Table 3.5 Comparison of 351(k) and 505(b)(2) Pathways

Approval under 351(k)	Approval under 505(b)(2)
Available for biosimilars	Available for drugs and certain biologics
Evaluation: Biosimilarity to a reference product (highly similar to reference product, no clinically meaningful differences)	Evaluation: Proof of safety and efficacy
Litigation: BPCIA ("patent dance")	Litigation: Hatch–Waxman (30-month stay)
Market exclusivity: Limited market exclusivity for the first interchangeable biosimilar against other interchangeable biosimilars	Market exclusivity: Likely not applicable for biosimilars, although five years of new chemical exclusivity has been awarded for recombinant versions of previously animal-derived products

A number of biologics have been approved under the 505(b)(2) pathway. Examples of five 505(b)(2) products, all produced by recombinant DNA technology, include the following:

- Basaglar® (Insulin glargine injection): In August 2014, the FDA granted tentative approval for Eli Lilly's Basaglar, a recombinantly produced insulin glargine for treating diabetes. As a 505(b)(2) product, the approval relied in part on clinical studies carried out for Sanofi's Lantus (insulin glargine). Basaglar does not have final approval due to the Hatch–Waxman litigation involving Sanofi's patents and the associated 30-month stay. Time to tentative approval was quick, however, coming to exactly 10 months. The same product was approved as a biosimilar, in 2014, in Europe.
- Omnitrope® (Somatropin for injection): In its 2006 decision to approve Sandoz's Omnitrope, a recombinant growth hormone replacement therapy, the FDA addressed and rejected citizen petitions from Pfizer, Biotechnology Industry Organization, and Genentech opposing Omintrope's approval. FDA's decision to approve Omnitrope set forth the required level of similarity between Omnitrope and the reference product, Pfizer's Genotropin, for approval under the 505(b)(2) pathway. Notably, Omnitrope was approved as a biosimilar in Europe in 2006.
- Hylenex® (Hyaluronidase human injection): In December 2005, less than nine months after submission of the 505(b)(2) application, the FDA approved Hylenex, a recombinant version of human hyaluronidase. Hylenex is marketed by Baxter and it facilitates subcutaneous fluid administration. At the time Hylenex was approved, ovine-derived hyaluronidase was marketed as Vitrase by ISTA Pharmaceuticals, Inc. Despite the fact that Vitrase was FDA approved, the FDA concluded that Hylenex was a new chemical entity compared to the prior versions of hyaluronidase and awarded Hylenex five years of market exclusivity.