadjuvant
	tiragolumab + T	1L PD-L1+ mSCCHN
RG6107	PiaSky (crovalimab)	sickle cell disease
RG6139	tobemstomig monotherapy + combos	solid tumors
RG6171	giredestrant	endometrial cancer
RG6180	autogene cevumeran	solid tumors
RG6357	dirloctogene samoparvovec	hemophilia A
RG6341	-	chronic cough
RG6536	vixarelimab	IPF/SSc-ILD
RG6631[4]	anti-TL1A	ulcerative colitis
RG6631[4]	anti-TL1A	Crohn's disease
RG7854/ RG6346/ RG6084**	ruzotolimod/xalnesiran/PDL1 LNA	HBV
RG6359	SPK-3006	Pompe disease
RG6615[5]	zilebesiran	hypertension
RG6641[3]	GLP-1/GIP RA (CT-868)	T1D with BMI ≥ 25
RG6042	tominersen	Huntington's
RG6102	trontinemab	Alzheimer's
RG6237	anti-latent myostatin + Evrysdi	SMA
	anti-latent myostatin	FSHD
RG6356	Elevidys	0 to <4 year old DMD
RG6416	bepranemab	Alzheimer's
RG7816	alogabat	ASD
RG7935	prasinezumab	Parkinson's
RG6179	vamikibart	DME
RG6299[6]	ASO factor B	geographic atrophy
RG6501	OpRegen	geographic atrophy
CHU	anti-IL-8 recycling antibody	endometriosis

Status as of April 17, 2024

RG-No - Roche/Genentech; CHU - Chugai managed; [1]Poseida Therapeutics managed; [2]co-development with Zion Pharma; [3]Carmot Therapeutics managed; [4]Telavant managed (TUSCANY-2 and TAHOE); [5]Alnylam Pharmaceuticals managed; [6]IONIS managed; T=Tecentriq; *also developed in neurology; **combination platform; *** moving forward with alternative LepB inhibitor (previously RG6319); RA=Receptor agonist

New Molecular Entity (NME)
Additional Indication (AI)
Oncology / Hematology
Immunology
Infectious Diseases
Cardiovascular & Metabolism
Neurology
Ophthalmology
Other

Roche Group development pipeline

Phase III (9 NMEs + 40 AIs)

RG3502	Kadcyla + T	HER-2+ eBC high-risk
RG6026	Columvi + chemo	2L+ DLBCL
	Columvi + Polivy + R-CHP	1L DLBCL
	Columvi	r/r MCL
RG6058	tiragolumab + T	1L PD-L1 high NSCLC
	tiragolumab + T + chemo	1L esophageal cancer
	tiragolumab + T	locally advanced esophageal cancer
	tiragolumab + T	stage III unresectable 1L NSCLC
	tiragolumab + T + chemo	1L non-squamous NSCLC
	tiragolumab + T	NSCLC adj
	tiragolumab + T + Avastin	1L HCC
RG6107	PiaSky (crovalimab)	aHUS
RG6114	inavolisib + palbociclib + fulv.	1L HR+ PIK3CA-mut. mBC
	inavolisib + fulvestrant	post CDKi HR+ PIK3CA-mut. BC
	inavolisib + Phesgo	1L HER2+ PIK3CA-mut. mBC
RG6171	giredestrant + palbociclib	1L ET sensitive ER+/HER2- mBC
	giredestrant	ER+ BC adj
	giredestrant + Phesgo	1L ER+/HER2+ BC
	giredestrant + CDK4/6i	1L ET resistant ER+/HER2- BC
RG6330	divarasib	2L NSCLC
RG7446	Tecentriq + platinum chemo	NSCLC periadj
	Tecentriq + BCG	NMIBC, high-risk
	Tecentriq + capecitabine or carbo/gem	1L TNBC
	Tecentriq + Avastin	HCC adj
	Tecentriq	ctDNA+ high-risk MIBC
	Tecentriq + lurbinectedin	1L maintenance SCLC
RG7601	Venclexta + azacitidine	1L MDS
RG7828	Lunsumio + lenalidomide	2L+ FL
	Lunsumio + Polivy	2L+ DLBCL
RG6149	astegolimab	COPD
RG6299	ASO factor B	IgA nephropathy
RG7159	Gazyva	lupus nephritis
	Gazyva	membranous nephropathy
	Gazyva	systemic lupus erythematosus
	Gazyva	childhood onset idiopathic nephrotic syndrome**
RG6152	Xofluza	influenza, pediatric (0-1 year)
	Xofluza	influenza direct transmission
RG1594	Ocrevus higher dose	RMS & PPMS
RG6168	Enspryng	MOG-AD
	Enspryng	autoimmune encephalitis
RG6356	Elevidys	DMD
RG7845	fenebrutinib	RMS
	fenebrutinib	PPMS
RG6168	Enspryng	TED
RG6179	vamikibart	UME
RG6321	Susvimo	DME
	Susvimo	DR
	Susvimo	wAMD, 36-week
RG7716	Vabysmo	CNV

Registration US & EU (1 NME + 6 AIs)

RG6107*	PiaSky (crovalimab)	PNH
RG7446	Tecentriq SC[1]	all approved indications
RG7853	Alecensa[2]	ALK+ NSCLC adj
RG1594	Ocrevus SC	RMS & PPMS
RG3625	TNKase[3]	stroke
RG7716	Vabysmo[2]	BRVO
	Vabysmo[2]	CRVO

T=Tecentriq
*Approved in China Q1 2024
**also known as pediatric nephrotic syndrome (PNS)
[1]Approved in EU, filed in US
[2]Approved in US, filed in EU
[3]Filed in US

New Molecular Entity (NME)
Additional Indication (AI)
Oncology / Hematology
Immunology
Infectious Diseases
Cardiovascular & Metabolism
Neurology
Ophthalmology
Other

Status as of April 17, 2024

Expected regulatory submissions*

New Molecular Entities: Lead and additional indications

New Molecular Entity (NME)
Additional Indication (AI)
Oncology / Hematology
Immunology
Infectious Diseases

Cardiovascular & Metabolism
Neurology
Ophthalmology
Other

*Filing timelines reflect the anticipated filing of a potential indication; projects shown are in phase II and phase III
✓ Indicates submission to health authorities has occurred
Unless stated otherwise submissions are planned to occur in US and EU
T=Tecentriq, RA=Receptor agonist
[1]Telavant managed (TUSCANY-2 and TAHOE)
[2]IONIS managed
[3]Alnylam Pharmaceuticals managed
[4]Carmot Therapeutics managed

2024

RG6114	**Inavolisib + palbociclib + fulvestrant** 1L HR+ PIK3CA-mut. mBC
RG6356	**Elevidys** DMD (EU)
RG6321	**Susvimo** DME (US)
RG6321	**Susvimo** DR (US)

2025

RG6058	**tiragolumab + T** 1L PD-L1 high NSCLC
RG6058	**tiragolumab + T** Stage III unresectable 1L NSCLC
RG6149	**astegolimab** COPD
RG6321	**Susvimo** wAMD (EU)

2026

RG6058	**tiragolumab + T + chemo** 1L esophageal cancer (CN)
RG6058	**tiragolumab + T** locally adv esophageal cancer
RG6107	**PiaSky (crovalimab)** aHUS
RG6171	**giredestrant + palbociclib** 1L ET sensitive ER+/HER2- mBC
RG7845	**fenebrutinib** RMS &PPMS
RG6179	**vamikibart** UME
RG6321	**Susvimo** DME (EU)

2027 and beyond

RG6058	**tiragolumab + T + chemo** 1L non-sq NSCLC
RG6058	**tiragolumab + T** NSCLC adj
RG6058	**tiragolumab + T** 1L PD-L1+ mSCCHN
RG6058	**tiragolumab+T+/-chemo** NSCLC periadjuvant
RG6058	**tiragolumab+T+ Avastin** 1L HCC
RG6107	**PiaSky (crovalimab)** sickle cell disease
RG6114	**Inavolisib + fulvestrant** post CDKi HR+ PIK3CA-mut. BC
RG6114	**inavolisib + Phesgo** 1L HER2+ PIK3CA-mut. mBC
RG6139	**tobemstomig** solid tumors
RG6171	**giredestrant** ER+ BC adj
RG6171	**giredestrant + Phesgo** 1L ER+/HER2+ BC
RG6171	**giredestrant** endometrial cancer
RG6171	**giredestrant + CDK4/6i** 1L ET resistant ER+/HER2- BC
RG6180	**autogene cevumeran** solid tumors
RG6330	**divarasib** 2L NSCLC
RG6299	**ASO factor B** IgA nephropathy
RG6341	**NME** chronic cough
RG6536	**vixarelimab** IPF & SSc-ILD
RG6631[1]	**anti-TL1A** ulcerative colitis
RG6631[1]	**anti-TL1A** Crohn's disease
RG7854/ RG6346/ RG6084	**ruzotolimod/xalnesiran/ PDL1 LNA** HBV
RG6042	**tominersen** Huntington's
RG6102	**trontinemab** Alzheimer's
RG6237	**anti-latent myostatin + Evrysdi** SMA
RG6237	**anti-latent myostatin** FSHD
RG6356	**Elevidys** 0 to <4 year old DMD
RG6416	**bepranemab** Alzheimer's
RG7816	**alogabat** ASD
RG7935	**prasinezumab** Parkinson's
RG6179	**vamikibart** DME
RG6299[2]	**ASO factor B** geographic atrophy
RG6321	**Susvimo** wAMD, 36-week refill
RG6501	**OpRegen** geographic atrophy
RG6615[3]	**zilebesiran** hypertension
RG6641[4]	**GLP-1/GIP RA (CT-868)** T1D with BMI ≥ 25

Status as of April 17, 2024

Expected regulatory submissions*

Marketed products: Additional indications

New Molecular Entity (NME)
Additional Indication (AI)
Oncology / Hematology
Immunology
Infectious Diseases
Cardiovascular & Metabolism
Neurology
Ophthalmology
Other

✓ Indicates submission to health authorities has occurred
Unless stated otherwise submissions are planned to occur in US and EU
*Filing timelines reflect the anticipated filing of a potential indication; projects shown are in phase II and phase III
**also known as pediatric nephrotic syndrome (PNS)

2024		2025		2026		2027 and beyond	
RG6026	**Columvi + chemo** 2L DLBCL	RG7159	**Gazyva** lupus nephritis	RG7828	**Lunsumio + lenalidomide** 2L FL+	RG7159	**Gazyva** membranous nephropathy	RG3502	**Kadcyla + Tecentriq** HER-2+ eBC high-risk
RG7446	**Tecentriq + Avastin** HCC adj	RG3625	**TNKase** stroke ✓	RG7828	**Lunsumio + Polivy** 2L+ DLBCL (US)	RG7159	**Gazyva** systemic lupus erythematosus	RG6026	**Columvi + Polivy + R-CHP** 1L DLBCL
RG7446	**Tecentriq + capecitabine or carbo/gem** TNBC	RG6152	**Xofluza** direct transmission	RG7446	**Tecentriq+ lurbinectedin** 1l maintenance SCLC			RG6026	**Columvi** r/r MCL
		RG6152	**Xofluza** influenza, pediatric (0-1 year)	RG7446	**Tecentriq** ctDNA+ high-risk MIBC			RG7446	**Tecentriq + BCG** High-risk NMIBC
				RG7446	**Tecentriq** NSCLC periadj			RG7159	**Gazyva** childhood onset idiopathic nephrotic syndrome**
				RG7601	**Venclexta + azacitidine** 1L MDS			RG6168	**Enspryng** MOG-AD
				RG1594	**Ocrevus higher dose** RMS & PPMS			RG7716	**Vabysmo** CNV
				RG6168	**Enspryng** TED				

Status as of April 17, 2024

Major pending approvals 2024

US		EU		China		Japan-Chugai	
RG7446	**Tecentriq SC** all approved indications Filed Nov 2022	RG6107	**PiaSky (crovalimab)** PNH Filed June 2023	RG7716	**Vabysmo** BRVO/CRVO Filed March 2023	RG7853	**Alecensa** ALK+ NSCLC adj Filed Dec 2023
RG6107	**PiaSky (crovalimab)** PNH Filed June 2023	RG7716	**Vabysmo** BRVO/CRVO Filed Aug 2023	RG1594	**Ocrevus** RMS & PPMS Filed June 2023	RG7916	**Evrysdi** SMA presymptomatic pediatric <2mo Filed Feb 2024
RG1594	**Ocrevus SC** RMS & PPMS Filed Nov 2023	RG1594	**Ocrevus SC** RMS & PPMS Filed Aug 2023	RG7853	**Alecensa** ALK+ NSCLC adj Filed Nov 2023	RG7446	**Tecentriq** Alveolar Soft Part Sarcoma Filed March 2024
		RG7853	**Alecensa** ALK+ NSCLC adj Filed Nov 2023	RG7828	**Lunsumio** 3L+ FL Filed Dec 2023	RG7828	**Lunsumio** 3L+ FL Filed March 2024
						RG99	**CellCept** SSc-ILD Filed March 2024

New Molecular Entity (NME)
Additional Indication (AI)
Oncology / Hematology
Immunology
Infectious Diseases

Cardiovascular & Metabolism
Neurology
Ophthalmology
Other

Status as of April 17, 2024

Major granted approvals 2024

US		EU		China		Japan-Chugai	
RG3648	**Xolair** Food allergy Feb 2024	RG7446	**Tecentriq SC** all approved indications Jan 2024	RG6107	**PiaSky (crovalimab)** PNH Feb 2024*	RG6107	**PiaSky (crovalimab)** PNH March 2024
RG7853	**Alecensa** ALK+ NSCLC adj April 2024					RG7716	**Vabysmo** BRVO/CRVO March 2024

*First worldwide appoval

New Molecular Entity (NME)
Additional Indication (AI)
Oncology / Hematology
Immunology
Infectious Diseases

Cardiovascular & Metabolism
Neurology
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Roche Pharma research and early development (pRED)

Genentech research and early development (gRED)

Spark

Hemlibra (emicizumab, RG6013)

Factor VIII mimetic for treatment of hemophilia A

Indication	Hemophilia A patients without inhibitors to factor VIII	Hemophilia A patients with and without inhibitors to Factor VIII, dosing every 4 weeks
Phase/study	**Phase III HAVEN 3**	**Phase III HAVEN 4**
# of patients	N=135	N=46
Design	Patients on FVIII episodic treatment prior to study entry: ▪ **ARM A:** Hemlibra prophylaxis QW ▪ **ARM B:** Hemlibra prophylaxis Q2W ▪ **ARM C:** Episodic FVIII treatment; switch to Hemlibra prophylaxis possible after 24 weeks Patients on FVIII prophylaxis prior to study entry: ▪ **ARM D:** Hemlibra prophylaxis QW	▪ **Part I:** Pharmacokinetic run-in part (N=6); Hemlibra Q4W ▪ **Part II:** Expansion part (N=40); Hemlibra Q4W
Primary endpoint	▪ Number of bleeds over 24 weeks	▪ Number of bleeds over 24 weeks
Status	▪ Study met primary and key secondary endpoints Q4 2017 ▪ FDA granted Breakthrough Therapy Designation April 2018 ▪ Data presented at WFH 2018 ▪ Filed in US (priority review) and EU in Q2 2018 ▪ Data published in *NEJM* 2018; 379: 811-822	▪ Pharmacokinetic run-in data at ASH 2017 ▪ Positive interim analysis outcome reported Q4 2017 ▪ Data presented at WFH 2018 ▪ Interim data filed in US and EU in Q2 2018 ▪ Data published in *Lancet Haematology* 2019; 6(6):e295-e305
	▪ Approved in US Q4 2018 and EU Q1 2019	
CT Identifier	NCT02847637	NCT03020160

In collaboration with Chugai

ASH=American Society of Hematology; WFH=World Federation of Hemophilia; NEJM=New England Journal of Medicine

Hemlibra (emicizumab, RG6013)

Factor VIII mimetic for treatment of hemophilia A

Indication	Hemophilia A patients with and without inhibitors to Factor VIII	Hemophilia A mild to moderate patients without inhibitors to Factor VIII
Phase/study	**Phase III HAVEN 5**	**Phase III HAVEN 6**
# of patients	N=85	N=70
Design	Patients with Hemophilia regardless of FVIII inhibitor status on prophylactic or episodic treatment prior to study entry: ▪ **ARM A**: Hemlibra prophylaxis QW ▪ **ARM B**: Hemlibra prophylaxis Q4W ▪ **ARM C**: No prophylaxis (control arm)	Patients with mild or moderate Hemophilia A without FVIII inhibitors ▪ Hemlibra QW (1.5mg/kg), Q2W (3.0mg/kg) or Q4W (6.0mg/kg) (patients preference)
Primary endpoint	▪ Number of bleeds over 24 weeks	▪ Safety and efficacy
Status	▪ FPI Q2 2018 ▪ Recruitment completed Q1 2019 ▪ Filed in China Q2 2020 ▪ Approved in China Q2 2021	▪ FPI Q1 2020, recruitment completed Q1 2021 ▪ Interim data presented at ASH 2021 and primary data presented at ISTH 2022 ▪ Filed in EU Q4 2021 ▪ Data presented at ASH 2022 ▪ Approved in EU for moderate Hemophilia A Q1 2023 ▪ Data published in *Lancet Haematology* 2023; 10(3) e168-e177
CT Identifier	NCT03315455	NCT04158648

In collaboration with Chugai

ASH=American Society of Hematology; ISTH=International Society on Thrombosis and Haemostasis

Alecensa (alectinib, RG7853)

New CNS-active inhibitor of anaplastic lymphoma kinase

Indication	Treatment-naïve ALK+ advanced NSCLC	Adjuvant ALK+ NSCLC
Phase/study	**Phase III ALEX**	**Phase III ALINA**
# of patients	N=286	N=257
Design	▪ **ARM A:** Alecensa 600mg BID ▪ **ARM B:** Crizotinib 250mg BID	▪ **ARM A:** Alecensa 600mg BID ▪ **ARM B:** Platinum-based chemotherapy
Primary endpoint	▪ Progression-free survival	▪ Disease-free survival
Status	▪ Data presented at ASCO 2017, 2018, ESMO 2017, 2018 and 2019 (final PFS and updated OS) ▪ Data published in *NEJM* 2017; 377:829-838 ▪ Approved in US Q4 2017 (priority review) and in EU Q4 2017	▪ FPI Q3 2018 ▪ Recruitment completed Q4 2021 ▪ Study met it's primary endpoint Q3 2023 ▪ Primary data presented at ESMO 2023 ▪ Filed in EU, China and Japan Q4 2023 ▪ Approved in US Q2 2024 (priority review) ▪ Data published in *NEJM* 2024; 390:1265-12
CT Identifier	NCT02075840	NCT03456076

In collaboration with Chugai

ALK=anaplastic lymphoma kinase; CNS= Central nervous system; NSCLC=non-small cell lung cancer; OS=Overall survival, PFS=Progression-free survival; ASCO=American Society of Clinical Oncology; NEJM=New England Journal of Medicine; ESMO=European Society for Medical Oncology

Kadcyla (trastuzumab emtansine, RG3502)

First ADC for HER2-positive breast cancer

Indication	HER2-positive early breast cancer (BC) high-risk patients	HER2-positive early breast cancer (BC) high-risk patients
Phase/study	**Phase III KATHERINE**	**Phase III ASTEFANIA**
# of patients	N=1,484	N=1,700
Design	▪ **ARM A:** Kadcyla 3.6mg/kg Q3W ▪ **ARM B:** Herceptin	▪ **ARM A:** Kadcyla plus Tecentriq ▪ **ARM B:** Kadcyla plus placebo
Primary endpoint	▪ Invasive disease-free survival	▪ Invasive disease-free survival
Status	▪ Stopped at pre-planned interim data analysis for efficacy Q4 2018 ▪ Data presented at SABCS 2018 ▪ BTD granted by FDA in Q1 2019 ▪ Filed in US (under RTOR) and EU Q1 2019 ▪ Approved in US Q2 2019 and in EU Q4 2019 ▪ Data published in *NEJM* 2019; 380:617-628 ▪ 7-year data presented at SABCS 2023	▪ FPI Q2 2021
CT Identifier	NCT01772472	NCT04873362

In collaboration with ImmunoGen, Inc.

ADC=antibody drug conjugate; BTD=Breakthrough therapy designation; HER2=Human Epidermal growth factor Receptor 2; SABCS=San Antonio Breast Cancer Symposium; RTOR=Real time oncology review; NEJM=New England Journal of Medicine

Phesgo (pertuzumab/trastuzumab, RG6264)

FDC of Perjeta and Herceptin for subcutaneous administration

Indication	**HER2-positive early breast cancer (BC)**	
Phase/study	**Phase III** **FeDeriCa**	**Phase II** **PHranceSCa**
# of patients	N=500	N=160
Design	Phesgo in combination with chemotherapy in neoadjuvant/adjuvant setting ▪ **ARM A:** Perjeta IV plus Herceptin IV plus chemotherapy ▪ **ARM B:** Phesgo plus chemotherapy	▪ **ARM A:** Perjeta and Herceptin IV followed by Phesgo ▪ **ARM B:** Phesgo followed by IV
Primary endpoint	▪ Trough Serum Concentration (Ctrough) of Perjeta during cycle 7	▪ Percentage of patients who preferred Phesgo
Status	▪ Primary endpoint met Q3 2019 ▪ Data presented at SABCS 2019 ▪ Data published in *Lancet Oncology* 2021; 22(1):85-97	▪ Final analysis completed, 85% patients preferred Phesgo ▪ Data presented at ESMO 2020 ▪ Data published in *Eur J Cancer* 2021; 152:223-232
	▪ Filed in US Q4 2019 & in EU Q1 2020; Approved in US Q2 2020 and EU Q4 2020	
CT Identifier	NCT03493854	NCT03674112

SC with Halozyme's rHuPH20/ Halozyme's human hyaluronidase

FDC=Fixed-dose combination; Phesgo=FDC of Perjeta and Herceptin for SC administration; HER2=Human Epidermal growth factor Receptor 2, IV=intravenous; SC=Subcutaneous; SABCS=San Antonio Breast Cancer Symposium; Eur J Cancer=European Journal of Cancer; ESMO=European Society for Medical Oncology

Tecentriq (atezolizumab, RG7446)

Anti-PD-L1 cancer immunotherapy – lung cancer

Indication	Adjuvant NSCLC	Periadjuvant NSCLC
Phase/study	**Phase III** **IMpower010**	**Phase III** **IMpower030**
# of patients	N=1,280	N=450
Design	Following adjuvant cisplatin-based chemotherapy ▪ **ARM A:** Tecentriq ▪ **ARM B:** Best supportive care	▪ **ARM A:** Tecentriq plus platinum-based chemotherapy ▪ **ARM B:** Platinum-based chemotherapy
Primary endpoint	▪ Disease-free survival	▪ Event-free survival
Status	▪ Recruitment completed Q3 2018 ▪ Study met primary endpoint Q1 2021 ▪ Data presented at ASCO, WCLC and ESMO 2021 ▪ Filed in US (priority review) and EU Q2 2021 ▪ Data published in *Lancet* 2021; 398(10308):1344-1357 ▪ Approved in US Q4 2021 and EU Q2 2022	▪ FPI Q2 2018 ▪ Recruitment completed Q3 2021
CT Identifier	NCT02486718	NCT03456063

NSCLC=non-small cell lung cancer; PD-L1=Programmed cell death-ligand 1; ASCO=American Society of Clinical Oncology; ESMO=European Society for Medical Oncology; WCLC=World Conference on Lung Cancer

Tecentriq (atezolizumab, RG7446)

Anti-PD-L1 cancer immunotherapy – lung cancer

Indication	1L maintenance extensive-stage SCLC	Stage IV NSCLC
Phase/study	**Phase III** **IMforte**[1]	**Phase Ib/III** **IMscin001**[2]
# of patients	N=450	N=371
Design	▪ **ARM A:** Platinum-etoposide + Tecentriq followed by maintenance Tecentriq plus lurbinectedin ▪ **ARM B:** Platinum-etoposide + Tecentriq followed by maintenance Tecentriq	**Phase Ib** ▪ Dose finding, Tecentriq SC followed by Tecentriq IV **Phase III** ▪ 2L NSCLC non inferiority of Tecentriq SC vs Tecentriq IV
Primary endpoint	▪ Progression-free survival and overall survival	▪ Observed concentration of Tecentriq in serum at cycle 1
Status	▪ FPI Q4 2021 ▪ Recruitment completed Jan 2024	▪ FPI Phase Ib Q4 2018 and FPI Phase III Q4 2020 ▪ Recruitment completed Q1 2022 ▪ Study met its primary end point Q3 2022 ▪ Data presented at ESMO-IO 2022 ▪ Filed in US and EU Q4 2022 ▪ Data published in *Ann. Oncol.* 2023; 34(8):693-702 ▪ Approved in EU Jan 2024
CT Identifier	NCT05091567	NCT03735121

[1]In collaboration with Jazz Pharma, [2]SC with Halozyme's rHuPH20/ Halozyme's human hyaluronidase

NSCLC=non-small cell lung cancer; PD-L1=Programmed cell death-ligand 1; SCLC=small cell lung cancer, SC=Subcutaneous, IV=Intravenous; ESMO-IO=European Society for Medical Oncology-Immuno-Oncology

Tecentriq (atezolizumab, RG7446)

Anti-PD-L1 cancer immunotherapy – urothelial carcinoma

Indication	High-risk non-muscle-invasive bladder cancer (NMIBC)	ctDNA+, high-risk muscle-invasive bladder cancer (MIBC)
Phase/study	**Phase III ALBAN**	**Phase III IMvigor011**
# of patients	N=516	N=495
Design	▪ **ARM A:** BCG induction and maintenance ▪ **ARM B:** Tecentriq plus BCG induction and maintenance	▪ **ARM A:** Tecentriq monotherapy ▪ **ARM B:** Placebo
Primary endpoint	▪ Recurrence-free survival	▪ Recurrence-free survival
Status	▪ FPI Q4 2018	▪ FPI Q2 2021
CT Identifier	NCT03799835	NCT04660344

BCG=Bacille Calmette-Guérin; PD-L1=Programmed cell death-ligand 1

Tecentriq (atezolizumab, RG7446)

Anti-PD-L1 cancer immunotherapy – hepatocellular carcinoma

Indication	Adjuvant hepatocellular carcinoma (HCC)
Phase/study	**Phase III** **IMbrave050**
# of patients	N=668
Design	▪ **ARM A:** Tecentriq plus Avastin ▪ **ARM B:** Active surveillance
Primary endpoint	▪ Recurrence-free survival
Status	▪ FPI Q4 2019 ▪ Recruitment completed Q4 2021 ▪ Study met its primary endpoint Q1 2023 ▪ Data presented at AACR 2023 and ASCO 2023 (PROs) ▪ Data published in *Lancet* 2023; 402(10415):1835-1847
CT Identifier	NCT04102098

PD-L1=Programmed cell death-ligand 1; AACR=American Association for Cancer Research; PROs=Patient-reported outcomes

Tecentriq (atezolizumab, RG7446)

Anti-PD-L1 cancer immunotherapy – breast cancer

Indication	Previously untreated metastatic triple negative breast cancer (TNBC)	
Phase/study	**Phase III IMpassion130**	**Phase III IMpassion132**
# of patients	N=902	N=572
Design	▪ **ARM A:** Tecentriq plus nab-paclitaxel ▪ **ARM B:** Placebo plus nab-paclitaxel	▪ **ARM A:** Tecentriq plus capecitabine or carbo/gem ▪ **ARM B:** Placebo plus capecitabine or carbo/gem
Primary endpoint	▪ Progression-free survival and overall survival (co-primary endpoint)	▪ Overall survival
Status	▪ Study met co-primary endpoint of PFS in both PD-L1+ and ITT populations Q3 2018 ▪ Primary PFS and interim OS data presented at ESMO 2018 and ASCO 2019 ▪ Data published in *NEJM* 2018; 379:2108-2121 ▪ US accelerated approval Q1 2019 – US indication voluntarily withdrawn Q3 2021 ▪ Approved in EU Q3 2019 ▪ Final OS presented at ESMO Asia 2020	▪ FPI Q1 2018
CT Identifier	NCT02425891	NCT03371017

Carbo/gem=gemcitabine and carboplatin; ITT=Intention to treat; PD-L1=Programmed cell death-ligand 1; PFS=Progression-free survival; OS=Overall survival; ESMO=European Society for Medical Oncology; ASCO=American Society of Clinical Oncology; NEJM=New England Journal of Medicine

Tecentriq (atezolizumab, RG7446)

Anti-PD-L1 cancer immunotherapy – breast cancer

Indication	Neoadjuvant triple negative breast cancer (TNBC)
Phase/study	**Phase III** **IMpassion031**
# of patients	N=333
Design	▪ **ARM A:** Tecentriq plus nab-paclitaxel ▪ **ARM B:** Placebo plus nab-paclitaxel
Primary endpoint	▪ Percentage of participants with pathologic complete response
Status	▪ Study met primary endpoint Q2 2020 ▪ Data presented at ESMO 2020 ▪ Data published in *Lancet* 2020;396 (10257):1090-1100 ▪ Filed in EU Q4 2020 - application withdrawn Q3 2021
CT Identifier	NCT03197935

PD-L1=Programmed cell death-ligand 1; ESMO=European Society for Medical Oncology, IDMC=Independent Data Monitoring Committee

Venclexta (venetoclax, RG7601)

Novel small molecule Bcl-2 selective inhibitor – chronic lymphocytic leukemia

Indication	Untreated chronic lymphocytic leukemia (CLL) patients with coexisting medical conditions	Untreated fit chronic lymphocytic leukemia (CLL) patients
Phase/study	**Phase III** **CLL14**	**Phase III** **CristaLLo**
# of patients	N=445	N=165
Design	▪ **ARM A:** Venclexta plus Gazyva ▪ **ARM B:** Chlorambucil plus Gazyva	▪ **ARM A:** Venclexta plus Gazyva ▪ **ARM B:** Fludarabine plus cyclophosphamide plus rituximab or bendamustine plus rituximab
Primary endpoint	▪ Progression-free survival	▪ MRD negativity rate in peripheral blood at 15 months
Status	▪ Study met primary endpoint Q4 2018 ▪ BTD granted by FDA Q1 2019 ▪ Filed in US (under RTOR) Q1 2019 and EU Q2 2019 ▪ Data presented at ASCO 2019, ASH 2019, 2020 and EHA 2021, 2022; 6-year data presented at EHA and ICML 2023 ▪ Data published in *NEJM* 2019; 380:2225-2236 ▪ Approved US Q2 2019 and EU Q1 2020	▪ FPI Q2 2020 ▪ Recruitment completed Q1 2023
CT Identifier	NCT02242942	NCT04285567

Joint project with AbbVie, in collaboration with The Walter and Eliza Hall Institute

Bcl-2=B-cell lymphoma 2; BTD=Breakthrough therapy designation; MRD=Minimal Residual Disease; ASH=American Society of Hematology; ASCO=American Society of Clinical Oncology; EHA=European Hematology Association; RTOR=Real time oncology review; NEJM=New England Journal of Medicine

Venclexta (venetoclax, RG7601)

Novel small molecule Bcl-2 selective inhibitor – myelodysplastic syndromes

Indication	Newly diagnosed higher-risk myelodysplastic syndromes (MDS)
Phase/study	**Phase III VERONA**
# of patients	N=500
Design	▪ **ARM A:** Venclexta plus azacitidine ▪ **ARM B:** Placebo plus azacitidine
Primary endpoint	▪ Overall survival
Status	▪ FPI Q4 2020 ▪ Recruitment completed Q3 2022
CT Identifier	NCT04401748

Joint project with AbbVie, in collaboration with The Walter and Eliza Hall Institute
Bcl-2=B-cell lymphoma 2

Polivy (polatuzumab vedotin, RG7596)

ADC targeting CD79b to treat B cell malignancies

Indication	1L DLBCL
Phase/study	**Phase III** **POLARIX**
# of patients	N=879
Design	▪ **ARM A:** Polivy plus R-CHP ▪ **ARM B:** R-CHOP
Primary endpoint	▪ Progression-free survival
Status	▪ Data presented at ASH 2021 and 2022 ▪ Filed in EU, Japan and China Q4 2021 and in the US Q3 2022 ▪ Published in *NEJM* 2022 27;386(4):351-363 ▪ Approved in EU Q2 2022, Japan Q3 2022, China Q1 2023 and US April 2023
CT Identifier	NCT03274492

In collaboration with Seagen Inc.

DLBCL=diffuse large B cell lymphoma; R-CHP=Rituxan, cyclophosphamide, hydroxydoxorubicin, prednisone; R-CHOP=Rituxan, cyclophosphamide, doxorubicin, vincristine, and prednisone; ASH=American Society of Hematology, NEJM=New England Journal of Medicine

Lunsumio (mosunetuzumab, CD20 x CD3, RG7828)

Bispecific anti-CD20/CD3 antibody engaging T and B cells simultaneously

Indication	3L+ FL, 3L+ DLBCL & other relapsed or refractory NHL	1L DLBCL	Relapsed or refractory DLBCL
Phase/study	**Phase I/II**	**Phase Ib/II**	**Phase Ib/II**
# of patients	N=713	N=117	N=235
Design	▪ Dose escalation of Lunsumio monotherapy and in combination with Tecentriq ▪ Expansion cohorts for r/r FL, r/r DLBCL and SC in r/r NHL	▪ Lunsumio plus CHOP ▪ Lunsumio plus CHP plus Polivy ▪ Lunsumio plus CHP-Polivy vs Rituximab plus CHP-Polivy	Dose escalation of Lunsumio plus Polivy ▪ **ARM A:** Lunsumio SC plus Polivy ▪ **ARM B:** Rituximab plus Polivy
Primary endpoint	▪ Safety, tolerability, dose/schedule, PK and response rates	▪ Safety/tolerability and response	▪ Safety/tolerability and response
Status	▪ Data in r/r NHL presented at ASH 2018, 2019, and in r/r FL at ASH 2020, 2021 and 2022 ▪ BTD granted by FDA Q2 2020 ▪ Filed in EU and rolling submission in US Q4 2021; Filed in US (priority review) Q2 2022 ▪ Approved in EU Q2 2022 and US Q4 2022 ▪ DLBCL data published in *J. Clin. Oncol.* 2022; 40(5)481-491 and *Blood Advances* 2023; 7 (17): 4926–4935 ▪ FL data published in the *Lancet Oncology* 2022;23(8):1055-1065 ▪ 3-year data in r/r FL presented at ASH 2023	▪ FPI Q1 2019 ▪ Recruitment completed Q2 2021 ▪ Data for Lunsumio plus CHOP presented at ASH 2020 ▪ Data published in *Blood Advances* 2023; 7 (20): 6055–6065.	▪ FPI Q3 2018 ▪ Recruitment completed Q1 2023 ▪ Initial data presented at ASCO 2021 and ASH 2021, 2022 ▪ Data presented at ASH 2023 ▪ Data published in *Nature Medicine* 2023; 30, 229–239
CT Identifier	NCT02500407	NCT03677141	NCT03671018

FL=follicular lymphoma; DLBCL=diffuse large B cell lymphoma; r/r=relapsed/refractory; NHL=non-Hodgkin's lymphoma; R=Rituximab; SC=subcutaneous; CHOP=cyclophosphamide, doxorubicin, vincristine, and prednisone; CHP=cyclophosphamide, doxorubicin, and prednisone; PK=Pharmacokinetics; BTD=Breakthrough Therapy Designation; ASH=American Society of Hematology; ASCO=American Society of Clinical Oncology

Lunsumio (mosunetuzumab, CD20 x CD3, RG7828)

Bispecific anti-CD20/CD3 antibody engaging T and B cells simultaneously

Indication	2L+ SCT ineligible DLBCL
Phase/study	**Phase III** **SUNMO**
# of patients	N=222
Design	▪ **ARM A:** Lunsumio plus Polivy ▪ **ARM B:** R + GemOx
Primary endpoint	▪ Progression-free survival
Status	▪ FPI Q2 2022
CT Identifier	NCT05171647

DLBCL=diffuse large B cell lymphoma; SCT=stem cell transplant; R=Rituxan/MabThera; GemOx=Gemcitabin und Oxaliplatin

Lunsumio (mosunetuzumab, CD20 x CD3, RG7828)

Bispecific anti-CD20/CD3 antibody engaging T and B cells simultaneously

Indication	1L DLBCL & 2L DLBCL following 1L induction	FL
Phase/study	**Phase I/II**	**Phase Ib/II**
# of patients	N=187	N=183
Design	▪ **Cohort A:** Lunsumio monotherapy (after a response to prior systemic chemotherapy) ▪ **Cohort B:** Lunsumio monotherapy (1L treatment in elderly/frail) ▪ **Cohort C:** Lunsumio SC plus Polivy in 1L elderly/unfit	Non-Randomized: ▪ Lunsumio plus lenalidomide in R/R FL safety run-in for phase III ▪ Lunsumio SC plus lenalidomide in 1L FL Randomized ▪ Lunsumio SC plus lenalidomide vs Lunsumio IV plus lenalidomide
Primary endpoint	▪ Safety/tolerability and response	▪ Safety/tolerability and response
Status	▪ FPI Q2 2019 – Cohort B ▪ FPI Q3 2019 – Cohort A ▪ FPI Q1 2021 – Cohort C ▪ Recruitment completed Q1 2023 ▪ Cohort B presented at ASH 2020 (Cohort B) and ASH 2022 ▪ Cohort C presented at ASH 2023	▪ FPI Q3 2020 ▪ Initial data presented at ASH 2021 and 2022 ▪ Recruitment completed Q2 2023
CT Identifier	NCT03677154	NCT04246086

FL=follicular lymphoma; DLBCL=diffuse large B cell lymphoma; SC=subcutaneous; ASH=American Society of Hematology

Lunsumio (mosunetuzumab, CD20 x CD3, RG7828)

Bispecific anti-CD20/CD3 antibody engaging T and B cells simultaneously

Indication	2L+ FL	Relapsed or refractory CLL
Phase/study	**Phase III CELESTIMO**	**Phase Ib/II**
# of patients	N=412	N=8
Design	▪ **ARM A**: Lunsumio plus lenalidomide ▪ **ARM B:** Rituximab plus lenalidomide	▪ Lunsumio monotherapy (3L+ CLL) ▪ Lunsumio + venetoclax ▪ Lunsumio + BTKi
Primary endpoint	▪ Progression-free survival	▪ Safety, dose-limiting toxicity and RPTD
Status	▪ FPI Q4 2021	▪ FPI Q1 2022
CT Identifier	NCT04712097	NCT05091424

FL=follicular lymphoma; r/r=relapsed/refractory; RPTD=Recommended Phase II Dose; CLL=Chronic lymphocytic leukemia

Columvi (glofitamab, CD20-TCB, RG6026)

Bispecific anti-CD20/CD3 antibody engaging T and B cells simultaneously

Indication	Relapsed or refractory Non-Hodgkin's lymphoma (NHL)		
Phase/study	**Phase I**	**Phase Ib**	**Phase I**
# of patients	N=700	N=140	N=18-36
Design	**Cohort 1:** Single-agent dose escalation study ▪ Initial dose escalation ▪ Expansion cohort in r/r DLBCL ▪ Expansion cohort in r/r FL ▪ All patients will receive pretreatment with a single dose of Gazyva (1000mg) **Cohort 2:** Columvi plus Gazyva (i.e. continuous treatment with Gazyva)	Dose escalation and expansion ▪ **ARM A:** Columvi plus Tecentriq ▪ **ARM B:** Columvi plus Polivy	Columvi SC ▪ Part 1 dose escalation
Primary endpoint	▪ Efficacy, safety, tolerability and PK	▪ Safety	▪ Safety
Status	▪ Data presented at ASH 2018, 2020, 2021, 2022, ICML 2019, 2021, EHA 2020, 2021, 2022 and ASCO 2021, 2022 and 2023 ▪ Data published in *J Clin Oncology* 2021; 39:18:1959-1970 and *NEJM* 2022; 387:2220-2231 ▪ Filed in EU Q2 2022 and US Q4 2022 ▪ Approved in Canada Q1, US Q2 and EU Q3 2023 ▪ Follow up data in r/r DLBCL presented at ASH 2023	▪ **ARM A:** FPI Q2 2018 ▪ **ARM B:** FPI Q4 2020 ▪ Recruitment completed Q2 2022 ▪ Data presented at ASH 2019, 2021	▪ FPI Q3 2021
CT Identifier	NCT03075696	NCT03533283	ISRCTN17975931

DLBCL=diffuse large B cell lymphoma; FL=Follicular lymphoma; r/r=Relapsed or refractory; SC=subcutenous; PK=Pharmacokinetics; ASCO=American Society of Clinical Oncology; ASH=American Society of Hematology; EHA=European Hematology Association; ICML=International Conference on Malignant Lymphoma; NEJM=New England Journal of Medicine

Columvi (glofitamab, CD20-TCB, RG6026)

Bispecific anti-CD20/CD3 antibody engaging T and B cells simultaneously

Indication	Non-Hodgkin's lymphoma (NHL)	2L+ SCT-ineligible DLBCL
Phase/study	**Phase Ib**	**Phase III** **STARGLO**
# of patients	Part I: 15-60 Part II: ~66-104	N=270
Design	▪ **Part I:** Dose-finding for the combination of Columvi plus G/R-CHOP in r/r indolent NHL ▪ **Part II:** Dose expansion Columvi plus G/R-CHOP or R-CHOP in 1L DLBCL ▪ **Part III:** Columvi plus R-CHP plus Polivy	▪ **ARM A:** Columvi plus gemcitabine and oxaliplatin, followed by up to 4 cycles of Columvi monotherapy ▪ **ARM B:** Rituximab in combination with gemcitabine and oxaliplatin A single dose of Gazyva will be administered 7 days prior to the first dose of Columvi
Primary endpoint	▪ Safety	▪ Overall survival
Status	▪ Part I: FPI Q1 2018 ▪ Part II: FPI Q1 2021 ▪ Recruitment completed Q1 2023 ▪ Data presented at ASH 2021, 2022, 2023 and ASCO 2023	▪ FPI Q1 2021 ▪ Recruitment completed Q1 2023 ▪ Study met primary endpoint April 2024
CT Identifier	NCT03467373	NCT04408638

DLBCL=diffuse large B cell lymphoma; SCT=stem cell transplant; CHOP=cyclophosphamide, doxorubicin, vincristine and prednisone; R=Rituxan/MabThera; G=Gazyva; NHL=Non-Hodgkin's lymphoma; ctDNA=circulating tumor DNA; ASH=American Society of Hematology; EOT PET-CR=End of treatment PET-complete response rate

Columvi (glofitamab, CD20-TCB, RG6026)

Bispecific anti-CD20/CD3 antibody engaging T and B cells simultaneously

Indication	2L+ SCT-eligible DLBCL	2L+ SCT-ineligible DLBCL	1L DLBCL fit (IPI 2-5)
Phase/study	**Phase Ib**	**Phase Ib**	**Phase III SKYGLO**
# of patients	N=40	N=112	N=1130
Design	▪ Columvi plus R-ICE (single-arm study)	▪ **ARM A:** Columvi IV plus CELMoD (CC-220 and CC-99282) ▪ **ARM B:** Lunsumio SC plus CELMoD (CC-220 and CC-99282)	▪ **ARM A:** Columvi plus Polivy plus R-CHP ▪ **ARM B:** Polivy plus R-CHP
Primary endpoint	▪ Objective response rate within 3 cycles	▪ Safety, DLT, RPTD	▪ Progression-free survival
Status	▪ FPI Q4 2022	▪ FPI Q4 2022	▪ FPI Q4 2023
CT Identifier	NCT05364424	NCT05169515	NCT06047080

DLBCL=diffuse large B cell lymphoma; DLT=Dose-limiting toxicity, RPTD=Recommended Phase II Dose; R-ICE= Rituxan plus ifosfamide, carboplatin, and etoposide; IV=Intravenous; SC=Subcutaneous; ; R-CHP=Rituxan, cyclophosphamide, hydroxydoxorubicin, prednisone; IPI=International prognostic index

Columvi (glofitamab, CD20-TCB, RG6026)

Bispecific anti-CD20/CD3 antibody engaging T and B cells simultaneously

Indication	Relapsed or refractory mantle cell lymphoma (MCL)
Phase/study	**Phase III** **GLOBRYTE**
# of patients	N=182
Design	▪ **ARM A:** Columvi monotherapy ▪ **ARM B**: Bendamustine + rituximab or rituximab + lenalidomide
Primary endpoint	▪ Progression-free survival by IRC
Status	▪ FPI Q4 2023
CT Identifier	NCT06084936

IRC=Independent review committee

Ocrevus (ocrelizumab, RG1594)

Humanized monoclonal antibody selectively targeting CD20+ B cells

Indication	Primary progressive multiple sclerosis (PPMS)
Phase/study	**Phase IIIb** **ORATORIO-HAND**
# of patients	N ~ 1,000
Design	120-week treatment period: ▪ **ARM A:** Ocrevus 600mg IV Q24W ▪ **ARM B:** Placebo
Primary endpoint	▪ Time to upper limb disability progression confirmed for at least 12 weeks
Status	▪ FPI Q3 2019
CT Identifier	NCT04035005

IV=intravenous

Ocrevus (ocrelizumab, RG1594)

Humanized monoclonal antibody selectively targeting CD20+ B cells

Indication	Primary progressive multiple sclerosis (PPMS)	Relapsing multiple sclerosis (RMS)	PPMS & RMS
Phase/study	**Phase IIIb GAVOTTE**	**Phase IIIb MUSETTE**	**Phase III Ocarina II[1]**
# of patients	N ~ 699	N ~ 786	N ~ 232
Design	120-week treatment period: ▪ **ARM A:** Ocrevus 600mg IV Q24W ▪ **ARM B:** Ocrevus 1200mg if BW <75kg or 1800mg if BW ≥75kg Q24W	120-week treatment period: ▪ **ARM A:** Ocrevus 600mg IV Q24W ▪ **ARM B:** Ocrevus 1200mg if BW <75kg or 1800mg if BW ≥75kg Q24W	▪ **ARM A:** Ocrevus IV ▪ **ARM B:** Ocrevus SC
Primary endpoint	▪ Superiority of Ocrevus higher dose versus approved dose on cCDP	▪ Superiority of Ocrevus higher dose versus approved dose on cCDP	▪ Serum Ocrevus area under the concentration-time curve (AUCW1-12) at week 12
Status	▪ FPI Q4 2020 ▪ Recruitment completed Q2 2023	▪ FPI Q4 2020 ▪ Recruitment completed Q4 2021	▪ FPI Q2 2022 ▪ Recruitment completed Q4 2022 ▪ Primary endpoint met July 2023 ▪ Data presented at ECTRIMS 2023 ▪ Filed in EU Q3 2023 and US Q4 2023
CT Identifier	NCT04548999	NCT04544436	NCT05232825

[1]SC with Halozyme's rHuPH20/ Halozyme's human hyaluronidase
cCDP=composite confirmed disability progression; IV=intravenous; SC=Subcutaneous

Evrysdi (risdiplam, RG7916)

Oral SMN2 splicing modifier

Indication	Spinal muscular atrophy (SMA)		
Phase/study	**Phase II/III FIREFISH**	**Phase II/III SUNFISH**	**Phase II JEWELFISH**
# of patients	N=21 (Part 1), 41 (Part 2)	N=51 (Part 1), 180 (Part 2)	N=174
Design	Infants with type 1 SMA ▪ **Part I (dose-finding):** ≥4 weeks ▪ **Part II (confirmatory):** 24 months	Adult & pediatric patients with type 2 or 3 SMA: ▪ **Part I (dose-finding):** At least 12 weeks ▪ **Part II (confirmatory):** 24 months	▪ Adult and pediatric patients with previously treated SMA type 1, 2 and 3
Primary endpoint	▪ Safety, tolerability, PK/PD and efficacy	▪ Safety, tolerability, PK/PD and efficacy	▪ Safety, tolerability, PK/PD
Status	▪ Part I 12-month data presented at AAN, CureSMA and EAN 2019; 16-month data presented at WMS 2019 ▪ Part II 1-year data presented at AAN 2020, Part I 2-year data at WMS 2020 ▪ Part I data published in *NEJM* 2021;384:915-923 ▪ Part II 2-year data presented at AAN 2021 ▪ Part II 1-year data published in *NEJM* 2021;385:427-435 ▪ 3-year data presented at EPNS 2022 and 4-year data presented at Cure SMA and EAN 2023	▪ Part I 12-month data presented at AAN, CureSMA and EAN 2019; 16-month data presented at WMS 2019 ▪ Part II 1-year data presented at SMA Europe 2020, 2-year data at MDA 2021, 3-year data at MDA 2022 and 4-year data at MDA and EAN 2023 ▪ Part II 1-year data published in *Lancet Neurology*, 2022; 21 (1) 42-52 ▪ Part II 2-year data published in J. Neurol. 2023; 270(5):2531-2546	▪ Data presented at WMS 2017, AAN 2018, WMS 2018, CureSMA 2019, WMS 2019, CureSMA 2020 and 2021 ▪ 2-year data presented at WMS 2022
	▪ ODD granted by FDA Q1 2017 and EU Q1 2019, PRIME designation in Q4 2018 ▪ Approved in US Q3 2020 and EU Q1 2021		
CT Identifier	NCT02913482	NCT02908685	NCT03032172

In collaboration with PTC Therapeutics and SMA Foundation

SMA=Spinal muscular atrophy; SMN=survival motor neuron; PK/PD=Pharmacokinetics/Pharmacodynamics; PRIME=priority medicines; AAN=American Academy of Neurology; WMS=World Muscle Society; EAN=European Academy of Neurology; NEJM=New England Journal of Medicine; MDA=Muscular Dystrophy Association; CureSMA=Annual SMA Conference; EPNS=European Paediatric Neurology Society; ODD=Orphan drug designation

Evrysdi (risdiplam, RG7916)

Oral SMN2 splicing modifier

Indication	Spinal muscular atrophy (SMA)
Phase/study	**Phase II** **RAINBOWFISH**
# of patients	N=25
Design	▪ Infants aged from birth to 6 weeks who have been genetically diagnosed with SMA but are not yet presenting with symptoms
Primary endpoint	▪ Proportion of participants with two copies of the SMN2 gene and baseline CMAP>=1.5 millivolt who are sitting without support
Status	▪ FPI Q3 2019 ▪ Recruitment completed Q1 2022 ▪ Initial data presented at CureSMA , WMS 2021, MDA and WMS 2022 ▪ Primary data presented at WMS 2023 ▪ Filed in US and EU Q4 2021 ▪ Approved in US Q2 2022 and EU Q3 2023
CT Identifier	NCT03779334

In collaboration with PTC Therapeutics and SMA Foundation

SMN=survival motor neuron; CMAP=compound muscle action potential; WMS=World Muscle Society; CureSMA=Annual SMA Conference; MDA=Muscular Dystrophy Association

Enspryng (satralizumab, RG6168, SA237)

Anti-IL-6 receptor humanized monoclonal antibody

Indication	Neuromyelitis optica spectrum disorder (NMOSD)	
Phase/study	**Phase III** **SAkuraStar**	**Phase III** **SAkuraSky**
# of patients	N=95	N=83
Design	Enspryng monotherapy: ▪ **ARM A:** Enspryng 120mg SC monthly ▪ **ARM B:** Placebo SC monthly	Add-on therapy of Enspryng: ▪ **ARM A:** Enspryng 120mg SC monthly ▪ **ARM B:** Placebo SC monthly ▪ Both arms on top of baseline therapies: azathioprine, mycophenolate mofetil or oral corticosteroids
Primary endpoint	▪ Efficacy (time to first relapse), safety and PK/PD	▪ Efficacy (time to first relapse), safety and PK/PD
Status	▪ Primary endpoint met Q4 2018 ▪ Data presented at ECTRIMS 2019 ▪ Published in *Lancet Neurology* 2020; 19(5): 402-412	▪ Primary endpoint met Q3 2018 ▪ Data presented at ECTRIMS 2018 and AAN 2019 ▪ Published in *NEJM* 2019; 381:2114-2124
	▪ BTD granted by FDA Q4 2018 ▪ Filed in EU Q3 2019; US acceptance of filing Q4 2019 ▪ Approved in US Q3 2020 and EU Q2 2021	
CT Identifier	NCT02073279	NCT02028884

Trials managed by Chugai (Roche opted-in)

BTD=Breakthrough therapy designation; PK/PD=Pharmacokinetics/Pharmacodynamics; SC=Subcutaneous; ECTRIMS=European Committee for Treatment and Research in Multiple Sclerosis; AAN=American Academy of Neurology; NEJM=New England Journal of Medicine

Enspryng (satralizumab, RG6168, SA237)

Anti-IL-6 receptor humanized monoclonal antibody

Indication	Generalised myasthenia gravis (MG)	Myelin oligodendrocyte glycoprotein antibody disease (MOG-AD)	Autoimmune encephalitis (AIE)
Phase/study	**Phase III LUMINESCE**	**Phase III METEOROID**	**Phase III CIELO**
# of patients	N=186	N=152	N=152
Design	▪ **ARM A:** Enspryng plus standard of care ▪ **ARM B:** Placebo plus standard of care	▪ **ARM A**: Enspryng at weeks 0, 2, 4 (loading doses) and maintenance doses Q4W ▪ **ARM B:** Placebo	▪ **ARM A**: Enspryng at weeks 0, 2, 4 (loading doses) and maintenance doses Q4W ▪ **ARM B**: Placebo
Primary endpoint	▪ Mean change from baseline in total MG-ADL score at week 24 in AChR+ population	▪ Time from randomization to the first occurrence of a MOG-AD relapse	▪ Efficacy (proportion of participants with mRS score improvement ≥ 1 from baseline and no use of rescue therapy at week 24) and safety
Status	▪ ODD granted in US Q1 2021 ▪ FPI Q4 2021 ▪ Recruitment completed Q3 2023 ▪ Primary endpoint met Q1 2024; no filing planned ▪ Primary data presented at AAN 2024	▪ FPI Q3 2022 ▪ ODD granted by FDA in Q4 2021	▪ FPI Q3 2022 ▪ ODD granted for NMDAR AIE in US Q3 22
CT Identifier	NCT04963270	NCT05271409	NCT05503264

In collaboration with Chugai

MG-ADL= Myasthenia Gravis Activities of Daily Living; AChR=Acetylcholine receptor; MOG-AD=Myelin Oligodendrocyte Glycoprotein Antibody Disease, mRS=Modified Rankin Scale; AIE=Autoimmune encephalitis; NMDAR AIE= Anti-N-Methyl-D-Aspartic Acid Receptor Autoimmune Encephalitis; ODD=Orphan drug designation

Gazyva (obinutuzumab, RG7159)

Immunology development program

Indication	Lupus nephritis		Membranous nephropathy
Phase/study	**Phase II NOBILITY**	**Phase III REGENCY**	**Phase III MAJESTY**
# of patients	N=126	N=252	N=140
Design	▪ **ARM A:** Gazyva 1000mg IV plus MMF / mycophenolic acid ▪ **ARM B:** Placebo IV plus MMF/ mycophenolic acid	▪ **ARM A:** Gazyva 1000mg IV (6 doses through Week 52) plus MFF ▪ **ARM B:** Gazyva1000 mg IV (5 doses through Week 52) plus MFF ▪ **ARM C:** Placebo IV plus MFF	▪ **ARM A:** Gazyva 1000mg IV on top of renin-angiotensin inhibitors ▪ **ARM B:** Tacrolimus treatment for 12 months
Primary endpoint	▪ Percentage of participants who achieve complete renal response (CRR)	▪ Percentage of participants who achieve complete renal response (CRR)	▪ Percentage of patients who achieve complete remission at week 104
Status	▪ Primary endpoint met Q2 2019 ▪ BTD granted by the FDA Q3 2019 ▪ Data presented at ASN and ACR 2019 ▪ Published in *Ann Rheum Dis* 2022; 81(1):100-107	▪ FPI Q3 2020 ▪ Recruitment completed Q1 2023	▪ FPI Q2 2021 ▪ Recruitment completed Q4 2023
CT Identifier	NCT02550652	NCT04221477	NCT04629248

In collaboration with Biogen

BTD=Breakthrough therapy designation; IV=Intravenous; ASN=American Society of Nephrology; ACR=American College of Rheumatology; MMF=mycophenolate mofetil

Gazyva (obinutuzumab, RG7159)

Immunology development program

Indication	Systemic lupus erythematosus (SLE)	Childhood onset idiopathic nephrotic syndrome*
Phase/study	**Phase III** **ALLEGORY**	**Phase III** **INShore**
# of patients	N=300	N=80
Design	▪ **ARM A:** Gazyva 1000mg IV on Day 1 and Weeks 2, 24 and 26. ▪ **ARM B:** Placebo IV	▪ **ARM A:** Gazyva plus oral steroids ▪ **ARM B:** Mycophenolate mofetil (MMF) plus oral steroids
Primary endpoint	▪ Percentage of participants who achieve Systemic Lupus Erythematosus Responder Index (SRI) at week 52	▪ Percentage of participants with sustained complete remission at 1 year
Status	▪ FPI Q4 2021	▪ FPI Q1 2023
CT Identifier	NCT04963296	NCT05627557

In collaboration with Biogen
*also known as pediatric nephrotic syndrome (PNS); IV=Intravenous

Lunsumio (mosunetuzumab, CD20 x CD3, RG7828)

Bispecific anti-CD20/CD3 antibody engaging T and B cells simultaneously

Indication	Systemic lupus erythematosus (SLE)
Phase/study	**Phase I**
# of patients	N=50
Design	▪ **ARM A:** Mosunetuzumab SC on either Day 1 or on Days 1 and 8 ▪ **ARM B:** Fractionated (divided) dose of mosunetuzumab SC on Days 1 and 8
Primary endpoint	▪ Safety
Status	▪ FPI Q1 2022
CT Identifier	NCT05155345

In collaboration with Biogen
SC=subcutaneous

Xolair (omalizumab, RG3648)

Humanized monoclonal antibody that selectively binds to IgE

Indication	Food allergy
Phase/study	**Phase III** **OUtMATCH[1]**
# of patients	N=180
Design	▪ Xolair by SC injection either Q2W or Q4W for 16 to 20 weeks
Primary endpoint	▪ Number of participants who successfully consume ≥600mg of peanut protein without dose-limiting symptoms
Status	▪ FPI Q3 2019 ▪ Study met primary endpoint Q3 2023 ▪ Filed in US Q3 2023* ▪ Priority review granted by FDA Q4 2023 ▪ Approved US Q1 2024 ▪ Published in NEJM 2024; 390(10):889-899
CT Identifier	NCT03881696

In collaboration with Novartis; 1 Sponsor of the study is the National Institute of Allergy and Infectious Diseases (NIAID)
*Filing acceptance Q4 2023; IgE=Immunoglobulin E; SC=Subcutaneous

Susvimo (PDS, RG6321)

First eye implant to achieve sustained delivery of a biologic medicine

Indication	Wet age-related macular degeneration (wAMD)		
Phase/study	**Phase III Archway**	**Phase II+III extension Portal**	**Phase IIIb Velodrome**
# of patients	N=418	N=1,000	N=442
Design	▪ **ARM A:** PDS Q24W ▪ **ARM B:** Intravitreal ranibizumab Q4W	▪ Patients from LADDER or Archway receive refills of ranibizumab Q24W (patients without the PDS will receive the PDS and subsequent refills) ▪ Patients from Velodrome, who don't meet the criteria for randomization to receive refills Q36W at week 24, receive refills of ranibizumab q24w ▪ Patients who complete or withdraw from Velodrome, receive refills of ranibizumab q24w	▪ **ARM A:** PDS Q36W ▪ **ARM B:** PDS Q24W
Primary endpoint	▪ Change in BCVA from baseline at the average of week 36 and week 40	▪ Safety and long term efficacy	▪ Change in BCVA from baseline averaged over weeks 68 and 72
Status	▪ Study met primary endpoint Q2 2020 ▪ Data presented at ASRS 2020, 44/48 week data at Angiogenesis 2021 and 2-year data at Angiogenesis 2022 ▪ Filed in US (PRIME) and EU Q2 2021 ▪ Approved in US Q4 2021	▪ FPI Q3 2018	▪ FPI Q3 2021
CT Identifier	NCT03677934	NCT03683251	NCT04657289

BCVA=best corrected visual acuity; wAMD=wet age-related macular degeneration; ASRS=American Society of Retinal Specialists; PDS=Port Delivery System with ranibizumab; PRIME=Priority review

Susvimo (PDS, RG6321)

First eye implant to achieve sustained delivery of a biologic medicine

Indication	Diabetic macular edema (DME)	Diabetic retinopathy (DR) without center-involved diabetic macular edema (DME)
Phase/study	**Phase III** **Pagoda**	**Phase III** **Pavilion**
# of patients	N=634	N=174
Design	▪ **ARM A:** Intravitreal ranibizumab (X4) followed by PDS with ranibizumab Q24W ▪ **ARM B:** Intravitreal ranibizumab Q4W until PDS is received	▪ **ARM A:** Intravitreal ranibizumab (X2) followed by PDS implant (refill Q36W) ▪ **ARM B:** Q4W comprehensive clinical monitoring (with IVT ranibizumab as needed) until participants receive PDS (refill Q36W)
Primary endpoint	▪ Change in BCVA from baseline at the average of week 60 and week 64	▪ Percentage of participants with a ≥2-step improvement from baseline on the ETDRS-DRSS at Week 52
Status	▪ FPI Q3 2019 ▪ Recruitment completed Q2 2021 ▪ Study met its primary endpoint Q4 2022 ▪ Data presented at Angiogenesis 2023	▪ FPI Q3 2020 ▪ Recruitment completed Q3 2021 ▪ Study met its primary endpoint Q4 2022 ▪ Data presented at Angiogenesis 2023
CT Identifier	NCT04108156	NCT04503551

BCVA=best corrected visual acuity; ETDRS=Early Treatment Diabetic Retinopathy Study; DRSS=Diabetic Retinopathy Severity Scale; PDS=Port Delivery System with ranibizumab

Vabysmo (faricimab, RG7716)

Bispecific antibody for the eye which targets and inhibits two signalling pathways (Ang-2 and VEGF-A)

Indication	Center-involving diabetic macular edema (CI-DME)	
Phase/study	**Phase III YOSEMITE**	**Phase III RHINE**
# of patients	N=940	N=951
Design	▪ **ARM A:** Faricimab Q8W ▪ **ARM B:** Faricimab PTI up to Q16W ▪ **ARM C:** Aflibercept, Q8W	▪ **ARM A:** Faricimab Q8W ▪ **ARM B:** Faricimab PTI up to Q16W ▪ **ARM C:** Aflibercept, Q8W
Primary endpoint	▪ Change from baseline in BCVA at 1 year	▪ Change from baseline in BCVA at 1 year
Status	▪ Study met primary endpoint Q4 2020 ▪ Data presented at Angiogenesis 2021	▪ Study met primary endpoint Q4 2020 ▪ Data presented at Angiogenesis 2021
	▪ Filed in US and EU Q2 2021 ▪ Published in the *Lancet* 2022 19;399(10326):741-755. ▪ 2-year data presented at Angiogenesis 2022 ▪ Approved in US Q1 2022 and EU Q3 2022 ▪ Post-hoc data indicating fast retinal drying presented at ARVO 2023	
CT Identifier	NCT03622580	NCT03622593

Ang-2=Angiopoietin-2; VEGF=Vascular endothelial growth factor; PTI=Personalized Treatment Interval; BCVA=best corrected visual acuity, ARVO=Association for Research in Vision and Ophthalmology

Vabysmo (faricimab, RG7716)

Bispecific antibody for the eye which targets and inhibits two signalling pathways (Ang-2 and VEGF-A)

Indication	Wet age related macular degeneration (wAMD)	
Phase/study	**Phase III TENAYA**	**Phase III LUCERNE**
# of patients	N=671	N=658
Design	▪ **ARM A:** Faricimab 6.0mg Q16W flexible after 4 IDs ▪ **ARM B:** Aflibercept 2.0mg Q8W after 3 IDs	▪ **ARM A:** Faricimab 6.0mg Q16W flexible after 4 IDs ▪ **ARM B:** Aflibercept 2.0mg Q8W after 3 IDs
Primary endpoint	▪ Change from baseline in BCVA week 40, 44 & 48	▪ Change from baseline in BCVA week 40, 44 & 48
Status	▪ Study met primary endpoint Q1 2021 ▪ Data presented at Angiogenesis 2021	▪ Study met primary endpoint Q1 2021 ▪ Data presented at Angiogenesis 2021
	▪ Filed in US and EU Q2 2021 ▪ Published in Lancet 2022 Feb 19;399(10326):729-740 ▪ Approved in US Q1 2022 and EU Q3 2022 ▪ 2-year data presented at ASRS 2022 ▪ Post-hoc data indicating fast retinal drying presented at ARVO 2023	
CT Identifier	NCT03823287	NCT03823300

BCVA=best corrected visual acuity; Ang-2=Angiopoietin-2; VEGF=Vascular endothelial growth factor; IDs=initiating doses; ASRS=American Society of Retina Specialists, ARVO=Association for Research in Vision and Ophthalmology

Vabysmo (faricimab, RG7716)

Bispecific antibody for the eye which targets and inhibits two signalling pathways (Ang-2 and VEGF-A)

Indication	Macular edema (ME) secondary to branch retinal vein occlusion (RVO)	Macular edema (ME) secondary to central retinal vein occlusion (RVO)
Phase/study	**Phase III BALATON**	**Phase III COMINO**
# of patients	N=570	N=750
Design	▪ **ARM A:** Faricimab, Q4W/PTI ▪ **ARM B:** Aflibercept, Q4W	▪ **ARM A:** Faricimab, Q4W/PTI ▪ **ARM B:** Aflibercept, Q4W
Primary endpoint	▪ Change from baseline in BCVA at week 24	▪ Change from baseline in BCVA at week 24
Status	▪ FPI Q1 2021 ▪ Recruitment completed Q1 2022 ▪ Study met its primary endpoint Q4 2022 ▪ Data presented at Angiogenesis 2023 ▪ Filed in US Q2 2023 and EU Q3 2023 ▪ Approved in US Q4 2023	▪ FPI Q1 2021 ▪ Recruitment completed Q1 2022 ▪ Study met its primary endpoint Q4 2022 ▪ Data presented at Angiogenesis 2023 ▪ Filed in US Q2 2023 and EU Q3 2023 ▪ Approved in US Q4 2023
CT Identifier	NCT04740905	NCT04740931

PTI=Personalized Treatment Interval; BCVA=best corrected visual acuity; Ang-2=Angiopoietin-2; VEGF=Vascular endothelial growth factor

Vabysmo (faricimab, RG7716)

Bispecific antibody for the eye which targets and inhibits two signalling pathways (Ang-2 and VEGF-A)

Indication	Myopic choriodial neovascularization (CNV)
Phase/study	**Phase III** **POYANG**
# of patients	n=280
Design	▪ **ARM A:** Faricimab 6.0 mg Q4W PRN ▪ **ARM B:** Ranibizumab 0.5 mg Q4W PRN
Primary endpoint	▪ Change from Baseline in Best-Corrected Visual Acuity (BCVA) Averaged Over Weeks 4, 8, and 12
Status	▪ FPI Q1 2024
CT Identifier	▪ NCT06176352

Ang-2=Angiopoietin-2; VEGF=Vascular endothelial growth factor; PRN = pro re nata

Enspryng (satralizumab, RG6168, SA237)

Anti-IL-6 receptor humanized monoclonal antibody

Indication	Thyroid eye disease	
Phase/study	**Phase III SatraGo-1**	**Phase III SatraGo-2**
# of patients	N=120	N=120
Design	▪ **ARM A:** Satralizumab at weeks 0, 2, 4 (loading doses) and maintenance doses Q4W ▪ **ARM B:** Placebo	▪ **ARM A:** Satralizumab at weeks 0, 2, 4 (loading doses) and maintenance doses Q4W ▪ **ARM B:** Placebo
Primary endpoint	▪ Proportion of participants with active disease achieving ≥ 2 mm reduction in proptosis from baseline (Day 1) at week 24 in the study eye, provided there is no deterioration of proptosis (≥ 2mm increase) in the fellow eye.	Proportion of participants with active disease achieving ≥ 2 mm reduction in proptosis from baseline (Day 1) at week 24 in the study eye, provided there is no deterioration of proptosis (≥ 2mm increase) in the fellow eye.
Status	▪ FPI Q4 2023	FPI Q4 2023
CT Identifier	NCT05987423	NCT06106828

In collaboration with Chugai

Xofluza (baloxavir marboxil, RG6152, S-033188)

Small molecule, novel CAP-dependent endonuclease inhibitor

Indication	Influenza		
Phase/study	**Phase III** **miniSTONE 1 (0-1 year old)**	**Phase III** **miniSTONE 2 (1- <12 years old)**	**Phase IIIb** **CENTERSTONE**
# of patients	N=30	N=176	N=3,160
Design	Healthy pediatric patients from birth to <1 year with influenza-like symptoms receive Xofluza on Day 1	Healthy pediatric patients 1 to <12 years of age with influenza-like symptoms ▪ **ARM A:** Xofluza ▪ **ARM B:** Tamiflu	Reduction of direct transmission of influenza from otherwise healthy patients to household contacts ▪ **ARM A:** Xofluza ▪ **ARM B:** Placebo
Primary endpoint	▪ Safety	▪ Safety	▪ Percentage of household contacts who are PCR-positive for influenza by day 5 post randomization of index patients
Status	▪ FPI Q1 2019 ▪ Recruitment completed Q3 2023	▪ Primary endpoint met Q2 2019 ▪ Data presented at OPTIONS X 2019 ▪ Filed in US Q1 2020 and EU Q4 2021 ▪ Data published in *Pediatric Infectious Disease* 2020 Aug;39(8):700-705 ▪ Approved in the US (age 5 years and older) Q3 2022 , EU Jan 2023 and China (age 5 years and older) Q1 2023	▪ FPI Q4 2019
CT Identifier	NCT03653364	NCT03629184	NCT03969212

In collaboration with Shionogi & Co., Ltd.
CAP=Catabolite Activating Protein

Roche Group development pipeline

Marketed products development programmes

Roche Pharma global development programmes

Roche Pharma research and early development (pRED)

Genentech research and early development (gRED)

Spark

Tiragolumab (anti-TIGIT, RG6058, MTIG7192A)

Monoclonal antibody targeting the immune checkpoint inhibitor TIGIT

Indication	1L NSCLC PD-L1 TPS>50%	Stage III unresectable 1L NSCLC
Phase/study	**Phase III** **SKYSCRAPER-01**	**Phase III** **SKYSCRAPER-03**
# of patients	N=500-560	N=800
Design	▪ **ARM A:** Tiragolumab plus Tecentriq ▪ **ARM B:** Placebo plus Tecentriq	▪ **ARM A:** Tiragolumab plus Tecentriq for up to 12 months ▪ **ARM B:** Durvalumab for up to 12 months
Primary endpoint	▪ Overall survival and progression-free survival	▪ Progression-free survival
Status	▪ FPI Q1 2020 ▪ Recruitment completed Q3 2021 ▪ Study did not meet one of its primary endpoints, PFS, Q2 2022	▪ FPI Q3 2020 ▪ Recruitment completed Q2 2023
CT Identifier	NCT04294810	NCT04513925

NSCLC=Non-small cell lung cancer; PD-L1=Programmed cell death-ligand 1; TPS=Tumor Proportion Score; PFS=Progression-free survival

Tiragolumab (anti-TIGIT, RG6058, MTIG7192A)

Monoclonal antibody targeting the immune checkpoint inhibitor TIGIT

Indication	Neoadjuvant and adjuvant NSCLC	1L non-squamous NSCLC	Adjuvant NSCLC
Phase/study	**Phase II SKYSCRAPER-05**	**Phase III SKYSCRAPER-06**	**Phase III SKYSCRAPER-15**
# of patients	N=82	N=540	n=1150
Design	▪ **ARM A:** (PD-L1 high) neoadjuvant tiragolumab plus Tecentriq followed by adjuvant tiragolumab plus Tecentriq or adjuvant chemotherapy ▪ **ARM B:** (PD-L1 all-comers) neoadjuvant tiragolumab plus Tecentriq plus chemo followed by adjuvant tiragolumab plus Tecentriq	▪ **ARM A:** Tiragolumab plus Tecentriq plus pemetrexed plus chemotherapy followed by maintenance tiragolumab plus Tecentriq plus pemetrexed ▪ **ARM B:** Placebo plus pembrolizumab plus pemetrexed plus chemotherapy followed by maintenance placebo plus pembrolizumab plus pemetrexed	▪ **ARM A:** Tiragolumab + Tecentriq ▪ **ARM B:** Tecentriq + Placebo
Primary endpoint	▪ Pathologic complete response, major pathological response and safety	▪ Objective response rate, progression-free survival and overall survival	▪ INV-DFS in PD-L1 ≥ 50% ▪ INV-DFS in PD-L1 ≥ 1%
Status	▪ FPI Q2 2021	▪ FPI Q4 2020	▪ FPI Q1 2024
CT Identifier	NCT04832854	NCT04619797	NCT06267001

NSCLC=Non-small cell lung cancer; PD-L1=Programmed cell death-ligand 1

Tiragolumab (anti-TIGIT, RG6058, MTIG7192A)

Monoclonal antibody targeting the immune checkpoint inhibitor TIGIT

Indication	Locally advanced esophageal cancer (EC)	1L esophageal cancer (EC)	1L recurrent/metastatic PD-L1 positive squamous cell head and neck carcinoma (SCCHN)
Phase/study	**Phase III SKYSCRAPER-07**	**Phase III SKYSCRAPER-08**	**Phase II SKYSCRAPER-09**
# of patients	N=750	N=500	N=120
Design	▪ **ARM A:** Tiragolumab plus Tecentriq ▪ **ARM B:** Tecentriq plus placebo ▪ **ARM C:** Placebo plus placebo	▪ **ARM A:** Tiragolumab plus Tecentriq plus cisplatin and paclitaxel ▪ **ARM B:** Placebo plus placebo plus cisplatin and paclitaxel	▪ **ARM A:** Tiragolumab plus Tecentriq ▪ **ARM B:** Tecentriq plus placebo
Primary endpoint	▪ Progression-free survival (A vs C) ▪ Overall survival (A vs C, hierarchical, B vs C hierarchical)	▪ Overall survival and progression-free survival	▪ Objective response rate
Status	▪ FPI Q3 2020 ▪ Recruitment completed Q3 2023	▪ FPI Q4 2020 ▪ Recruitment completed Q4 2021 ▪ Study met its primary endpoints of OS and PFS in Q1 2024 ▪ Data presented at ASCO GI 2024	▪ FPI Q1 2021 ▪ Recruitment completed Q2 2022
CT Identifier	NCT04543617	NCT04540211	NCT04665843

Tiragolumab (anti-TIGIT, RG6058, MTIG7192A)

Monoclonal antibody targeting the immune checkpoint inhibitor TIGIT

Indication	Locally advanced, recurrent or metastatic solid tumors	1L HCC
Phase/study	**Phase II** **SKYSCRAPER-11**	**Phase III** **SKYSCRAPER-14**
# of patients	N=60	N=650
Design	▪ Tiragolumab plus Tecentriq IV FDC	▪ **ARM A:** Tecentriq plus Avastin plus tiragolumab ▪ **ARM B:** Tecentriq plus Avastin plus placebo
Primary endpoint	▪ Safety	▪ Progression-free survival (INV=Investigator-assessed); Overall survival
Status	▪ FPI Q2 2023	▪ FPI Q3 2023
CT Identifier	NCT05661578	NCT05904886

FDC=Fixed-dose combination; IV=Intravenous; HCC=Hepatocellular cancer; INV=Investigator-assessed

Tiragolumab (anti-TIGIT, RG6058, MTIG7192A)

Monoclonal antibody targeting the immune checkpoint inhibitor TIGIT

Indication	Solid tumors	NSCLC
Phase/study	Phase I	Phase II CITYSCAPE
# of patients	N=540	N=135
Design	▪ **Phase Ia:** Dose escalation and expansion of tiragolumab ▪ **Phase Ib:** Dose escalation and expansion of tiragolumab in combination with Tecentriq and/or other anti-cancer therapies	▪ **ARM A:** Tecentriq plus tiragolumab ▪ **ARM B:** Tecentriq monotherapy
Primary endpoint	▪ Safety, tolerability, PK variability and preliminary efficacy	▪ Overall response rate and progression-free survival
Status	▪ Data presented at AACR 2020	▪ Data presented at ASCO 2020 and WCLC and ESMO IO 2021 ▪ BTD granted by FDA Q4 2020 ▪ Data published in *Lancet Oncol* 2022; 23(6):781-792
CT Identifier	NCT02794571	NCT03563716

BTD=Breakthrough therapy designation; PK=Pharmacokinetics; ASCO=American Society of Clinical Oncology; AACR=American Association for Cancer Research; WCLC=World Conference on Lung Cancer; ESMO IO=European Society for Medical Oncology - Immuno-Oncology

Inavolisib (RG6114, GDC-0077)

A potent, orally available, and selective PI3Kα inhibitor

Indication	PIK3CA-mutant HR-positive metastatic breast cancer (mBC)	post CDKi HR-positive PIK3CA-mutant breast cancer	PIK3CA mutant solid tumors and metastatic ER+ HER2-negative breast cancer
Phase/study	**Phase III INAVO120**	**Phase III INAVO121**	**Phase I**
# of patients	N=400	N=400	N=256
Design	▪ **ARM A:** Inavolisib plus palbociclib plus fulvestrant ▪ **ARM B:** Placebo plus palbociclib plus fulvestrant	▪ **ARM A:** Inavolisib plus fulvestrant ▪ **ARM B:** alpelisib plus fulvestrant	Monotherapy and in combination with standard of care (letrozole; letrozole plus palbociclib; fulvestrant) ▪ **Stage 1:** Dose escalation ▪ **Stage 2:** Dose expansion
Primary endpoint	▪ Progression-free survival	▪ Progression-free survival	▪ Safety, tolerability and pharmacokinetics
Status	▪ FPI Q1 2020 ▪ Recruitment completed Q3 2023 ▪ Study met its primary endpoint of PFS Q4 2023 ▪ Data presented at SABCS 2023	▪ FPI Q2 2023	▪ FPI Q4 2016 ▪ Preclinical/molecule discovery data presented at AACR 2017 ▪ Data presented at SABCS 2019, 2020 and 2021
CT Identifier	NCT04191499	NCT05646862	NCT03006172

ER=Estrogen receptor; HR=Hormone receptor; HER2=Human Epidermal growth factor Receptor 2; PI3K=Phosphoinositide 3-Kinase; AACR=American Association for Cancer Research; SABCS=San Antonio Breast Cancer Symposium; CDKi= Cyclin-dependent kinase inhibitor

Inavolisib (RG6114, GDC-0077)

A potent, orally available, and selective PI3Kα inhibitor

Indication	1L HER2-positive PIK3CA mutant metastatic breast cancer (mBC)
Phase/study	**Phase III** **INAVO122**
# of patients	N=230
Design	▪ **ARM A:** Inavolisib plus Phesgo after induction therapy with Phesgo + taxane ▪ **ARM B:** Placebo plus Phesgo after induction therapy with Phesgo + taxane
Primary endpoint	▪ Progression-free survival
Status	▪ FPI Q3 2023
CT Identifier	NCT05894239

HER2=Human Epidermal growth factor Receptor 2; PI3K=Phosphoinositide 3-Kinase

Giredestrant (SERD (3), RG6171, GDC-9545)

A selective estrogen receptor degrader or downregulator

Indication	ER+ HER2-negative metastatic breast cancer (mBC)	ER+ HER2-negative Stage I-III operable breast cancer (BC)	Neoadjuvant ER-positive breast cancer (BC)
Phase/study	**Phase I**	**Phase I**	**Phase II coopERA Breast Cancer**
# of patients	N=181	N=75	N=221
Design	▪ Dose escalation and expansion at RPTD ▪ Giredestrant monotherapy and in combination with palbociclib and/or LHRH agonist	▪ Open-label, pre-operative administration ▪ Dose escalation	▪ **ARM A:** Giredestrant followed by giredestrant plus palbociclib ▪ **ARM B:** Anastrazole followed by anastrazole plus palbociclib
Primary endpoint	▪ Safety	▪ Safety, tolerability and PK/PD	▪ Safety, tolerability and PK/PD
Status	▪ FPI Q4 2017 ▪ Data presented at SABCS 2019, 2021 and ASCO 2020, 2021	▪ FPI Q3 2019 ▪ Data presented at ASCO 2021	▪ FPI Q3 2020 ▪ Data presented at ESMO and SABCS 2021; ASCO 2022 ▪ Data (biomarker subgroup analysis) presented at ESMO 2022 ▪ Data published in Lancet Oncology 2023; 24(9): 1029–41
CT Identifier	NCT03332797	NCT03916744	NCT04436744

ER=Estrogen receptor; HER2=Human Epidermal growth factor Receptor; RPTD=Recommended phase II dose; LHRH=Luteinizing hormone–releasing hormone; PK/PD=Pharmacokinetics/Pharmacodynamics; SABCS=San Antonio Breast Cancer Symposium; ASCO=American Society of Clinical Oncology

Giredestrant (SERD (3), RG6171, GDC-9545)

A selective estrogen receptor degrader or downregulator

Indication	1L ER-positive metastatic breast cancer (mBC)	Adjuvant ER-positive breast cancer (BC)
Phase/study	**Phase III** **persevERA Breast Cancer**	**Phase III** **lidERA Breast Cancer**
# of patients	N=978	N=4,100
Design	▪ **ARM A:** Giredestrant plus palbociclib ▪ **ARM B:** Letrozole plus palbociclib	▪ **ARM A:** Giredestrant monotherapy ▪ **ARM B:** Tamoxifen or aromatase inhibitor
Primary endpoint	▪ Progression-free survival	▪ Invasive disease-free survival
Status	▪ FPI Q4 2020 ▪ Recruitment completed Q1 2023	▪ FPI Q3 2021
CT Identifier	NCT04546009	NCT04961996

ER=Estrogen receptor

Giredestrant (SERD (3), RG6171, GDC-9545)

A selective estrogen receptor degrader or downregulator

Indication	1L ER-positive/HER2-positive breast cancer (BC)	Grade 1 endometrial cancer	ET resistant ER+/HER2-negative breast cancer (BC)
Phase/study	**Phase III heredERA**	**Phase II endomERA**	**Phase III pionERA**
# of patients	N=812	N=45	N=1050
Design	Induction Phesgo plus taxane followed by maintenance with either: ▪ **ARM A:** Giredestrant plus Phesgo ▪ **ARM B:** Phesgo	▪ Giredestrant once a day (QD) on days 1 to 28 of each 28-day cycle for 6 cycles	▪ **ARM A**: Giredestrant plus CDK4/6i ▪ **ARM B**: Fulvestrant plus CDK4/6i
Primary endpoint	▪ Progression-free survival	▪ Percentage of participants who have regression by 6 months	▪ Progression-free survival in ESR1m and ITT
Status	▪ FPI Q2 2022	▪ FPI Q2 2023	▪ FPI Q4 2023
CT Identifier	NCT05296798	NCT05634499	NCT06065748

ER=Estrogen receptor; HER2=Human Epidermal growth factor Receptor; Phesgo=FDC of Perjeta and Herceptin for SC administration ; ITT=Intention to treat

Divarasib (KRAS G12C inhibitor, RG6330, GDC-6036)

A potent, orally available, and selective inhibitor of the KRAS G12C mutant protein

Indication	Advanced or metastatic solid tumors with a KRAS G12C mutation	2L NSCLC	2L, 1L metastatic colorectal cancer (mCRC)
Phase/study	**Phase I**	**Phase II/III B-FAST***	**Phase Ib INTRINSIC**
# of patients	N=438	Modular design	Modular design
Design	Monotherapy and combinations of divarasib with other anti-cancer therapies	**Cohort G (KRAS G12C)** ▪ **ARM A:** divarasib ▪ **ARM B:** Docetaxel	Single arm studies: ▪ **Cohort E** (1L+ CRC): divarasib + cetuximab + FOLFOX ▪ **Cohort F** (2L+ CRC): divarasib + cetuximab ▪ **Cohort G** (1L+ CRC): divarasib + cetuximab + FOLFIRI
Primary endpoint	▪ Safety	▪ Progression-free survival	▪ Safety
Status	▪ FPI Q3 2020 ▪ Data presented at WCLC 2022, ESMO 2022 ▪ Data published in *NEJM* 2023 24;389(8):710-721	▪ BTD granted by FDA Q3 2022 ▪ FPI Q4 2022	▪ FPI Q1 2023
CT Identifier	NCT04449874	NCT03178552	NCT04929223

*Only cohorts with active recruitment shown; NSCLC=Non-small cell lung cancer; WCLC=World Conference on Lung Cancer; ESMO=European Society for Medical Oncology; BTD=Breakthrough therapy designation, CRC=Colorectal cancer

Divarasib (KRAS G12C inhibitor, RG6330, GDC-6036)

A potent, orally available, and selective inhibitor of the KRAS G12C mutant protein

Indication	1L NSCLC
Phase/study	**Phase Ib** **KRASCENDO 170**
# of patients	N=60
Design	▪ **Cohort A**: Combination of divarasib plus pembrolizumab (PD-L1+ NSCLC) ▪ **Cohort B:** Combination of divarasib plus pembrolizumab plus carboplatin/cisplatin plus pemetrexed
Primary endpoint	▪ Safety, tolerability
Status	▪ **Cohort A**: FPI Q2 2023 ▪ **Cohort B**: FPI Q1 2024
CT Identifier	NCT05789082

NSCLC=Non-small cell lung cancer; PD-L1=Programmed cell death-ligand

PiaSky (crovalimab) (RG6107, SKY59)

A humanized monoclonal antibody against complement C5

Indication	Paroxysmal nocturnal hemoglobinuria (PNH)	Paroxysmal nocturnal hemoglobinuria (PNH) patients switching from a C5 inhibitor
Phase/study	**Phase I/II COMPOSER**	**Phase III COMMODORE 1**
# of patients	N=59	N=89 (ARMs A/B)
Design	Healthy volunteers and treatment naïve and pretreated patients with PNH: ▪ **Part I:** Single ascending dose study in healthy subjects ▪ **Part II:** Intra-patient single ascending dose study in PNH patients ▪ **Part III:** Multiple-dose study in PNH patients ▪ **Part IV:** Dose confirmation in PNH patients	▪ **ARM A:** Crovalimab ▪ **ARM B:** Eculizumab ▪ **ARM C:** Patients switching to PiaSky (crovalimab) from ravulizumab, higher than labeled doses of eculizumab & C5 SNP patients (descriptive-arm)
Primary endpoint	▪ Safety, PK, PD	▪ Safety
Status	▪ Nonclinical data published in Scientific Reports 2017 Apr; 7(1):1080 ▪ Data presented for Part 2 and 3 at ASH 2018 and 2019 ▪ Published in *Blood* 2020; 135 (12): 912–920	▪ FPI Q3 2020 ▪ Study results in Q1 2023 supported the favorable benefit-risk profile of crovalimab, as seen in the pivotal COMMODORE 2 study ▪ Data presented at EHA 2023 ▪ Filed in US and EU Q2 2023
CT Identifier	NCT03157635	NCT04432584

In collaboration with Chugai

ASH=American Society of Hematology; PNH=Paroxysmal nocturnal hemoglobinuria; PK/PD=Pharmacokinetics/Pharmacodynamics

PiaSky (crovalimab) (RG6107, SKY59)

A humanized monoclonal antibody against complement C5

Indication	Paroxysmal nocturnal hemoglobinuria (PNH) C5 inhibitor naive patients	Paroxysmal nocturnal hemoglobinuria (PNH) C5 inhibitor naive patients (China only)
Phase/study	**Phase III** **COMMODORE 2**	**Phase III** **COMMODORE 3**
# of patients	N=204	N=51
Design	▪ **ARM A:** Crovalimab ▪ **ARM B:** Eculizumab	▪ Crovalimab loading dose IV on Day 1, followed by weekly crovalimab SC doses for 4 weeks

Primary endpoint	▪ Non-inferiority of crovalimab compared to eculizumab:
	  ▪ % patients with transfusion avoidance from baseline through week 25
	  ▪ % patients with haemolysis control, as measured by LDH <=1.5ULN from week 5-25
		▪ Percentage of patients with transfusion avoidance from baseline through week 25
		▪ Mean percentage of participants with hemolysis control (week 5 through week 25)

Status	▪ FPI Q4 2020 ▪ Recruitment completed Q2 2022 ▪ Study met its primary endpoint Q1 2023 ▪ Data presented at EHA 2023 ▪ Filed in US and EU Q2 2023	▪ FPI Q1 2021; Recruitment completed Q3 2021 ▪ Study met its co-primary endpoints Q1 2022 ▪ Data presented at ASH 2022 ▪ Published in *Am J Hematol* 2023;98(9):1407-1414 ▪ First global approval in China Q1 2024
CT Identifier	NCT04434092	NCT04654468

In collaboration with Chugai

LDH=Lactate Dehydrogenase; ULN=Upper Limit of Normal; IV=Intravenous; SC=Subcutaneous, ASH=American Society of Hematology

PiaSky (crovalimab) (RG6107, SKY59)

A humanized monoclonal antibody against complement C5

Indication	Atypical hemolytic uremic syndrome (aHUS) study 1 - adults	Atypical hemolytic uremic syndrome (aHUS) study 2 - paediatrics
Phase/study	**Phase III COMMUTE-a**	**Phase III COMMUTE-p**
# of patients	N=90	N=35
Design	Single-arm study of aHUS patients ▪ **Cohort 1**: not previously treated with C5i ▪ **Cohort 2:** switching from C5i ▪ **Cohort 3:** known C5 polymorphism	Single-arm study of aHUS patients ▪ **Cohort 1:** not previously treated with C5i ▪ **Cohort 2:** switching from C5i ≤18y/o ▪ **Cohort 3:** previously treated with C5i (includes participants with known C5 polymorphism)
Primary endpoint	▪ Cohort 1+3: proportion of patients with complete TMA response anytime between baseline and week 25 ▪ Cohort 2: proportion of patients with maintained TMA control from baseline through week 25	▪ Cohort 1: proportion of patients with complete TMA response anytime between baseline and week 25 ▪ Cohort 2: proportion of patients with maintained TMA control from baseline through week 25
Status	▪ FPI Q4 2021	▪ FPI Q4 2021
CT Identifier	NCT04861259	NCT04958265

In collaboration with Chugai

aHUS=Atypical Hemolytic Uremic Syndrome; C5i=C5 inhibitor; TMA=thrombotic microangiopathy

PiaSky (crovalimab) (RG6107, SKY59)

A humanized monoclonal antibody against complement C5

Indication	Sickle cell disease (SCD) acute treatment	Sickle cell disease (SCD) chronic VOC prevention
Phase/study	Phase Ib CROSSWALK-a	Phase IIa CROSSWALK-c
# of patients	N=30	N=90
Design	▪ **ARM A:** Crovalimab ▪ **ARM B:** Placebo	▪ **ARM A:** Crovalimab ▪ **ARM B:** Placebo
Primary endpoint	▪ Safety	▪ VOC rate, up to 48 weeks
Status	▪ FPI Q1 2022	▪ FPI Q1 2022
CT Identifier	NCT04912869	NCT05075824

VOC=Vaso-occlusive crises

PiaSky (crovalimab) (RG6107, SKY59)

A humanized monoclonal antibody against complement C5

Indication	Lupus nephritis (LN)
Phase/study	**Phase I**
# of patients	N=15
Design	▪ Single-arm study of patients with active class III, IV, or V lupus nephritis and urine protein-to-creatinine ratio >=1.5 g/g ▪ All patients to receive crovalimab IV loading dose and subsequent crovalimab SC q1w (Day 1, Week 1,2 and 3) followed by corvalimab SC Q4W
Primary endpoint	▪ PK, safety
Status	▪ FPI Q1 2023
CT Identifier	ISRCTN12809537

In collaboration with Chugai
IV=Intravenous, SC=Subcutaneous, PK=Pharmacokinetics

Astegolimab (RG6149, Anti-ST2)

A monoclonal antibody that selective binds to ST2

Indication	Chronic obstructive pulmonary disease (COPD)		
Phase/study	**Phase II** **COPD-ST2OP**	**Phase IIb** **ALIENTO**	**Phase III** **ARNASA**
# of patients	N=81	N=1,290	N=1,290
Design	▪ Astegolimab SC 490mg Q4W for 48 weeks	▪ **ARM A:** SC astegolimab Q2W ▪ **ARM B:** SC astegolimab Q4W ▪ **ARM C:** SC placebo Q2W	▪ **ARM A:** SC astegolimab Q2W ▪ **ARM B:** SC astegolimab Q4W ▪ **ARM C:** SC placebo Q2W
Primary endpoint	▪ Number of moderate to severe exacerbation	▪ Annualized rate of moderate and severe COPD exacerbations over the 52-week treatment period	▪ Annualized rate of moderate and severe COPD exacerbations over the 52-week treatment period
Status	▪ Published in *Lancet Respir Med* 2022;10(5):469-477	▪ FPI Q4 2021	▪ FPI Q1 2023
CT Identifier	NCT03615040	NCT05037929	NCT05595642

In collaboration with Amgen
COPD=Chronic obstructive pulmonary disease, SC=Subcutaneous

ASO factor B (RG6299)

Antisense oligonucleotide that targets factor B

Indication	IgA nephropathy (IgAN)		Geographic atrophy (GA)
Phase/study	**Phase II***	**Phase III IMAGINATION**	**Phase II* GOLDEN STUDY**
# of patients	N=25	N=428	N=330

Design	▪ ASO factor B SC at week 1 following Q4W dosing through week 25
	▪ Optional 48-week extension (Q4W)
		▪ **ARM A:** ASO factor B SC at week 1, 3, 5 following Q4W dosing for 104 weeks
		▪ **ARM B:** Placebo
			▪ **ARM A:**
			  ▪ Stage 1: ASO factor B SC at 1 of 3 dose levels Q4W up to week 45
			  ▪ Stage 2: dose cohort expansion
			▪ **ARM B:** Placebo

Primary endpoint	▪ % reduction in 24-hour urine protein excretion at week 29	▪ Change in UPCR at week 37 from baseline	▪ Absolute change from baseline in the GA area at week 49
Status	▪ FPI Q2 2020	▪ FPI Q3 2023	▪ FPI Q2 2019
CT Identifier	NCT04014335	NCT05797610	NCT03815825

In collaboration with IONIS

*Study run by IONIS, GA=Geographic atrophy; UPCR=Urine protein-to-creatinine ratio; SC=Subcutaneous; ASO=Antisense oligonucleotide

Vamikibart (anti-IL-6; RG6179)

A monoclonal antibody that potently binds interleukin-6 (IL-6) cytokine

Indication	Diabetic macular edema (DME) and Uveitic macular edema (UME)	Diabetic macular edema (DME)	
Phase/study	**Phase I** **DOVETAIL**	**Phase II** **BARDENAS**	**Phase II** **ALLUVIUM**
# of patients	N=90	N=210-230	N=360-400
Design	▪ Part I: Multiple ascending dose study of intravitreal monotherapy ▪ Part II: monotherapy and in combination with anti-VEGF	▪ **ARM A:** Anti-IL-6 plus ranibizumab ▪ **ARM B:** Ranibizumab plus sham control	▪ **Arm A:** 0.25 mg anti-IL-6 Q8W ▪ **Arm B:** 1.0 mg anti-IL-6 Q8W ▪ **Arm C:** 1.0 mg anti-IL-6 Q4W ▪ **Arm D**: 0.5 mg ranibizumab Q4W
Primary endpoint	▪ Safety, tolerability, PK	▪ Mean change from baseline in BCVA averaged over week 44 and week 48	▪ Mean change from baseline in BCVA averaged over week 44 and week 48
Status	▪ FPI Q3 2019 ▪ Data presentation at ARVO 2023	▪ FPI Q4 2021 ▪ Recruitment completed Q2 2023	▪ FPI Q4 2021 ▪ Recruitment completed Q4 2023
CT Identifier		NCT05151744	NCT05151731

PK=Pharmacokinetics; BCVA=Best corrected visual acuity, ARVO=Association for Research in Vision & Ophthalmology

Vamikibart (anti-IL-6; RG6179)

A monoclonal antibody that potently binds interleukin-6 (IL-6) cytokine

Indication	Uveitic macular edema (UME)	
Phase/study	**Phase III MEERKAT**	**Phase III SANDCAT**
# of patients	N=225	N=225
Design	▪ **ARM A:** Anti-IL-6 low-dose Q4W to week 12, followed by PRN ▪ **ARM B:** Anti-IL-6 high-dose Q4W to week 12, followed by PRN ▪ **ARM C:** Sham control Q4W to week 12,followed by PRN	▪ **ARM A:** Anti-IL-6 low-dose Q4W to week 12, followed by PRN ▪ **ARM B:** Anti-IL-6 high-dose Q4W to week 12, followed by PRN ▪ **ARM C:** Sham control Q4W to week 12,followed by PRN
Primary endpoint	▪ Proportion of participants with ≥ 15 letter improvement from baseline in BCVA at week 16	▪ Proportion of participants with ≥ 15 letter improvement from baseline in BCVA at week 16
Status	▪ FPI Q1 2023	▪ FPI Q1 2023
CT Identifier	NCT05642312	NCT05642325

BCVA=Best corrected visual acuity; PRN= Pro re nata

Elevidys (delandistrogene moxeparvovec, SRP-9001, RG6356)

rAAVrh74.MHCK7.Micro-dystrophin gene therapy

Indication	Duchenne muscular dystrophy (DMD)
Phase/study	**Phase II** **ENVOL**
# of patients	N=21
Design	Open label single arm study in 0 to <4 year old DMD boys who will receive a single intravenous (IV) infusion of Elevidys on Day 1, separated into 4 cohorts: ▪ **Cohort A**: ~ 10 participants who are 3 years of age ▪ **Cohort B:** ~ 4 participants who are 2 years of age ▪ **Cohort C:** ~ 4 participants who are > 6 months to < 2 years of age ▪ **Cohort D:** ~ 3 participants who are <= 6 months of age
Primary endpoint	▪ Safety
Status	▪ FPI Q4 2023
CT Identifier	

In collaboration with Sarepta
DMD=Duchenne muscular dystrophy

Tominersen (RG6042, HTT ASO)

Antisense oligonucleotide (ASO) targeting human HTT mRNA

Indication	Huntington's disease
Phase/study	**Phase II** **GENERATION HD2**
# of patients	N=360
Design	Patients aged 25 to 50 years with prodromal (very early subtle signs of HD) or early manifest HD ▪ **ARM A:** Tominersen 60mg Q16W via a lumbar puncture ▪ **ARM B:** Tominersen 100mg Q16W via a lumbar puncture ▪ **ARM C:** Placebo Q16W via a lumbar puncture
Primary endpoint	▪ Safety, biomarkers and efficacy
Status	▪ FPI Q1 2023
CT Identifier	NCT05686551

In collaboration with IONIS
HD=Huntington's Disease; HTT=Huntingtin

Fenebrutinib (RG7845, GCD-0853)

Highly selective and reversible (noncovalent) bruton tyrosine kinase

Indication	Primary progressive multiple sclerosis (PPMS)	Relapsing multiple sclerosis (RMS)	
Phase/study	**Phase III FENtrepid**	**Phase III FENhance 1**	**Phase III FENhance 2**
# of patients	N=985	N=736	N=751
Design	▪ **ARM A:** Fenebrutinib twice daily oral ▪ **ARM B:** Ocrevus 2x300mg IV Q24W	▪ **ARM A:** Fenebrutinib twice daily oral ▪ **ARM B:** Teriflunomide once daily oral	▪ **ARM A:** Fenebrutinib twice daily oral ▪ **ARM B:** Teriflunomide once daily oral
Primary endpoint	▪ Time to onset of cCDP12	▪ Time to onset of cCDP12 and annualized relapse rate	▪ Time to onset of cCDP12 and annualized relapse rate
Status	▪ FPI Q4 2020 ▪ Recruitment completed Q2 2023	▪ FPI Q1 2021 ▪ Recruitment completed Q1 2024	▪ FPI Q1 2021 ▪ Recruitment completed Q4 2023
CT Identifier	NCT04544449	NCT04586010	NCT04586023

IV=Intravenous; cCDP12=Composite 12-week confirmed disability progression

Fenebrutinib (RG7845, GCD-0853)

Highly selective and reversible (noncovalent) bruton tyrosine kinase

Indication	Relapsing multiple sclerosis (RMS)
Phase/study	**Phase II (Biomarker study)** **FENopta**
# of patients	N=109
Design	▪ **ARM A:** Fenebrutinib ▪ **ARM B:** Placebo
Primary endpoint	▪ Total number of new gadolinium-enhancing T1 lesions observed on MRI scans of the brain at 12 weeks
Status	▪ Data presented at EAN and ECTRIMS 2023
CT Identifier	NCT05119569

MRI=Magnetic resonance imaging; EAN=European Academy of Neurology

Anti-latent myostatin (RG6237, GYM329)

Recycling and antigen-sweeping monoclonal anti-latent myostatin antibody

Indication	Facioscapulohumeral Muscular Dystrophy (FSHD)	Spinal muscular atrophy (SMA)	Obesity
Phase/study	**Phase II** **MANOEUVRE**	**Phase II/III** **MANATEE**[1]	**Phase Ib**
# of patients	N=48	N=180	N=30-36
Design	▪ **ARM A:** 4-week pre-treatment to collect baseline movement data with a wearable device, followed by anti-latent myostatin ▪ **ARM B:** Placebo	**ARM A:** ▪ **Part I**: GYM329 plus Evrysdi for 24 weeks, followed by GYM329 plus Evrysdi for 72 weeks ▪ **Part II:** GYM329 plus Evrysdi for 72 weeks **ARM B:** ▪ Placebo plus Evrysdi	▪ **Cohort A** (n=15-18): Single dose 50mg SC ▪ **Cohort B** (n=15-18): Multiple dosing 100mg SC Q4W week plus loading dose for first 3 doses
Primary endpoint	▪ Percent change in contractile muscle volume of quadriceps femoris muscles by MRI at week 52 and safety	▪ Change from baseline in RHS score after week 72 of treatment ▪ Safety, PK/PD and muscle biomarkers	▪ PK/PD, tolerability, safety
Status	▪ FPI Q1 2023	▪ ODD granted by FDA in Q4 2021 for GYM329 ▪ FPI Part I ambulatory cohort Q2 2022; non-ambulatory cohort July 2023	▪ FPI expected Q2 2024
CT Identifier	NCT05548556	NCT05115110	

[1] In collaboration with PTC Therapeutics and SMA Foundation

PK/PD=Pharmacokinetics/Pharmacodynamics; ODD=Orphan drug designation; RHS=Revised hammersmith scale ; MRI=Magnetic Resonance Imaging, SC=Subcutaneous

Roche Group development pipeline

Marketed products development programmes

Roche Pharma global development programmes

Roche Pharma research and early development (pRED)

Genentech research and early development (gRED)

Spark

pRED oncology development programs -1

Molecule	Indication	Phase	# of patients	Status	CT Identifier
Oncology					
FAP-4-1BBL (RG7827)	3L+ MSS metastatic colorectal cancer	Ib	80	FPI Q3 2021 Combination study with cibisatamab	NCT04826003
tobemstomig PD1-LAG3 (RG6139)	Solid tumors	I	320	FPI Q4 2019 Data presented at ESMO 2022 Recruitment completed Q4 2022	NCT04140500
	Advanced or metastatic esophageal squamous cell cancer	II	210	FPI Q2 2021 Randomized trial, compared with nivolumab Recruitment completed Q3 2023	NCT04785820 TALIOS
	Untreated unresectable or metastatic melanoma	II	80	FPI Q3 2022 Recruitment completed Q3 2023	NCT05419388
	Non-small cell lung cancer	II	180	FPI Q1 2023 Recruitment completed Q1 2024	NCT05775289
	advanced and metastatic urothelial cancer	II	240	FPI Q2 2023	NCT05645692
	Metastatic renal cell carcinoma	II	210	FPI Q2 2023	NCT05805501
	Triple-negative breast cancer	II	160	FPI Q3 2023	NCT05852691
englumafusp alfa (CD19-4-1BBL, RG6076)	R/R B cell non-Hodgkin's lymphoma	I	362	Part I: FPI Q3 2019 Part II: FPI Q3 2020 Combination study with Columvi Data presented at ASH 2022 and ICML 2023	NCT04077723

pRED oncology development programs -2

Molecule	Indication	Phase	# of patients	Status	CT Identifier
Oncology					
eciskafusp alfa (PD1-IL2v, RG6279)	Solid tumors	Ib	256	Part I: FPI Q2 2020; recruitment completed Q4 2021 Part II: FPI Q1 2022 Part III: FPI Q1 2023	NCT04303858
vopikitug (RG6292)	Advanced and metastatic solid tumors	I	160	FPI Q4 2020 PK/PD data presented at AACR 2023	NCT04642365
forimtamig (Anti-GPRC5D, RG6234)	Multiple myeloma	I	400	FPI Q4 2020 Data presented at EHA 2022 and ASH 2022	NCT04557150
BRAFi (3) (RG6344)	Solid tumors	I	292	FPI Q1 2022	ISRCTN13713551
CD19xCD28 (RG6333)	R/R B cell non-Hodgkin's lymphoma	I	~200	FPI Q1 2022 Combination study with Columvi	NCT05219513
DLL3 trispecific (RG6524)	Solid tumors	I	168	FPI Q1 2023	NCT05619744
WRN covalent inhibitor[1] (RG6457)	Solid tumors	I	220	FPI Q1 2024	NCT06004245
USP1 inhibitor[2] (RG6614)	Solid tumors	I	140	FPI Q3 2021	NCT05240898

Partner: [1]Vividion Therapeutics, [2] KSQ Therapeutics

pRED neurology development programs -1

Molecule	Indication	Phase	# of patients	Status	CT Identifier
Neurology					
trontinemab (BS-anti-Aβ mAb, RG6102)	Alzheimer's disease	IIa	~210	FPI Q1 2021 Data presented at ADPD 2024	NCT04639050
Brainshuttle™-CD20 (RG6035)	Multiple sclerosis	I	30-63	FPI Q3 2021	ISRCTN16295177 NCT05704361
Gamma-secretase modulator (RG6289)	Alzheimer's disease	I	138	FPI Q4 2021	
prasinezumab[1] (anti-αSynuclein, RG7935, PRX002)	Parkinson's disease	II	316	The study did not meet its primary endpoint, but showed a reduced clinical decline of core motor signs (MDS UPDRS partIII). Data presented at MDS & ADPD 2020-22. The Open Label Extension is ongoing. OLE data presented at MDS 2023 OLE data presented at ADPD 2024	NCT03100149 (PASADENA)
		IIb	575	FPI Q2 2021 Recruitment completed Q1 2023	NCT04777331 (PADOVA)
alogabat (GABA-Aa5 PAM, RG7816)	Autism spectrum disorder	II	105	FPI Q1 2021	NCT04299464 (Aurora)

Partner: [1]Prothena
BS=Brainshuttle™; mAb=monoclonal antibody

pRED neurology development programs -2

Molecule	Indication	Phase	# of patients	Status	CT Identifier
Neurology					
MAGL inhibitor (RG6182)	Multiple sclerosis	I	Up to 36	FPI Q3 2023	
selnoflast* (NLRP3i, RG6418)	Parkinson's disease	Ib	48	FPI Q3 2022	

*molecule also in gRED development: Phase Ic in coronary artery disease with FPI Q4 2022

pRED immunology and ophthalmology development programs

Molecule	Indication	Phase	# of patients	Status	CT Identifier
Immunology					
selnoflast* (NLRP3i, RG6418)	Asthma	Ib	60	FPI Q1 2024	
NME (RG6382)	SLE	I	70	FPI Q4 2023	NCT05835986
Ophthalmology					
zifibancimig (VEGF-Ang2 DutaFab, RG6120)	nAMD	I	251	FPI Q4 2020	NCT04567303 (BURGUNDY)
NME (RG6209)	retinal disease	I	~70 (Part I)	FPI Q4 2022	

*molecule also in gRED development: Phase Ic in coronary artery disease with FPI Q4 2022

pRED infectious diseases development programs

Molecule	Indication	Phase	# of patients	Status	CT Identifier
Infectious Diseases					
ruzotolimod (TLR7 agonist (3) RG7854)	Chronic hepatitis B	I	150	FPI Q4 2016 Data presented at APASL 2019	NCT02956850
ruzotolimod/ xalnesiran[1]/ PDL1 LNA (RG7854/RG6346/RG6084)	Chronic hepatitis B	II	275	FPI Q3 2020	NCT04225715 (PIRANGA)
PDL1 LNA (RG6084)	Chronic hepatitis B	I	35	FPI Q1 2019 Part Ia: completed Part Ib: initiated	
zosurabalpin (Abx MCP, RG6006)	A. baumannii infections	I	204	FPI Q4 2020	NCT04605718
HBsAg MAb (RG6449)	Chronic hepatitis B	I	110	Part I: FPI Q2 2023 Part II: FPI Q4 2023	NCT05763576

Partner: [1]Dicerna Pharmaceuticals Inc./Novo Nordisk
Abx MCP=antibiotic macrocyclic peptide

Roche Group development pipeline

Marketed products development programmes

Roche Pharma global development programmes

Roche Pharma research and early development (pRED)

Genentech research and early development (gRED)

Spark

gRED oncology development programs -1

Molecule	Indication	Phase	# of patients	Status	CT Identifier
Oncology					
cevostamab (anti-FcRH5 x CD3; RG6160)	R/R multiple myeloma	I	300	FPI Q3 2017 Data presented at ASH 2020, 2021 & 2022	NCT03275103
	R/R multiple myeloma	I	120	FPI Q2 2021	NCT04910568
	BCMA-experienced R/R MM	I/II	140	FPI Q4 2022	NCT05535244
	R/R multiple myeloma	Ib	~110	FPI Q3 2023 In combination with elranatamab	NCT05927571
	Multiple myeloma platform study	I/II	50	FPI Q4 2023 Multiple molecules and combinations	NCT05583617
efbalropoendekin alfa (IL15/IL15Ra-Fc, RG6323)[1]	Solid tumors	Ia/Ib	250	FPI Q1 2020	NCT04250155
	R/R multiple myeloma	I	60	FPI Q2 2022	NCT05243342
	R/R multiple myeloma	I	90	FPI Q1 2023 Combination study with cevostamab	NCT05646836
autogene cevumeran (Individualized Neoantigen-Specific Therapy (iNeST); RG6180)[2]	Solid tumors	Ia/Ib	272	FPI Q4 2017 Data presented at AACR 2020 Recruitment completed Q1 2022	NCT03289962
	1L advanced melanoma	II	131	FPI Q1 2019 Recruitment completed Q4 2021	NCT03815058 (IMcode001)
	Adjuvant PDAC	II	260	FPI Q4 2023	NCT05968326 (IMcode003)

Partner: [1]Xencor, [2]BioNTech

gRED oncology development programs -2

Molecule	Indication	Phase	# of patients	Status	CT Identifier
Oncology					
runimotamab (HER2 x CD3, RG6194)	Metastatic HER2-expressing cancers	I	440	FPI Q2 2018 Study closed Q1 2024	NCT03448042
	Solid tumors	Ib	~125	FPI Q3 2022	NCT05487235
migoprotafib (SHP2i, RG6433)[1]	KRAS-G12C mutant solid tumors	Ib	~500	FPI Q4 2021 Arm F of a combination study investigating divarasib monotheraphy and combinations	NCT04449874
	EGFRi 2L+ NSCLC, 2L+ CRC	Ib	~120	FPI Q1 2024	NCT05954871
anti-CCR8 (RG6411)	Solid tumors	I	110	FPI Q4 2022	NCT05581004
AR degrader (RG6537)[2]	mCRPC	I	~160	FPI Q2 2023	NCT05800665
anti-latent TGFβ1 (SOF10; RG6440)	Solid tumors	Ib	120	FPI Q3 2023	NCT05867121
NME (RG6468)	Solid tumors	I	110	FPI Q4 2023	NCT06031441

Partner: [1]Relay, [2]Jemincare

gRED immunology and ophthalmology development programs

Molecule	Indication	Phase	# of patients	Status	CT Identifier
Immunology					
NME (RG6287, GDC-8264)	Acute graft versus host disease	Ib	40	FPI Q2 2023 Study closed Q4 2023	NCT05673876
NME (RG6315, MTBT1466A)	Systemic sclerosis	Ib	100	FPI Q1 2023	NCT05462522
NME (RG6341, GDC-6599)	Asthma	Ia/Ib	84	FPI Q4 2021	
	Chronic cough	IIa	80	FPI Q1 2023	NCT05660850
TMEM16A potentiator (RG6421, GDC-6988)	Cystic fibrosis	Ib	30	FPI Q3 2022 Study completed Q2 2023	ISRCTN15406513
Vixarelimab (RG6536)[1]	Idiopathic pulmonary fibrosis / Systemic sclerosis-associated interstitial lung disease	II	~290	FPI Q2 2023	NCT05785624
	Inflammatory bowel disease	II	~260	FPI expected Q2 2024	NCT06137183
Ophthalmology					
NME (RG6351)	DME	I	~90	FPI Q2 2022 LPI Q1 2024	ISRCTN14152148
OpRegen (RG6501)[2]	Geographic atrophy	II	60	FPI Q1 2023	NCT05626114

Partner: [1]Kiniksa Pharmaceuticals, [2]Lineage Cell Therapeutics

gRED infectious diseases development program

Molecule	Indication	Phase	# of patients	Status	CT Identifier
Infectious Diseases					
LepB inhibitor (RG6436)*	Complicated urinary tract infection	I	104	FPI Q2 2024	ISRCTN18049481

*moving forward with alternative LepB inhibitor (previously RG6319)

Roche Group development pipeline

Marketed products development programmes

Roche Pharma global development programmes

Roche Pharma research and early development (pRED)

Genentech research and early development (gRED)

Spark

Hemophilia A

Unique gene therapy platform

Molecule	Dirloctogene Samoparvovec (SPK-8011) (RG6357)	
Indication	**Hemophilia A**	
Phase/study	**Phase I**	**Phase I/II**
# of patients	N=100	N=30
Design	▪ Long term follow up study of patients who have received SPK-8011 in any prior Spark-sponsored SPK-8011 study	▪ Gene transfer, dose-finding safety, tolerability, and efficacy study of SPK-8011
Primary endpoint	▪ Safety	▪ Safety and changes from baseline in FVIII activity levels at week 52
Status	▪ Ongoing	▪ Updated data presented at ISTH 2020 and 2021 ▪ Recruitment completed Q1 2021 ▪ Data published in *NEJM* 2021;385:1961-1973 ▪ 5-year data published at ASH 2022
CT Identifier	NCT03432520	NCT03003533

ISTH=International Society on Thrombosis and Haemostasis; NEJM=New England Journal of Medicine

Pompe disease

Unique gene therapy platform

Molecule	**SPK-3006 (RG6359)**
Indication	**Pompe disease**
Phase/study	**Phase I/II RESOLUTE**
# of patients	N=20
Design	▪ Gene transfer study for late-onset Pompe disease
Primary endpoint	▪ Safety
Status	▪ FPI Q4 2020 ▪ Recruitment completed Q2 2022
CT Identifier	NCT04093349

Doing now what patients need next