

From the Editor

Biotechnology – diverse as the colours of the rainbow



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Ask 10 people what “biotechnology” means and you will get 10 different answers.

Some would categorise biotechnology by colours (Figure 1):¹

Red biotechnology:

- Medical research

Green biotechnology:

- Plant-based/agriculture

Blue biotechnology:

- Marine/ocean ecosystems

White biotechnology:

- Industrial/commercial production

Yellow biotechnology:

- Food production

Grey biotechnology:

- Bioremediation

Brown biotechnology:

- Desert research

Gold biotechnology:

- Bioinformatics and nanobiotechnology

Violet biotechnology:

- Ethical and legal issues in biotechnology

Dark biotechnology:

- Biological warfare

Or by species: animal, plant, microbial;

Or by platform: in vitro, in vivo, in silico...

But science is too complex and diverse to be colour-coded or pigeonholed. Taking the simple examples of the aspirin (from green to red to white) and the yeast (from green to yellow to white), biotechnology is the veritable chameleon.

Going back to the Greek roots of “bios” (life) and “techne” (craft or skill) is not helpful. The term “life” is no longer binary and artificial intelligence puts a whole new meaning to craft or skill.

What is clear is that biotechnology, as diverse as the colours of the rainbow, has touched our

lives in one way or another; some would even say it has “encroached” into all aspects of daily life – ready or not.

Power and responsibility

“With great power comes great responsibility.”

Thanks to Hollywood, this age-old adage is identified not only with superpowers, but also with biotechnology gone haywire. Cliché aside, this quote is undeniably applicable to biotechnology regardless of definition, colour, species, or platform. Harnessing the power of biotechnology comes with huge benefits as well as dangers. See suggested readings below.

Medical writers and communicators are key in demystifying the complex world of biotechnology. By writing and reporting the science accurately in a comprehensible manner, we help keep biotechnology safe and honest.

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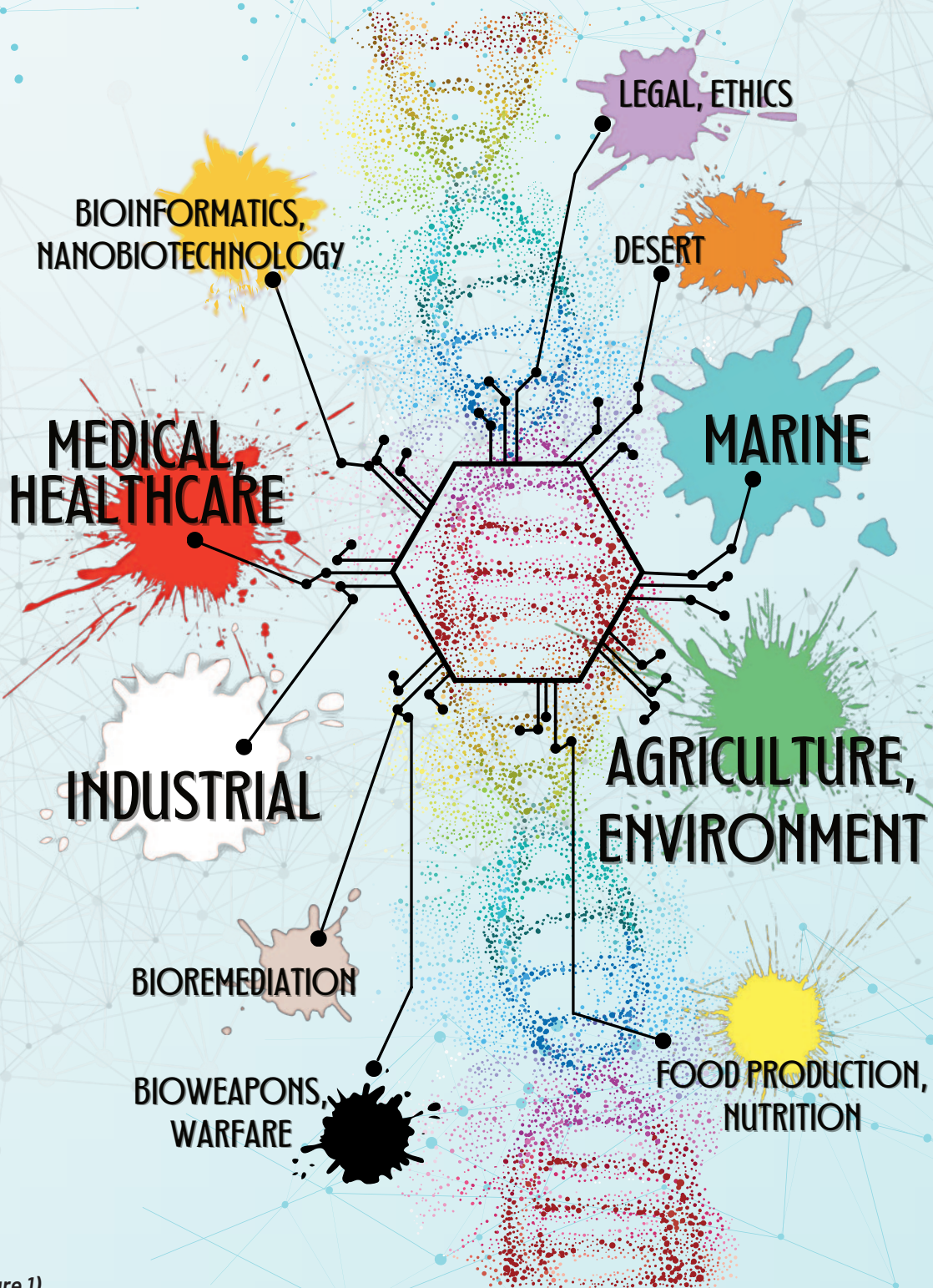
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BIOTECHNOLOGY

The 10 key research areas by color



(Figure 1)

Illustration: Judit Mészáros