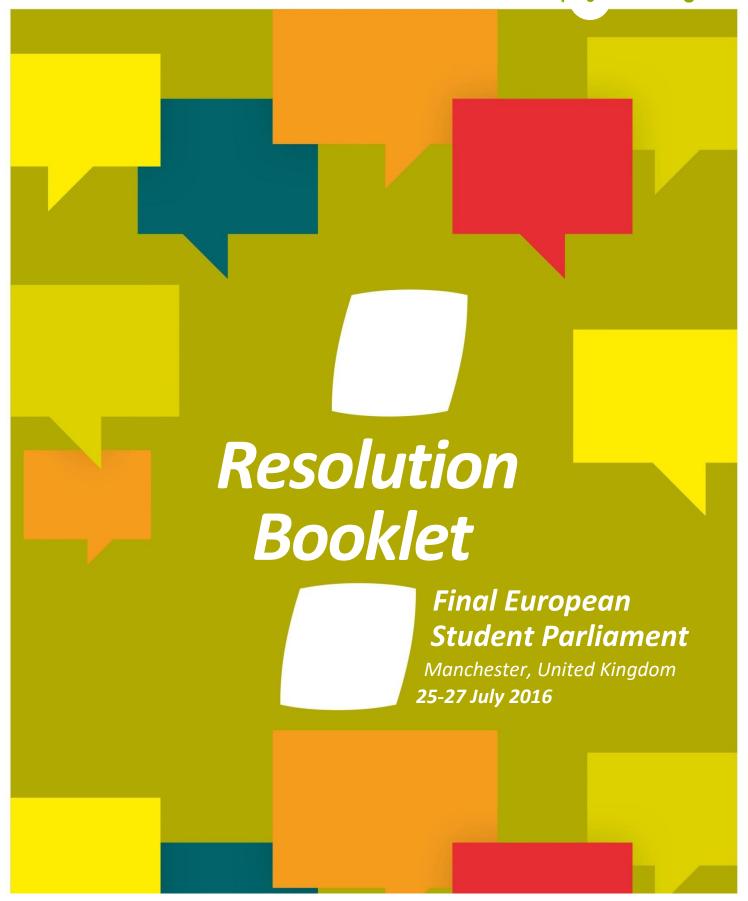


Debate science!

wissenschaft 🖁 im dialog



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# **PARLIAMENTARY DEBATE**

09:45	Opening of the parliamentary debates
	<ul> <li>Elena Lührs, Wissenschaft im Dialog</li> </ul>
	<ul> <li>Dr Katrin Rehak-Nitsche, Robert Bosch Foundation</li> </ul>
10:00	Parliamentary debate
	The Human Brain
10:40	Parliamentary debate
	Living and eating healthy – but how?
11:20	Parliamentary debate
	The changing reproduction of mankind
12:00	Lunch
13:00	Speech
	ESOF champion Professor Dame Nancy Rothwell
13:15	Parliamentary debate
	Stem cells – the potential allrounders?
13:55	Parliamentary debate
	Exploring the inside
14:35	Parliamentary debate
	Augmented human: Optimising the human
15:15	Parliamentary debates
	Imitating nature
16:00	Handover of resolutions
	<ul> <li>Robert-Jan Smits, Director-General Science and Innovation,</li> </ul>
	European Commission
	<ul> <li>Julie Ward, Member of European Parliament</li> </ul>
16:15	Closing ceremony
	Handover of certificates





### **COMMITTEES & EXPERTS**

#### The human brain

The human brain has been investigated intensively for years. Experts hope for therapies against dementia illnesses, but also human thinking and feeling is a core focus. But how does our brain work? Can we really simulate our brain and thinking? And will we be able to understand and heal dementia illnesses?

Expert: Dong-Seon Chang, Max Planck Institute for Biological Cybernetics

### Living and eating healthy – but how?

Organic food is ,en vogue'. But what is that supposed to mean? Do we better not eat meat or even animal products at all? Are genetically engineered foods dangerous for our health? Are long-term consequences to be expected? And how can we be sure what is really healthy and what isn't?

Expert: Haleh Moravej, Manchester Metropolitan University

### The changing reproduction of mankind

Practices of in vitro fertilisation have become quite common and accepted in society – and here is the very latest: social freezing. Conserving ova is supposed to ensure the compatibility of career and family. How can the human being manipulate its own reproduction and does that really work? Which chances and risks exist?

Expert: Daniel Brison, University of Manchester, Central Manchester University Hospitals

### Stem cells – the potential allrounders?

There would be no man or any other multicellular creature without stem cells. What are stem cells and why is their investigation this attractive – and frowned upon at the same time? How does our life change if we can direct stem cells – and how is that supposed to function at all? Expert: Stephen Richardson, University of Manchester

### **Exploring the inside**

What does our brain do while we are exercising? Imaging methods provide diagnostics of the body's inside. The latest discovery is a high-resolutioned fluorescence microscopy. What is it capable of doing and what effect might it have for widespread diseases?

Expert: Heather Williams, Central Manchester University Hospitals





### Augmented human: optimising the human

Glasses and prostheses have been employed for many centuries to optimise the human body. As of now a new wave of modifying the body is being initiated: by means of the google glasses or a ring that can name objects using a camera. What will the human being look like in 20 years' time? Will our skills be extended through implants, drugs or other technical means? Experts: Cyrill Bussy, University of Manchester; Stéphanie Lacour, CNRS; Gabriel Dorthe, University of Lausanne

### **Imitating nature**

Imitating nature through a modular system – that is what synthetic biology is about. Scientists hope for new medication and new pharmaceutical ingredients. How is that supposed to function? How can we imitate new biological pieces, gadgets or systems? And don't we overstep the mark here?

Expert: Rainer Breitling, University of Manchester





### PROCEDURE OF THE DEBATE

### Reading the resolutions

A member of the proposing committee reads out the operative clauses ("we recommend...") of the resolutions from the podium. The introductory clauses are not read. (One member of the proposing committee; at the lectern)

### **Defence speech**

A member of the proposing committee gives a defence speech from the podium. They explain why the committee chose the resolutions and why the parliament should vote for them. (One member of the proposing committee; at the lectern; max .3 minutes)

### Attack speech(es)

A member of another committee makes an attack speech from the podium. If the full time is not used, a second attack speech from another committee may be allowed. (One member of an opposing committee; from their seat, max. 3 minutes)

# 2<sup>nd</sup> defence speech

A member of the proposing committee responds to the attack speech from their seat. (One member of the proposing committee; from their seat; max. 1 min)

### **Open debate**

All m e m b e r s of the student parliament can debate the resolutions from their seats (1 minute per person). After about 3-4 points, the chair asks the proposing committee to respond to the points made (1 minute response).

(1 minute per speaker; max. 25 minutes)

### **Summation speech**

After the open debate a member of the proposing committee makes a summation speech. This is the last chance to speak before voting.

(Two members of the proposing committee; at the lectern; max. 3 minutes)

### Voting

Students vote by raising their hands. Only the operative clauses are voted on. Each resolution is voted on separately and passes with a simple majority (if 84 votes are counted, then 43 are needed for the resolution to be carried).

(Raise hands to vote 'yes' or 'no' or abstain)





### The human brain

The human brain has been investigated intensively for years. Experts hope for therapies against dementia illnesses, but also human thinking and feeling is a core focus. But how does our brain work? Can we really simulate our brain and thinking? And will we be able to understand and heal dementia illnesses?

Proposed by: Dario González Picos (Barcelona), Tommaso Rapaggi (Bolzano), Efstratios

Skrimizeas (Athens), Ognjen Nikolić (Belgrade), Alina Frerichs (Berlin), Shir Chana Cohen (Jerusalem), Michelle Moujahed (Mendrisio), Lottie Sawford

(Nottingham), Lara Nadler (Rostock), Neda Lapteva (Sofia), Lisa Christiansen (Sonderborg), Romain Strohecker (Strasbourg), Gundra

Raissar (Tartu), Gabriele Sega (Torino) Ciara Lavelle O'Brien (Moderator)

- 1. Burnout Syndrome, psychological stress, and depression have become worldwide epidemics. The health consequences of these diseases are documented across the world, particularly with the increasing number of suicides;
- 2. People with mental illnesses report that the social stigma attached to mental illness makes their problems worse and also makes it harder for them to recover. Nearly nine out of ten people with mental health problems say that stigma and discrimination has had a negative effect on their lives;
- 3. The number of psychological and eating disorders is continuing to increase in younger age groups due to the unrealistic body images portrayed by the media. This can cause depression and eating disorders;
- 4. By 2050 people aged 60 and older will make up 22% of the global population. With this comes an increase in diseases like dementia. There is a worldwide need to commit to action on healthy ageing;
- 5. Recent evidence shows that computerised brain training has preventive effects on dementia in elderly people and can reduce the onset of dementia by up to eleven years.





- 1. Government incentives should be introduced for stress reduction programs in schools, universities and workplaces to include the implementation and use of relaxation rooms and information workshops on mental illnesses;
- 2. Education systems across the world should include mental health policies to avoid negative portrayal of mental illnesses. A number of joint worldwide positive marketing campaigns should be launched to change public attitudes to mental illnesses;
- Regulation by law should be used to introduce recently proposed legislation to mandate that all advertisements involving people whose images have been altered using Photoshop or similar programs have a warning label which draws the attention of the reader;
- 4. There needs to be an increase in pioneering care facilities for elderly people using all day reminiscence therapy where patients are medicated less and more active;
- 5. Scientifically tailored computer brain training programs be introduced for adults aged 65 and over.





# Living and eating healthy - but how?

Organic food is 'en vogue'. But what is that supposed to mean? Do we better not eat meat or even animal products at all? Are genetically engineered foods dangerous for our health? Are long-term consequences to be expected? And how can we be sure what is really healthy and what isn't?

Proposed by: Maria Lap

Maria Lappa (Athens), Gerard Sala Mayench (Barcelona), Anđela Rojević (Belgrade), Cassandra Rosa Askin (Berlin), Philipp Rossi (Bolzano), Adam Hallissey (Cork), Antonia Kohde (Herford), Rawan Masalha (Jerusalem), Theresa Jennings (Nottingham), Lea Zimdahl (Rostock), Krista Trendafilova

(Sofia), Christina Prinds Bilberg (Sonderborg), Raïhène Cherifi

(Strasbourg), Federico Morello (Torino)

Ciara OConnor (Moderator)

### We recognise:

1. The endless amount of varied information on a healthy way of living provided to people, which makes it difficult for them to identify the most suitable choice of food and lifestyle for them;

- 2. The lack of transparency surrounding TTIP (Transatlantic Trade Investment Partnership)<sup>1</sup> and how it could affect the quality of food and therefore one's well-being;
- 3. That modern technological advances, though they have some negative influences on people's social interaction and physical activity, have the potential to be used for the benefit of a balanced lifestyle;
- 4. That many areas are facing a scarcity of green spaces while others are facing high cost indoor activity facilities;
- 5. The current absence of thorough studies on GMO (Genetically Modified Organisms) foods and their influences on the future of human health.
- 6. The problem of irregular food labelling, including the best before date, unnecessarily leading to immense food waste and confusion of consumers as they are not aware of components of food that they are purchasing;
- 7. That seasonal, sustainable and local produce are sometimes not preferred over imported foods because of the cost.

<sup>&</sup>lt;sup>1</sup> TTIP-The Transatlantic Trade and Investment Partnership (TTIP) is a proposed trade agreement between the European Union and the United States, with the aim of promoting trade and multilateral economic growth. The American government considers the TTIP a companion agreement to the Trans-Pacific Partnership (TPP). The agreement is under ongoing negotiations.





- 1. The development of an initiative to enable parents and students to make informed choices regarding a well-balanced diet and lifestyle, ensuring that schools comply with the rules of healthy eating and living;
- 2. Raising awareness through campaigns and informative materials, conveyed via the media in relation to TTIP, as European food quality standards should not be threatened by TTIP;
- 3. Developing an official European app made in collaboration with universities including BMI (Body Mass Index), workouts, information on food, blogs, interactive professional chat, etc. It should be promoted by the health department in each country and be compatible with all European languages;
- 4. National Governments should promote and invest in building accessible public open spaces and subsidise the cost of physical activity facilities;
- 5. To encourage funding of long term studies on GMO foods and provide information in a relatable dialogue to consumers;
- 6. The creation of a common European label in which the product/food must meet quality criteria and standards;
- 7. Investing money from import taxes on products that are imported to Europe, with an exception of those that are only imported and not produced in Europe, towards local produce to lower the cost of healthy local food.





# The changing reproduction of mankind

Practices of in vitro fertilisation have become quite common and accepted in society – and here is the very latest: social freezing. Conserving ova is supposed to ensure the compatibility of career and family. How can the human being manipulate its own reproduction and does that really work? Which chances and risks exist?

Proposed by: Alba Neher Mestre (Barcelona), Nikola Borovčanin (Belgrade), Pirathayini

Kandeepan (Berlin), Amelie Friederike Kruse (Herford), Carmel Givon (Jerusalem), Tiarnan Giles (Nottingham), Petya Bankova (Sofia), Diana Parapanova (Sofia), Ditte-Emilie Toft Sørensen (Sonderborg), Alix Boussandel (Strasbourg), Riine Heinsalu (Tartu), Francesca Chiappino

(Torino)

Liis Kass (Moderator)

- 1. Reproductive medicine is continuously becoming more relevant. However, there is no central authority on the European level that evaluates cultural differences, beliefs, values and problems before passing guidelines regarding it;
- Companies have an increasing economic interest in keeping employees continuously bound to their work. Some of them offer to finance the cryopreservation of gametes, ostensibly motivated by family friendly considerations;
- 3. It is scientifically possible to learn about the embryo's genetics and we are alarmed by the ability to freely modify the embryo;
- 4. Ethical views on the procedures involving embryos differ;
- 5. The right of getting a child for same-sex couples varies from state to state;
- 6. Female infertility and health risks regarding pregnancy increase with age. Male infertility also increases with age. There is insufficient funding from the state for treating infertility;
- 7. Infertility is a common condition in our society and can be considered a disease;
- 8. Currently surrogacy is not legal in all states which leads to reproduction tourism.





- An ethics commission on a European level that advises the politicians when laws are
  passed so all cultures and values are equally considered and the guidelines regarding
  reproductive medicine would be updated regularly. This commission should consist of
  representatives of the ethical committees of the states;
- 2. Authorizing social freezing of gametes. The state will create a trust in which companies must deposit money for employees so that the employees are not pressured by the companies directly;
- 3. There has to be a restriction on the embryo selection process so it should only be used in the case of preventing genetic diseases, with the parents' consent;
- 4. That parents should be able to decide the destiny of their surplus embryos (research, freezing, donation, elimination);
- 5. That same-sex couples be allowed to use surrogacy in the countries where they are already allowed to adopt children;
- 6. Allowing state funding to assisted reproductive technologies, taking into consideration the health and the age of the patients. Not restricting patients from using private funding for assisted reproductive technologies;
- 7. Social campaigns to raise awareness about infertility causes (age, smoking, alcohol abuse etc.) and to encourage earlier family planning in order to minimize health risks for both parents and the child;
- 8. That surrogacy should be legal and internationally regulated and the surrogate mother should have social security and payment for both medical costs and additional living costs.





# Stem cells – the potential allrounders?

There would be no man or any other multicellular creature without stem cells. What are stem cells and why is their investigation this attractive – and frowned upon at the same time? How does our life change if we can direct stem cells – and how is that supposed to function at all?

Proposed by:

Rafail Papanikolopoulos (Athens), Anastasia Srećković (Belgrade), Sidney Kühn (Berlin), Alice Ravagnani (Bolzano), Hanna-Britta Vahi (Cork), Maor Boltaksov (Jerusalem), Giacomo Sassi (Mendrisio), Maxim Prus (Rostock), Ida Kjær Mieritz (Sonderborg), Julie Venot (Strasbourg), Andrus Punt

(Tartu), Vittorio Mossetti (Torino)

Kärt Lehis (Moderator)

#### Our committee:

- 1. Recognises that different EU countries have varying regulations regarding the application of stem cell treatments which may result in danger to patients;
- 2. Is alarmed by the ongoing stem cell tourism, using unapproved and ineffective treatments, which often result in a loss of savings and even life;
- 3. Is concerned by the lack of correct information available about stem cells in society, which has led to uninformed opinions and restrictions on research;
- 4. Notes with regret that there is a gap between the EU funding for pre-clinical stem cell research and the money needed for late-stage clinical research from investors, due to the inability of scientists to translate their results into possible profits and positive results in a short period of time;
- 5. Is fully aware that the use of embryonic stem cells is controversial, which acts as a barrier to further understanding, development of research, and access to the full potential of stem cells.





#### **Our committee:**

- 1. Requests that the European Medicines Agency establishes and monitors the implementation of standards that all stem cell therapies within the EU must meet prior to their application;
- 2. Calls for informational material, seminars conducted by experts and victims of stem cell tourism, and support groups connected to hospitals for those in need of stem cell treatments;
- Requests further EU-organised cultural campaigns that will educate the general public, alongside educational programs about recent scientific research, for secondary school students and teachers, to promote critical thinking from an early age and the confidence to talk about stem cells;
- 4. Recommends the creation of departments within universities that would help scientists and researchers present and communicate results to potential investors for further funding;
- 5. Emphasises that scientific research should overcome conservative values for the future of the human being through education, widespread discussion, and the elimination of common misconceptions.





# **Exploring the inside**

What does our brain do while we are exercising? Imaging methods provide diagnostics of the body's inside. The latest discovery is a high-resolutioned fluorescence microscopy. What is it capable of doing and what effect might it have for widespread diseases?

Proposed by: Kevin Grüner (Bolzano), Maria Tsakona (Athens), Berta Plandolit López

(Barcelona), Cormac Larkin (Cork), Joe Puhlmann (Herford), Giacomo Sgarbossa (Mendrisio), Lorenzo Tanzi (Mendrisio), Chelsea Owen (Nottingham), Klaudia Cander (Nottingham), Yasmine Achour (Strasbourg), Stella Leego (Tartu), Rachel Noach (Torino)

Albert Reverendo Mascort (Moderator)

#### We recognise:

1. Potential long-term health effects of radiation exposure for both patients and doctors;

- 2. Lack of education about effects of using medical imaging techniques in some areas within Europe due to difficulties in processing the information;
- 3. That the development of HRFM<sup>2</sup> and STED<sup>3</sup> microscopy techniques though promising, are still not widely available;
- 4. Insufficient availability of imaging equipment in certain EU countries;
- 5. The critical importance of rapid access to patients' medical records by different specialists working on the same case;
- 6. Existing flaws related to medical databases such as hardware thefts and accessibility difficulties;
- 7. The difficulty of establishing the extent of anonymity in private medical information used for research;
- 8. Considerable public concern regarding insufficient safeguards on the confidentiality of patients' medical records;

<sup>&</sup>lt;sup>2</sup> HRFM: High-Resolution Fluorescence Microscopy

<sup>&</sup>lt;sup>3</sup> STED: Stimulated Emission Depletion microscopy





- 1. The investment of funds towards research on a new non-ionising imaging technology with the hope to develop clearer images with patients' health being made a priority;
- 2. Training in communication for all doctors involved in imaging techniques in order for them to educate patients on the benefits and risks of their treatment;
- 3. Engaging the public and school students to learn about imaging techniques through simple and creative language in comics, cartoons and commercials;
- 4. Using European funding programmes like Horizon 2020 to further develop and commercialise new technologies with the aim of making imaging instruments and make them widely available to scientists;
- 5. Encouraging governments to invest fairly in the purchasing of imaging equipment by assigning funds correlated with the size of the population of each city;
- 6. The creation of an Europe-wide consent form in which patients have the opportunity to indicate whether they are willing to share their personal data or not and to what extent they want it to be available;
- 7. Hospitals to use a medical database system that doctors can access via fingerprint recognition and portable devices;
- 8. The creation of a medical records database for all EU citizens to expedite patient care, primarily for acute care and with secondary applications being strictly limited to medical research on the EU level.





# Augmented human: optimising the human

Glasses and prostheses have been employed for many centuries to optimise the human body. As of now a new wave of modifying the body is being initiated: by means of the google glasses or a ring that can name objects using a camera. What will the human being look like in 20 years' time? Will our skills be extended through implants, drugs or other technical means?

Proposed by: Theofanis Kotsonis (Athens), Queralt Martín Saladich (Barcelona), Đorđe

Ogrizović (Belgrade), Bennet Seiffert (Berlin), Alina Santoso (Bolzano), Íde Ní Dheasmhúnaigh (Cork), Murat Akalan (Herford), Gali Parnes (Jerusalem), Diana Fomasi (Mendrisio), Jonas Trappe (Rostock), Sebastian

Duarte Faurby (Sonderborg), Michel Kapp (Strasbourg), Taavi Karvanen

(Tartu), Sara Tavella (Torino) Nicolas Cerclé (Moderator)

- 1. Private investors invest money in research only when they are sure that they will directly benefit from it. On the other hand, public funds can be used by scientists without restrictions;
- 2. Scientists are free to research as deep as they want on the topic of augmented human, which could cause the invention of dangerous technologies;
- 3. There are potential dangers that might be caused by augmentations and optimisations, such as the abuse of drugs;
- 4. The rise in production of augmentation products could lead to a worsening in the pollution of the environment;
- 5. There is a potential risk of an increased social divide due to the unequal access to human augmentation;
- 6. Human augmentation could lead to the users' private data being stolen from augmentation products;
- 7. We are concerned that private and military research is not made available for civilian medical use.





- Researchers who make use of public and private funding combined, as well as public funding should be required to follow guidelines for the publication of research materials, in order to improve outcomes for the augmentation of the human body;
- 2. Committees open to public participation should be created in order to ensure that these technologies are not against human rights or/and public interest, and should have the right to intervene with such research;
- 3. Regulations are needed to monitor the safe application of enhancement technologies to the human body;
- 4. The usage of eco-friendly products, which would not be harmful to people nor to the environment;
- 5. The access to minimum standard augmentation should be equal to everyone through public health insurance in order to narrow potential social barriers;
- 6. National governments should use safe connection systems in order to protect our privacy;
- 7. Boards should be established for making suitable military technologies available for public medical use.





# **Imitating nature**

Imitating nature through a modular system – that is what synthetic biology is about. Scientists hope for new medication and new pharmaceutical ingredients. How is that supposed to function? How can we imitate new biological pieces, gadgets or systems? And don't we overstep the mark here?

Proposed by: Athina Mavroudi (Athens), Víctor Ramón Llorente (Barcelona), Nikola

Tepic (Belgrade), Lorenza Mottinelli (Bolzano), Rachel Coomey (Cork), James MacSweeney (Cork), Mark Kemal Temizyürek (Herford), Francesca

Rovati (Mendrisio), Emily Spray (Nottingham), Tuan Tung Nguyen (Rostock), Nikol Parvanova (Sofia), Charlotte Søholm Gillesberg

(Sonderborg)

Lorenz Oberkofler (Moderator)

- 1. A general mistrust among the public towards the products of genetically modified organisms (GMOs) such as food crops, animal feed, pharmaceutical compounds and synthesised chemicals. This mistrust is partially the result of the possibility of researching ethically debateable topics in the field of synthetic biology;
- 2. That a big part of society is unaware of the opportunities and possible dangers that synthetic biology poses. This is mainly caused by a lack of information provided by the educational systems within the European Union;
- 3. That current EU legislation demands that any product containing in excess of 0.9% ingredients which have been genetically modified bear a sign indicating this, as well as the phrase "produced from genetically modified [organism]" in their ingredients list;
- 4. That means of promoting collaboration between research institutes are limited and the overly long lifespan of patents does not favour collaboration. As a result funding is spent inefficiently on competing projects with similar goals and research takes longer;
- 5. That overpopulation is a growing problem particularly in areas where people do not have access to an adequate nutrition, healthcare, or the infrastructure required for research;
- 6. That current, non-specific health treatments are not efficient enough when treating bacterial infections and common illnesses such as cancer, viral diseases and autoimmune conditions;
- 7. That GMOs could potentially become invasive and harm native species. Furthermore, the large scale monoculture of GMOs may also lead to the destruction or imbalance of natural habitats and ecosystems;







8. That some GMOs have the noteworthy ability to remove a portion of the pollutants from soil, the atmosphere and bodies of water. Another characteristic of some GMOs is a reduced hydration quota enabling farmers to extend their supplies of potable water;

- 1. A nationally managed conference should be regularly implemented in the each EU member state to promote discussion related to the ethics of synthetic biology research and ultimately influence the creation of laws surrounding this research;
- That teacher training with an aim of informing students about GMO-derived products should be introduced. We urge that unbiased campaigns addressing the uncertain consequences of this research be promoted across a variety of media in order to spread safe consumer information amongst people of all ages regarding products developed from synthetic biology;
- 3. That the consumer products are labelled in a way that no customer, who is uninformed but takes interest in the product's ingredients, could falsely buy or consume a product without knowing the extent to which any or all of the components have been modified;
- 4. The term of patents placed on original intellectual and physical property be reduced dramatically to encourage collaboration and co-operation between research institutes, and promote competition whilst increasing the penalties for breaching patent law;
- 5. The research into genetically modified crops and medicines engineered to thrive in less developed regions be funded and their respective research institutes be subsidised;
- 6. That synthetic biology should be implemented to develop personalised medicine, which will reduce the overall cost of long-term care. Furthermore, these funds should be reinjected into the research and development process;
- 7. Precautions to be taken to preserve natural ecosystems and to prevent GMOs from spreading and taking over natural habitats, even in their position as a weaker organism on an evolutionary scale;
- 8. Further research should be carried out to investigate the characteristics and possible beneficial effects certain traits added to GMO crops could have on our environment.



# Debate science!

A project by:

# wissenschaft : im dialog

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