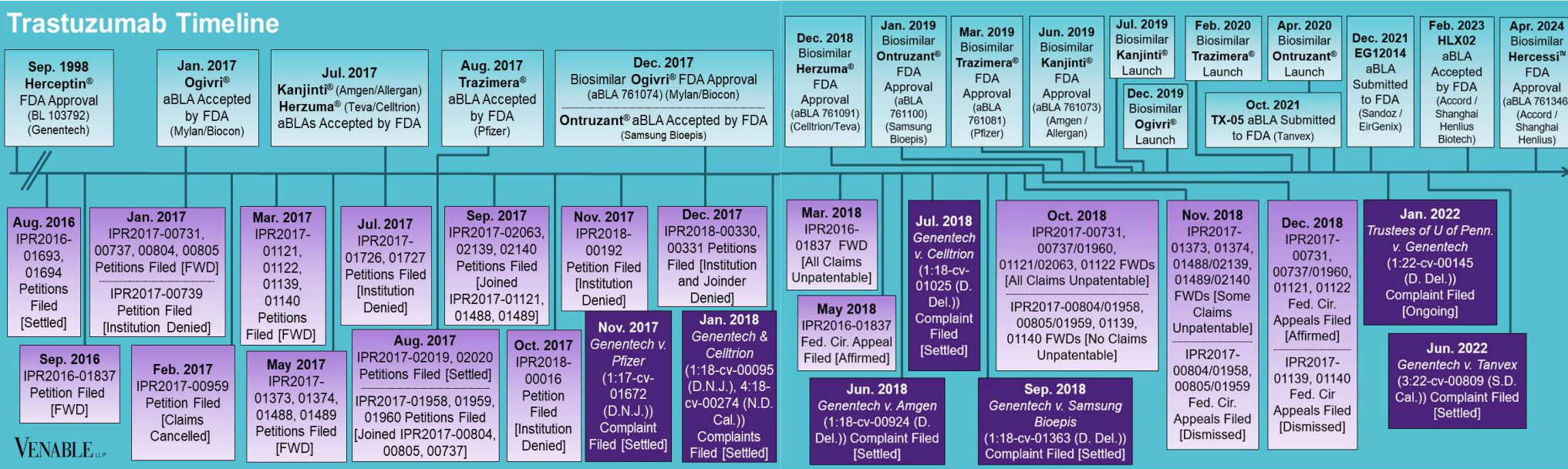
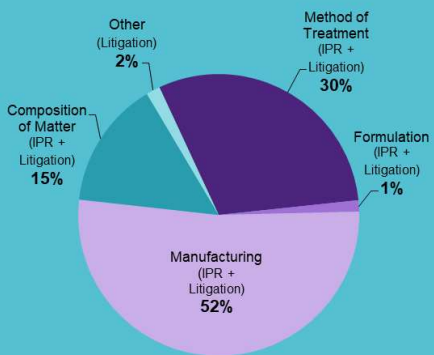


Trastuzumab Timeline

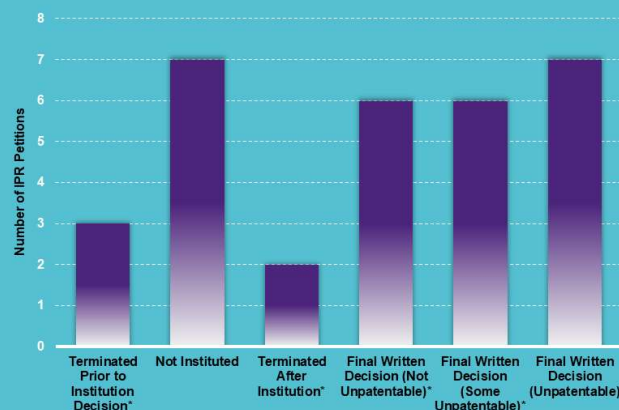


Trastuzumab Challenged Claim Types in IPR and Litigation*



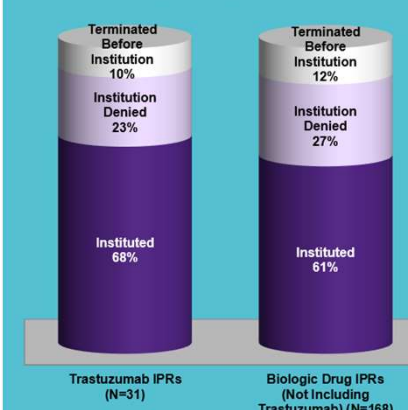
*In litigations, it has been alleged that at least these claims will be infringed or are invalid.

Trastuzumab IPR Status



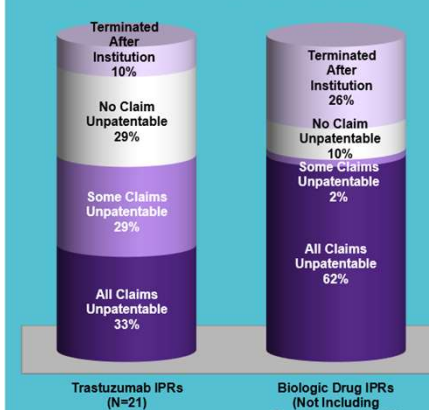
*Joinder counted as separate decisions

IPR Institution Rates*



*Joinder counted as separate decisions

Outcomes After Institution*



*Joinder counted as separate decisions

FWD = Final Written Decision

Spotlight On: Trastuzumab

May 31, 2024

Technology: Trastuzumab is a humanized monoclonal antibody that targets the HER2/neu receptor, which is overexpressed in some types of cancer. The HER2 pathway is involved in cell growth and division.

| | <i>Genentech v. Pfizer</i> 1:17-cv-01672 (D. Del.) Settled Cont'd below | <i>Celltrion v. Genentech</i> 4:18-cv-00274 (N.D. Cal.) Dismissed; Fed. Cir. 18-2160 Dismissed Cont'd below | <i>Genentech v. Celltrion</i> 1:18-cv-00095 (D. Del.) Settled Cont'd below | <i>Genentech v. Amgen</i> 1:18-cv-00924 (D. Del.) Settled; Fed. Cir. 19-2156 TRO/PI Denied Cont'd below | <i>Genentech v. Celltrion</i> 1:18-cv-01025 (D. Del.) Settled Cont'd below | <i>Genentech v. Samsung Bioepis</i> 1:18-cv-01363 (D. Del.) Settled Cont'd below | <i>Pfizer v. Genentech</i> IPR2017-02019 Settled after institution; IPR2018-00330 Institution and joinder denied | <i>Celltrion v. Genentech</i> IPR2017-01373 IPR2017-01374 FWD- Some claims unpatentable | <i>Pfizer & Samsung Bioepis v. Genentech</i> IPR2017-01488 IPR2017-02139 (joined) FWD- Some claims unpatentable | <i>Pfizer & Samsung Bioepis v. Genentech</i> IPR2017-01489 IPR2017-02140 (joined) FWD- Some claims unpatentable | <i>Pfizer & Samsung Bioepis v. Genentech</i> IPR2017-00804 IPR2017-01958 (joined) FWD- No claims unpatentable, Fed. Cir. 19-1174 Settled | <i>Celltrion v. Genentech</i> IPR2017-01139 FWD- No claims unpatentable, Fed. Cir. 19-1258 Settled | <i>Hospira v. Genentech</i> IPR2016-01837 FWD- All claims unpatentable, Fed. Cir. 18-1933 Affirmed (US as Intervenor, Hospira settled) |
|-----------|--|--|---|---|---|---|---|---|---|---|--|---|---|
| 6,121,428 | x | | x | x | x | | | | | | | | |
| 6,242,177 | x | | x | x | x | | | | | | | | |
| 6,331,415 | x | x | x | x | x | x | | | | | | | |
| 6,339,142 | x | x | x | | x | x | x | | | | | | |
| 6,407,213 | x | x | x | x | x | x | | x | x | x | | | |
| 6,417,335 | x | x | x | x | x | x | | | | | | | |
| 6,489,447 | x | x | x | x | x | | <i>Pfizer & Samsung Bioepis v. Genentech</i> IPR2017-00805 IPR2017-01959 (joined) FWD- No claims unpatentable, Fed. Cir. 19-1173 Settled | <i>Celltrion v. Genentech</i> IPR2017-01140 FWD- No claims unpatentable, Fed. Cir. 19-1259 Settled | <i>Hospira v. Genentech</i> IPR2017-00731 FWD- All claims unpatentable, Fed. Cir. 19-1263 Affirmed (US as Intervenor, Hospira settled) | <i>Celltrion & Pfizer v. Genentech</i> IPR2017-01121 IPR2017-02063 (joined) FWD- All claims unpatentable, Fed. Cir. 19-1267 Affirmed (US as Intervenor, Other parties settled) | | | |
| 6,586,206 | x | x | x | x | x | x | | | | | | | |
| 6,610,516 | x | x | x | | x | x | | | | | | | |
| 6,620,918 | x | x | x | x | x | | | | | | | | |
| 6,627,196 | x | x | x | x | x | x | | | | | x | x | |
| 6,716,602 | x | x | x | | x | | | | | | | | |
| 6,870,034 | | | | x | | | | | | | <i>Pfizer v. Genentech</i> IPR2018-00016 Institution denied | <i>Samsung Bioepis v. Genentech</i> IPR2018-00192 Institution denied | <i>Trustees of U of Penn. v. Genentech</i> 1:22-cv-00145 (D. Del.) Ongoing |
| 7,371,379 | x | x | x | x | x | x | x | x | | | | | |
| 7,390,660 | x | x | x | | x | x | | | | | | | |
| 7,449,184 | x | x | x | x | x | | | | | | | | |
| 7,485,704 | x | x | x | | x | x | | | | | | | |
| 7,501,122 | x | x | x | x | x | | | | | | | | |
| 7,625,558 | | | | | | | | | | | | | x |
| 7,807,799 | x | x | x | | x | x | | | | | | | |
| 7,846,441 | x | x | x | x | x | x | | | x | x | x | x | |

FWD = Final Written Decision

Spotlight On: Trastuzumab

May 31, 2024

| | <i>Genentech v. Pfizer</i> 1:17-cv-01672 (D. Del.) Cont'd from above | <i>Celltrion v. Genentech</i> 4:18-cv-00274 (N.D. Cal.) Cont'd from above | <i>Genentech v. Celltrion</i> 1:18-cv-00095 (D. Del.) Cont'd from above | <i>Genentech v. Amgen</i> 1:18-cv-00924 (D. Del.) Cont'd from above | <i>Genentech v. Celltrion</i> 1:18-cv-01025 (D. Del.) Cont'd from above | <i>Genentech v. Samsung Bioepis</i> 1:18-cv-01363 (D. Del.) Cont'd from above | <i>Genentech v. Tanvex</i> 3:22-cv-00809 (S.D. Cal.) Settled | <i>Pfizer & Samsung Bioepis v. Genentech</i> IPR2017-00737 IPR2017-01960 (joined) FWD- All claims unpatentable, Fed. Cir. 19-1265 Affirmed (US as Intervenor, Other parties settled) | <i>Pfizer v. Genentech</i> IPR2017-00739 Institution denied | <i>Celltrion v. Genentech</i> IPR2017-01122 FWD- All claims unpatentable, Fed. Cir. 19-1270 Affirmed (US as Intervenor, Celltrion settled) |
|------------|---|--|--|--|--|--|---|---|--|--|
| 7,892,549 | x | x | x | x | x | x | | x | x | x |
| 7,923,221 | x | x | x | x | x | x | | | | |
| 7,993,834 | x | x | x | x | x | x | | | | |
| 8,044,017 | x | | | x | | | | | | |
| 8,076,066 | x | x | x | x | x | x | | | | |
| 8,314,225 | x | | | x | | | | | | |
| 8,357,301 | | x | x | x | x | | | | | |
| 8,425,908 | x | x | x | x | x | x | | <i>Pfizer v. Genentech</i> IPR2017-02020 Settled after institution; IPR2018-00331 Institution and joinder denied | <i>Celltrion v. Genentech</i> IPR2017-00959 Terminated before institution (claims cancelled) | <i>Pfizer v. Genentech</i> IPR2017-01726 IPR2017-01727 Institution denied (claims previously cancelled) |
| 8,440,402 | x | x | x | x | x | x | | | | |
| 8,460,895 | x | x | x | x | x | | | | | |
| 8,512,983 | x | x | x | x | x | x | | | | |
| 8,574,869 | x | x | x | x | x | x | x | | | |
| 8,591,897 | | | | | | | | x | x | |
| 8,633,302 | x | x | x | | x | | | | | |
| 8,691,232 | x | x | x | x | x | | | | | |
| 8,710,196 | x | | | x | | | | | | |
| 8,771,988 | x | x | x | x | x | | | | | |
| 8,822,655 | x | x | x | | x | | | | | |
| 9,047,438 | | x | x | x | x | | | | | |
| 9,080,183 | | x | x | x | x | | | | | |
| 9,249,218 | x | x | x | x | x | x | | x | | |
| 9,428,548 | | x | x | | x | | | | | |
| 9,428,766 | x | x | x | x | x | | | | | |
| 9,487,809 | x | x | x | x | x | | | | | |
| 9,493,744 | x | | | x | | | | | | |
| 9,714,293 | x | x | x | x | x | x | | | | |
| 9,868,760 | | | | x | | | | | | |
| 10,160,811 | | | | x | | | | | | |
| 10,662,237 | | | | | | | x | | | |
| 10,808,037 | | | | | | | x | | | |