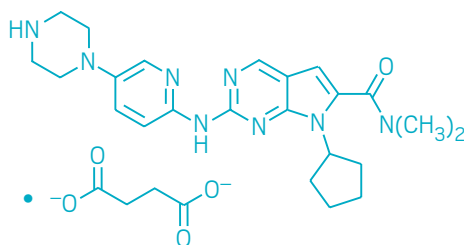


Bountiful year

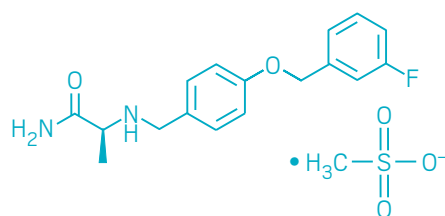
Cancer and rare-disease drugs scored the most approvals in 2017, and small molecules continued to be an important drug modality.

DRUG NAME	ACTIVE INGREDIENT	APPLICANT	MODE OF ACTION	INDICATION
Tulance	Plecanatide	Synergy Pharmaceuticals	Guanylate cyclase-C agonist	Chronic idiopathic constipation
Parsabiv	Etelcalcetide	Amgen	Calcium-sensing receptor modulator	Secondary hyperparathyroidism in chronic kidney disease
Emflaza	Deflazacort	Marathon Pharmaceuticals	Corticosteroid prodrug	Duchenne muscular dystrophy
Siliq	Brodalumab	Valeant Pharmaceuticals	IL-17RA antagonist	Psoriasis
Xermelo	Telotristat ethyl	Lexicon Pharmaceuticals	Tryptophan hydroxylase inhibitor	Carcinoid syndrome diarrhea
1 Kisqali	Ribociclib	Novartis	CDK4/6 inhibitor	HR-positive/HER2-negative advanced or metastatic breast cancer ▲
2 Xadago	Safinamide	Newron Pharmaceuticals	Monoamine oxidase B inhibitor	Parkinson's disease
Bavencio	Avelumab	Merck KGaA/Pfizer	PD-L1 inhibitor	Merkel cell carcinoma ▲●
Symproic	Naldemedine	Purdue Pharma	Mu opioid receptor antagonist	Opioid-induced constipation
3 Zejula	Niraparib	Tesaro	PARP inhibitor	Recurrent epithelial ovarian, fallopian tube, or primary peritoneal cancer ▲
Dupixent	Dupilumab	Sanofi/Regeneron Pharmaceuticals	IL-4 and IL-13 inhibitor	Eczema ▲
Ocrevus	Ocrelizumab	Roche	CD20 binder	Multiple sclerosis ▲
4 Austedo	Deutetrabenazine	Teva Pharmaceutical	Vesicular monoamine transporter 2 inhibitor	Huntington's disease-associated chorea
Ingrezza	Valbenazine	Neurocrine Biosciences	Vesicular monoamine transporter 2 inhibitor	Tardive dyskinesia ▲
Brineura	Cerliponase alfa	BioMarin Pharmaceutical	Enzyme replacement therapy	Batten disease ▲
5 Alunbrig	Brigatinib	Takeda Pharmaceutical	ALK inhibitor	ALK-positive non-small cell lung cancer ▲●
6 Rydapt	Midostaurin	Novartis	Multikinase inhibitor, including FLT3 and KIT	FLT3-positive acute myeloid leukemia ▲
Tymlos	Abaloparatide	Radius Health	Parathyroid hormone-related protein	Osteoporosis
Imfinzi	Durvalumab	AstraZeneca	PD-L1 inhibitor	Urothelial carcinoma ▲●
Radicava	Edaravone	Mitsubishi Tanabe	Unknown	Amyotrophic lateral sclerosis
Kevzara	Sarilumab	Sanofi/Regeneron Pharmaceuticals	IL-6R inhibitor	Rheumatoid arthritis
Baxdela	Delafloxacin	Melinta Therapeutics	Fluoroquinolone	Skin infections
Bevyxxa	Betrixaban	Portola Pharmaceuticals	Factor Xa inhibitor	Venous thromboembolism

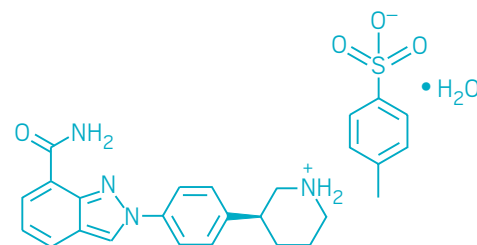
Note: Drugs appear in order of approval during 2017. Source: FDA



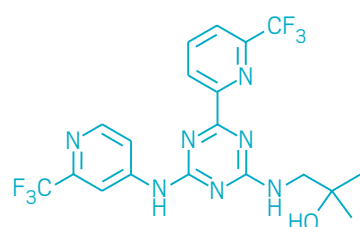
1 Kisqali (ribociclib)



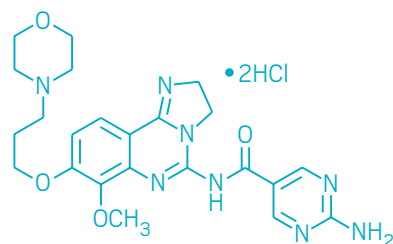
2 Xadago (safinamide)



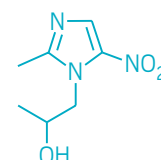
3 Zejula (niraparib)



7 Idhifa (enasidenib)



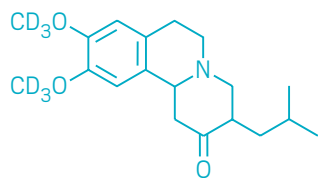
8 Aliqopa (copanlisib)



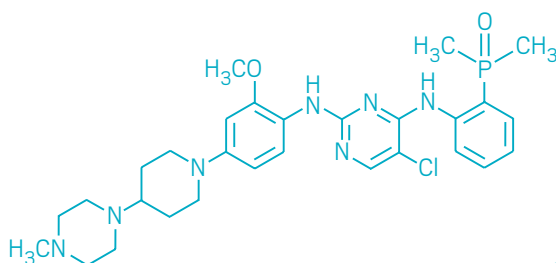
9 Solosec (secnidazole)

KEY: ■ Small molecule ■ Peptide ■ Antibody ■ Enzyme ■ Antibody-drug conjugate ▲ FDA breakthrough status
● Accelerated approval ■ Priority review voucher earned

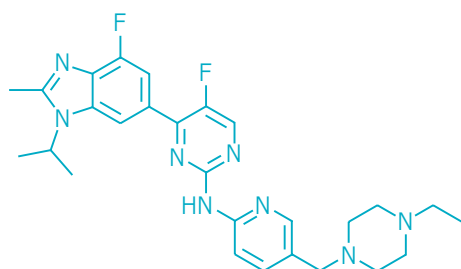
DRUG NAME	ACTIVE INGREDIENT	APPLICANT	MODE OF ACTION	INDICATION
Tremfya	Guselkumab	Johnson & Johnson	IL-23 inhibitor	Psoriasis
Nerlynx	Neratinib maleate	Puma Biotechnology	EGFR, HER2, and HER4 inhibitor	HER2-positive breast cancer
Vosevi	Sofosbuvir, velpatasvir, and voxilaprevir	Gilead Sciences	NS5B polymerase, NS5B, and NS3/4A protease inhibitors	Hepatitis C ▲
7 Idhifa	Enasidenib	Celgene	IDH2 inhibitor	IDH2-positive acute myeloid leukemia
Mavyret	Glecaprevir and pibrentasvir	AbbVie	NS3/4A protease and NS5A inhibitors	Hepatitis C ▲
Besponsa	Inotuzumab ozogamicin	Pfizer	CD22-binding antibody and cytotoxic antibiotic	Acute lymphoblastic leukemia ▲
Vabomere	Meropenem and vaborbactam	The Medicines Co.	Carbapenem antibacterial and non-β-lactam β-lactamase inhibitor	Complicated urinary tract infections
Benznidazole	Benznidazole	Chemo Research	Nitroimidazole antimicrobial	Chagas disease ●
8 Aliqopa	Copanlisib	Bayer	Pan-PI3K inhibitor	Follicular lymphoma ●
9 Solosec	Secnidazole	Symbiomix Therapeutics	Nitroimidazole antimicrobial	Bacterial vaginosis
10 Verzenio	Abemaciclib	Eli Lilly & Co.	CDK4/6 inhibitor	Breast cancer ▲
11 Calquence	Acalabrutinib	AstraZeneca	BTK inhibitor	Mantle cell lymphoma ▲ ●
12 Vyulta	Latanoprostene bunod ophthalmic solution	Valeant Pharmaceuticals	Metabolizes into two pressure-lowering moieties	Glaucoma/ocular hypertension
13 Prevymis	Letermovir	Merck & Co.	Cytomegalovirus DNA terminase complex inhibitor	Infection prevention after bone marrow transplant ▲
Fasenra	Benralizumab	AstraZeneca	IL-5R α receptor binder	Severe asthma
Mepsevii	Vestronidase alfa	Ultragenyx Pharmaceutical	Enzyme replacement therapy	MPS VII (Sly syndrome)
Hemlibra	Emicizumab	Roche	Factor IX and X binder	Hemophilia A ▲
Ozempic	Semaglutide	Novo Nordisk	GLP-1 receptor agonist	Type 2 diabetes
Xepi	Ozenoxacin	Medimetriks Pharmaceuticals	Nonfluorinated quinolone antibiotic	Impetigo
Rhopressa	Netarsudil ophthalmic solution	Aerie Pharmaceuticals	ρ-kinase inhibitor	Glaucoma/ocular hypertension
Macrilen	Macimorelin acetate	Aeterna Zentaris	Ghrelin mimetic	Adult growth hormone deficiency
14 Steglatro	Ertugliflozin	Merck & Co./Pfizer	SGLT2 inhibitor	Type 2 diabetes
Giapreza	Angiotensin II	La Jolla Pharmaceutical	Synthetic human angiotensin II	Hypotension in sepsis or critical illness



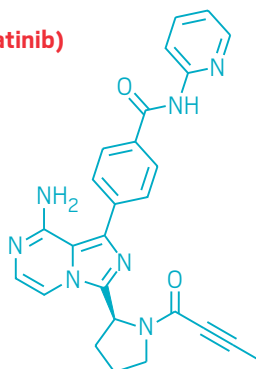
4 Austedo (deutetrabenazine)



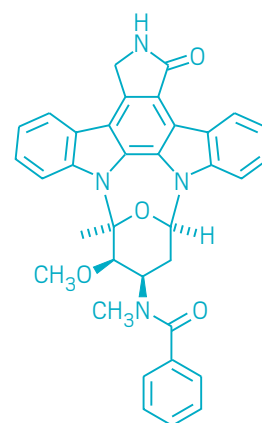
5 Alunbrig (brigatinib)



10 Verzenio (abemaciclib)



11 Calquence (acalabrutinib)



6 Rydapt (midostaurin)