

Antibody
  Antibody–drug conjugate
  Fusion protein
  Neurotoxin
  Oligonucleotide
  Peptide
  Polymer
  Small interfering RNA
  Small molecule

## Healthy harvest

The FDA approved 48 new drugs in 2019, a crop that, while dominated by small molecules, featured a wide range of newer modalities.

DRUG NAME	ACTIVE INGREDIENT	MARKETER	INDICATION	MECHANISM OF ACTION
Ubrelyv	Ubrogepant	Allergan	Acute migraines	CGRP receptor antagonist
Enhertu	Fam-trastuzumab deruxtecan	AstraZeneca and Daiichi Sankyo	Metastatic breast cancer	HER2-directed antibody and topoisomerase inhibitor
Dayvigo	Lemborexant	Eisai	Insomnia	Orexin receptor antagonist
Caplyta	Lumateperone tosylate	Intra-Cellular Therapies	Schizophrenia	Unknown
TissueBlue	Brilliant blue G ophthalmic solution	Dutch Ophthalmic Research Center	Internal limiting membrane staining	Dye
Padcev	Enfortumab vedotin	Astellas Pharma and Seattle Genetics	Bladder cancer	Nectin-4-directed antibody and microtubule inhibitor
Vyondys 53	Golodirsen	Sarepta Therapeutics	Duchenne muscular dystrophy	Exon skipping to enable production of dystrophin
1 Oxbritya	Voxelotor	Global Blood Therapeutics	Sickle cell disease	Hemoglobin S polymerization inhibitor
Xcopri	Cenobamate	SK Biopharmaceuticals	Partial-onset seizures	Suspected positive allosteric modulator of GABA <sub>A</sub> ion channel
Givlaari	Givosiran	Alnylam Pharmaceuticals	Acute hepatic porphyria	Aminolevulinic acid synthase 1 silencing
Adakveo	Crizanlizumab	Novartis	Pain associated with sickle cell disease	P-selectin inhibitor
Fetroja	Cefiderocol	Shionogi	Complicated urinary tract infections	Cephalosporin antibacterial
Brukinsa	Zanubrutinib	BeiGene	Mantle cell lymphoma	BTK inhibitor
Reblozyl	Luspatercept	Acceleron Pharma, Celgene	Anemia in people with $\beta$ -thalassemia	Erythroid maturation agent
ExEm Foam	Air polymer-type A	IQ Medical Ventures	Diagnostic to assess fallopian tube function in women with known or suspected infertility	Contrast agent
2 Trikafta	Elexacaftor, ivacaftor, tezacaftor	Vertex Pharmaceuticals	Cystic fibrosis	CFTR corrector, CFTR potentiator, CFTR corrector
3 Reyvow	Lasmiditan	Eli Lilly and Company	Acute migraines	5-HT <sub>1F</sub> receptor agonist
Fluorodopa F-18	Fluorodopa F-18	None	Diagnostic for Parkinson's disease	Positron-emission tomography
Scenesse	Afamelanotide	Clinuvel Pharmaceuticals	Light-exposure-related pain in people with erythropoietic protoporphyria	Melanocortin-1 receptor agonist
Beovu	Brolucizumab	Novartis	Wet age-related macular degeneration	VEGF inhibitor
Aklief	Trifarotene	Galderma	Acne	RAR agonist
4 Ibsrela	Tenapanor	Ardelyx	Irritable bowel syndrome	NHE3 sodium transport inhibitor
Nourianz	Istradefylline	Kyowa Kirin	"Off" episodes in people with Parkinson's disease	Suspected adenosine A <sub>2A</sub> receptor antagonist
Ga-68-DOTATOC	Ga-68-DOTATOC	None	Imaging agent to localize somatostatin receptor-positive neuroendocrine tumors	Positron-emission tomography
Xenleta	Lefamulin	Nabriva Therapeutics	Pneumonia	Systemic pleuromutilin antibacterial
Rinvoq	Upadacitinib	AbbVie	Rheumatoid arthritis	JAK inhibitor
Inrebic	Fedratinib	Celgene	Myelofibrosis	JAK2 and FLT3 inhibitor
5 Rozlytrek	Entrectinib	Roche	Non-small-cell lung cancer whose tumors are ROS1 positive	ROS1 and NTRK inhibitor
Wakix	Pitolisant	Harmony Biosciences	Excessive daytime sleepiness in people with narcolepsy	Unknown
6 Pretomanid	Pretomanid	Global Alliance for TB Drug Development	Treatment-resistant tuberculosis	Nitroimidazooxazine antimycobacterial
Turalio	Pexidartinib	Daiichi Sankyo	Symptomatic tenosynovial giant-cell tumors	CSF1R, KIT, and FLT3-ITD inhibitor
Nubeqa	Darolutamide	Bayer	Nonmetastatic castration-resistant prostate cancer	Androgen receptor inhibitor
Accrufer	Ferric maltol	Shield Therapeutics	Iron-deficiency anemia	Iron delivery
Recarbrio	Imipenem, cilastatin, relebactam	Merck & Co.	Complicated urinary tract and complicated intra-abdominal infections	Penem antibacterial, renal dehydropeptidase inhibitor, $\beta$ -lactamase inhibitor
Xpovio	Selinexor	Karyopharm Therapeutics	Multiple myeloma	Nuclear export inhibitor
Vyleesi	Bremelanotide	Amag Pharmaceuticals	Hypoactive sexual desire disorder in premenopausal women	Melanocortin receptor agonist
Polivy	Polatuzumab vedotin	Roche	Diffuse large B-cell lymphoma	CD79b binder with antimetabolic agent
7 Piqray	Alpelisib	Novartis	Breast cancer	PI3K $\alpha$ inhibitor
Vyndaqel	Tafamidis meglumine	Pfizer	Heart disease caused by transthyretin-mediated amyloidosis	Selective TTR stabilizer
Skyrizi	Risankizumab	AbbVie	Plaque psoriasis	IL-23 inhibitor
Balversa	Erdafitinib	Johnson & Johnson	Bladder cancer	FGFR inhibitor
Evenity	Romosozumab	Amgen, UCB	Osteoporosis in postmenopausal women	Sclerostin inhibitor
8 Mayzent	Siponimod	Novartis	Relapsing forms of multiple sclerosis	Selective sphingosine 1-phosphate receptor modulator
Sunosi	Solriamfetol	Jazz Pharmaceuticals	Excessive sleepiness in people with narcolepsy or obstructive sleep apnea	Dopamine and norepinephrine reuptake inhibitor
9 Zulresso	Brexanolone	Sage Therapeutics	Postpartum depression	Allosteric GABA receptor modulator
Egaten	Triclabendazole	Novartis	Fascioliasis	Unknown
Cablivi	Caplacizumab	Sanofi	Acquired thrombotic thrombocytopenic purpura	Anti-von Willebrand factor nanobody
Jeuveau	PrabotulinumtoxinA	Evolus	Temporary improvement of frown lines	Acetylcholine release inhibitor

Sources: US Food and Drug Administration, companies. Note: Drugs shown in reverse chronological order of approval during 2019.