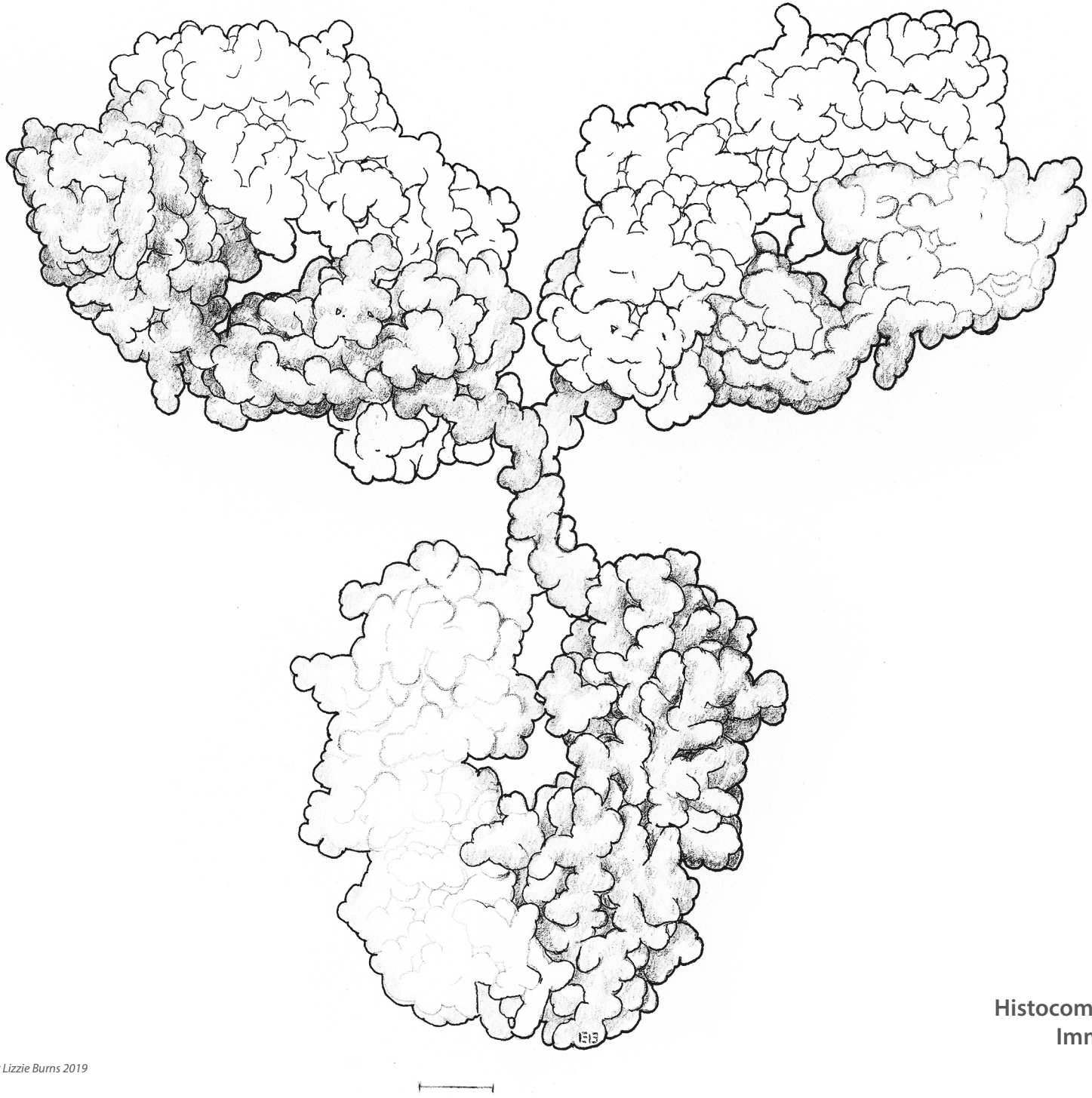
Looking after us

This drawing depicts an antibody, which is an important part of your immune system that defends your body from microorganisms and viruses that can make you unwell.

Antibodies are Y-shaped proteins produced by your body in response to an intruder. An antibody recognises a unique molecule (called an antigen). The area where the antibody recognises and sticks to the intruder is found at the tip of the two arms (at the top). These are very variable areas that allow each antibody to identify a particular intruder. Once stuck, the antibody acts like a flag, letting cells from the immune system know to attack and destroy the microbe or virus, and so keep you protected and well. With transplants, pathologists need to make sure the patient is compatible with the donor, and have to dampen the immune system to prevent organ rejection.

This structure is striking, made of two halves joined together at the middle to form a flexible interwoven Y shape. Add unique colours at the variable ends which recognise intruders.

The bar at the bottom represents 1 nanometre (one millionth of a millimetre). Around 10,000 antibodies would fit across the width of a human hair.



Histocompatabilty and Immunogenetics
Antibody