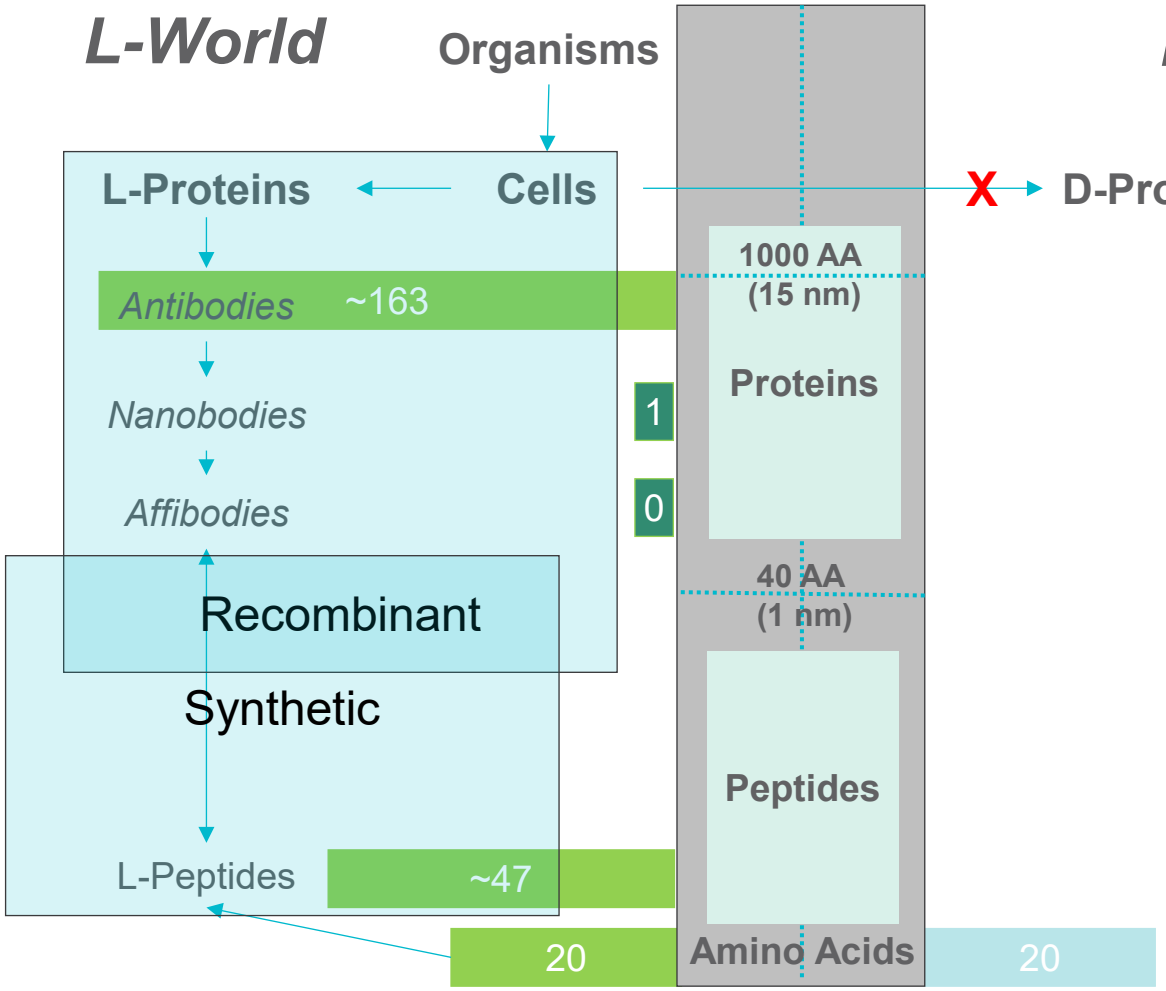
Dextera Biosciences

Discover the right treatment

Greg Went , NAS Meeting | Sept 29, 2025

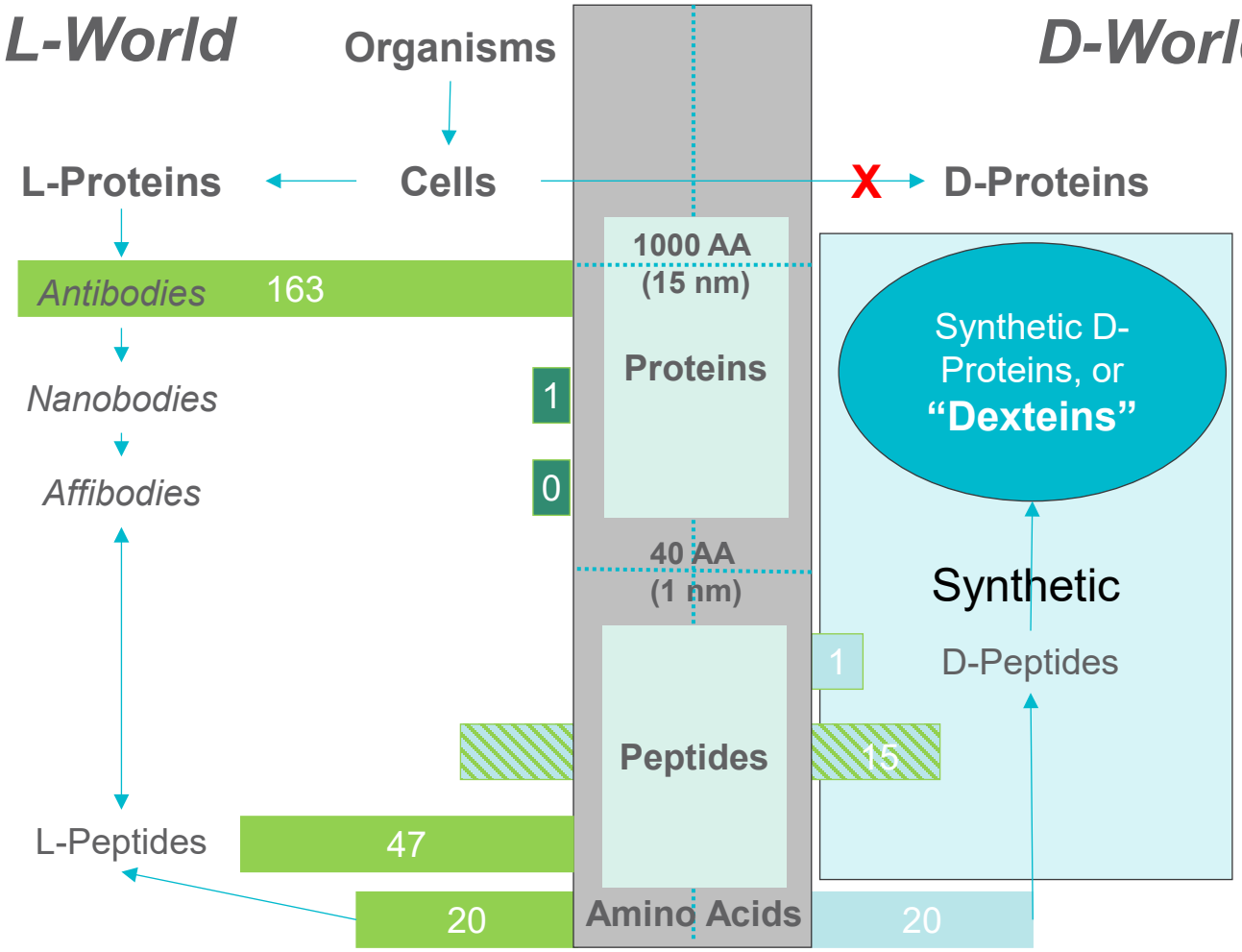
Diagrammatic view of the landscape w/ our terminology



- L-amino acid peptide drugs are approved
- L- and D-amino acids exist in nature

Sources: FDA.gov

Diagrammatic view of the landscape w/ our terminology



- **First all D-amino acid protein drug candidate enters clinic?**

- D-amino acid peptide drugs that are approved (1 for 4)
- D-amino acids are incorporated into approved drugs
- L-amino acid peptide drugs are approved
- L- and D-amino acids exist in nature

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Sources: FDA.gov

Why the distinction between D-Proteins and ‘dexteins’?

- **Protein (n.)**
  - 1844, from French *protéine*, coined 1838 by Dutch chemist Gerhard Johan Mulder (1802-1880), perhaps on suggestion of Berzelius, from Greek *prōteios* "the first quality," from *prōtos* "first" (see proto-) + -ine (2).
  - Originally a theoretical substance thought to be a constituent of food essential to life, further studies of the substances he was working with overthrew this, but the words *protein* and *proteid* continued to be used in international work on the matter and also for other organic compounds; the modern use as a general name for a class of bodies arose in German. The confusion became so great a committee was set up in 1907 to sort out the nomenclature, which it did, giving *protein* its modern meaning ("class of organic compounds forming an important part of all living organisms") and banishing *proteid*.
  - Implies that all proteins are derived from living organisms – so L-only.
- **Dextein (n.)**
  - A synthetic molecule comprised entirely of D-amino acids

Source: Online Etymology

What we like about ‘dexteins’ as source of potential drugs

- They are synthetic, and relatively inexpensive to make
- They can ‘see’ drug targets and modulate their activity; large enough
- They are otherwise not visible to natural protein systems (i.e., enzymes, components of immune system (antibodies/TCR))
- They don’t involve working with DNA, RNA, or cells
- They cannot replicate and are non infective
- They don’t accumulate in the spleen, liver or kidneys and can be rapidly cleared by the body

- Thus, able to mediate critical therapeutic functions without any influence or interaction with any other biological system and the genetic or protein level

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Thank you!