

“journey from postdoc to professor”

March, Moscow 2015

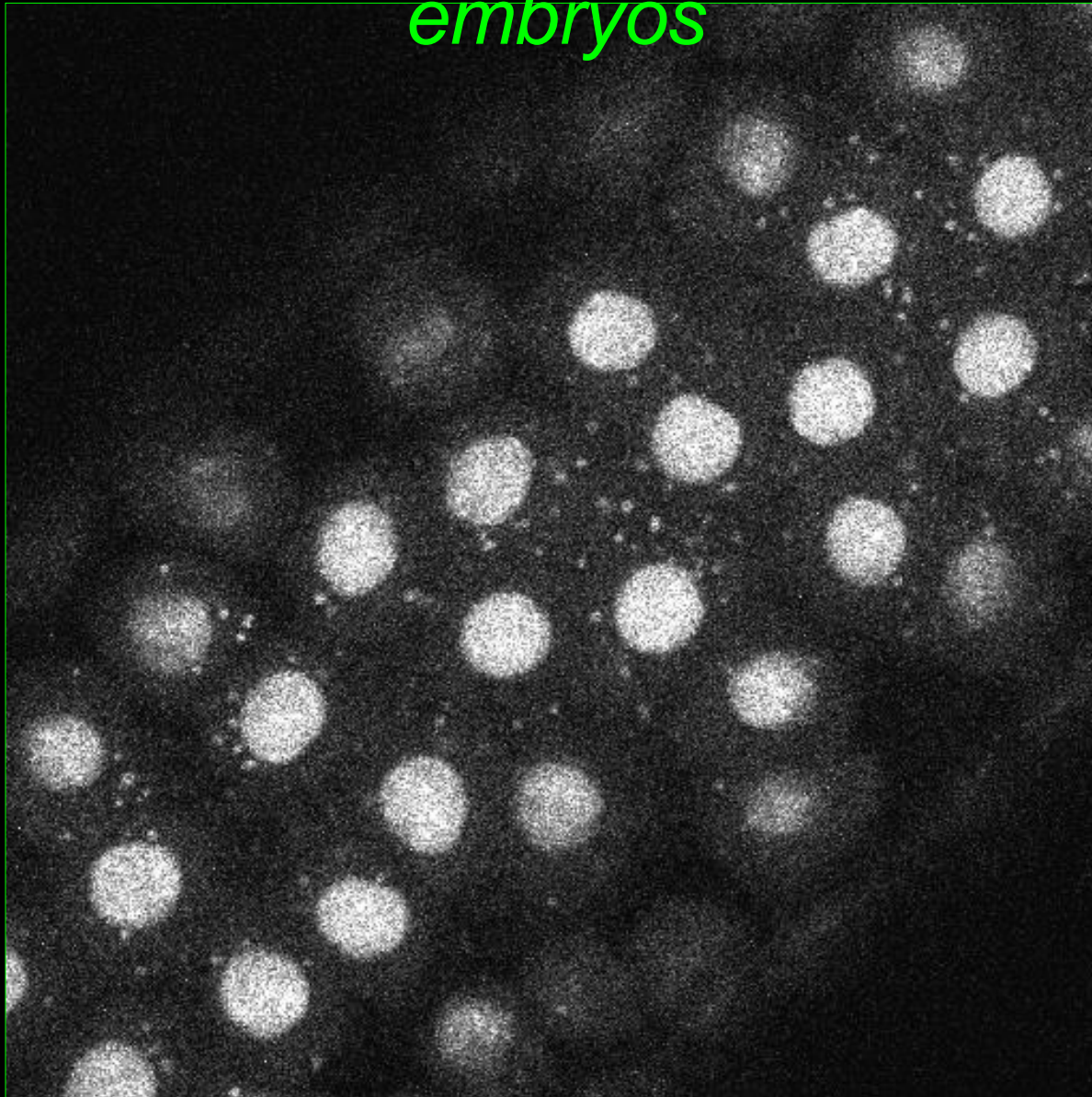


Margarete Heck, PhD

Professor of Cell Biology & Genetics

Director, Postgraduate Studies (School of Clinical Sciences)

Chromosome condensation and segregation in fly embryos



*Video of
H2Av-GFP
expressing
fly embryo*

***Ellada
Savvidou***



Born in Munich

Moved to upstate New York at 6 weeks of age

plattsburgh

STATE UNIVERSITY COLLEGE OF ARTS AND SCIENCE



*...being in the right place
at the right time*

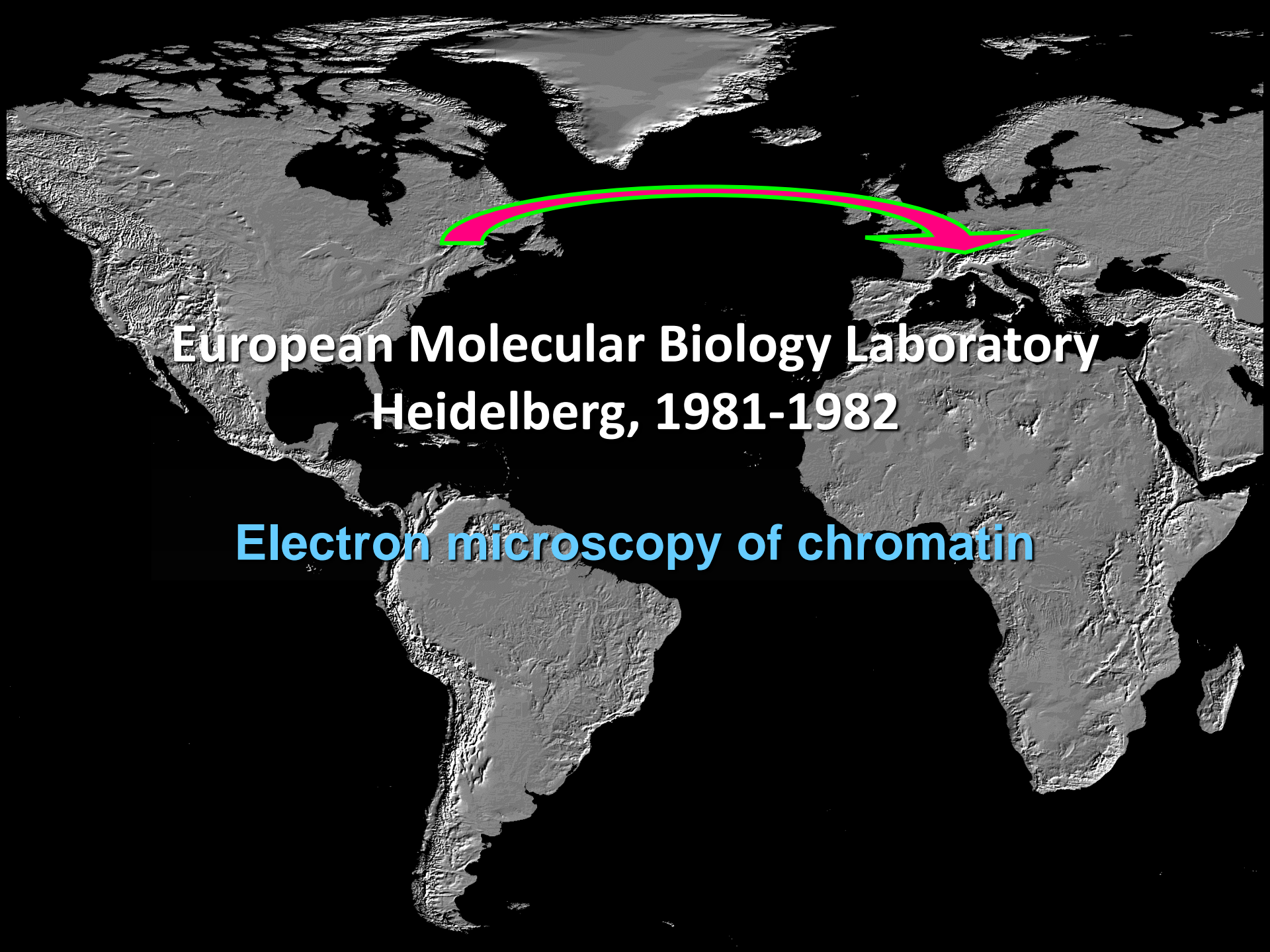
weekly

MARCH 25, 1981



MARGARETE HECK IS COLLEGE'S FIRST FULBRIGHT WINNER

Senior Margarete Heck has been selected to receive a Fulbright-Hays Scholarship for the academic year 1981-82. She is the first Plattsburgh State student to receive one of the prestigious awards, which will cover tuition, travel and living expenses for a year of pre-doctoral study abroad. Heck, one of the first participants in the College's In Vitro Cell Biology program and a microbiology/tissue culture major, will study advanced cell biology at Heidelberg University with Dr. Jan-Eric Edstrom, who developed microdissection and microelectrophoretic techniques. The Catskill, N.Y. resident is a 1980-81 Hudson Scholar and was recently chosen for inclusion in the 1981 edition of Who's Who Among Students in American Universities and Colleges.



**European Molecular Biology Laboratory
Heidelberg, 1981-1982**

Electron microscopy of chromatin

A grayscale topographic map of the world, showing landmasses and ocean depths. A red double-headed arrow is positioned above the text, spanning across the Atlantic Ocean and pointing towards the Americas and Europe.

**Johns Hopkins University School of Medicine
Baltimore, 1983-1988**

**DNA topoisomerase II in chromosome structure
and cell proliferation**

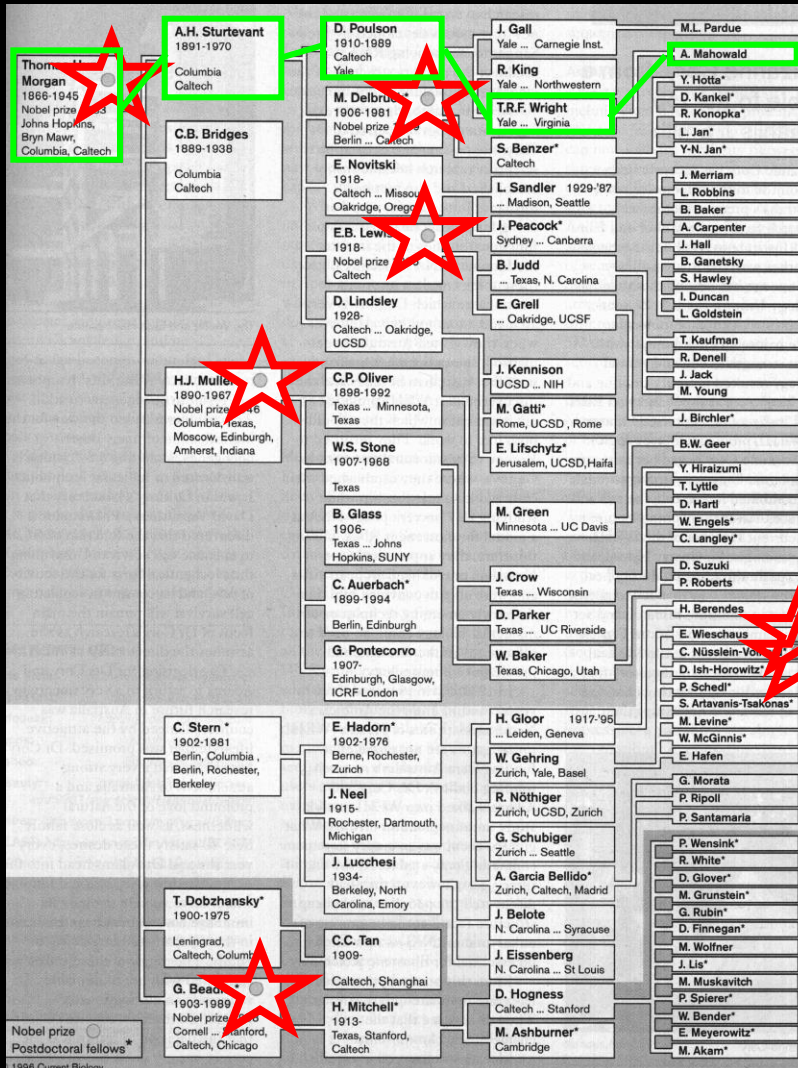


**Carnegie Institution of Washington
Baltimore, 1988-1992**

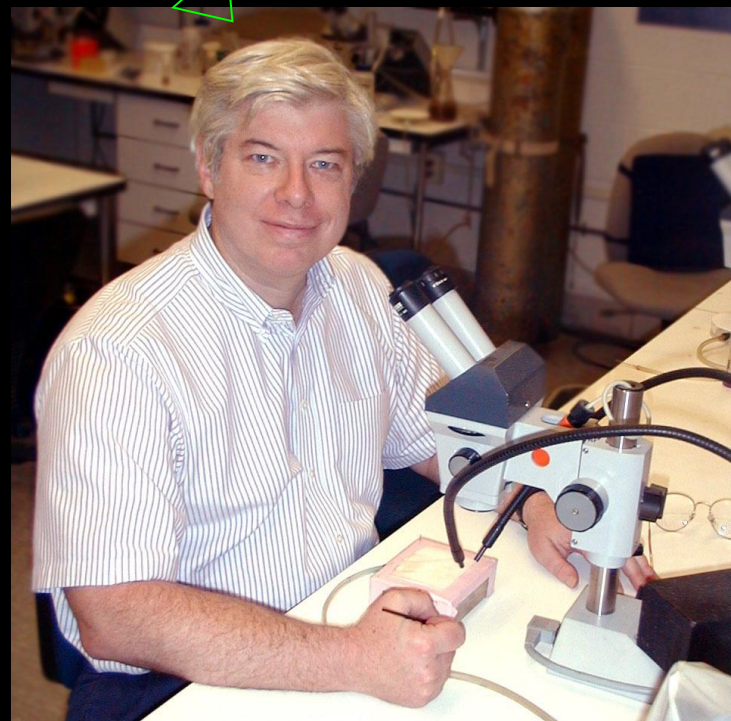
Replication origins used during DNA amplification

Identification of lethal mutations in *Drosophila*

My postdoc lab, 1st experience with the collegial “*Drosophila*” community



Spradling → Heck



Allan Spradling, Director CIW

★
Nobel
Prize



**Johns Hopkins University School of Medicine
Assistant Professor of Cell Biology and Anatomy
Baltimore, 1992-1995**



Forward genetics:

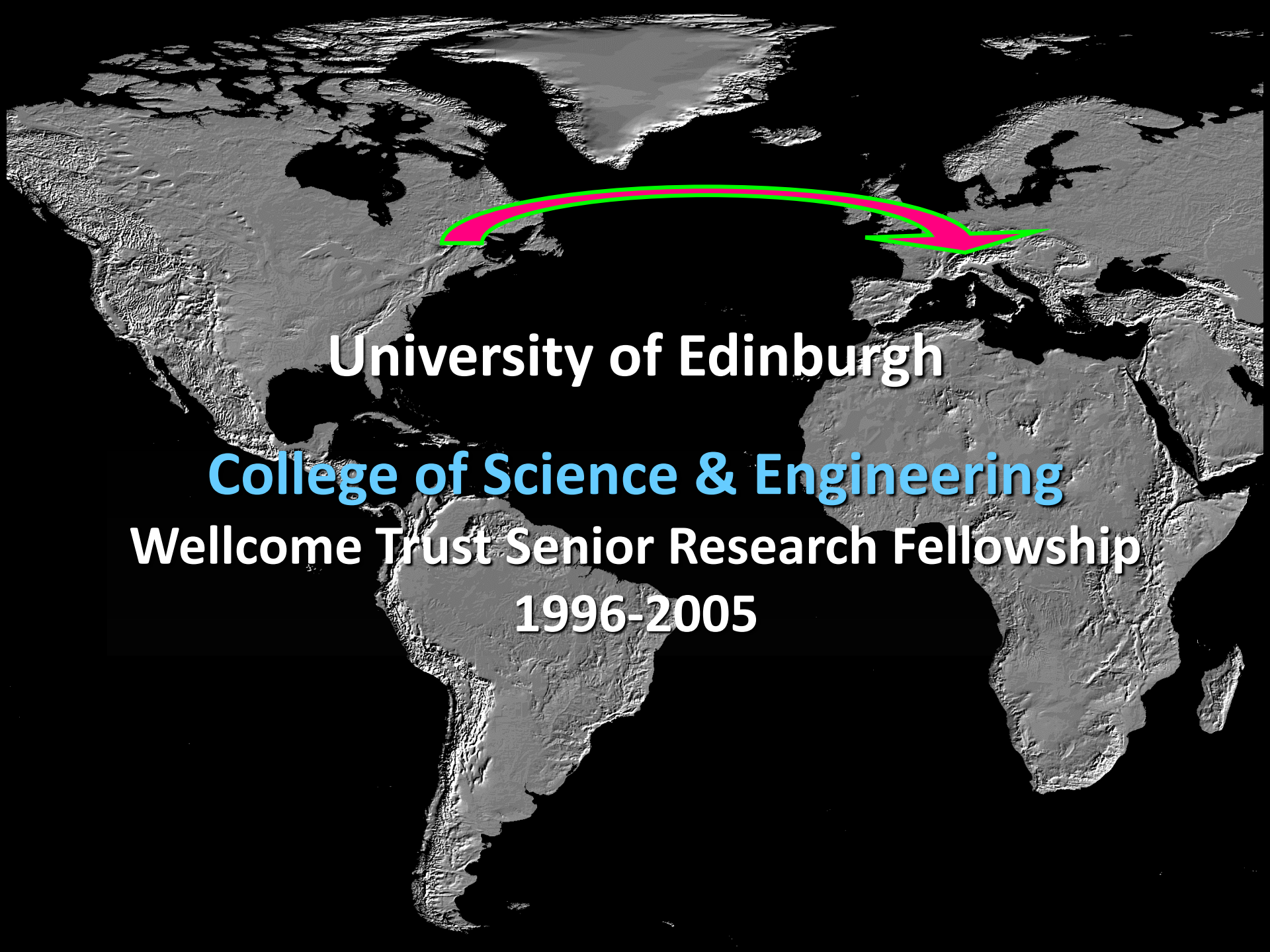
Mutations affecting nuclear &
chromosome structure

Reverse genetics:

Identification and analysis of cohesin &
condensin subunits



Prof Maurizio Gatti
SAPIENZA Università di Roma
Honorary Professor,
Novosibirsk



University of Edinburgh

College of Science & Engineering

Wellcome Trust Senior Research Fellowship

1996-2005



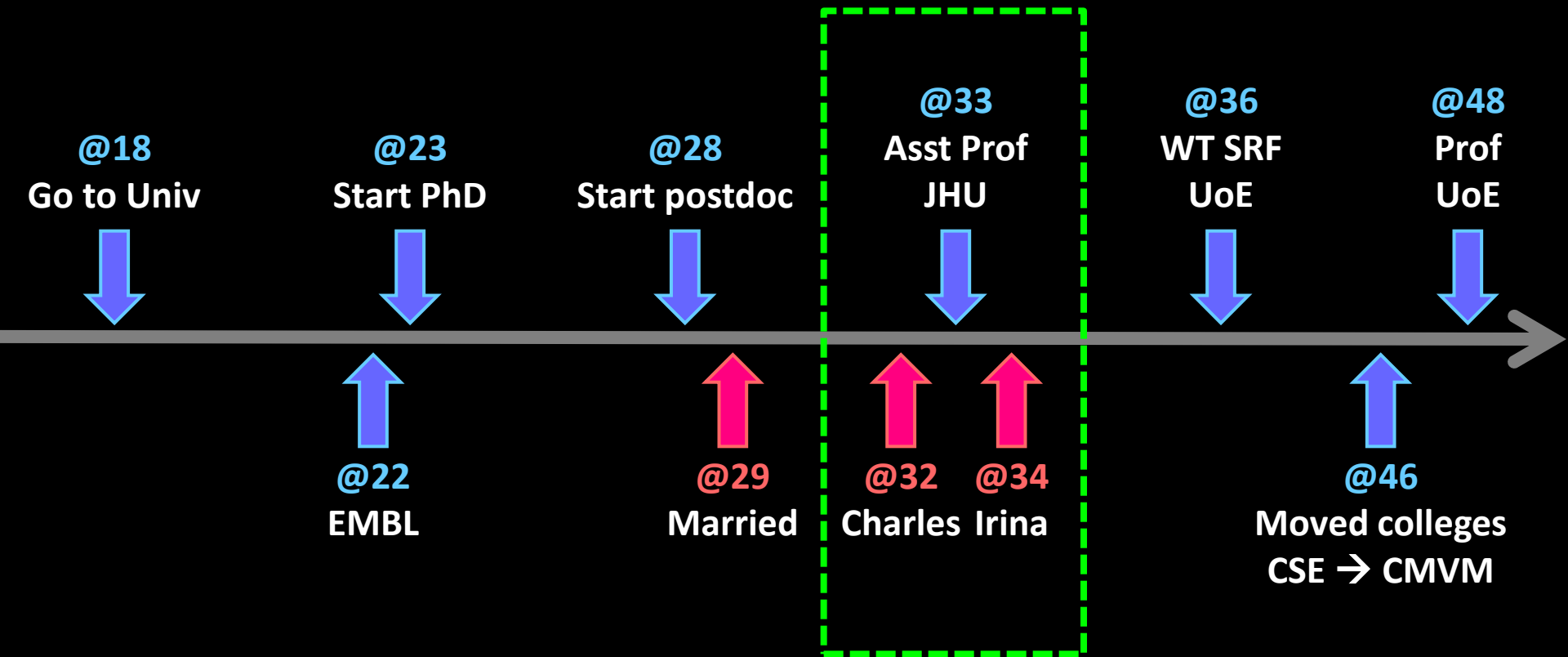
University of Edinburgh

College of Science & Engineering

**Wellcome Trust Senior Research Fellowship
1996-2005**

College of Medicine & Veterinary Medicine

**Wellcome Trust University Award
2006-2011**



What do I love, and what do I dislike about my career?

1. With funding, ability to do what YOU want to do
2. Every day is different
3. Stimulating
4. Challenging
5. Working as part of a team
6. World-wide travel
7. (Small) modicum of international recognition
8. The belief you are contributing to knowledge

1. Paper rejection
2. Grant rejection
3. Big egos/petty points
4. Feeling inferior
5. The job is never done
6. It's hard to get the time to do the things you really need to be doing

Current Biology

Vol 10 No 24 14/28 December 2000

Magazine includes

My word: Back to Mexico

Dispatches

Actin dynamics
Retinal processing
X inactivation
Plant male fertility
S-phase checkpoint
Specific chaperones
RNA-binding proteins
Wnt signalling

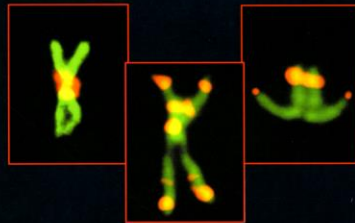
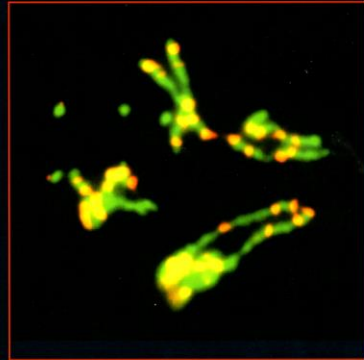
Review

Immunological synapse

Research

Replication timing
Sister chromatid cohesion
Replication checkpoint
Rapamycin effects
Taste receptors in *Drosophila*
Cell polarity in yeast
Transgene silencing
Controlling auxin efflux
Stabilizing metaphase arrest
FIP-2 and Huntington's disease
L1 not required for LTP
Wnt signalling regulation
C. elegans pathogen
Functional genomics

Current Biology
Publications

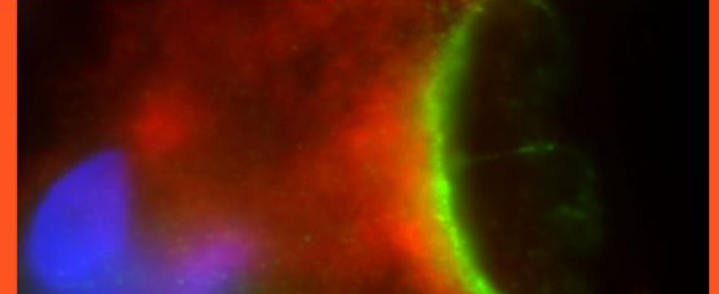


Drosophila ORC2 and replication t

JCB

THE JOURNAL OF CELL BIOLOGY

VOL. 167, NO. 4, NOVEMBER 22, 2004



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PLOS GENETICS



Cut and Run

Mitochondria
Brake for Ca^{2+}
Killing Pluripotent Cells
Oligomers Go Apical
Ubiquitin for Import

www.jcb.org

“Alternative” scientific careers

- Medicine
- Industry / Pharma
- Public policy / ‘think tanks’
- Patent law
- Tech transfer
- Grants administration
- Science communication
- Publishing (scientific journals)
- Lab manager / Research Centre manager

Some thoughts for PhD students...

- Work hard → then work harder
- Don't be shy, talk to people, get advice
- Don't reinvent the wheel!
- Your postdoc lab is extremely important – what do YOU want to learn? Where?
- Get out of your *comfort zone* → try a new direction for your postdoc
- Don't be afraid to explore new avenues!
- Don't expect things to be handed to you on a silver platter

Go to seminars!

- Don't only attend those that you think are most directly relevant to your project
- Help you to think “outside the box”
- You may:
 - Find the science riveting
 - Take a wee nap
 - Discover an idea or technique relevant to what you do
 - Discover how NOT to give a research talk!

“from postdoc to professor”

- Get feedback on manuscripts, and proposals
- Recognition that you can say “nyet”
- Stand up for yourself! Finding the right mentor
 - Formal schemes – or informal?
 - Should be somebody you respect and trust
 - Doesn’t have to be in the same research area
 - Doesn’t have to be the same gender
 - Feel comfortable to contact
- Know the promotion process at your Univ

“from postdoc to professor”

- Know the promotion process at your Univ
 - *Grants count, papers count*
 - *But so does teaching*
 - *As does admin*
 - *Grants probably count most though...*
- Figure out what works for you (big lab, SME)
- Women less likely to put themselves forward
- Athena Swan initiatives (gender equality)
- Promotion transparency – is it true?
- There will always be ‘better’ game players...

Don't do research unless you love it...

- “In the field of observation, chance favours only the prepared mind” *Louis Pasteur (1822-1895)*
- “Science may set limits to knowledge, but should not set limits to imagination” *Bertrand Russell (1872-1970)*
- “Discovery consists in seeing what everyone else has seen and thinking what no one else has thought” *Albert Szent-Gyorgi (1893-1986)*
- “Only those who attempt the absurd will achieve the impossible” *MC Escher (1898-1972)*
- “That’s curious” *Isaac Asimov (1920-1992)*

Thank you!