Krogsgaard Thomsen, Novo Nordisk chief scientific officer and executive vice president.

Thomsen says the company is tackling risk factors for the disease by searching for novel targets that could prevent or slow the progression of type 2 diabetes. In addition, they are pursuing what he calls “holy grail scenarios” for diabetes, including a US$2 billion investment in transforming injectable protein-based drugs into oral tablets, and also developing stem cell therapies that will regenerate or replace insulin-secreting beta cells in the pancreas.

Ingredients for a Top Employer

Every year, Science Careers surveys employees in the biotechnology, pharmaceutical, and biopharmaceutical industries to find out which companies are the top employers and to define the characteristics that make them so. In 2016, 5,984 respondents took the web-based survey deployed via email (see Survey Methodology online at www.sciencecareers.org/topemployers2016).

The bulk of respondents reported being 30 years of age or older (85%) and lived in North America or Europe (84%). Two-thirds of respondents have an advanced degree and 10 years or more of work experience, and 60% report working in R&D positions (see Survey Demographics box, above).

This year, as in the past, employees chose “innovative leader” as the top-driving characteristic of a top employer. Other company characteristics that drove the rankings were “treats employees with respect,” “having loyal employees,” “having work culture values aligned” with employees’ values, being “socially responsible,” and having a “clear vision” (see Driving Characteristics table, page 492).

The 2016 survey also asked respondents to define what makes companies the worst of the worst. Companies got low marks for ineffective leadership; having too much hierarchy, politics, or bureaucracy; and poor ethics that resulted in harm to patients or the environment. Respondents also dinged companies for profit-driven priorities and weak research-project pipelines.

When asked what makes the best companies the best, employees noted that the top firms operate as meritocracies, possess adequate resources, have trusted brands, and are responsive to stakeholders. Companies exhibiting these qualities include the rest of this year’s top 10 employers: Vertex Pharmaceuticals (No. 5), Novozymes (No. 6), Genentech (No. 7), Alexion Pharmaceuticals (No. 8), Biocon (No. 9), and Roche (No. 10) (see chart on page 488 for full top 20 list).

Innovate big, go creative

For the last 14 years, companies that lead in innovative solutions to health care and biotechnology dominate the list of top employers. This year, the leading companies take innovation even further, seeking creative biological solutions that will take their therapies for cancer, diabetes, and Alzheimer’s disease truly outside of the box—or rather, the pill bottle. Not surprisingly, the companies that cultivate scientific creativity and encourage researchers to follow where their curiosity leads attract and retain the best scientific workforces.

Moderna’s scientists are motivated by the company’s mission to use mRNA science to deliver transformative medicines, including medicines that can replace missing or flawed intracellular proteins. Moderna’s mRNA therapeutics, made with proprietary nucleotide analogs, have the potential to generate any conceivable protein using the body’s own cellular machinery.

Kerry Benenato, associate director of chemistry at Moderna, was hooked by “the challenges we were going to face, knowing that what’s in the literature is not quite good enough, so we were going to have to do some pretty inventive discovery.” Her enthusiasm for the science she’s doing is catching—she’s recruited six friends and colleagues to work for Moderna in her two years there.

Regeneron believes that “innovation can be taught to the next generation,” says Yancopoulos. He notes that many of the company’s top technology innovators are “still in the conference room every day helping nurture the next great scientists.” Yancopoulos cites Praluent, Regeneron’s new cholesterol-lowering drug, as an example of the next generation of drugs developed by leveraging the wealth of human genetics data. The Regeneron Genetics Center, which opened in 2014, already houses the sequences of more than 100,000 human exomes—the parts of the genome that encode proteins—linked to patient electronic medical records from the Geisinger Health System and other collaborators.

Last year, Novartis invested US$8.9 billion in R&D, supporting more than 11,000 R&D employees worldwide. Ann Taylor, global head of the program office for NIBR, says the company has cultivated a culture that listens to everyone and looks to multiple sources for the next great idea—from external collaborators to postdocs.

As a group leader at the NIBR Biologics Center in Basel, Switzerland, Darko Skegro engineers bispecific antibodies to target cancer and modifies antibodies to overcome cancer resistance. “Normally antibodies against cancer recruit natural killer cells, but can we switch up the antibody in a way that it suddenly recruits other cell types to come and kill the cancer cells?” he asks. When his group shared this risky idea with colleagues in Basel and Cambridge, they were immediately given the green light to try it. “This is why Novartis is a great place to work—I have the freedom to explore things and innovate—and with the support of many other groups.”

Alliances strengthen innovation

Whether it’s through mergers and acquisitions, partnerships, or academic collaborations, top employers find strategic ways to make alliances work to their portfolio’s advantage. Both Regeneron and Moderna represent relatively small but lightning-fast companies whose platform technologies have matured into clinical programs advancing at a rapid clip. A key to both companies’ success has been identifying the appropriate partners for drug development projects.

This summer, Moderna announced two major deals with pharmaceutical partners to advance projects in oncology and cystic fibrosis. A US$200 million deal with U.S.-based Merck & Co. would pair Merck & Co.’s immuno-oncology...