

*Conosci la **GRANDE IMPORTANZA**
delle cellule staminali contenute nel
sangue del **cordone ombelicale** del tuo bimbo?*

*Conservandole offri a tuo figlio la possibilita' di avere a disposizione
per un lungo periodo di tempo cellule staminali vitali con ottime
capacita' replicative.*

*Un gesto prezioso che puoi compiere solo al
momento della sua nascita, un momento unico
ed irripetibile!*



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per tuo figlio le
cellule staminali
del sangue
del cordone
ombelicale
**Il parto è l'unico
momento**

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insieme a noi

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fianco ogni giorno

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una bioanca**

non siamo
intermediari
parla con noi!

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STAMINA

I BIMBI
NON SI
TOCCANO

SI AL DIRITTO
DI SCEGLIERE
SI A STAMINA
SI ALLA VITA

SI AL METODO
MATTIA E LU
E TUTTI GLI AL
VOGLIONO CONTINUARE A

LUDOVICA FRANCO



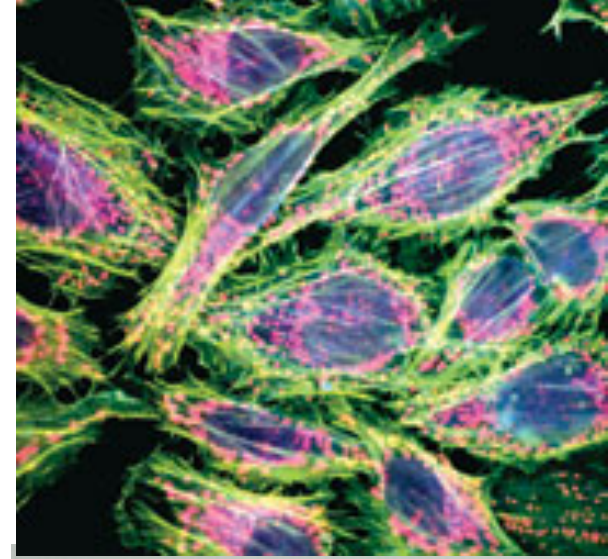






HeLa cells

since 1951 self-replicating
used in thousands biol exp
contribution to medicine



Henrietta Lacks

1920 - 1951

HeLa cancer cells have evolved into a self-replicating, single-cell life-form.

HeLa cells should be given the new species name of [Helacyton gartleri](#).

The cells are a genetic chimera of HPV18 and human cervical cells and now have a distinct, stable, non-human chromosome number.





WHO'S AFRAID OF
**HUMAN
CLONING**
?

Gregory E. Pence

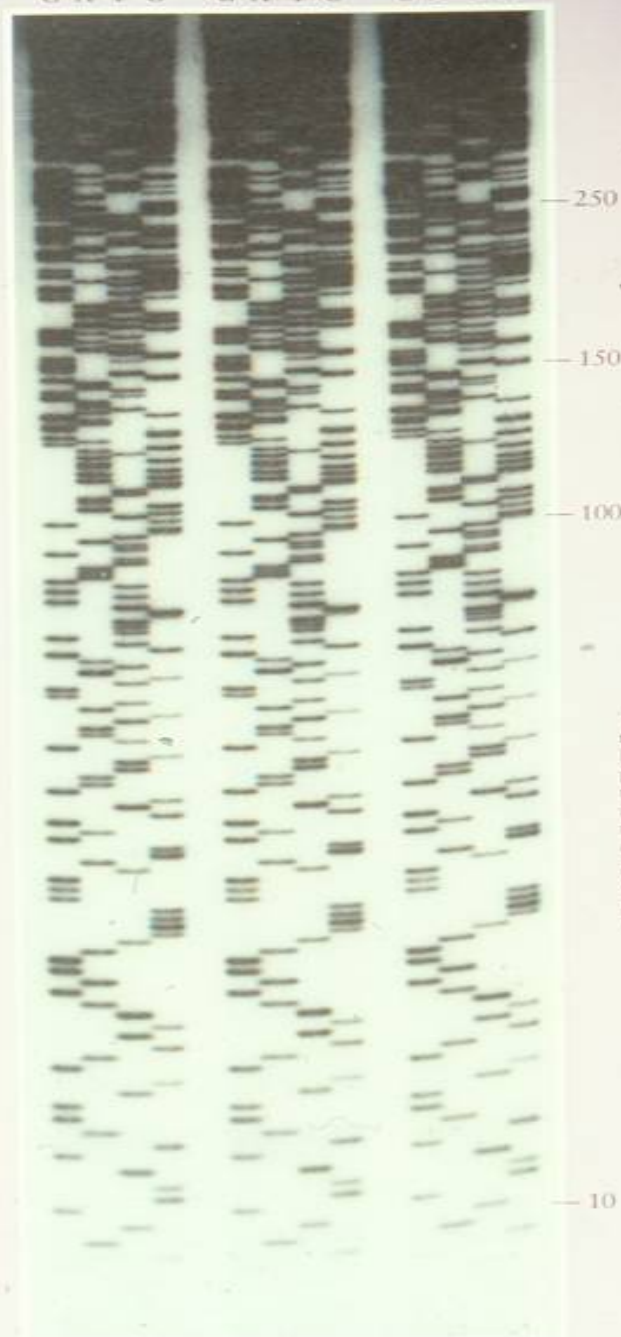
Playing God or Scientific Progress?

**HUMAN
CLONING**



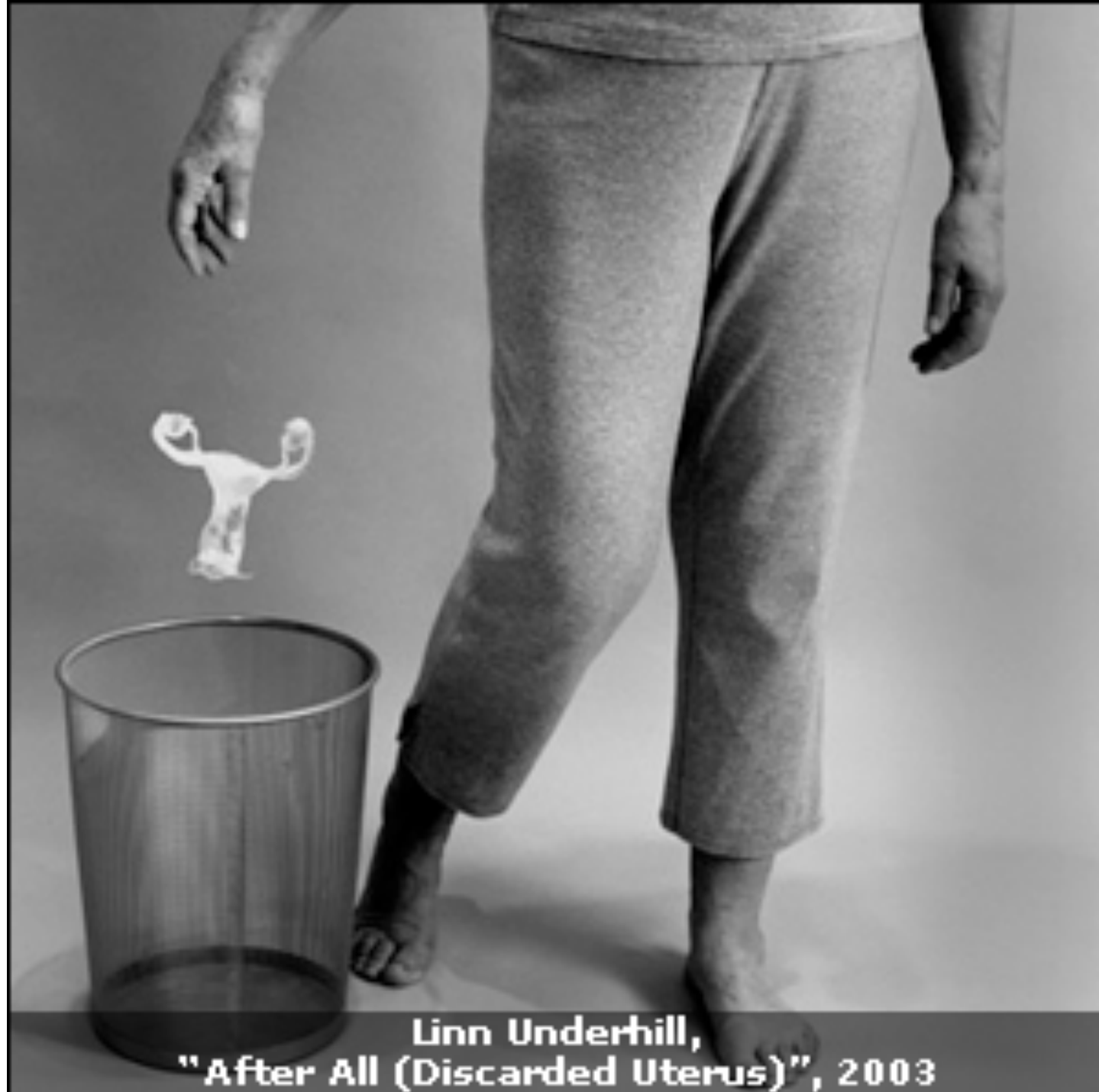
Performance in DNA Sequencing

GATC GATC GATC



Typical results obtained with the "Sequencing" Kit from Pharmacia LKB. The excellent performance of this kit reflects the high quality of the components it contains, not least, the quality of the dNTPs and ddNTPs in the sequencing mixes. The template was M13mp18; sequencing was performed using the protocol provided with the kit.





Linn Underhill,
"After All (Discarded Uterus)", 2003

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110th St dogwalker needs daily afternoon assistance. \$10/hr. 665-4320.

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Mt. Sinai's, Dept. of Dermatology



Pelli

Jürgen Habermas

Il futuro della natura umana

I rischi di una genetica liberale

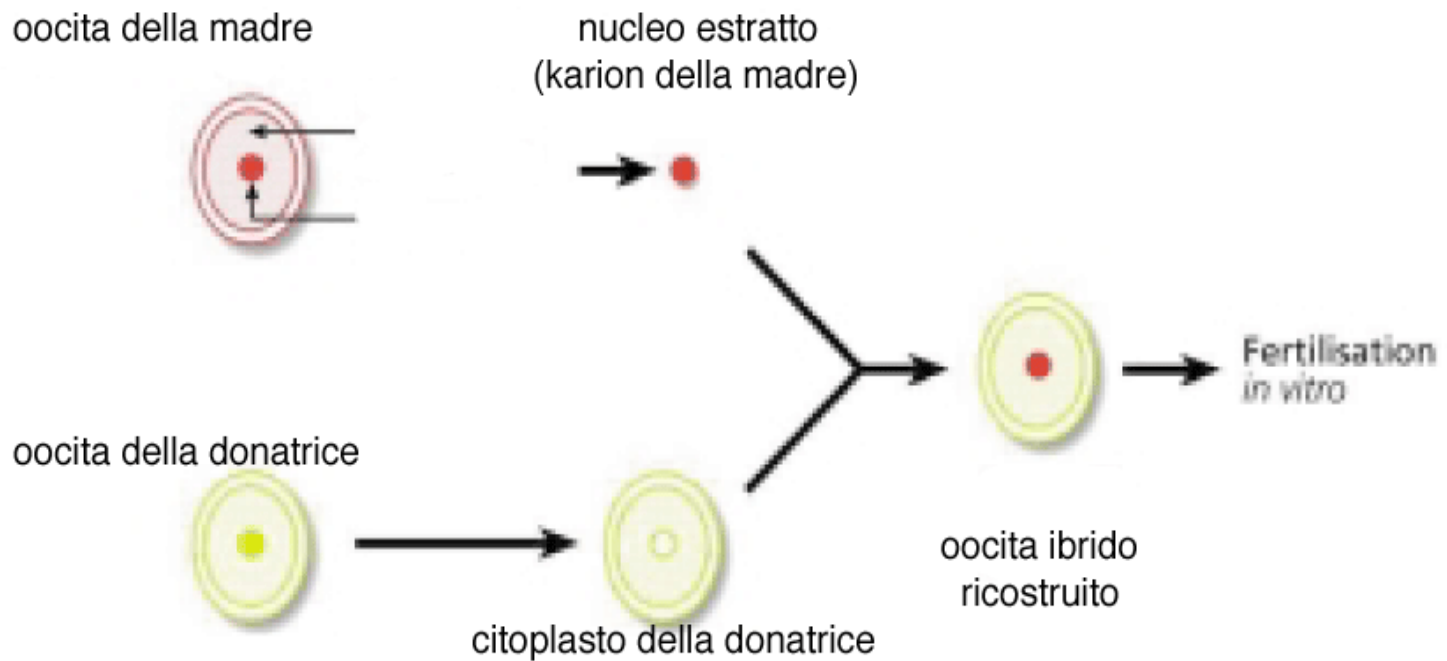
A cura di Leonardo Ceppa

Frontiera insuperabile !?!?!?!?

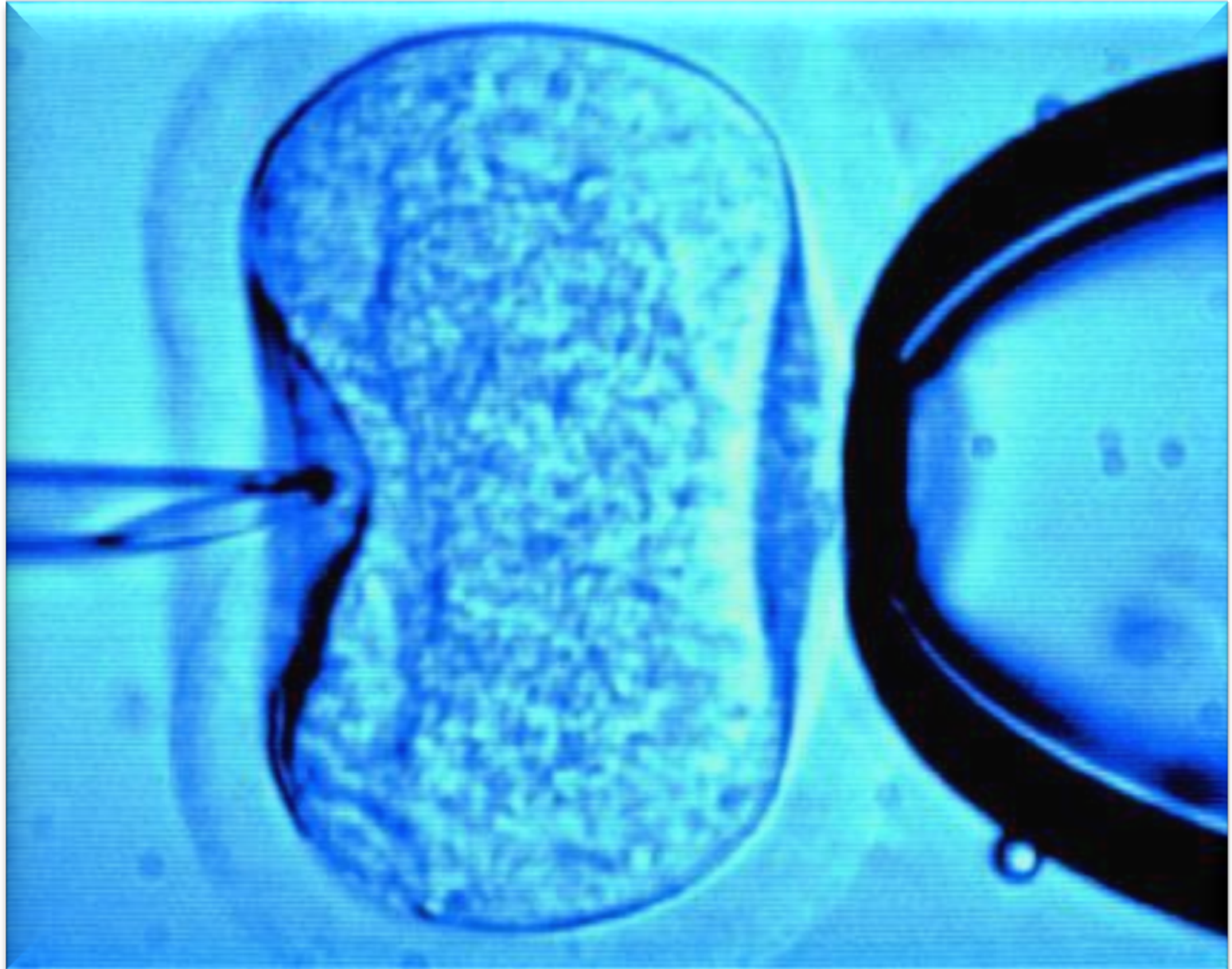


BIBLIOTECA EINAUDI

Treating mitochondrial disease by oocyte (egg) nucleus transfer – key steps



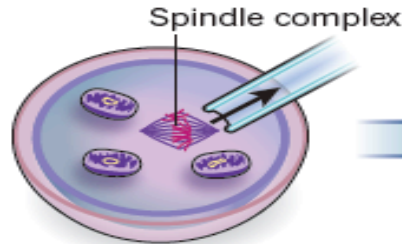
In vitro fertilization



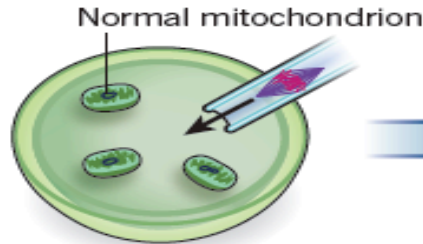
TWO WAYS TO CRACK AN EGG

Researchers are studying two ways to fuse a diseased egg with a healthy one to prevent rare mitochondrial diseases.

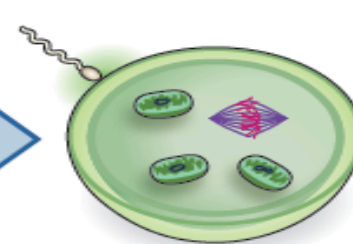
Maternal spindle transfer



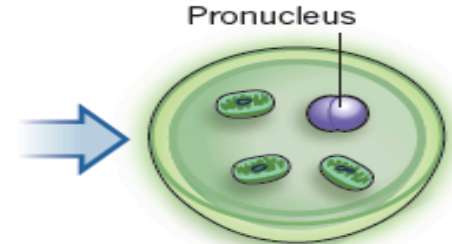
The chromosomes are removed from an unfertilized egg that has mutated mitochondrial DNA.



These are added to an unfertilized donor egg that has had its nucleus removed.

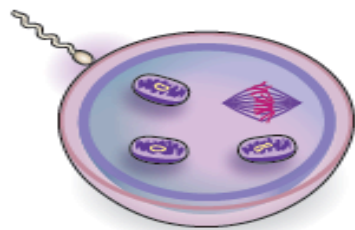


This fused egg is fertilized *in vitro*.

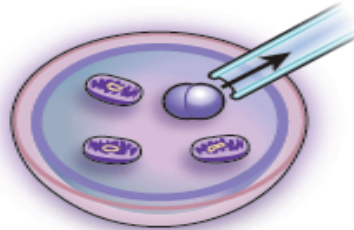


The egg develops normally to form an embryo.

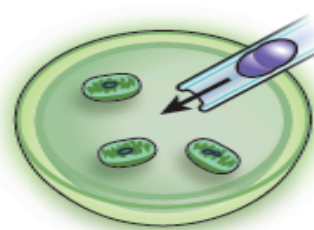
Pronuclear transfer



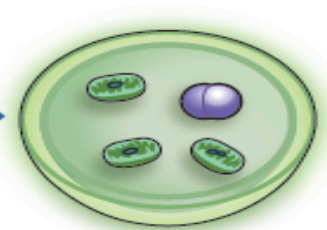
An egg with mutated mitochondrial DNA is fertilized *in vitro*.



The resulting pronucleus is removed.



This is transferred to a fertilized donor egg that has had its pronucleus removed.



The fused egg develops normally.

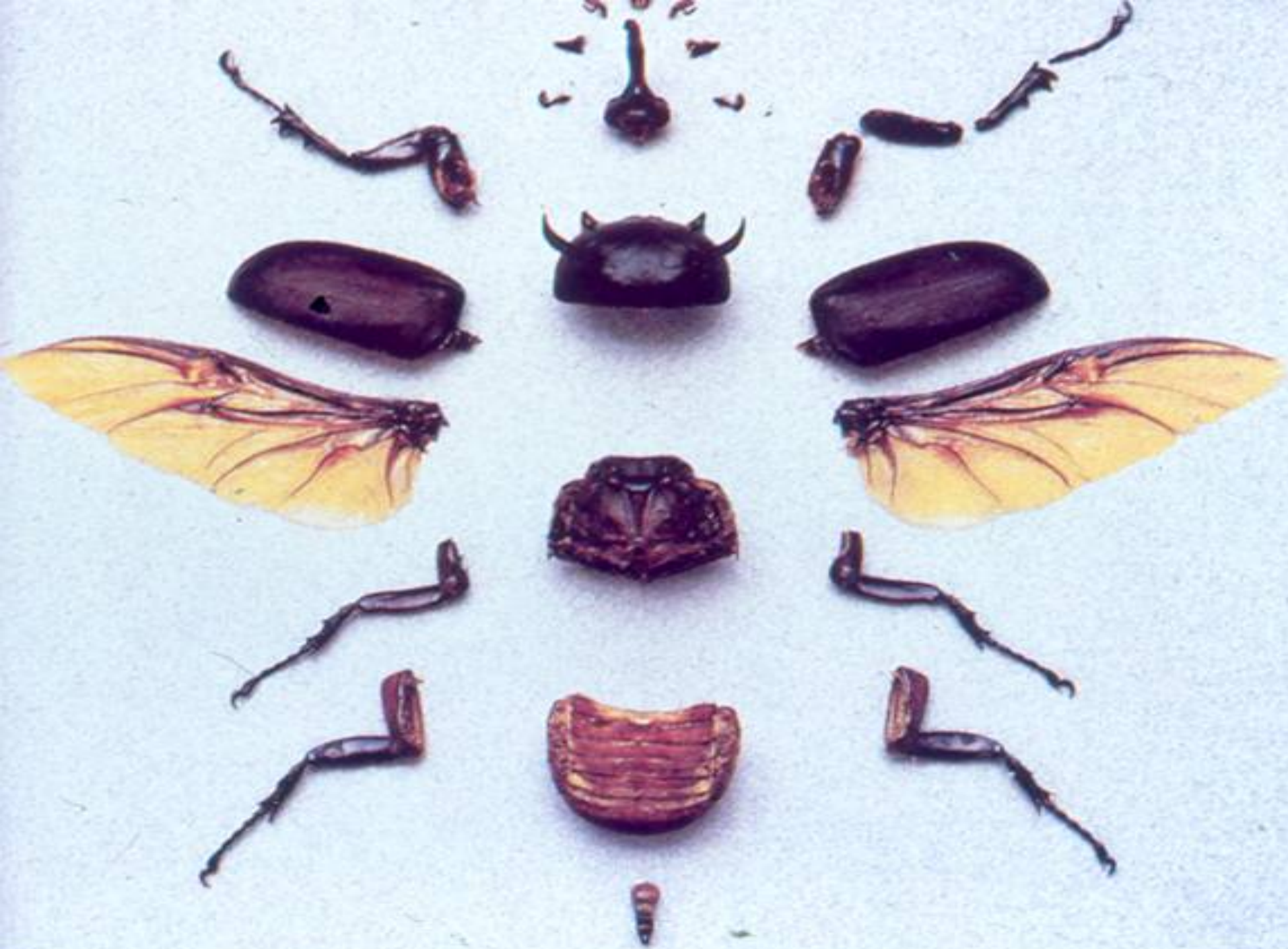
EMBRYOLOGY

UK sets sights on gene therapy in eggs

Public consultation and safety assessment would pave the way for embryo manipulation to treat genetic diseases.

BIOLOGIA SINTETICA

“ogni sistema biologico può essere considerato come una combinazione di elementi funzionali individuali che possono essere ricombinati in nuove configurazioni capaci di modificarne le precedenti proprietà funzionali o di crearne di nuove”

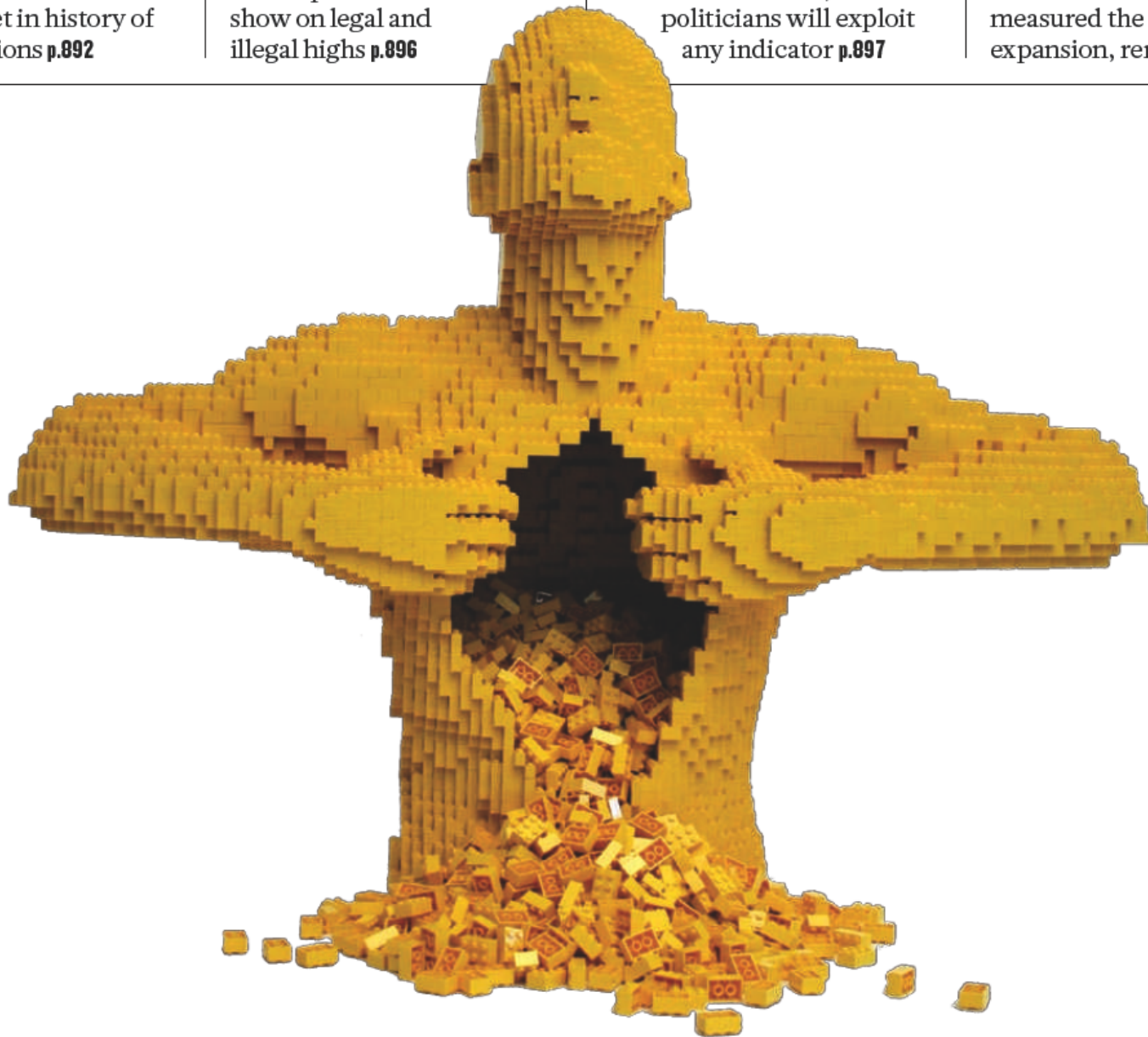


INOLOGY Lessons for future
he Internet in history of
amunications **p.892**

DRUGS Opium dominates
show on legal and
illegal highs **p.896**

ECONOMICS Beware,
politicians will exploit
any indicator **p.897**

OBITUARY Allan Sandage,
measured the Universe
expansion, remembere



Build life to understand it

INSIDE THIS WEEK: A 16-PAGE SPECIAL REPORT ON WATER

The Economist

MAY 22ND-28TH 2010

Economist.com

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America's surprising primaries

Does Facebook know too much?

Labour after Gordon Brown

How to plug an oil well

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organism and its
consequences

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Craig Venter



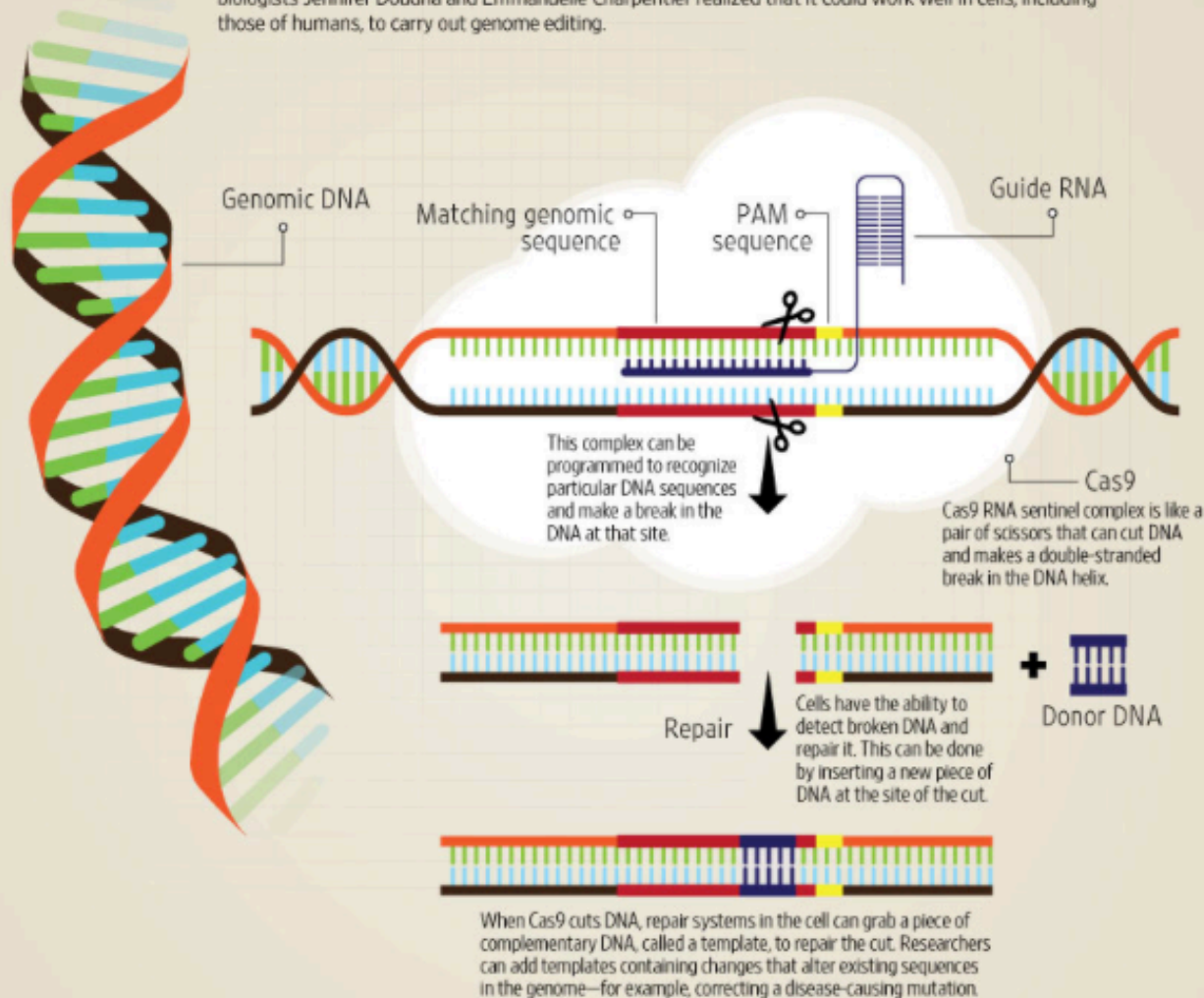
Synthia



From left, former Twitter CEO Dick Costolo, Emmanuelle Charpentier, Jennifer Doudna and Cameron Diaz.

HOW CRISPR WORKS

CRISPR-Cas9, abbreviated from clustered regularly-interspaced short palindromic repeats, is a hybrid of protein and ribonucleic acid (RNA) which works as an efficient hunt-and-cut system in bacteria. Molecular biologists Jennifer Doudna and Emmanuelle Charpentier realized that it could work well in cells, including those of humans, to carry out genome editing.

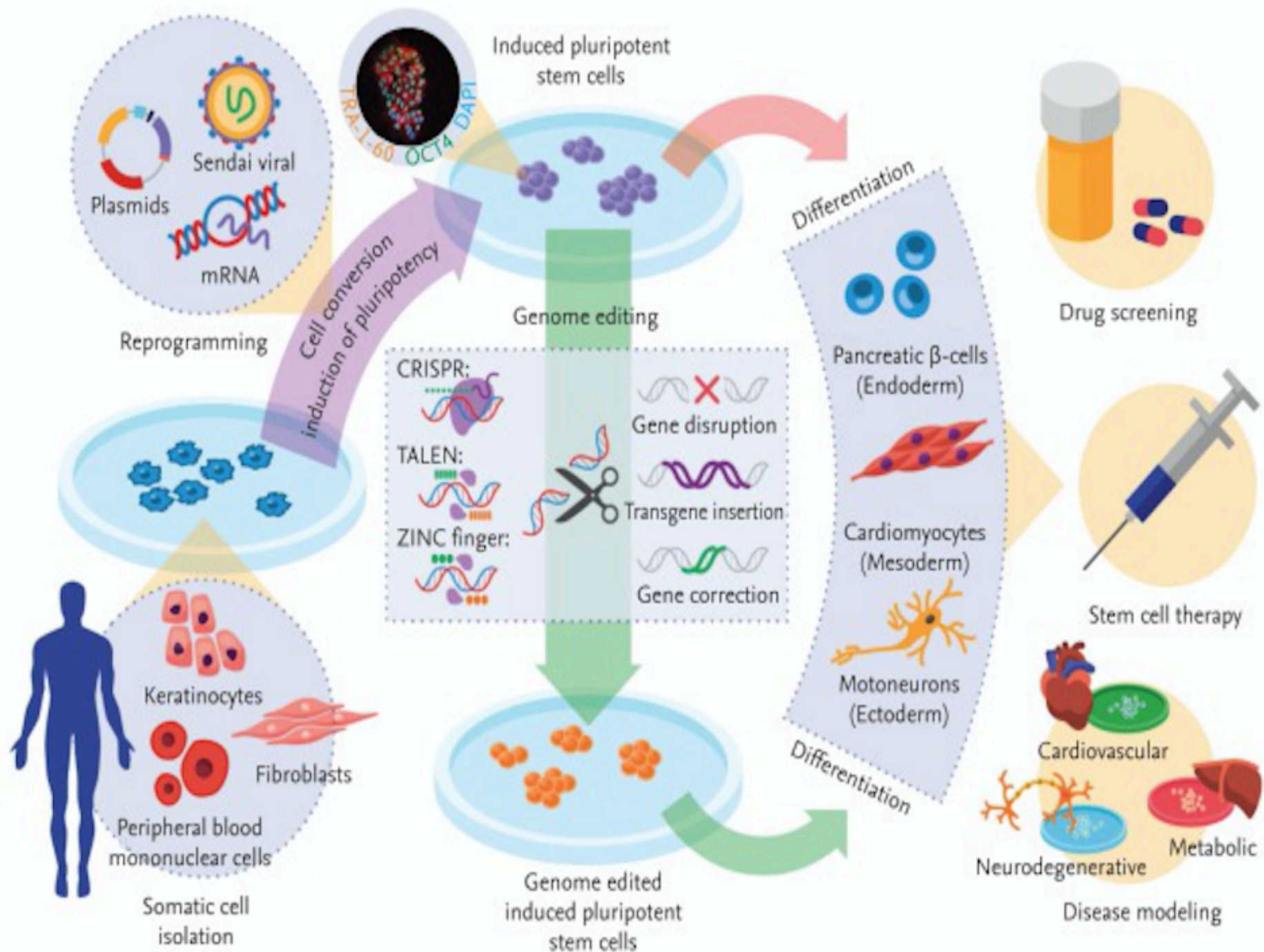


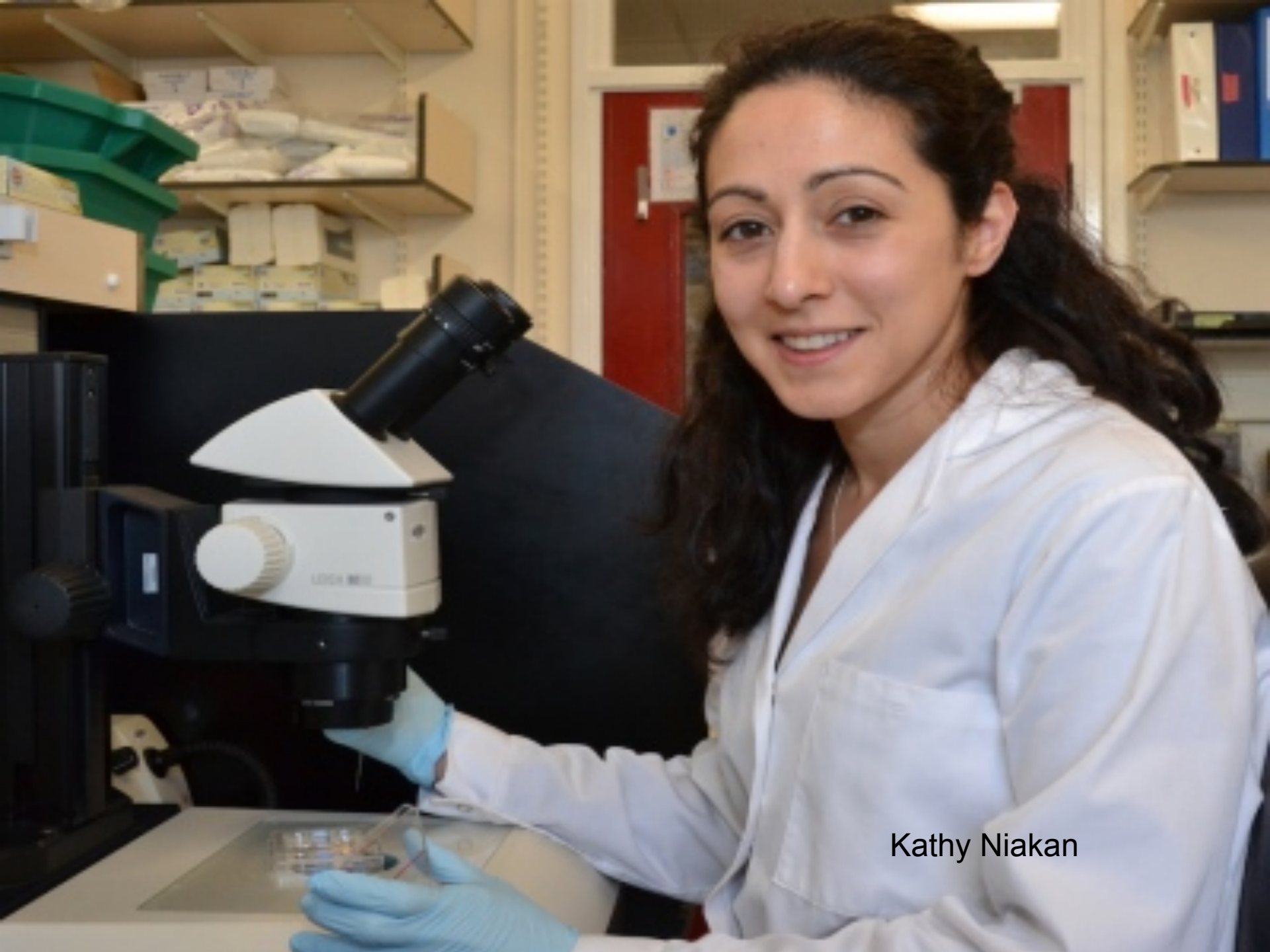
● When viruses infect a cell, they inject their DNA. In bacterium, the CRISPR system allows that DNA to be plucked out of the virus and inserted in little bits

into the chromosome of the bacterium.

● These integrated bits of viral DNA get inserted at a site in the bacteria.

● CRISPR allows cells to record over time the viruses that they have been exposed to, so that cells are protected from those viruses.





Kathy Niakan



Classici

Stendhal, il romanziere
più settecentesco dell'800



14

di ALESSANDRO PIPERNO

Biografie

Storia di Enzo Ferrari
l'uomo che creò il mito



22

di EDOARDO NESI

Maschere

Vite da 200 chili in su
La tv senza redenzione



34

Il dibattito delle idee

Negli ultimi mesi, con gli articoli di Edoardo Boncinelli e Giuseppe Remuzzi, «la Lettura» ha affrontato spesso una delle grandi frontiere (al confine tra scienza e fantascienza) della ricerca: quella legata alla «correzione» di sequenze del Dna per arginare malattie ereditarie o addirittura comportamenti devianti. Ora, lo sviluppo impetuoso di questa rivoluzione, il dibattito etico che la accompagna (affrontato in Italia per esempio in un testo che sta elaborando la Fondazione Umberto Veronesi), le sue suggestioni narrative, sono al centro di queste pagine. Intervengono biologi, filosofi e un romanziere

U
g
m
Umanità
geneticamente
modificata

di MANUELA MONTI e CARLO ALBERTO REDI

Carlo Alberto Redi

SIRONI
EDITORE

In libreria dal 21 settembre 2011

Il biologo furioso

Provocazioni d'autore
tra scienza e politica



Pagine 224 Prezzo: € 18,00

Il primo libro di uno tra i più importanti biologi italiani dello sviluppo, scienziato vulcanico e senza peli sulla lingua

Dalla clonazione all'inizio-vita, dalle staminali agli ogm, dall'evoluzionismo agli investimenti per la ricerca: 16 brevi saggi di grande attualità tra scienza e politica

«Non è il biologo, o in generale lo scienziato, a creare danni: è il modo di usufruire delle conoscenze che è pericoloso se svincolato da scelte politiche e morali superiori. È per questo che mi indigno con chi ha le redini del nostro Paese, i decisori politici e i grandi (si fa per dire) pensatori, i quali non mostrano la benché minima umiltà nel chiedere di sapere, nell'informarsi sulle conoscenze biologiche necessarie per condurre una società laica e giusta».

Carlo Alberto Redi, tra i più autorevoli biologi italiani dello sviluppo, è scienziato di fama internazionale ma anche un cittadino indignato, anzi furente. L'embrione è un individuo? Lo spermatozoo è vita? Cosa sono gli OGM cisgenici? Quanto investe in ricerca la Corea del Sud? E l'Italia?

Con questo libro sceglie di prendere la parola affrontando temi di caldissima attualità: dalla clonazione all'inizio-vita, dalle staminali agli ogm, dall'evoluzionismo agli investimenti per la ricerca.

Redi ingaggia un confronto aperto con coloro che in Italia "prendono le decisioni" sapendo quasi nulla di ciò su cui devono legiferare e non risparmia fendenti neppure a quanti "tromboni, da avanspettacolo" si arrogano il diritto di parola pubblica su questioni di cui sembrano ignorare le più elementari conoscenze scientifiche.

Con questo pamphlet il biologo offre al lettore elementi per farsi un'opinione più informata e meno ideologica, più argomentata e meno cialtrona. Ma Redi non perde occasione anche per affrontare argomenti più leggeri: Il sesso maschile? In biologia è accessorio! Quando porgete un fiore sapete cosa state tenendo in mano... biologicamente parlando?

Vulcanico, eclettico, scomodo, Redi sa argomentare e, perché no, divertire. Una sola la regola imprescindibile: motivare le proprie affermazioni con i risultati delle ricerche scientifiche più recenti.

Carlo Alberto Redi è docente di Zoologia presso l'Università di Pavia. Ha vinto il *Premio per le Scienze biologiche* dell'Accademia nazionale dei Lincei, di cui è socio corrispondente. È stato membro della Commissione nazionale di studio sull'uso delle cellule staminali ed è membro del Comitato nazionale per la biosicurezza, le biotecnologie e le scienze della vita. I suoi contributi scientifici sono pubblicati sulle più prestigiose riviste internazionali. Dirige il gruppo di ricerca che ha partecipato alla clonazione del topo *Cumulina* e attualmente si occupa di riprogrammazione genetica dei nuclei di cellule somatiche. Insieme a Gianna Milano e Amedeo Santosuosso dirige *OpenLab* di Pavia: laboratorio annuale di eventi e incontri con magistrati, giornalisti e addetti ai lavori.

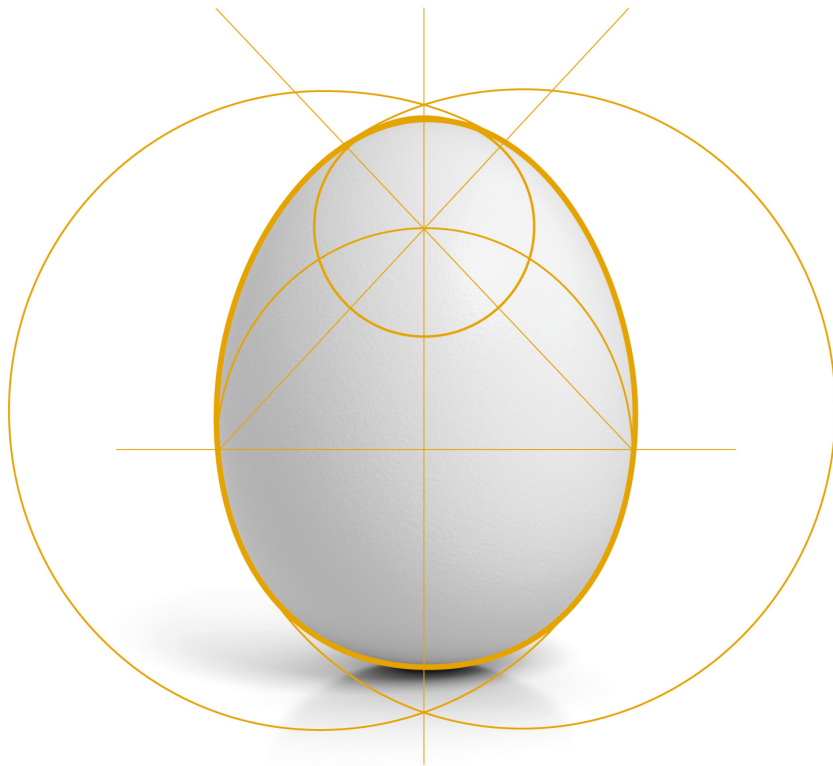
Ufficio Stampa Sironi: Pietro Coerezza, Enrica Brambilla - 0258459894/24 - 3381203727



Pavia a spasso nella città della scienza

Guida scientifica di Pavia
di Carlo Alberto Redi
e Manuela Monti

Carlo Alberto Redi, Manuela Monti

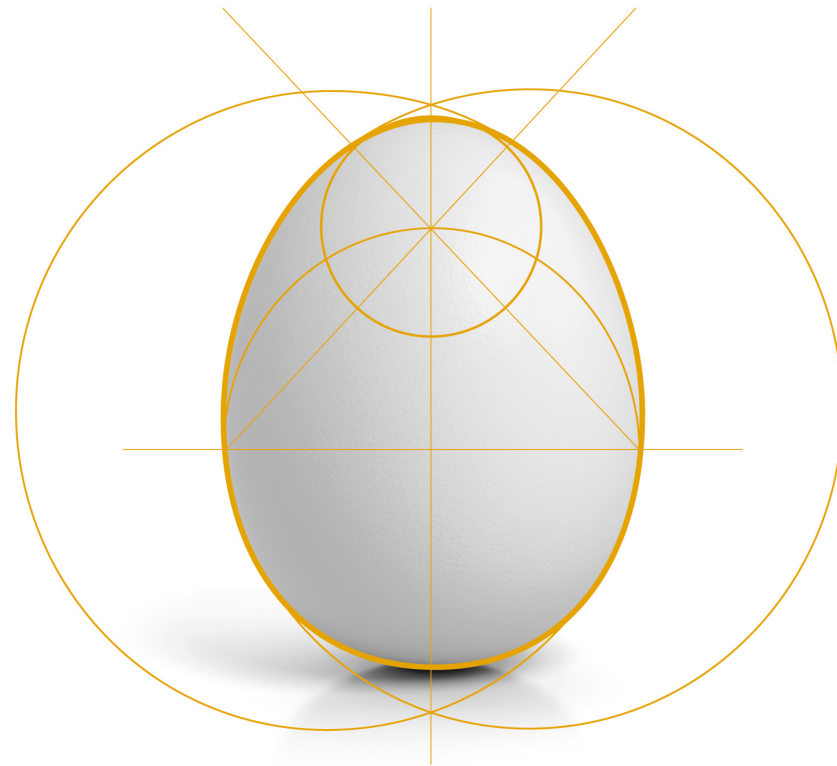


Storia di una cellula fantastica

Scienza, cultura
e natura dell'uovo

SIRONI
EDITORE

Carlo Alberto Redi, Manuela Monti



Storia di una cellula fantastica

Scienza, cultura
e natura dell'uovo

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GRAZIE !
per l' attenzione !

