

WE ARE ALL CHIMERAS (AND WE DIDN'T KNOW IT)

The word chimera comes from Greek mythology and evokes a creature assembled from parts of different animals. But in a very real biological sense, we are all chimeras. This is the fascinating message at the heart of the book recently reviewed in *Nature*, *Hidden Guests: Migrating Cells and How the New Science of Microchimerism Is Redefining Human Identity* by Lise Barnéoud.

During pregnancy, cells pass from the fetus to the mother and from the mother to the fetus through the placenta. Some of these cells do not disappear after birth, but remain in the body for decades, possibly for a lifetime. And they do not come only from the direct mother-child exchange: cells may also originate from a grandmother, older siblings, or even a twin. This phenomenon is known as microchimerism.

These “guest” cells are extremely rare, yet they have been found in every organ studied so far. Remarkably, they are not just passive bystanders. They can contribute to tissue repair, take part in immune responses, and even influence immune memory.

The book also traces the scientific history of these discoveries, from chance observations in the 19th century to modern research showing that cells exchanged in utero can persist for decades. This challenges the traditional view that all cells in a person come only from the original fertilized egg.

The implications are profound. According to classical immunology, the immune system sharply distinguishes between “self” and “non-self”. Yet microchimeric cells are clearly “non-self” and still are not rejected. This opens new questions about autoimmune diseases, immune tolerance, and even transplantation medicine.

In the end, *Hidden Guests* is not only a book about cell biology. It is also a reflection on what it really means to be an individual. If we permanently carry cells from other people, and if our own cells can persist in others across generations, where does the boundary between “me” and “you” truly lie?

As the *Nature* review concludes, this is a book that weaves together science, history, and philosophy into a compelling narrative.

Book Reference (English and Original French)

Barnéoud, Lise. *Hidden Guests: Migrating Cells and How the New Science of Microchimerism Is Redefining Human Identity*.
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Les cellules buissonnières: L'enfant dont la mère n'était pas née et autres folles histoires du microchimérisme (Premier Parallèle, 2023).