

ASTRAZENECA DEVELOPMENT PIPELINE

AS AT 31 MARCH 2014

NMEs

Phase III / Registration

Submission dates shown for assets in Phase III and beyond. As disclosure of compound information is balanced by the business need to maintain confidentiality, information in relation to some compounds listed here has not been disclosed at this time.

| Compound | Mechanism | Area Under Investigation | Date Commenced Phase | Estimated Filing | | | |
|---|---|--|----------------------|--------------------|----------|----------|----------|
| | | | | US | EU | Japan | China |
| Cardiovascular and Metabolism | | | | | | | |
| <i>Brilinta / Brilique</i> ¹ | ADP receptor antagonist | arterial thrombosis | | Launched | Launched | Filed | Launched |
| <i>Epanova</i> [#] | omega-3 free fatty acids | hypertriglyceridaemia | | Filed | | | |
| <i>Farxiga / Forxiga</i> ² | SGLT-2 inhibitor | diabetes | | Launched | Launched | Approved | Filed |
| <i>Myalept</i> | leptin analogue | lipodystrophy | | Approved | 2015 | N/A | |
| Oncology | | | | | | | |
| <i>Caprelsa</i> | VEGFR / EGFR tyrosine kinase inhibitor with RET kinase activity | medullary thyroid cancer | | Launched | Launched | Q3 2014 | Filed |
| moxetumomab pasudotox [#] | anti-CD22 recombinant immunotoxin | hairy cell leukaemia | Q2 2013 | 2018 | 2018 | | |
| olaparib | PARP inhibitor | BRCAm PSR ovarian cancer | | Filed ³ | Filed | | |
| olaparib SOLO-1 | PARP inhibitor | 1st line BRCAm ovarian cancer | Q3 2013 | 2017 | 2017 | 2017 | 2017 |
| olaparib SOLO-2 | PARP inhibitor | BRCAm PSR ovarian cancer | Q3 2013 | 2016 | 2016 | 2016 | 2016 |
| olaparib GOLD | PARP inhibitor | 2nd line gastric cancer | Q3 2013 | | | 2017 | 2018 |
| olaparib OlympiAD | PARP inhibitor | metastatic breast cancer | Q2 2014 ⁴ | 2016 | 2016 | 2017 | |
| selumetinib [#] (ARRY-142886) SELECT-1 | MEK inhibitor | 2nd line KRAS+ NSCLC | Q4 2013 | 2017 | 2017 | | |
| selumetinib [#] (ARRY-142886) ASTRA | MEK inhibitor | differentiated thyroid cancer ⁵ | Q3 2013 | 2017 | 2017 | | |
| selumetinib [#] (ARRY-142886) SUMIT | MEK inhibitor | uveal melanoma ⁵ | Q1 2014 ⁶ | 2015 | 2015 | | |

Phase III / Registration (continued)

| Compound | Mechanism | Area Under Investigation | Date Commenced Phase | Estimated Filing | | | |
|---|--|---|----------------------|------------------|----------|-------|---------|
| | | | | US | EU | Japan | China |
| Respiratory, Inflammation and Autoimmunity | | | | | | | |
| benralizumab [#] | anti-IL-5R MAb | severe asthma | Q4 2013 | 2016 | 2016 | | |
| brodalumab [#] AMAGINE-1,2,3 | anti-IL-17R MAb | psoriasis | Q3 2012 | ++ | ++ | | |
| brodalumab [#] AMVISION-1,2 | anti-IL-17R MAb | psoriatic arthritis | Q1 2014 | ++ | ++ | | |
| lesinurad | selective uric acid reabsorption inhibitor (SURI) | chronic treatment of patients with gout | Q4 2011 | Q4 2014 | Q4 2014 | | 2017 |
| PT003 GFF | LAMA / LABA | COPD | Q2 2013 | 2015 | 2016 | | |
| PT001 GP | LAMA | COPD | Q2 2013 | 2015 | 2016 | | |
| Infection | | | | | | | |
| CAZ AVI [#] (CAZ104) RECLAIM | cephalosporin / beta lactamase inhibitor | serious infections | Q1 2012 | N/A | Q4 2014 | 2015 | 2016 |
| CAZ AVI [#] (CAZ104) REPROVE | cephalosporin / beta lactamase inhibitor | hospital-acquired pneumonia / ventilator-associated pneumonia | Q2 2013 | N/A | 2017 | 2017 | 2018 |
| Zinforo [#] | extended spectrum cephalosporin with affinity to penicillin-binding proteins | pneumonia / skin infections | | N/A | Launched | N/A | Q2 2014 |
| Neuroscience | | | | | | | |
| naloxegol [#] (NKTR-118) | oral peripherally-acting mu-opioid receptor antagonist | opioid-induced constipation | | Filed | Filed | | |

[#] Partnered product.

++ Filing is the responsibility of the partner.

1 Brilinta in the US; Brilique in rest of world.

2 Farxiga in the US; Forxiga in rest of world.

3 FDA accepted submission April 2014.

4 First patient randomised April 2014.

5 These indications previously included under the broad Phase II project listing.

6 First patient expected to dose early Q2 2014.

NMEs

Phases I and II

| Compound | Mechanism | Area Under Investigation | Phase | Date Commenced Phase | Estimated Filing | | | |
|--|---|--|-----------------|----------------------|------------------|----|-------|-------|
| | | | | | US | EU | Japan | China |
| Cardiovascular and Metabolism | | | | | | | | |
| AZD1722 [#] | NHE3 inhibitor | ESRD-Pi CKD with T2DM / ESRD-fluid retention | II | Q1 2013 | | | | |
| AZD4901 | hormone modulator | polycystic ovarian syndrome | II | Q2 2013 | | | | |
| roxadustat [#] (FG-4592) | hypoxia-inducible factor inhibitor | anaemia in CKD / ESRD | II ¹ | | 2018 | NA | NA | 2016 |
| MEDI6012 | LCAT | arterial thrombosis | I | Q1 2012 | | | | |
| MEDI8111 | Rh-factor II | trauma / bleeding | I | Q1 2014 | | | | |
| Oncology | | | | | | | | |
| AZD1775 [#] | WEE-1 inhibitor | ovarian cancer | II | Q4 2012 | | | | |
| AZD2014 | mTOR serine / threonine kinase inhibitor | solid tumours | II | Q1 2013 | | | | |
| AZD4547 | FGFR tyrosine kinase inhibitor | solid tumours | II | Q4 2011 | | | | |
| MEDI-551 [#] | anti-CD19 MAb | haematological malignancies | II | Q1 2012 | | | | |
| MEDI-573 [#] | anti-IGF MAb | metastatic breast cancer | II | Q2 2012 | | | | |
| MEDI4736 [#] | anti-PD-L1 MAb | NSCLC | II | Q1 2014 | | | | |
| selumetinib [#] (ARRY-142886) | MEK inhibitor | 2nd line KRAS-NSCLC | II | Q1 2013 | | | | |
| tremelimumab | anti-CTLA4 MAb | mesothelioma | II | Q2 2013 | | | | |
| AZD5363 [#] | AKT kinase inhibitor | breast cancer | II | Q1 2014 | | | | |
| AZD1208 | PIM kinase inhibitor | haematological malignancies | I | Q1 2012 | | | | |
| AZD6738 | ATR serine / threonine kinase inhibitor | CLL / head & neck | I | Q4 2013 | | | | |
| AZD8186 | PI3 kinase beta inhibitor | solid tumours | I | Q2 2013 | | | | |
| AZD9150 [#] | STAT3 inhibitor | haematological malignancies | I | Q1 2012 | | | | |
| AZD9291 | EGFR tyrosine kinase inhibitor | solid tumours | I | Q1 2013 | | | | |
| MEDI-565 [#] | anti-CEA BiTE MAb | solid tumours | I | Q1 2011 | | | | |
| MEDI0639 [#] | anti-DLL-4 MAb | solid tumours | I | Q2 2012 | | | | |
| MEDI0680 (AMP-514) | anti-PD-1 MAb | solid tumours | I | Q4 2013 | | | | |
| MEDI3617 [#] | anti-ANG-2 MAb | solid tumours | I | Q4 2010 | | | | |
| MEDI4736 [#] + tremelimumab | anti-PD-L1 MAb + anti-CTLA4 MAb | solid tumors | I | Q4 2013 | | | | |
| MEDI4736 [#] + dabrafenib + trametinib ² | anti-PD-L1 MAb + BRAF inhibitor + MEK inhibitor | melanoma | I | Q1 2014 | | | | |
| MEDI6469 [#] | murine anti-OX40 MAb | solid tumours | I | Q1 2006 | | | | |

NMEs

Phases I and II (continued)

| Compound | Mechanism | Area Under Investigation | Phase | Date Commenced Phase | Estimated Filing | | | |
|---|---|--|-------|----------------------|------------------|----|-------|-------|
| | | | | | US | EU | Japan | China |
| Oncology (continued) | | | | | | | | |
| moxetumomab pasudotox [#] | anti-CD22 recombinant immunotoxin | pALL | I | Q3 2008 | | | | |
| volitinib [#] (AZD6094) | MET tyrosine kinase inhibitor | solid tumours | I | Q1 2012 | | | | |
| Respiratory, Inflammation and Autoimmunity | | | | | | | | |
| AZD2115 [#] | MABA | COPD | II | Q2 2012 | | | | |
| AZD5069 | CXCR2 antagonist | asthma | II | Q4 2010 | | | | |
| anifrolumab [#] (MEDI-546) | anti-IFN-alpha MAb | SLE | II | Q1 2012 | | | | |
| benralizumab [#] | anti-IL-5R MAb | COPD | II | Q4 2010 | | | | |
| brodalumab [#] | anti-IL-17R MAb | asthma | II | Q2 2013 | | | | |
| mavrilimumab [#] | anti-GM-CSFR MAb | rheumatoid arthritis | II | Q1 2010 | | | | |
| MEDI2070 [#] | anti-IL-23 MAb | Crohn's disease | II | Q1 2013 | | | | |
| MEDI7183 [#] | anti-a4b7 MAb | Crohn's disease / ulcerative colitis | II | Q4 2012 | | | | |
| MEDI8968 [#] | anti-IL-1R MAb | COPD / HS | II | Q4 2011 | | | | |
| RDEA3170 | selective uric acid reabsorption inhibitor (SURI) | chronic management of hyperuricaemia in patients with gout | II | Q3 2013 | | | | |
| sifalimumab [#] (MEDI-545) | anti-IFN-alpha MAb | SLE | II | Q3 2008 | | | | |
| tralokinumab | anti-IL-13 MAb | asthma / IPF | II | Q1 2008 | | | | |
| AZD1419 | TLR9 antagonist | asthma | I | Q3 2013 | | | | |
| AZD4721 | CXCR2 antagonist | COPD | I | Q3 2013 | | | | |
| AZD7624 | inhaled P38 inhibitor | COPD | I | Q1 2013 | | | | |
| AZD8848 [#] | inhaled TLR7 antagonist | asthma | I | Q2 2012 | | | | |
| MEDI-551 [#] | anti-CD19 MAb | multiple sclerosis | I | Q3 2012 | | | | |
| MEDI5872 [#] | anti-B7RP1 MAb | SLE | I | Q4 2008 | | | | |
| MEDI9929 [#] | anti-TSLP MAb | asthma | I | Q4 2008 | | | | |
| PT010 | LAMA / LABA / ICS | COPD | I | Q4 2013 | | | | |
| Infection | | | | | | | | |
| AZD5847 | oxazolidinone anti-bacterial inhibitor | tuberculosis | II | Q4 2012 | | | | |
| CXL [#] | beta lactamase inhibitor / cephalosporin | MRSA | II | Q4 2010 | | | | |
| ATM AVI | monobactam / beta lactamase inhibitor | targeted serious bacterial infections | I | Q4 2012 | | | | |
| AZD0914 | GyrAR | serious bacterial infections | I | Q4 2013 | | | | |
| MEDI-550 | pandemic influenza virus vaccine | pandemic influenza prophylaxis | I | Q2 2006 | | | | |

NMEs

Phases I and II (continued)

| Compound | Mechanism | Area Under Investigation | Phase | Date Commenced Phase | Estimated Filing | | | |
|------------------------------|---------------------------------------|--|-------|----------------------|------------------|----|-------|-------|
| | | | | | US | EU | Japan | China |
| Infection (continued) | | | | | | | | |
| MEDI-559 (PRVV) | paediatric RSV vaccine | RSV prophylaxis | I | Q4 2008 | | | | |
| MEDI4893 | MAB binding to <i>S. aureus</i> toxin | hospital-acquired pneumonia / serious <i>S. aureus</i> infection | I | Q1 2013 | | | | |
| MEDI9287 ³ | H7N9 vaccine | avian influenza | I | Q4 2013 | | | | |
| Neuroscience | | | | | | | | |
| AZD3241 | myeloperoxidase inhibitor | Parkinson's disease | II | Q2 2012 | | | | |
| AZD5213 | histamine-3 receptor antagonist | Tourette's syndrome / neuropathic pain | II | Q4 2013 | | | | |
| AZD3293 [#] | beta-secretase inhibitor | Alzheimer's disease | I | Q4 2012 | | | | |
| AZD6423 | NMDA antagonist | suicidal ideation | I | Q3 2013 | | | | |

Partnered product.

1 In-licensed asset in late-development but the Phase III AstraZeneca programme has yet to randomise its first patient.

2 MedImmune-sponsored study in collaboration with GSK.

3 Vaccine in development through a CRADA with NIH.

Line Extensions

| Compound | Mechanism | Area Under Investigation | Date Commenced Phase | Estimated Filing | | | |
|--|---|---|----------------------|----------------------|-----------------------|---------|-------|
| | | | | US | EU | Japan | China |
| Cardiovascular and Metabolism | | | | | | | |
| <i>Brilinta / Brilique</i> ¹ EUCLID | ADP receptor antagonist | outcomes study in patients with peripheral artery disease | Q4 2012 | 2016 | 2016 | 2016 | 2017 |
| <i>Brilinta / Brilique</i> ¹ PEGASUS-TIMI 54 | ADP receptor antagonist | outcomes study in patients with prior myocardial infarction | Q4 2010 | 2015 | 2015 | 2015 | 2017 |
| <i>Brilinta / Brilique</i> ¹ SOCRATES | ADP receptor antagonist | outcomes study in patients with stroke or TIA | Q1 2014 | 2016 | 2016 | 2016 | 2017 |
| <i>Brilinta / Brilique</i> ¹ THEMIS | ADP receptor antagonist | outcomes study in patients with Type 2 diabetes and CAD, but without a previous history of MI or stroke | Q1 2014 | 2017 | 2017 | 2018 | 2018 |
| <i>Bydureon Dual Chamber Pen</i> | GLP-1 receptor agonist | diabetes | | Approved | Filed | Q2 2014 | |
| <i>Bydureon EXSCEL</i> | GLP-1 receptor agonist | outcomes study | Q2 2010 | 2018 | 2018 | 2018 | |
| <i>Bydureon weekly suspension</i> | GLP-1 receptor agonist | diabetes | Q1 2013 | 2015 | 2015 | | |
| <i>Farxiga / Forxiga</i> ² DECLARE-TIMI 58 | SGLT-2 inhibitor | outcomes study | Q2 2013 | 2020 | 2020 | | |
| <i>Kombiglyze XR FDC / Komboglyze FDC</i> ³ | DPP-4 inhibitor / metformin FDC | diabetes | | Launched | Launched | | Filed |
| <i>Onglyza SAVOR-TIMI 53</i> | DPP-4 inhibitor | outcomes study | Q2 2010 | Q1 2014 ⁴ | Filed | | 2015 |
| saxagliptin / dapagliflozin FDC | DPP-4 inhibitor / SGLT-2 inhibitor FDC | diabetes | Q2 2012 | 2015 | 2015 | | |
| <i>Xigduo XR FDC / Xigduo FDC</i> ⁵ | SGLT-2 inhibitor / metformin FDC | diabetes | | Filed | Approved ⁶ | | |
| Oncology | | | | | | | |
| <i>Caprelsa</i> | VEGFR / EGFR tyrosine kinase inhibitor with RET kinase activity | differentiated thyroid cancer | Q2 2013 | 2016 | 2016 | 2016 | |
| <i>Faslodex FALCON</i> | oestrogen receptor antagonist | 1st line advanced breast cancer | Q4 2012 | 2016 | 2016 | 2016 | 2016 |
| <i>Iressa</i> | EGFR tyrosine kinase inhibitor | treatment beyond progression | Q1 2012 | | 2015 | 2015 | 2015 |
| Respiratory, Inflammation and Autoimmunity | | | | | | | |
| <i>Symbicort</i> ⁷ | ICS / LABA | Breath Actuated Inhaler asthma / COPD | | | | | |

Line Extensions (continued)

| Compound | Mechanism | Area Under Investigation | Date Commenced Phase | Estimated Filing | | | |
|------------------------------|-------------------------------|--|----------------------|------------------|----------|---------|----------|
| | | | | US | EU | Japan | China |
| Neuroscience | | | | | | | |
| <i>Diprivan</i> [#] | sedative and anaesthetic | conscious sedation | | N/A | Launched | Q4 2014 | Launched |
| Gastrointestinal | | | | | | | |
| <i>Entocort</i> | glucocorticoid steroid | Crohn's disease / ulcerative colitis | | Launched | Launched | 2015 | N/A |
| linaclotide [#] | GC-C receptor peptide agonist | irritable bowel syndrome with constipation (IBS-C) | | N/A | N/A | N/A | 2015 |
| <i>Nexium</i> | proton pump inhibitor | peptic ulcer bleeding | | Approved | Launched | N/A | Launched |

Partnered product.

1 *Brilinta* in the US; *Brilique* in rest of world.

2 *Farxiga* in the US; *Forxiga* in rest of world.

3 *Kombiglyze XR* in the US; *Komboglyze FDC* in the EU.

4 Filed and awaiting regulatory acceptance.

5 *Xigduo XR FDC* in the US; *Xigduo FDC* in the EU.

6 Approval granted in January 2014 but reported as a progression for FY2013.

7 Development of a new BAI device is ongoing.