“Let’s highlight it: pitching your research for all”

Dr. Teresa Rayon
The Francis Crick Institute
@t_rayon

Background

2007

Diploma in Biology

Universidad Autónoma de Madrid

2014

PhD

CNIC

2016

EMBO Postdoctoral Fellow

The Francis Crick Institute

2017

En Fase Experimental podcast

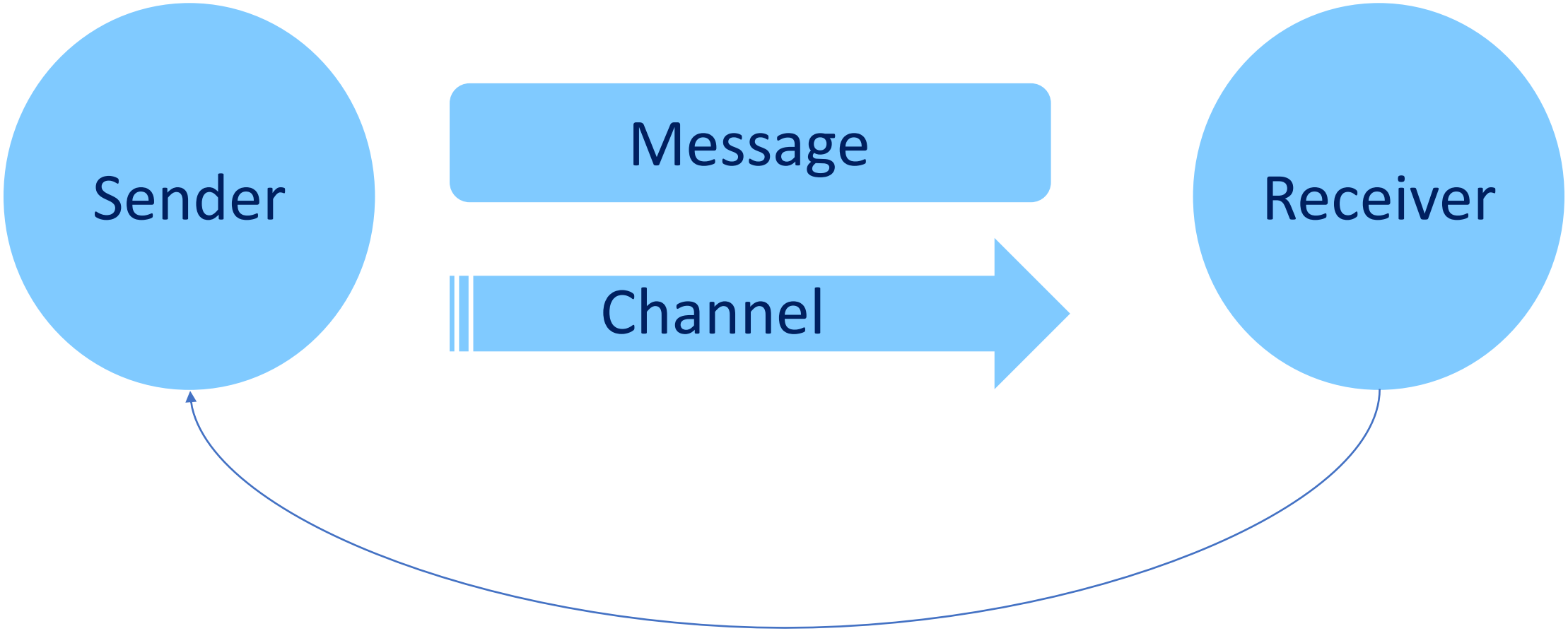
SRUK

2018

preLighter

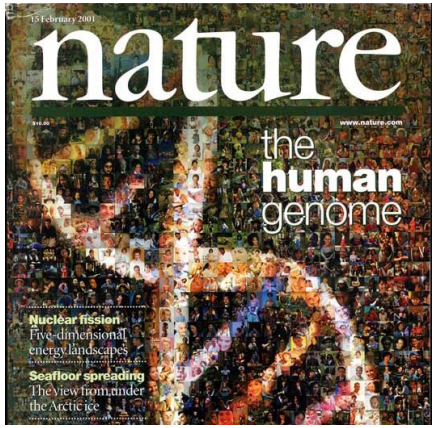
The Company of Biologists

How do we communicate science?



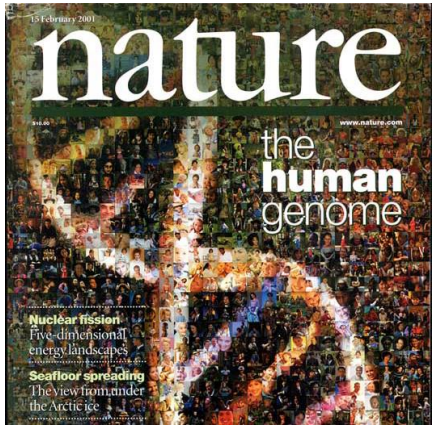
What written channels do we use in science?

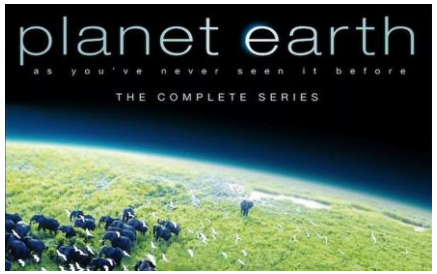
Journals


15 February 2001
nature
www.nature.com
the human genome
Nuclear fission
Five-dimensional energy landscapes
Seafloor spreading
The view from under the Arctic ice

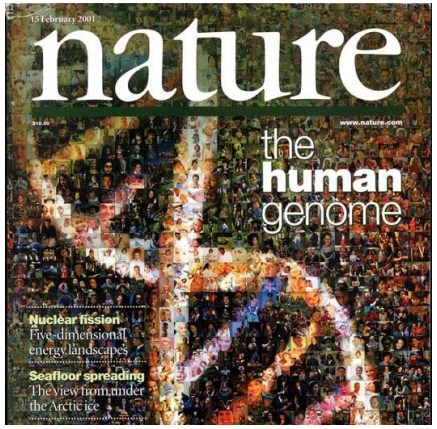

muy
INTERESANTE
12
hallazgos
TECNOLOGÍA
CÓMO MEJORARÁ NUESTRAS VIDAS EL 5G
FRUTA Y VERDURA
¿POR QUÉ AÚN SE ENVUELVEN EN PLÁSTICO?
CRIMEN
TEST GENÉTICOS CONTRA EL TRÁFICO INFANTIL
LA REVOLUCIÓN
NEANDERTAL
CUIDABAN A LOS ENFERMOS, DECORABAN LAS CUEVAS, SE PINTABAN EL CUERPO, ENTERRABAN A LOS MUERTOS, TENÍAN SEXO CON 'HOMO SAPIENS'... ASÍ PENSABAN Y SENTÍAN NUESTROS PRIMOS EVOLUTIVOS

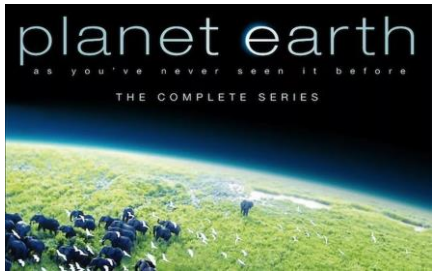
Journals
TV programs





Journals
tv programs
blogs
news





mosaic

Materia

Ciencia de la música, música de la ciencia

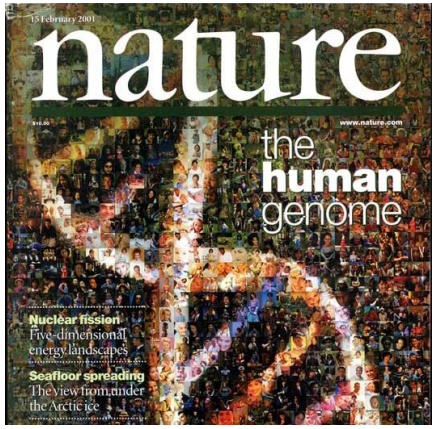
La más enigmática de las artes plantea cuestiones profundas sobre el mundo y nuestra posición en él

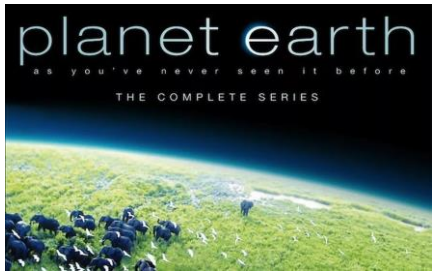
SALUD

Muere la científica española Margarita Salas

Su mayor contribución fue la de ayudar a entender cómo se duplica el ADN. Fue la primera mujer española en ser elegida miembro de la Academia Nacional de Ciencias de EEUU

Journals
tv programs
blogs
news
podcasts
movies
exhibitions





Materia

Ciencia de la música, música de la ciencia

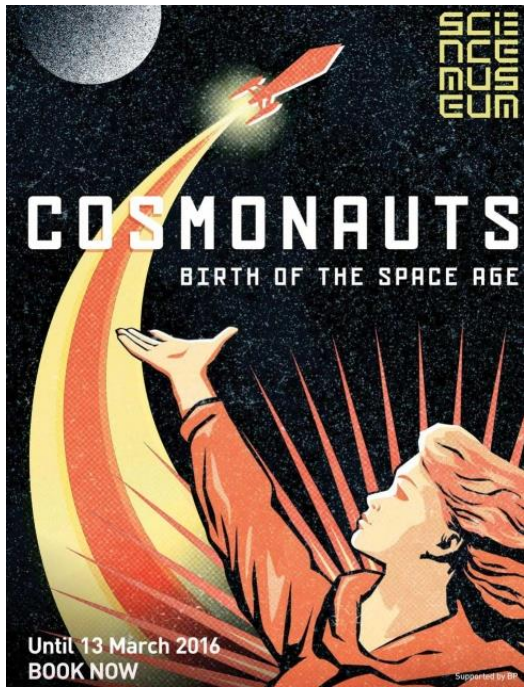
La más enigmática de las artes plantea cuestiones profundas sobre el mundo y nuestra posición en él

mosaic

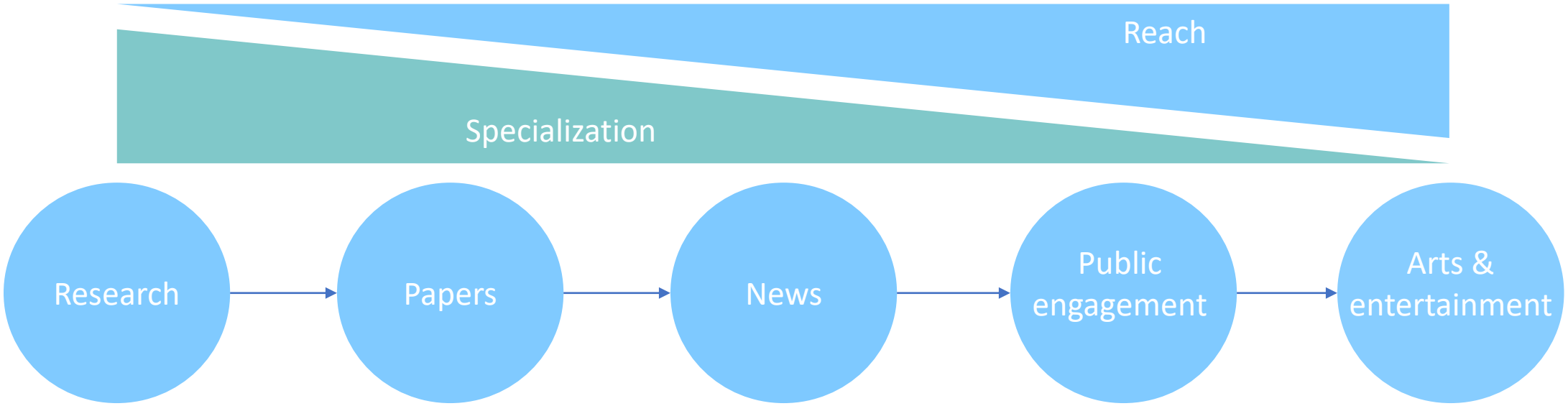
SALUD

Muere la científica española Margarita Salas

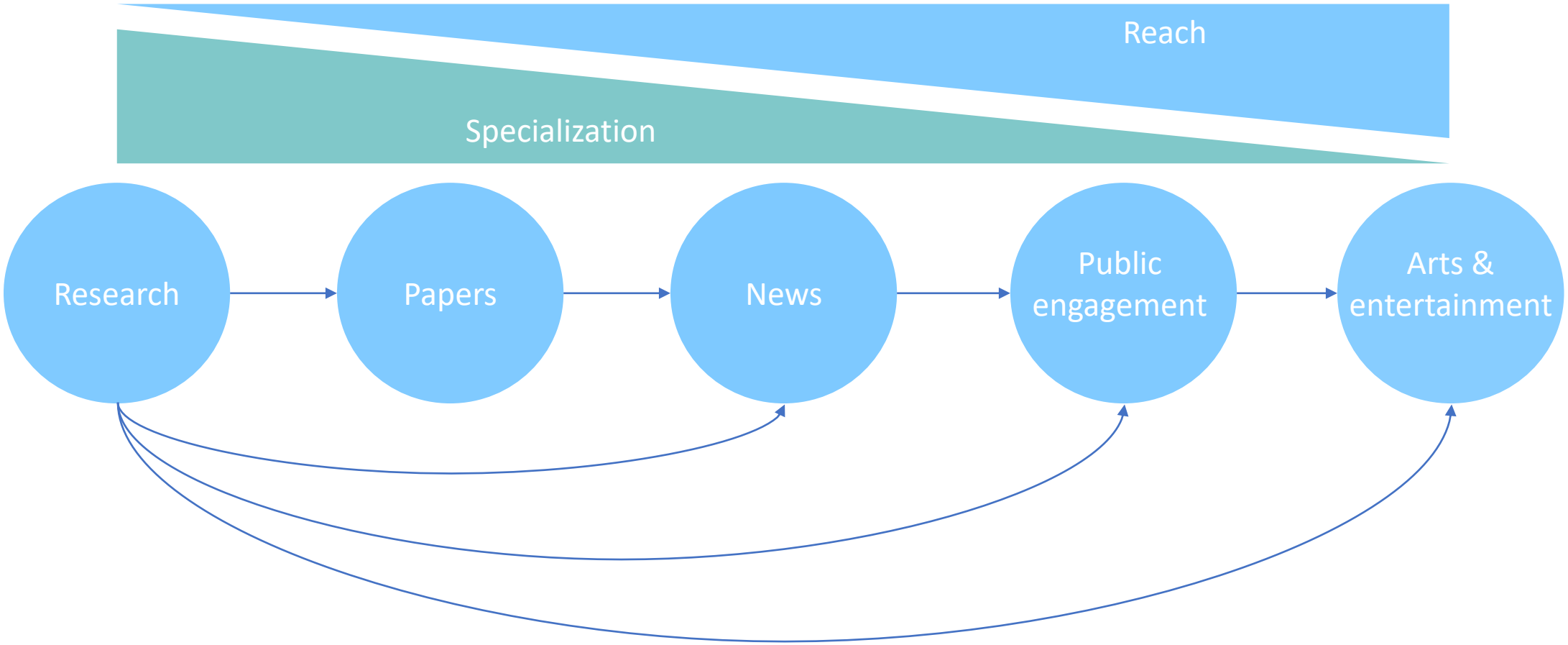
Su mayor contribución fue la de ayudar a entender cómo se duplica el ADN. Fue la primera mujer española en ser elegida miembro de la Academia Nacional de Ciencias de EEUU



Communication Flow



Communication Flow



During my PhD…

Scientific article

CellPress

Developmental Cell
Article

Notch and Hippo Converge on *Cdx2* to Specify the Trophectoderm Lineage in the Mouse Blastocyst

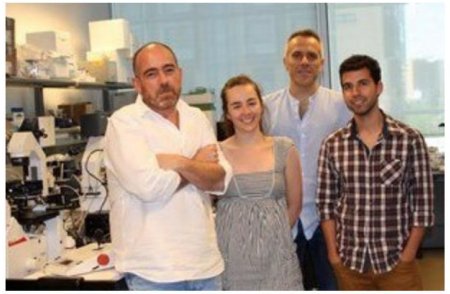
Teresa Rayon,[1] Sergio Menchero,[1] Andres Nieto,[2] Panagiotis Xenopoulos,[3] Miguel Crespo,[1,7] Katie Cockburn,[2,4] Susana Cañon,[1] Hiroshi Sasaki,[5] Anna-Katerina Hadjantonakis,[3] Jose Luis de la Pompa,[6] Janet Rossant,[2,4] and Miguel Manzanares[1,*]

[1]Stem Cell Biology Program, Department of Cardiovascular Development and Repair, Centro Nacional de Investigaciones Cardiovasculares (CNIC), Melchor Fernández Almagro 3, 28029 Madrid, Spain
[2]Program in Developmental and Stem Cell Biology, Hospital for Sick Children Research Institute, 555 University Avenue, Toronto, ON M5G 1X8, Canada
[3]Developmental Biology Program, Sloan-Kettering Institute, New York, NY 10065, USA
[4]Department of Molecular Genetics, University of Toronto, 1 King's College Circle, Toronto, ON M5S 1A8, Canada
[5]Institute of Molecular Embryology and Genetics, Department of Cell Fate Control, Kumamoto University, 2-2-1 Honjo, Kumamoto 860-0811, Japan
[6]Cardiovascular Developmental Biology Program, Department of Cardiovascular Development and Repair, Centro Nacional de Investigaciones Cardiovasculares (CNIC), Melchor Fernández Almagro 3, 28029 Madrid, Spain
[7]Present address: Department of Surgery, Weill Cornell Medical College, 1300 York Avenue, New York, NY 10065, USA
*Correspondence: mmanzanares@cnic.es
http://dx.doi.org/10.1016/j.devcel.2014.06.019

Press release
(Nota de prensa)

Investigadores del CNIC hallan la clave de la primera distinción de células de los mamíferos

" La convergencia de dos rutas de señalización es la que ayuda a establecer la aparición del tipo celular embrionario y el extraembrionario: el tipo celular embrionario dará lugar a todo el organismo adulto y el extraembrionario formará la placenta " El hallazgo podría favorecer la mejora de las tecnologías de la reproducción asistida



During my postdoc …

en fase EXPERIMENTAL SRUK CERU

Scientific writing: Who will read it?

Scientific article

- Scientists
- Editors

Article | Published: 11 September 2013

Reprogramming *in vivo* produces teratomas and iPS cells with totipotency features

María Abad, Lluc Mosteiro, Cristina Pantoja, Marta Cañamero, Teresa Rayon, Inmaculada Ors, Osvaldo Graña, Diego Megías, Orlando Domínguez, Dolores Martínez, Miguel Manzanares, Sagrario Ortega & Manuel Serrano

- Plain-language Summary
  - Scientists of all fields
  - General public

02.07.2015 | actualización 12:33 horas Por RTVE.es / EFE

Plain-language writing: Why should we care?

- Communication is part of the everyday life of a scientist
- Broaden our Impact
  - Increase scope of research
  - Make research as open and accessible as possible
  - Our responsibility to society, who fund most of our work
- Increasing our skillset - Careers beyond academia
  - Editor
  - Media Communicator
  - Scientific journalist
  - …

Plain-language writing: How?

- Explain the same concepts and findings as the paper but in language that most people would understand, and not assuming that the reader has any previous specialist knowledge.

- Use active sentences

- Keep your message focused and be concise

Digest your Menchero et. al

Your turn

Transitions in cell potency during early mouse development are driven by Notch

Sergio Menchero[1], Antonio Lopez-Izquierdo[1], Isabel Rollan[1], Julio Sainz de Aja[1,†], Maria Jose Andreu[1], Minjung Kang[2], Javier Adan[1], Rui Benedito[3], Teresa Rayon[1,†], Anna-Katerina Hadjantonakis[2] and Miguel Manzanares[1,*]

Background information to understand the findings in your paper

- Start general and become gradually more specific in the following sentences.
- Consider which details a reader would need to know.
- Provide simple definitions or explanations for all technical terms and acronyms.

What exact research question did you set out to answer and why?

- Clarify if this question was asking something completely new, or if you wanted to test or build upon previous findings.
- explain why should people care whether you can answer this question or not.

most important findings

- Focus on the paper highlights, and explain them clearly and completely.
- If possible, describe your methodology with a sentence or two.
- Always mention which species, type of organism or cells you have studied (for example, mutant mice, fruit flies, human kidney cells, or cancer cells).

Who might eventually benefit from the findings of your study, and what would need to be done before we could achieve these benefits?

- Think beyond your immediate field of research.
- Avoid hype or exaggeration. Be careful not to imply that the findings will imminently lead to new treatments.

And when you think you're done…

- Always re-read the general instructions and specific tips under each question, and then edit your answers.
- Ask someone from outside your field, to read your answers and help you identify any answers that are unclear or lacking in detail.

Digest

Background information to understand the findings in your paper

Digest

Background information to understand the findings in your paper

Upon fertilisation, the zygote needs to divide in order to generate all cell types that exist in the adult organism. These mature cell types arise during development as cells differentiate and become progressively more specialized in successive divisions. During the first divisions - before the embryo is implanted in the womb- cells have the ability to produce all the cell types in the adult as well as the organs required for embryo development such as the yolk sac and placenta. During the first two to three days of development, this ability is gradually lost as cells become more specialized and take on specific roles. Molecular signals from the surface of a cell to its nucleus, called signalling pathways, are key in the process. With this work, we find a common pathway, the Notch signalling pathway, that governs the specialization steps during these first embryo divisions and show that this pathway coordinates the initiation of the specialization steps.

Digest

What exact research question did you set out to answer and why?

Digest

What exact research question did you set out to answer and why?

There are two pathways that coordinate the distinction between “placenta” cells and the rest of cells that will form the adult organism in the early embryo. This is conceptually important because duplicated mechanisms could make an embryo error proof and resilient. However, we didn’t know to what extent the function of the two pathways was overlapping or complementary, and if Notch had a specific role, so we set out to identify if both pathways crosstalk between them and whether Notch had a specific function.

Digest

most important findings

Digest

most important findings

We find that Notch pathway function is independent of the other pathway, and that it is active earlier than anticipated - when the mouse embryo is formed by four cells- by using genetic and pharmacological tools in the embryo, combined with in vivo imaging. In addition, when we study what genes respond to Notch using transcriptomics in single embryos, we find an unforeseen role for Notch pathway in driving the specialization of cells by repressing genes that maintain cells in an undifferentiated state.

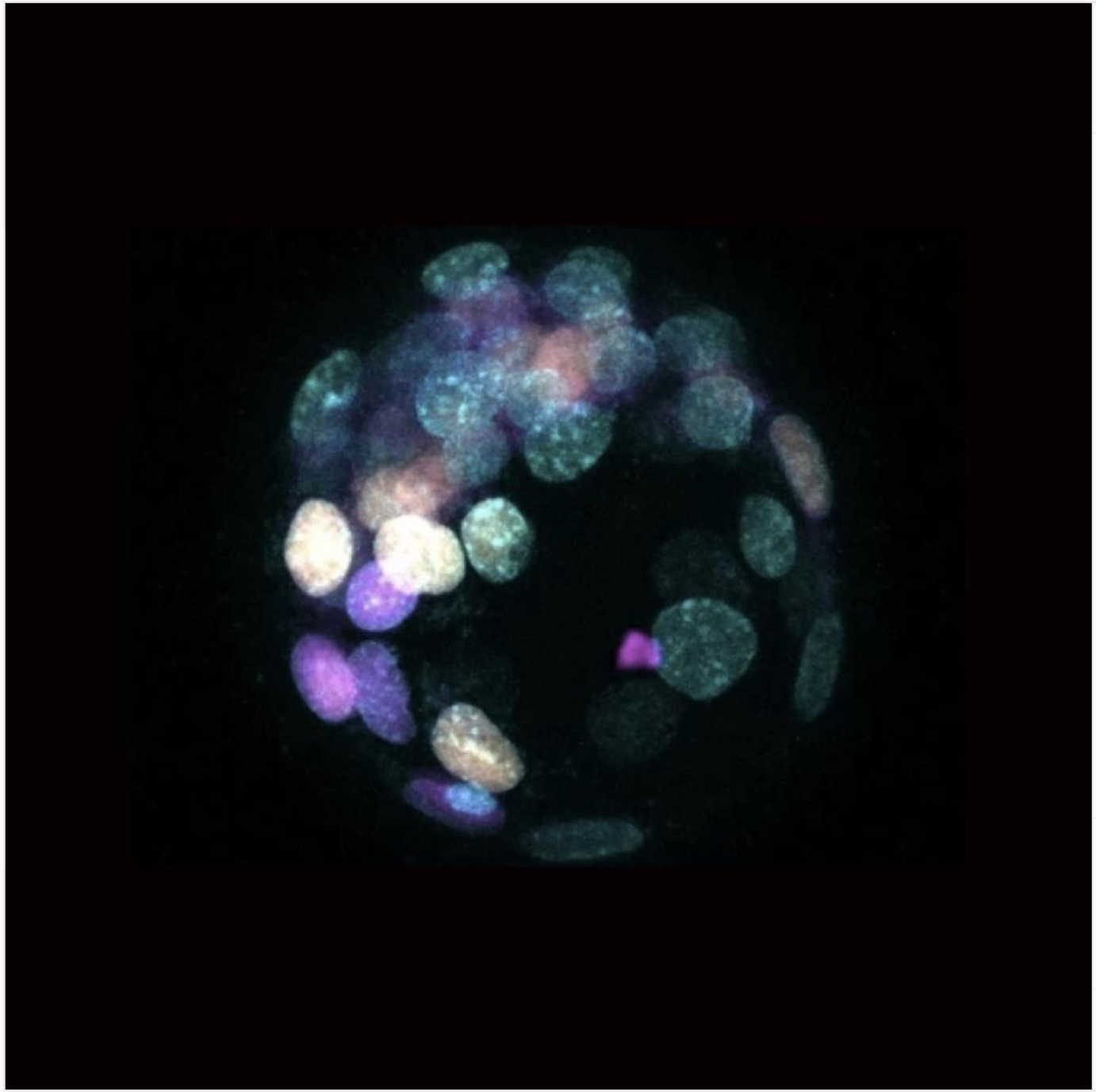
Digest

Expanding findings

Digest

Expanding findings

In our work, we show an additional working principle for Notch, where it acts in parallel to the other key pathway in the early embryo. In addition, the Notch pathway is crucial in many developmental processes whenever cells need to define a new cell type. How the loss of identical cells is regulated by Notch in the early embryo might be a general mechanism for Notch mode of action.



elifesciences • Follow

elifesciences Fateful decisions: In the early mouse embryo, the Notch signalling pathway coordinates the first stages of cell specialisation.
The cells have different colours depending on the levels of Notch activity.

DOI: 10.7554/eLife.42930

#cell #potency #embryonic #chromosomes #gene #developmental #biology #science #research #article

28w

t_rayon Sooooo cute <3

61 likes

MAY 2

Log in to like or comment.

Digest your PhD

Digest your PhD

Background information to understand the findings in your paper

Digest your PhD

What exact research question did you set out to answer and why?

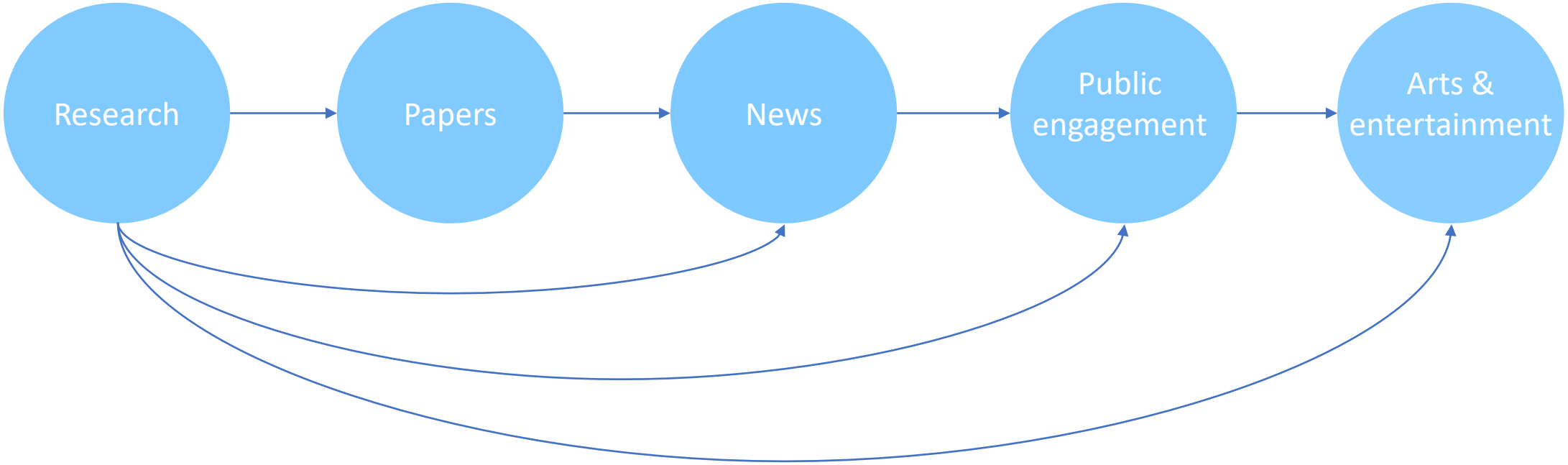
Digest your PhD

most important findings

Digest your PhD

Expanding findings

Take home message



From giving talks to writing papers, communication is part of the everyday life of a scientist. Tune it right!