



FDA-approved Small Molecule Kinase Inhibitors (2001-2022)



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01 Imatinib Gleevec (Novartis) Protein Target: BCR-Abl, KIT, PDGFR 2001 Multiple cancers	02 Gefitinib Iressa (AstraZeneca) Protein Target: EGFR 2003 Multiple cancers	03 Erlotinib Tarceva (Osi pharmaceuticals) Protein Target: EGFR 2004 Multiple cancers	04 Sorafenib Nexavar (Bayer) Protein Target: VEGFR, PDGFR, c-Raf, b-Raf 2005 Multiple cancers	05 Sunitinib Sutent (Pfizer) Protein Target: VEGFR, PDGFR, KIT, RET, etc. 2006 Multiple cancers	06 Dasatinib Sprycel (Bristol-Myers Squibb) Protein Target: BCR-Abl, Src, etc. 2006 Multiple cancers	07 Lapatinib Tykerb (GlaxoSmithKline) Protein Target: EGFR, ErbB2 2007 Breast cancer	08 Nilotinib Tasigna (Novartis) Protein Target: BCR-Abl, PDGFR, KIT, etc. 2007 Chronic Myelogenous Leukemia (CML)	09 Pazopanib Votrient (GlaxoSmithKline) Protein Target: VEGFR, PDGFR, FGFR, KIT 2009 Renal Cell Carcinoma, Soft Tissue Sarcoma	10 Vandetanib Caprelsa (AstraZeneca) Protein Target: VEGFR, EGFR 2011 Multiple Endocrine Cancers
11 Vemurafenib Zelboraf (Roche) Protein Target: B-Raf 2011 Thyroid Tumour, Melanoma	12 Crizotinib Xalkori (Pfizer) Protein Target: ALK, C-Met, HGFR 2011 Multiple Cancers	13 Ruxolitinib Jakafi (Incyte) Protein Target: JAK1, JAK2 2011 Myelofibrosis, Polycythemia Vera	14 Axitinib Inlyta (Pfizer) Protein Target: VEGFR, KIT, PDGFR 2012 Renal Cell Carcinoma	15 Bosutinib Bosulif (Wyeth) Protein Target: BCR-Abl, Src, etc. 2012 Chronic Myelogenous Leukemia	16 Regorafenib Stivarga (Bayer) Protein Target: VEGFR 2012 Multiple Cancers	17 Tofacitinib Xeljanz (Pfizer) Protein Target: JAK2, JAK3 2012 Rheumatoid Arthritis	18 Cabozantinib Cometriq (Exelixis) Protein Target: VEGFR2, C-Met 2012 Thyroid Cancer	19 Ponatinib Iclusig (Ariad) Protein Target: BCR-Abl 2012 CML, Acute Lymphoblastic Leukemia	20 Trametinib Mekinist (GlaxoSmithKline) Protein Target: MEK1, MEK2 2013 Metastatic Melanoma
21 Dabrafenib Tafinlar (GlaxoSmithKline) Protein Target: B-Raf 2013 Metastatic Melanoma	22 Afatinib Gilotrif (Boehringer Ingelheim) Protein Target: EGFR, HER2 2013 Non-Small Cell Lung Cancer (NSCLC)	23 Ibrutinib Imbruvica (pharmaceuticals) Protein Target: BTK 2013 CLL, mantle cell lymphoma	24 Ceritinib Zykadia (Novartis) Protein Target: ALK 2014 NSCLC	25 Idelalisib Zydelig (GILEAD) Protein Target: PI3K δ 2014 Multiple Cancers	26 Nintedanib OFEV (Boehringer Ingelheim) Protein Target: VEGFR, EGFR, PDGFR 2014 Idiopathic Pulmonary Fibrosis	27 Palbociclib Ibrance (Pfizer) Protein Target: CDK4, CDK6 2015 Breast Cancer	28 Lenvatinib Lenvima (Eisai) Protein Target: VEGFR, PDGFR 2015 Thyroid Cancer	29 Cobimetinib Cotellic (Genentech) Protein Target: MEK 2015 Malignant Melanoma (with BRAF mutation)	30 Osimertinib Tagrisso (AstraZeneca) Protein Target: EGFR 2018 Non-Small Cell Lung Cancer
31 Alectinib Alecensa (Hoffmann-La Roche) Protein Target: ALK 2017 Non-Small Cell Lung Cancer	32 Ribociclib Kisqali (Novartis) Protein Target: CDK4, CDK6, HER2 2017 Breast Cancer	33 Brigatinib Alunbrig (ARIAD) Protein Target: EGFR, ALK 2017 Non-Small Cell Lung Cancer	34 Midostaurin Rudapt (Novartis) Protein Target: CD135 (FLT3) 2017 Myeloid Leukaemia	35 Neratinib Nerlynx (Pfizer) Protein Target: EGFR, HER2 2017 Breast Cancer	36 Copanlisib Alliqa (Bayer) Protein Target: PI3K α , PI3K δ 2017 Relapsed Follicular Lymphoma	37 Abemaciclib Verzenio (Eli Lilly) Protein Target: CDK4, CDK6 2017 Breast Cancer	38 Acalabrutinib Calquence (AstraZeneca) Protein Target: BTK 2017 Chronic Lymphocytic Leukaemia (CLL)	39 Netarsudil Rhopressa (Aerie) Protein Target: Rho Kinase 2018 Glaucoma and Ocular hypertension	40 Fostamatinib Tavalisse (Rigel) Protein Target: Spleen Tyrosine Kinase (SYK) 2018 Chronic immune thrombocytopenia
41 Baricitinib Olumiant (Eli Lilly) Protein Target: JAK1, JAK2 2018 Rheumatoid Arthritis	42 Encorafenib Braftovi (Novartis/Array) Protein Target: BRAF 2018 Melanoma, Colorectal Cancer	43 Binimetinib Mektovi (Array) Protein Target: MEK1, MEK2 2018 Multiple Cancers	44 Duvelisib Copiktra (Intellikine) Protein Target: PI3K 2018 Chronic Lymphocytic Leukaemia	45 Dacomitinib Vizimpro (Pfizer) Protein Target: EGFR 2018 Non-Small Cell Lung Cancer	46 Lorlatinib Lorbrena (Pfizer) Protein Target: ALK, ROS1 2018 Non-Small Cell Lung Cancer	47 Larotrectinib Vitrakvi (Array) Protein Target: Tropomyosin Kinase Receptors 2018 Multiple Cancers	48 Gilteritinib Xospata (Astellis) Protein Target: FLT3 2018 Acute Myeloid Leukaemia (AML)	49 Erdafitinib Balversa (Astellis) Protein Target: FGFR2/3 2019 Bladder Cancer	50 Alpelisib Piqray (Novartis) Protein Target: HER2 2019 Breast Cancer
51 Pexidartinib Turalio (Daiichi Sankyo) Protein Target: CSF-1R 2019 Tenosynovial Giant Cell Tumour	52 Entrectinib Rozytrek (Genentech) Protein Target: ROS1, TRK A-C, ALK 2019 Non-Small Cell Lung Cancer	53 Fedratinib Inrebic (Celgene) Protein Target: JAK2 2019 Myeloid Cancer	54 Upadacitinib Rinvoq (AbbVie) Protein Target: JAK1 2019 Rheumatoid Arthritis	55 Zanubrutinib Brukinsa (BeiGene) Protein Target: BTK 2019 Mantle Cell Lymphoma	56 Avapritinib Ayyavkit (Blueprint) Protein Target: PDGFRA 2020 Advanced Systemic Mastocytosis	57 Selumetinib Koselugo (AstraZeneca) Protein Target: MEK1, MEK2 2020 Neurofibromas	58 Pemigatinib Pemazyre (Incyte) Protein Target: FGFR2 2020 Bile Duct Cancer	59 Tucatinib Tukysa (Array) Protein Target: HER2 2020 Breast Cancer	60 Capmatinib Tabrecta (Novartis) Protein Target: c-Met 2020 Metastatic Non-Small Cell Lung Cancer
61 Selpercatinib Reltevo (Eli Lilly) Protein Target: RET receptor kinase 2020 NSCLC, Thyroid Cancer	62 Ripretinib Qinlock (Deciphera) Protein Target: KIT, PDGFRA 2020 Gastrointestinal Stromal Tumour (GIST)	63 Pralsetinib Gavreto (Blueprint) Protein Target: RET 2020 Non-Small Cell Lung Cancer	64 Tirbanibulin Klisyri (Almirall) Protein Target: SRC Kinase 2020 Actinic Keratosis	65 Tepotinib Tepmetko (Merck) Protein Target: MET 2021 Non-Small Cell Lung Cancer	66 Umbralisib Ukoniq (TG Therapeutics) WITHDRAWN FROM MARKET Protein Target: PI3K δ 2021 Marginal Zone Lymphoma	67 Trilaciclib Cosela (G1 Therapeutics) Protein Target: CDK4/6 2021 Myelosuppression	68 Tivozanib Fotivda (AVEO) Protein Target: VEGF 2021 Renal Cell Cancer	69 Infigratinib Tusletiq (QED Therapeutics) Protein Target: FGFR1-3 2021 Bile Duct Cancer	70 Belumosudil Rezurock (Sanofi) Protein Target: ROCK2 2021 Chronic Graft vs Host Disease
71 Mobocertinib Exkivity (Takeda) Protein Target: EGFR 2021 Non-Small Cell Lung Cancer	72 Asciminib Scemblix (Novartis) Protein Target: BCR-Abl1 2022 Chronic Myeloid Leukaemia (CML)	73 Abrocitinib Cibinqo (Pfizer) Protein Target: JAK1 2022 Atopic Dermatitis (Eczema)	74 Pacritinib Vonjo (CTI BioPharma) Protein Target: JAK2, FLT3 2022 Myelofibrosis						

Tyrosine Kinase Inhibitor

Serine/Threonine Kinase Inhibitor

Lipase Kinase Inhibitor

