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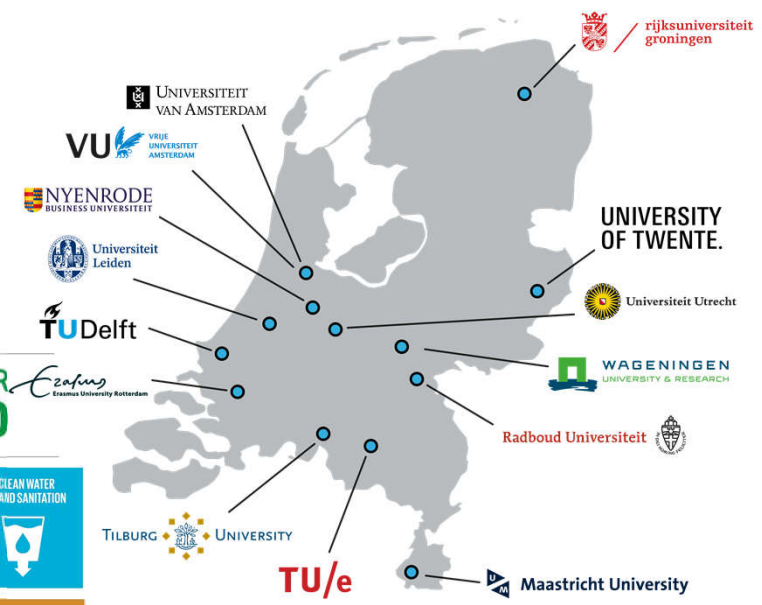
SDGs IS MALAYSIA PREPARED?

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sdg2018@ucsiuniversity.edu.my

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KMUTT SUSTAINABLE UNIVERSITY FOR SUSTAINABLE DEVELOPMENT GOALS 2030

1 NO POVERTY
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 3 GOOD HEALTH AND WELL-BEING
 4 QUALITY EDUCATION
 5 GENDER EQUALITY
 6 CLEAN WATER AND SANITATION
 7 AFFORDABLE AND CLEAN ENERGY
 8 DECENT WORK AND ECONOMIC GROWTH
 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
 10 REDUCED INEQUALITIES
 11 SUSTAINABLE CITIES AND COMMUNITIES
 12 RESPONSIBLE CONSUMPTION AND PRODUCTION
 13 CLIMATE ACTION
 14 LIFE BELOW WATER
 15 LIFE ON LAND
 16 PEACE, JUSTICE AND STRONG INSTITUTIONS
 17 PARTNERSHIPS FOR THE GOALS

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232,484 research publications across all 17 SDGs over the past decade

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 NETWORK FOR EDUCATION AND RESEARCH ON PEACE AND SUSTAINABILITY

つくる 平和を 世界のここから

第2回 広島大学 SDGs シンポジウム

SDGsを活用した 大学改革と研究力強化

2018 12/1 SAT 13:00-17:30

広島大学 東千田未来創生センター M401室

第1部 (13:00-14:00)
 ヒューズレクター・マツシタ(京大) H.M.ラット・メルジャン(京大)

第2部 (14:20-17:30)
 基調講演1 Getting Started with the SDGs in Universities
 タム・クスタイン (スタンフォード大学)

基調講演2 From Agency to Enterprise in American Higher Education
 デヴィッド・アンダーソン (スタンフォード大学)

使用言語:英語及び日本語(同時通訳あり)

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 17 PARTNERSHIPS FOR THE GOALS

UNIVERSITY OF WOLVERHAMPTON

UN Sustainable Development Goals - People



<p>frontiers in Sustainable Food Systems</p> <p>frontiers in Nutrition</p> <p>frontiers in Public Health</p> <p>frontiers in Education</p>	<p>Nutrition and Environmental Sustainability</p> <p>Agricultural Biological Chemistry</p> <p>Agro Food Safety</p> <p>Climate-Smart Food Systems</p> <p>Sustainable Food Processing</p> <p>Waste Management in Agroecosystems</p> <p>Water-Smart Food Production</p> <p>Environmental Health</p> <p>Epidemiology</p> <p>Health Economics</p>	<p>Public Health Education and Promotion</p> <p>Occupational Health and Safety</p> <p>Obesity</p> <p>HIV and AIDS</p> <p>Immunotherapies and Vaccines</p> <p>Infectious Diseases</p> <p>Child Health and Human Development</p> <p>Public Health Policy</p> <p>Disaster and Emergency Medicine</p> <p>Public Mental Health</p>	<p>Family Medicine and Primary Care</p> <p>Digital Health</p> <p>Population, Reproductive and Sexual Health</p> <p>Digital Education</p> <p>Digital Scholarship</p> <p>Educational Psychology</p> <p>Leadership in Education</p> <p>Special Educational Needs</p> <p>Assessment, Testing and Applied Measurement</p> <p>Gender, Sex and Sexuality Studies</p>
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UN Sustainable Development Goals - Prosperity



<p>frontiers in Energy Research</p> <p>frontiers in Built Environment</p>	<p>Groundwater Resources and Management</p> <p>Freshwater Science</p> <p>Wastewater Management</p> <p>Bioenergy and Biofuels</p> <p>Solar Energy</p> <p>Hydrogen Storage and Production</p> <p>Energy Systems and Policy</p> <p>Process and Energy Systems Engineering</p> <p>Indoor Environment</p> <p>Carbon Capture, Storage, and Utilization</p>	<p>Fuel Cells</p> <p>Nanoenergy Technologies and Materials</p> <p>Wind Energy</p> <p>Smart Grids</p> <p>Energy Storage</p> <p>Structural Sensing</p> <p>Computer-Aided and Digital Manufacturing Technologies</p> <p>Structural Materials</p> <p>Engine and Automotive Engineering</p> <p>Composite Materials</p>	<p>Sustainable Design and Construction</p> <p>Historic Preservation and Restoration</p> <p>Bridge Engineering</p> <p>Hydrosphere</p> <p>Digital Architecture</p> <p>Earthquake Engineering</p> <p>Transportation and Transit Systems</p> <p>Wind Engineering and Science</p>
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UN Sustainable Development Goals - Planet

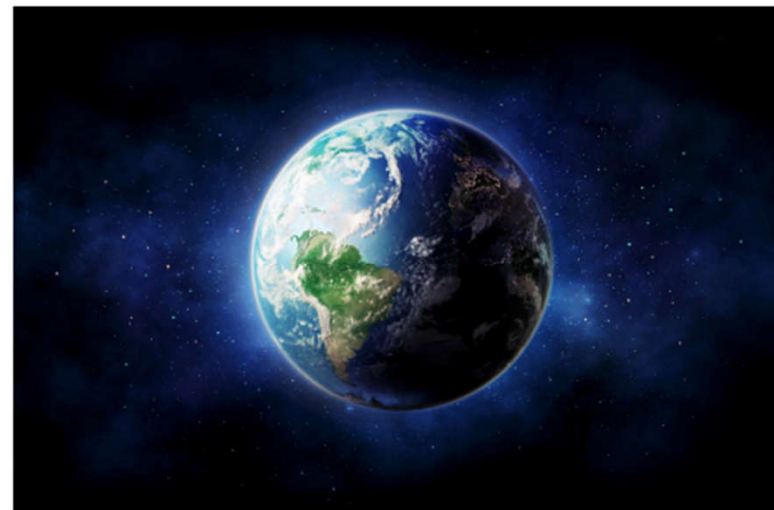


<p>frontiers in Environmental Science</p> <p>frontiers in Marine Science</p>	<p>Science and Environmental Communication</p> <p>Interdisciplinary Climate Studies</p> <p>Marine Ecosystem Ecology</p> <p>Deep-Sea Environments and Ecology</p> <p>Ocean Engineering, Technology, and Solutions for the Blue Economy</p> <p>Marine Conservation and Sustainability</p> <p>Marine Affairs and Policy</p> <p>Coral Reef Research</p> <p>Marine Fisheries, Aquaculture and Living Resources</p>	<p>Marine Biotechnology</p> <p>Marine Pollution</p> <p>Global Change and the Future Ocean</p> <p>Coastal Ocean Processes</p> <p>Ocean Observation</p> <p>Marine Systematics and Taxonomy</p> <p>Microbial Symbioses</p> <p>Quaternary Science, Geomorphology and Paleoenvironment</p> <p>Science and Environmental Communication</p>	<p>Soil Processes</p> <p>Toxicogenomics</p> <p>Atmospheric Science</p> <p>Air Pollution</p> <p>Environmental Informatics</p> <p>Conservation</p> <p>Metabolomics</p> <p>Green and Environmental Chemistry</p> <p>Environmental Toxicology</p>
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Frontiers journals support UN Sustainable Development Goals

Posted on November 13, 2017 in About Frontiers, Frontiers Announcements, Sustainability



As a leader in Open Science, Frontiers is well placed to drive sustainability solutions. Image: Shutterstock

A new series of interdisciplinary Frontiers journals and sections aims to speed up solutions for sustainable development — the greatest global challenge of our time. Covering the 17 UN **sustainable development goals (SDGs)**, our **Open Science for Sustainability** initiative makes rigorously peer-reviewed sustainability research articles openly and freely available to everybody in the world in order to accelerate the scientific and technological solutions we so urgently need to build a sustainable future.

Urgent need for solutions

As the world population grows from 7.4 to nearly 10 billion people by 2050, the earth is entering the Anthropocene — the first period in history in which a single species has placed basic earth systems in danger. We are in a race against time to find new solutions for tackling climate change and protecting the environment while at the same time ending poverty and fighting inequalities. The UN SDGs provide a framework for governments, cities, businesses and communities to achieve these goals by 2030.

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THE University Impact Rankings 2019 by SDG: partnerships for the goals methodology

April 2, 2019

This ranking looks at the broader ways in which universities support the SDGs through collaboration with other countries, the promotion of best practices and the publication of data. Unless all partners work together towards the SDGs, they cannot be achieved.

This is the only compulsory SDG for inclusion in the overall rankings. It is also worth a smaller proportion of the final score in the overall table.

View the [methodology](#) for the University Impact Rankings 2019 to find out how these data are used in the overall ranking.

Metrics

Research (27%)

- Proportion of academic publications with co-author from other country (14%)
- Number of publications that relate to the 11 SDGs (13%)

The first metric measures the proportion of academic publications that are co-authored by someone from another country.

The second metric measures the number of publications that relate to the 11 SDGs that are part of the first *Times Higher Education* University Impact Rankings.

The data are provided by Elsevier's Scopus dataset and normalised across its range using z-scoring. It includes all indexed publications between 2013 and 2017.

Relationships to support the goals (23%)

- Policy development with government or NGOs (4.6%)
- Promoting cross-sectoral dialogue with government or NGOs (4.6%)
- Collaborating internationally to capture data relating to SDGs (4.6%)
- Working internationally to promote best practice around SDGs (4.6%)
- Supporting the education of NGOs with respect to the SDGs (4.6%)

We asked for evidence that universities gather data on the progress of the SDGs internationally and promote best practices and cross-sectoral dialogue in support of the goals.

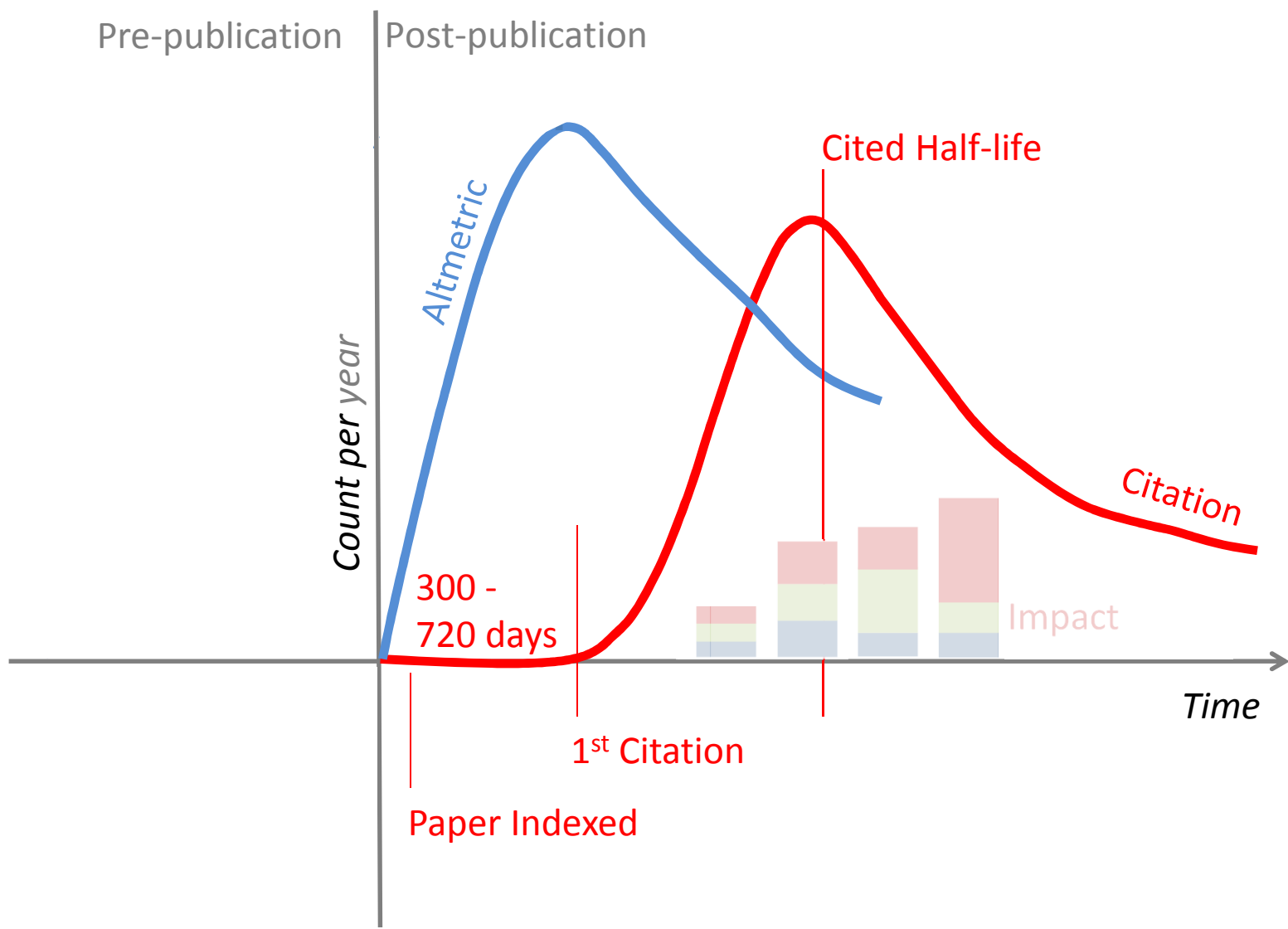
This data and evidence were provided directly by universities. The evidence was evaluated and scored by *Times Higher Education* and is not normalised.

Publication of SDG reports (50%)

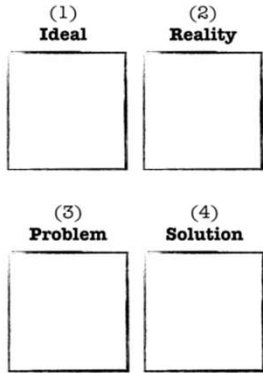
We asked institutions whether they published specific data on their performance against each of the 10 SDGs included in the first *Times Higher Education* University Impact Rankings (excluding SDG 17 on partnerships for the goals).

The metrics:

1. Research (14%)
2. Relationships to support the goals (23%)
3. Publication of SDG report (50%)



Your Storyboard



A Role for Parasites in Stabilising the Fig-Pollinator Mutualism

Abstract

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Infographic

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Video Abstract

Communication from Learned to Innate Olfactory Processing Centers Is Required for Memory Retrieval in *Drosophila* Neuron

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[Claim this publication](#)**Self-organization process in newborn skin organoid formation inspires strategy to restore hair regeneration of adult cells**

Mingxing Lei, Linus J. Schumacher, Yung-Chih Lai, Wen-Tau Juan, Chao-Yuan Yeh, Ping Wu, Ting-Xin Jiang, Ruth E. Baker, Randall Bruce Widelitz, Li Yang, Cheng-Ming Chuong

Proceedings of the National Academy of Sciences, August 2017, Proceedings of the National Academy of Sciences

DOI: 10.1073/pnas.1700475114

Technique to restore the regenerative ability of adult skin and hair follicles

What is it about?

To understand how the progenitor cells (stem) from newborn mouse skin were regulated to form skin with appendages (like hair follicles). Using the 3D in vitro organoid model, the self-organization ability of the newborn mouse cells was learned and was used to partially restore the adult mouse cells to form hairs

Why is it important?

Previous studies were focusing on using different sources of cells to regenerate skin and hair follicles with inconsistent outcome. This multi-disciplinary approach helps to learn the nature of self-organization ability of the newborn mouse cells comprehensively. Through such learning, the regenerative ability of the adult mouse cells could be partially restored. This finding will provide one step closer in regenerating human skin and human hair follicles with the potential of the same to be applied in treating burn injury and alopecia

Perspectives

 **Dr. Mingxing Lei** (Author)
China Medical University

This study opens a new avenue to improve the ability of adult skin cells to form a fully functional skin, with clinical applications. The principles uncovered here are likely to function in other organ systems and will inspire us to view organoid morphogenesis, embryogenesis, and regeneration differently. The application of these findings will enable the rescue of robust hair formation in adult skin cells, thus eventually helping patients in the context of regenerative medicine

[Read Publication](#)

The following have contributed to this page: Dr. Mingxing Lei



Authors

 **Dr. Mingxing Lei**
China Medical University

Resources

Open Access version

Supporting Information: Self-organization process in newborn skin organoid formation

Videos and descriptions of this research

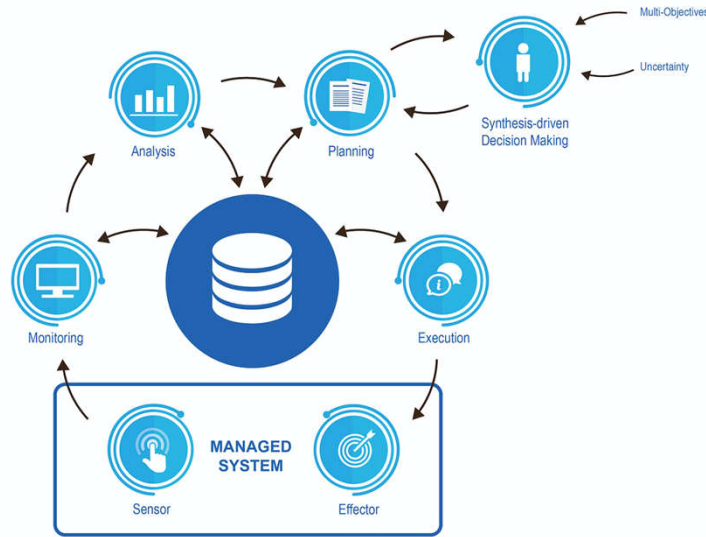
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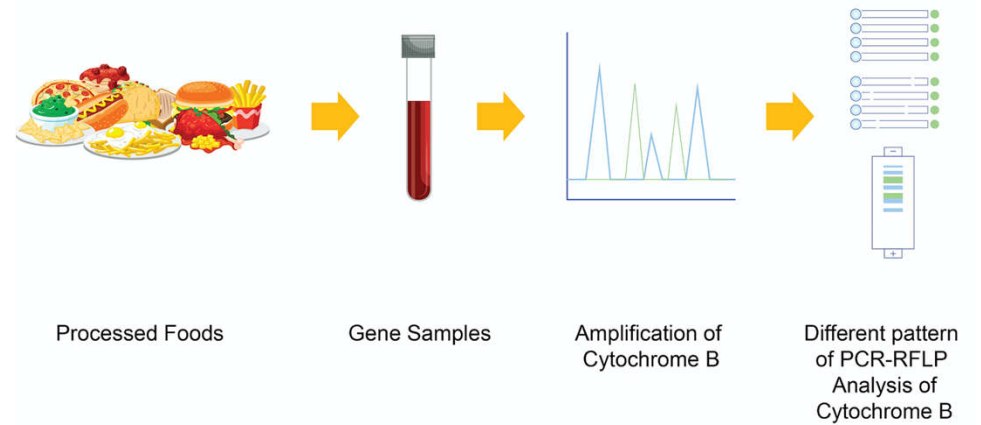
Cyclic dermal BMP signalling regulates stem cell activation during hair regeneration
Maksim V. Pliukus et al., Baker, Philip K. Maini, Robert Maxson, Cheng-

highlight on the technical method

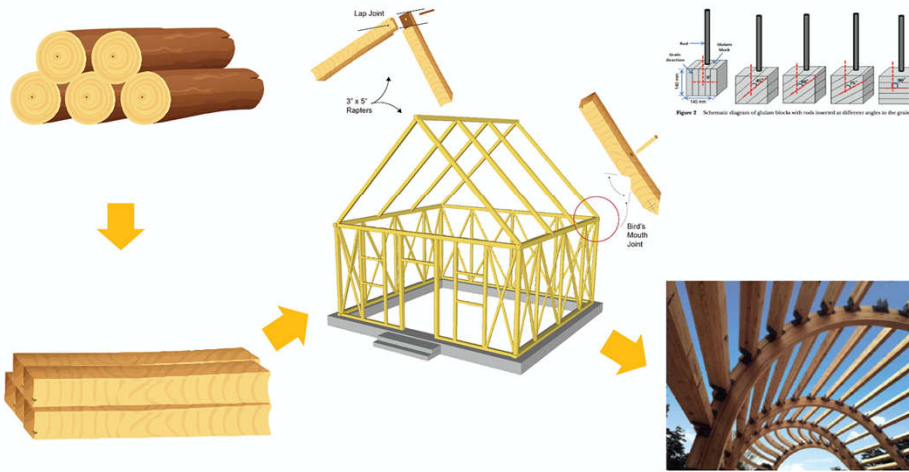
Generating optimal decision codes automatically is a complex and challenging task. The existing generation methods are still lacking.



Meat species identification and Halal authentication using DNA

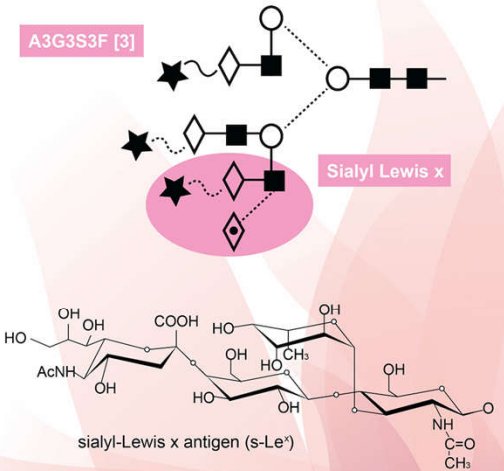


Pull-out strength of steel rods in mengkulang timber at different angles to the grain



Revealing potential glycan markers from serum glycoproteins associated with cancer progression

CA15-3
Biomarker of
1st choice for
breast cancer



Potential glycan biomarker for breast cancer with

- Higher specificity
- Higher sensitivity



The Discovery of CMU Taiwan @researchcmu

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College & University in Taichung, Taiwan

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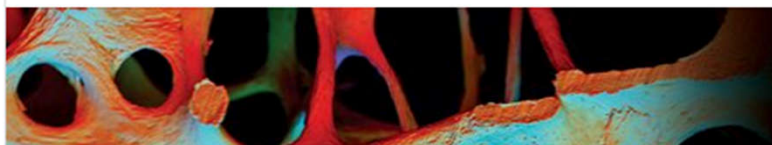
Nguyen Thuy Linh and 1 other like this or have checked in

Posts

The Discovery of CMU Taiwan February 12 at 12:09 PM

Paeonol has been proven to exert antioxidant, anti-inflammatory, and anti-tumorigenic effects.

Click for research highlights: <http://bit.ly/2S1TMis>



About See All



No.91 Hsueh-Shih Road Taichung, Taiwan 40402



The Discovery of CMU Taiwan



Published by KC Tang [?] · December 30, 2018 at 12:30 AM · 🌐

A potential therapeutic candidate for Osteoarthritis disease was found.

Click for research highlights: <https://go.nature.com/2DyzCZy>

Full research at: <https://doi.org/10.1038/srep43205>



GO.CREATEDACARD.ME

Effectively decreased monocyte infiltration and prevented cartilage degradation and inflammatory model



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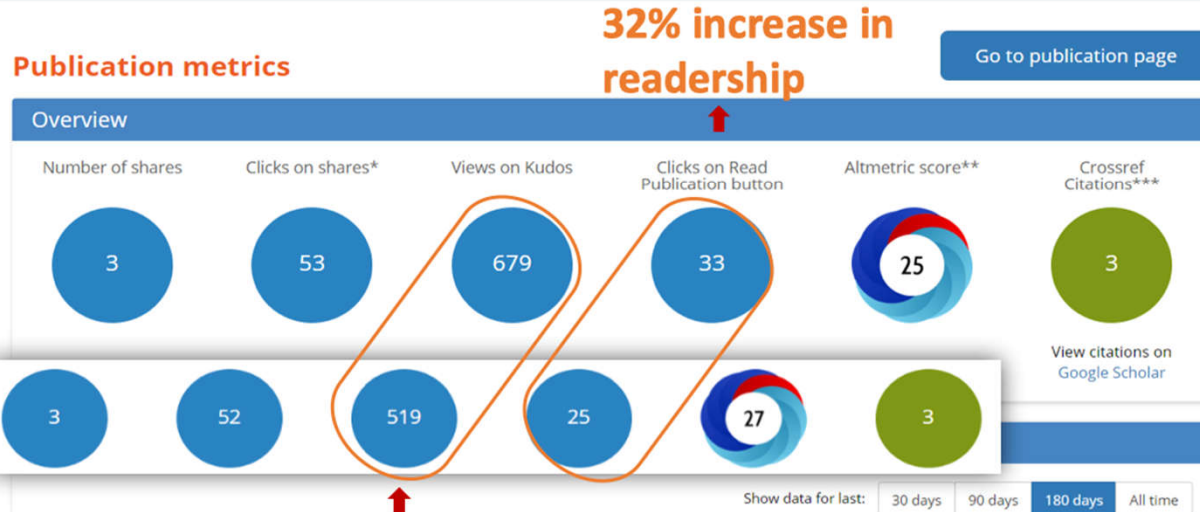
Topic in November: Acupuncture

Acupuncture decreased the risk of coronary heart disease in patients with fibromyalgia in Taiwan: a nationwide matched cohort study

Mei-Yao Wu, Ming-Cheng Huang, Jen-Huai Chiang, Mao-Feng Sun, Yu-Chen Lee, Hung-Rong Yen

February 2017, Springer Science + Business Media

DOI: 10.1186/s13075-017-1239-7



Geographical breakdown (Twitter)

Country	Count	As %
Ireland	2	14%
United Kingdom	2	14%
Taiwan	1	7%
Argentina	1	7%
Spain	1	7%
New Zealand	1	7%
Unknown	6	43%

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Where are we right now?

Challenges in STI today

- 01 Fragmented and disconnected STI landscape
- 02 No clear overarching and agile governance for STI to synergise actions across ministries, agencies, industries, and communities
- 03 Misalignment of research priority areas with R&D output, imports, exports and IPs
- 04 Ineffective resource allocation and lack of sustainable funding to drive innovation capacity
- 05 Lack of total S&T talent planning and development to move STI agenda
- 06 Inadequate public-private partnership outcomes
- 07 Majority of industries are not innovators
- 08 Society has low science engagement
- 09 Home-grown technology, talent, industries, products & services are not visible
- 10 International STI strategic alliances are not fully leveraged
- 11 Marginalised and under-served communities are often left behind in STI developments
- 12 Sustainability is not an inherent part of the STI ecosystem



A better start SUMMAR MALAYSIA POLICY SCIENCE, TECHNO (202

Challenges in STI today

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Where are we right now?



STRATEGIC THRUST 7: STI FOR SOCIETAL WELL-BEING & ENABLER FOR SDGs

A decline in the infant mortality rate for Malaysia, 6.7 deaths per 1,000 births in 2017, depicts the significance of STI advancement. The beneficiaries of a developed STI ecosystem does not just boost the economic status but also the healthcare industry of our nation. The identification of critical technologies through a structured institutional framework to support societal well-being of Malaysia cover both, long-term and short-term goals of strategic interventions in existing national policies. The active involvement of all members of the quadruple helix by adapting technology application value chain to address distinguished national challenges determines the effectiveness of these strategic interventions. Furthermore, a multidisciplinary STI approach needs to be encouraged to achieve all 17 Sustainability Development Goals by 2030.



"STI development in the coming 30 years is a must to fulfil not only our objectives of becoming an advanced nation, but a sustainable one at that" -
Datuk Seri Panglima Madius Tangau



SUSTAINABLE DEVELOPMENT GOALS 17 GOALS TO TRANSFORM OUR WORLD



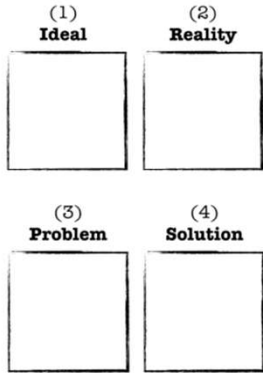


Emphasizing
CREATIVITY

**AT WHAT
COST?**



Your Storyboard



A Role for Parasites in Stabilising the Fig-Pollinator Mutualism

Abstract

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Communication from Learned to Innate Olfactory Processing Centers Is Required for Memory Retrieval in *Drosophila* Neuron

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PLOS BIOLOGY

A Role for Parasites in Stabilising the Fig-Pollinator Mutualism

Derek W. Dunn^{1,2,3}, Simon T. Segar^{1,2}, Jo Ridley³, Ruth Chan¹, Ross H. Crozier⁴, Douglas W. Yu³, James M. Cook^{1,2,5*}

1 Division of Biology, Imperial College London, Ascot, United Kingdom, **2** School of Biological Sciences, University of Reading, Reading, United Kingdom, **3** School of Biological Sciences, University of East Anglia, Norwich, United Kingdom, **4** School of Marine and Tropical Biology, James Cook University, Townsville, Queensland, Australia, **5** Natural Environment Research Council (NERC) Centre for Population Biology, Imperial College London, Ascot, United Kingdom

Mutualisms are interspecific interactions in which both players benefit. Explaining their maintenance is problematic, because cheaters should outcompete cooperative conspecifics, leading to mutualism instability. Monoecious figs (*Ficus*) are pollinated by host-specific wasps (Agaonidae), whose larvae gall ovules in their “fruits” (syconia). Female pollinating wasps oviposit directly into *Ficus* ovules from inside the receptive syconium. Across *Ficus* species, there is a widely documented segregation of pollinator galls in inner ovules and seeds in outer ovules. This pattern suggests that wasps avoid, or are prevented from ovipositing into, outer ovules, and this results in mutualism stability. However, the mechanisms preventing wasps from exploiting outer ovules remain unknown. We report that in *Ficus rubiginosa*, offspring in outer ovules are vulnerable to attack by parasitic wasps that oviposit from outside the syconium. Parasitism risk decreases towards the centre of the syconium, where inner ovules provide enemy-free space for pollinator offspring. We suggest that the resulting gradient in offspring viability is likely to contribute to selection on pollinators to avoid outer ovules, and by forcing wasps to focus on a subset of ovules, reduces their galling rates. This previously unidentified mechanism may therefore contribute to mutualism persistence independent of additional factors that invoke plant defences against pollinator oviposition, or physiological constraints on pollinators that prevent oviposition in all available ovules.

Citation: Dunn DW, Segar ST, Ridley J, Chan R, Crozier RH, et al. (2008) A role for parasites in stabilising the fig pollinator mutualism. *PLoS Biol* 6(3): e159. doi:10.1371/journal.pbio.0060039

Introduction

In a biosphere driven by selection at the level of the individual gene [1], explaining the existence of cooperation, such as mutualism, is a major scientific challenge. Mutualisms are interspecific ecological interactions characterised by reciprocal benefits to both partners [2] that usually involve costly investments by each. What factors thus prevent one partner from imposing unsustainable costs onto the other to enable mutualism stability [3–7]? In some mutualisms, the larger, more sessile partner, manipulates the other by directing benefits to cooperative individuals and costs to cheaters [4–7]. However, a general consensus on mutualism persistence has only recently been formulated, and this clearly shows that a high benefit-to-cost ratio of cooperating is one important factor [8,9].

Fig trees (*Ficus*) and their host-specific aganoid pollinator wasps are a classic example of an obligate mutualism [10,11]. The wasps pollinate the trees, and the trees provide resources for wasp offspring. In monoecious *Ficus*, female wasps push their way through a specialised entrance into receptive syconia (colloquially, “figs”), which are enclosed inflorescences. The wasps then pollinate the tree while depositing their eggs individually into ovules. Thus, each egg laid costs the tree one seed, but upon emergence, the female wasp offspring disperse that tree’s pollen. Trees need to produce both wasps and seeds for the mutualism to persist, but natural selection should favour wasps that exploit the maximum number of fig ovules in the short term, resulting in a conflict of interest between wasp and tree. However, the mutualism has persisted for at least 60 million years and has radiated into more than 750 species pairs [12]. The mechanisms preventing wasps

from overexploiting figs remain unknown, despite intensive study over four decades.

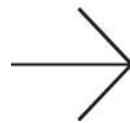
Within receptive syconia, the lengths of floral styles are highly variable [13,14], and ovipositing pollinators (foundresses) favour flowers with shorter styles for their offspring [15–18]. Style and pedicel lengths of flowers are negatively correlated. Short-styled ovules develop into seeds or galls (when a wasp is present) near the syconium inner cavity, while most long-styled ovules develop into seeds near the outer wall [19,20] (Figure 1). These patterns have been shown to reflect the oviposition preferences of foundresses, and are unlikely to be the result of greater elongation of pedicels containing eggs during syconial maturation, because in receptive syconia, pollinators’ eggs are mainly present in short-styled inner ovules [16]. These widespread observations have been tied to four, not necessarily mutually exclusive, mechanisms that have been proposed to stabilise the fig-pollinator mutualism: (1) Unbeatable seeds—outer ovules may be defended biochemically or physically against oviposition or larval development [21]. However, no mechanism has yet been identified. (2) Short ovipositors—pollinators’ ovipositors may be too short to fully penetrate the long styles of

Academic Editor: Anurag A. Agrawal, Cornell University, United States of America
Received: September 14, 2007; **Accepted:** January 22, 2008; **Published:** March 11, 2008

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Abbreviation: s.e., standard error

* To whom correspondence should be addressed. E-mail: james.cook@reading.ac.uk



Big
Why

Why

What

How



WHY

INTRODUCTION

Thesis Statement

- Topic
- Stance
- Rationale

To
Sharpen

WHAT

DISCUSSION

+ CONCLUSION

- Contributions
- Avenues
- Change
- Levels

To
Organize

HOW

METHODOLOGY

Killer Thesis Statement (Why)

What is a Thesis Statement?

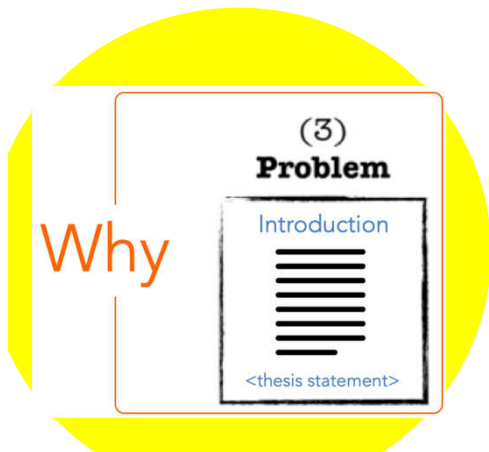
- A single sentence that is located at the end of your introduction.
- Tells the reader what your opinion is and what paper is going to prove.
- Directs your reader to the main pieces of evidence you will explore.

Analytical
Explanatory/Expository
Argumentative

From examining <claim one>, <claim two> and <claim three>, it is clear that <opinion>.



"From examining minions' **cramped working conditions**, **low pay** and **lack of vacation entitlement**, it is clear that **Gru is a bad employer whose HR practices should be investigated.**"



The Formula

Although most politicians support ongoing funding for the DEA,
counter argument (opposite of your opinion)

Topic

the war on drugs
Subject

+

is a travesty of justice
Opinion

Stance

because sentencing laws are discriminatory, more prisons than colleges are built,
reason 1 reason 2
and addiction is treated as a crime rather than a disease.
reason 3

Rationale

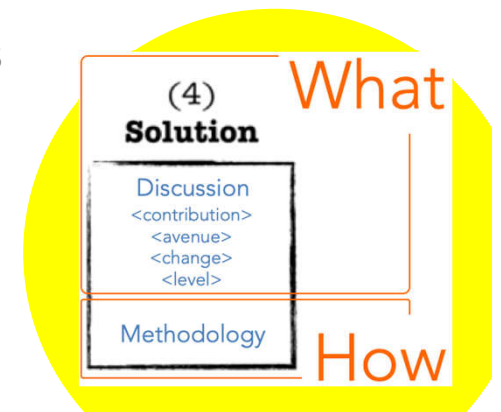
Why

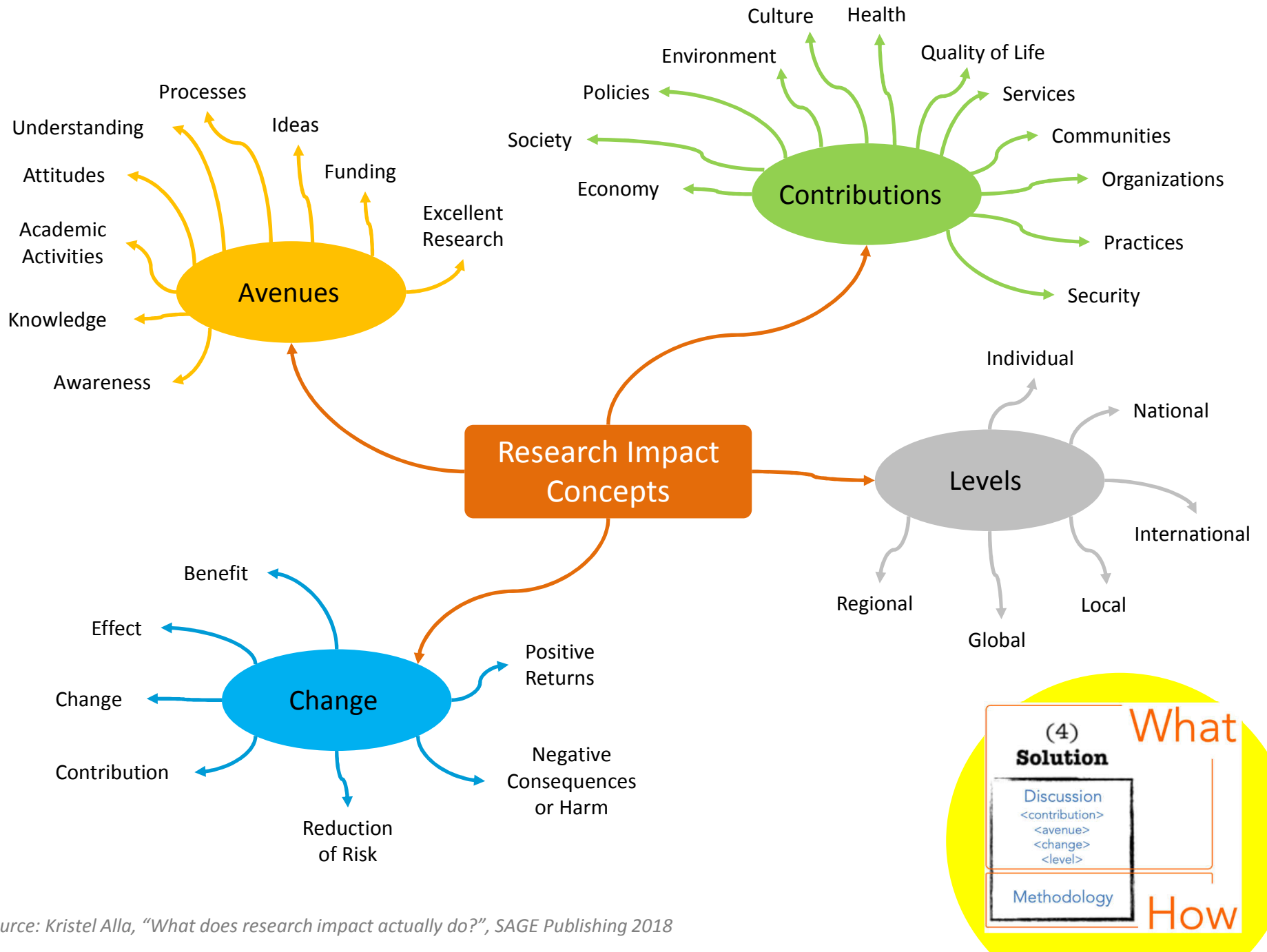
(3)
Problem

Introduction

<thesis statement>

What you have done that will bring research impact to society





Source: Kristel Alla, "What does research impact actually do?", SAGE Publishing 2018

Big Why =

Why = Killer Thesis Statement (last para of Introduction)

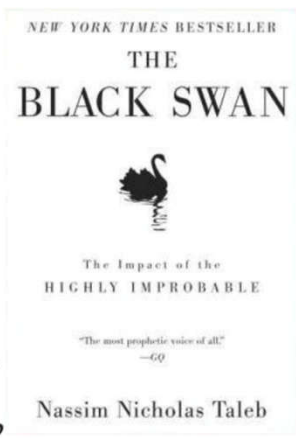
What = Change + Contributions + Avenues + Levels

How = The details

PLS = Big Why + Why + What

Abstract = Why + What + How





"The Black Swan"
4. The Wildcard Scenario

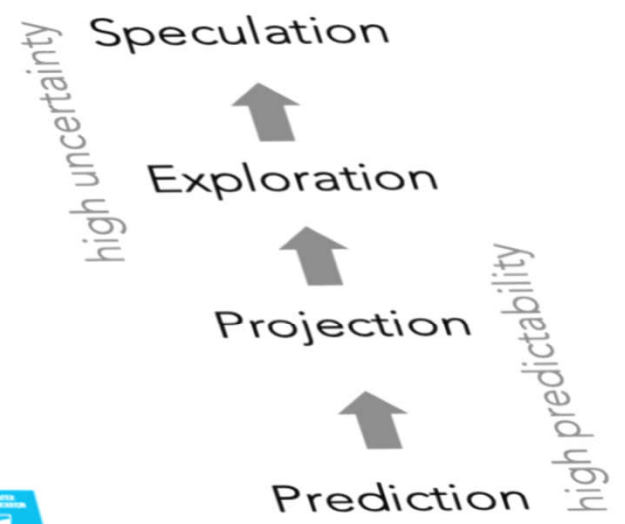
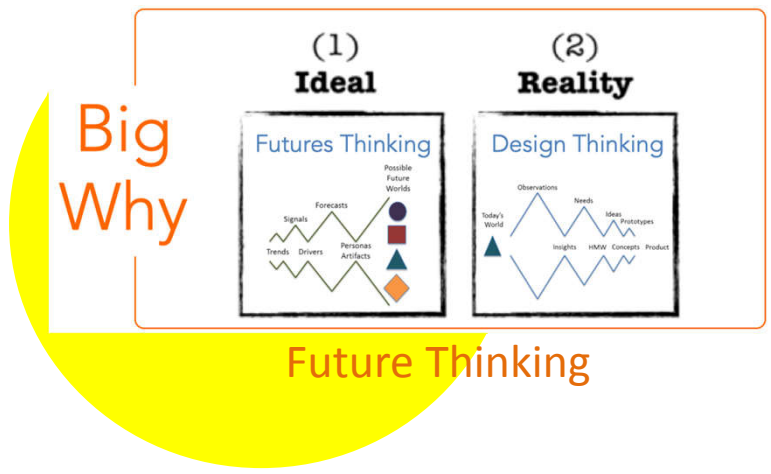
"The Star"
3. The Possible Scenario

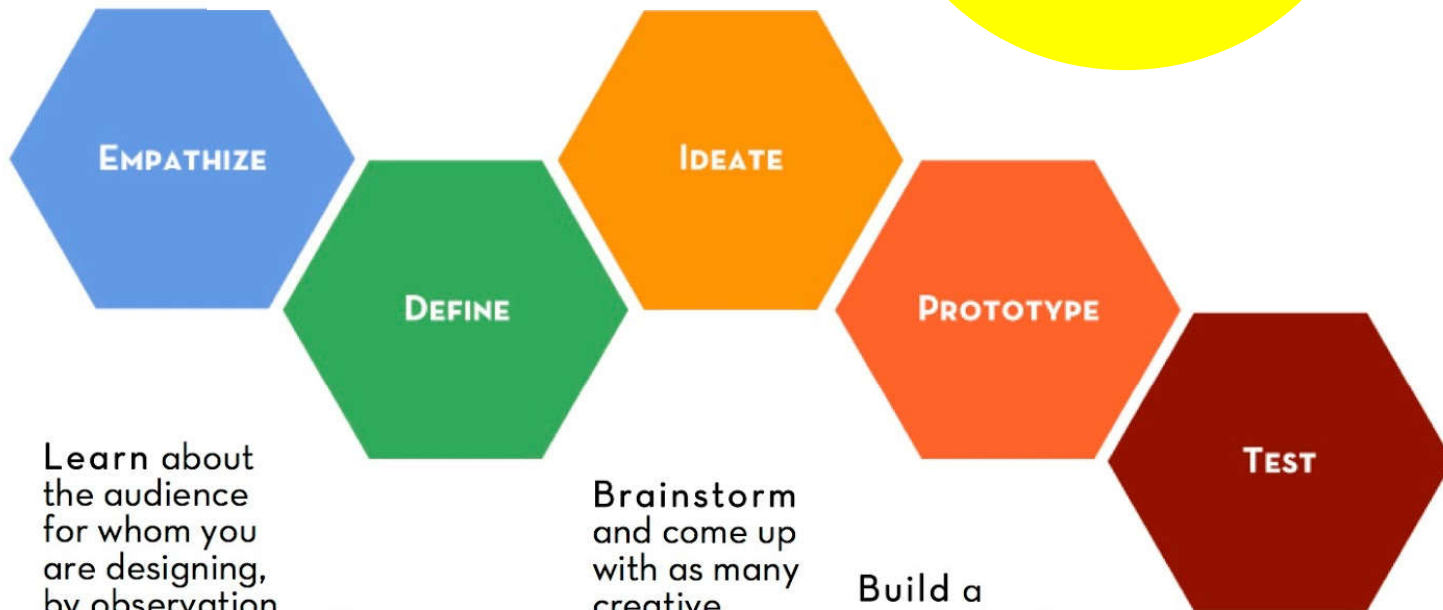
"The Mountain"
2. The Plausible Scenario

"The Chessboard"
1. The Probable Scenario



Adapted from: H Tibbs, "Making the future visible", 1999





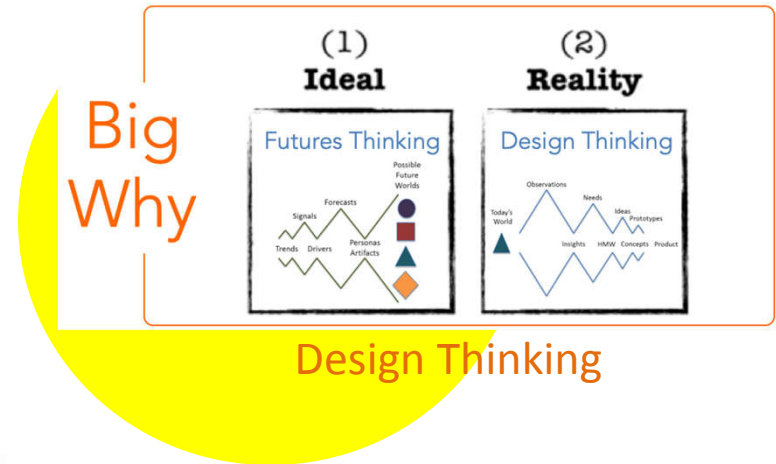
Learn about the audience for whom you are designing, by observation and interview.
Who is my user? What matters to this person?

Create a point of view that is based on user needs and insights.
What are their needs?

Brainstorm and come up with as many creative solutions as possible.
Wild ideas encouraged!

Build a representation of one or more of your ideas to show to others.
How can I show my idea? Remember: A prototype is just a rough draft!

Share your prototyped idea with your original user for feedback.
What worked? What didn't?



United States Patent
van der Steur et al.

Patent No.: **US 8,851,397 B1**
Date of Patent: **Oct. 7, 2014**

Abstract
A method for stabilizing the internal medicine of a patient with a high risk of HIV exposure prophylaxis (PrEP) to reduce HIV acquisition. The method includes: (a) identifying a patient with a high risk of HIV exposure prophylaxis; (b) determining a specific internal medicine regimen for the patient; (c) determining a specific internal medicine regimen for the patient; and (d) administering the specific internal medicine regimen to the patient.

Claims
1. A method for stabilizing the internal medicine of a patient with a high risk of HIV exposure prophylaxis (PrEP) to reduce HIV acquisition, the method comprising: (a) identifying a patient with a high risk of HIV exposure prophylaxis; (b) determining a specific internal medicine regimen for the patient; (c) determining a specific internal medicine regimen for the patient; and (d) administering the specific internal medicine regimen to the patient.

References
1. U.S. Pat. No. 7,812,345 (2006-08-01)
2. U.S. Pat. No. 7,812,345 (2006-08-01)
3. U.S. Pat. No. 7,812,345 (2006-08-01)
4. U.S. Pat. No. 7,812,345 (2006-08-01)
5. U.S. Pat. No. 7,812,345 (2006-08-01)

KNOWLEDGE
ANTIRETROVIRAL
Eric C. Tang¹, Asha Iyer¹
¹Columbia University

INTRODUCTION
Recent studies in heterosexual men at high risk for HIV exposure prophylaxis (PrEP) to reduce HIV acquisition. These results are promising regarding their use in terms of safety, potential and provider willingness. Initiation of PrEP is a regular risk reduction strategy and its risk is low. Effectiveness and safety of PrEP if providers are not aware of its risks and its benefits. Currently, there are few studies on PrEP prevention.

OBJECTIVES
1. To determine the current internal medicine prevention amongst high risk patients.
2. To assess internal medicine PrEP as a method of HIV prevention.
3. To determine specific internal medicine PrEP to high-risk populations.

METHODS
• 135 internal medicine patients were invited to the Center.
• Part of a larger study in New York City.
• 26-question survey covering:
a. Demographic
b. Type of practice
c. Awareness of PrEP
d. Concerns
e. Willingness to prescribe PrEP

REFERENCE
1. U.S. Pat. No. 7,812,345 (2006-08-01)
2. U.S. Pat. No. 7,812,345 (2006-08-01)
3. U.S. Pat. No. 7,812,345 (2006-08-01)
4. U.S. Pat. No. 7,812,345 (2006-08-01)
5. U.S. Pat. No. 7,812,345 (2006-08-01)

Why Animal Models Fail in ALZHEIMER'S DISEASE RESEARCH

Today, 5.3 million Americans suffer from Alzheimer's. Rates are expected to triple by 2050.

Currently, Alzheimer's research relies on animal models. But animals do not develop the disease as it develops in humans.

99.6% of Alzheimer's drugs that test successfully in animals FAIL in human trials.

In the last decade, ZERO new drugs have been developed that can effectively treat ALZHEIMER'S.

What do 7 billion people do?

- 430 million are unemployed
- 577 million are older than 64
- 800 million work industrial jobs
- 1.4 billion work in agriculture
- 1.7 billion work in services
- 1.9 billion are too young to work (ages 0-15)
- over 400 million are entrepreneurs

Just the right amount of water can go through as fast as it's put in the funnel.

But it's not the water that's the problem. It's the funnel.

"The first few drivers could have a ripple effect, even if it doesn't look like it."

STEPHEN J. HANUSI

sources: cia.gov, census.gov, gemconsortium.org

A Role for Parasites in Stabilising the Fig-Pollinator Mutualism

Derek W. Dunn^{1,2,3}, Simon T. Segar^{1,2}, Jo Ridley¹, Ruth Chan¹, Ross H. Crockett¹, Douglas B. Clark^{1,2,3}

Abstract
Mutualisms are interspecific interactions in which both players benefit. Explaining the because cheaters should outcompete cooperative conspecifics, leading to mutualism breakdown. Parasites that manipulate the behavior of one of the mutualist partners, thereby altering the benefits to the other partner, can stabilize mutualisms. We show that parasitic wasps that manipulate the behavior of fig wasps, which are mutualist partners in the fig-pollinator mutualism, can stabilize the mutualism. We show that parasitic wasps that manipulate the behavior of fig wasps, which are mutualist partners in the fig-pollinator mutualism, can stabilize the mutualism. We show that parasitic wasps that manipulate the behavior of fig wasps, which are mutualist partners in the fig-pollinator mutualism, can stabilize the mutualism.

Introduction
In a long-term debate by selection at the level of the individual gene (1), explaining the existence of cooperation, such as mutualisms, is a major scientific challenge. Mutualisms are interspecific ecological interactions characterized by reciprocal benefits to both partners (2) that usually involve costly investments by each. What factors thus prevent one partner from imposing unreasonable costs on the other to enable mutualism stability (3-7)? In some mutualisms, the larger, more mobile partner, manipulating the other by diverting benefits to cooperative individuals and costs to defectors (8-10). However, a general consensus on mutualism persistence has only recently been formulated, and this chiefly shows that high benefits to one partner are essential for mutualism stability (11-13).

Fig trees (Ficus) and their specific specialist pollinators (wasps) are a classic example of an obligate mutualism (14,15). The wasps pollinate the trees, and the trees provide resources for wasp offspring. In some species, female wasps push their way through a specialised entrance into receptive ovules (collecting "nectar"), which are excluded to other species. The wasps then pollinate the tree while depositing their egg individually into ovules. Thus, each egg laid into the tree ovule seed, but upon emergence, the female wasp offspring disperse their own seeds. Trees need to produce both wasps and seeds for the mutualism to persist, but natural selection should favor wasps that exploit the maximum number of fig ovules in the shortest time, resulting in a conflict of interest between wasp and tree. However, the mutualism has persisted for at least 60 million years and has radiated into more than 750 species pairs (12). The mechanisms preventing wasp

Discussion
Derek W. Dunn, Simon T. Segar, Jo Ridley, Ruth Chan, Ross H. Crockett, Douglas B. Clark. *Science* 2014; 343: 123-126.

Introduction
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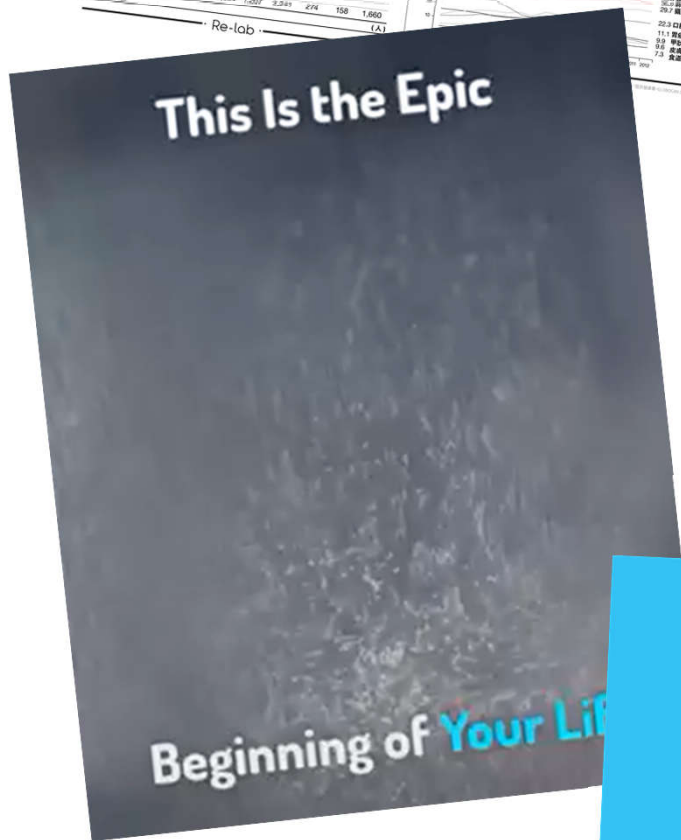
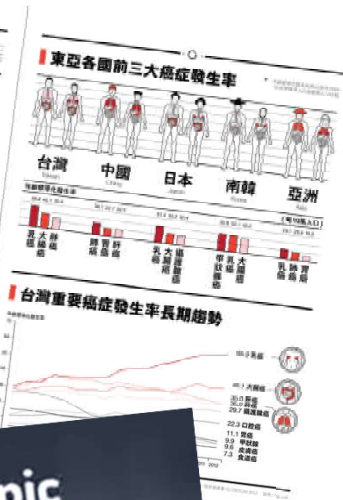
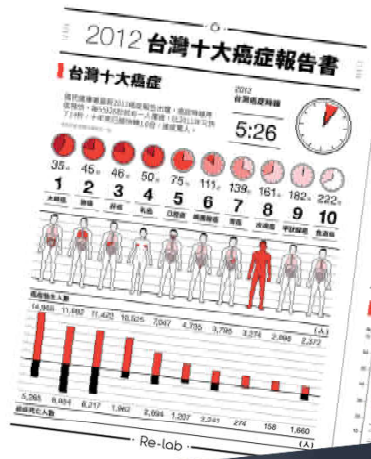
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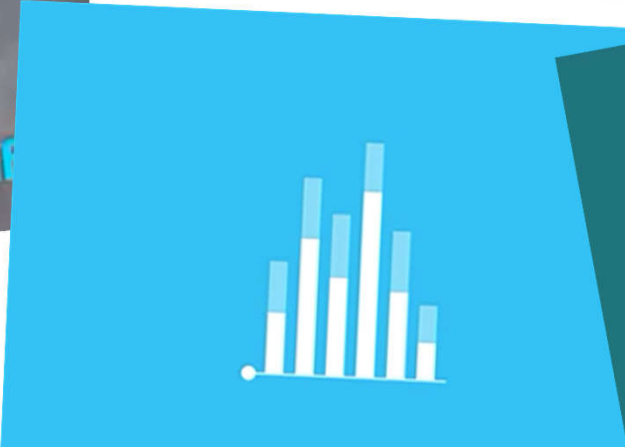
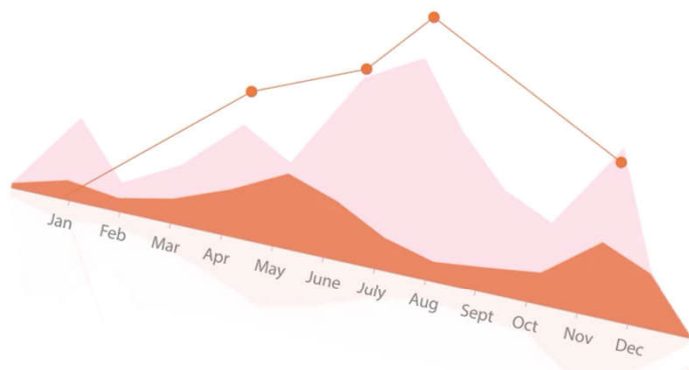
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prescribe PrEP
However, more
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GEMENTS
report from the Doris Duke Charitable Foundation Clinical
by a grant from the Bristol Myers Squibb Venology Fellow
Infectious Disease Fellow Dr. Asha Iyer.



animation





In a nutshell.....

1. Research Impact is the ultimate measurement of research performance
2. Publishers, funders and rankers are adjusting their criteria toward impact quantification
3. Researchers need to promote their research work after publication for impact evidencing
4. Universities need to support such transformation with: research writing skill, and later, the platform

Thank You

woeifuhwong@gmail.com

“We share your discovery!”

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