

Vote 2: Synthetic Biology Applications

	1. Making biofuels from plant wastes	2. Detecting pollutants in the environment	3. Cleaning up pollutants in the environment	4. Making new industrial materials
	Using synthetic biology to make micro-organisms digest cellulose from plant wastes, to replace petrol and diesel by biofuels, and without competing for land	Using synthetic biology to make sensors to detect pollutants, such as arsenic in drinking water in Bangladesh	Using micro-organisms created through synthetic biology to search out and digest pollutants in the environment	For example, using specially adapted bacteria to mass produce spider silk in vats as a strong lightweight industrial material
	Would this application be acceptable? <i>(Mark with an X for each application)</i>			
Yes				
Possibly				
Unsure / don't know				
Doubtful				
No				
Why? <i>(in your own words)</i>				

...continued overleaf

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	5. Micro-organisms to make synthetic pharmaceuticals.	6. Creating synthetic viruses to research pandemic flu.	7. Genetically engineered biological devices to detect infections.	8. Enhancing food production by helping plants absorb nitrogen.
	Engineering strains of <i>E.coli</i> bacteria to make synthetic versions of naturally occurring therapeutic substances, such as artemisinin for treating malaria.	Joining DNA sections to make flu viruses, to find out why some flus give rise to pandemics, hoping one day to make vaccines able to adapt to new flu strains.	Genetically engineered biological devices which can both detect and warn of bacterial infections on catheters and perhaps surgical implants.	Using multiple genetic modification to enable cereal crops to absorb and use nitrogen more effectively, reducing the need for nitrogen fertilisers.
	Would this application be acceptable? <i>(Mark with an X for each application)</i>			
Yes				
Possibly				
Unsure / don't know				
Doubtful				
No				
Why? <i>(in your own words).</i>				