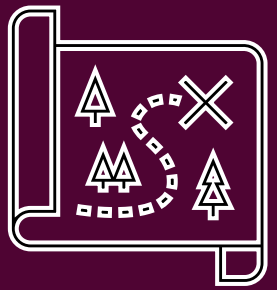


How to obtain top grants? An inspirational lecture

Pauliina Damdimopoulou

Associate Professor / Perinatal and Reproductive Toxicology
Division of Obstetrics and Gynecology
Department of Clinical Science, Intervention and Technology

My (academic) journey = building of profile and merits

Swetox - a turning point

My ERC story

Some thoughts about writing

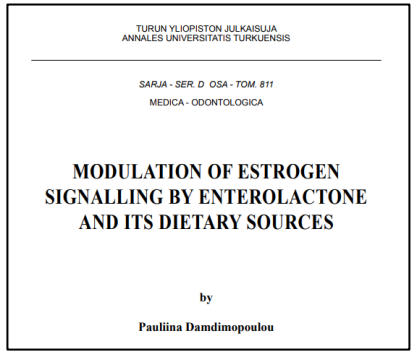
The map to success!

1

I wanted to be a farmer!
1980s-1990s
Growing up on a farm in rural Finland
No academics in the family

2

Pursuing university studies
2000-2008
University of Turku, Finland
-MSc in Food Chemistry -05
-PhD in Cell Biology -08


TURUN YLIOPISTON JULKAISUJA
ANNALES UNIVERSITATIS TURKUENSIS

SARJA - SER. D OSA - TOM. 811
MEDICA - ODONTOLOGICA

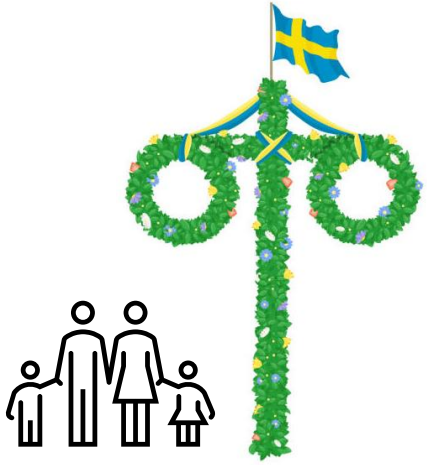
MODULATION OF ESTROGEN SIGNALLING BY ENTEROLACTONE AND ITS DIETARY SOURCES

by

Pauliina Damdimopoulou

3

2008-2014 Postdoc years
-Industrial postdoc in Paris, France
-Academic postdoc at Karolinska Institutet and Karolinska University Hospital, Sweden



4

Finding my cause
Starting the Chemicals and Female Fertility lab
2014 -
Swedish Toxicology Sciences Research Center (Swetox)
Can I use the rich hospital resources to investigate impact of chemical contaminants on ovaries, oocytes and fertility in women?

Profile & merits after a PhD and two postdocs?

- PROFILE: food chemistry, phytoestrogens, heavy metals, reporter gene assays, cell culture, rats, mice, frogs and fish, estrogen and androgen signaling, mouse embryos, human ovarian tissue culture… (“sillsallad”)
- PUBLICATIONS: PhD eventually resulted in 5 papers (IF 2-4 journals); two postdoc periods gave no first name papers but middle name positions in fancy publications and two last name papers in low impact journals.
- OTHER: experience of two EU projects, networking and project coordination in three different countries, collaborations that lead to extra publications, teaching, PhD co-supervision, and one 1-year VR postdoctoral grant.
- ALSO: one child=one maternity leave, postdoc time coming to an end (the 4-year rule), all grants declined, too long time since PhD to apply for junior grants, not enough merits for senior grants, ready to go for a plan B…

Swetox – a sudden leap to independency

- Swedish Toxicology Sciences Research Center was opened in 2014 with visions to establish a hub for toxicological sciences in Sweden
- A mentor encouraged me to apply (I would not have otherwise). Mindset “All In”: if I had unlimited resources, what would I do?
- I received one of the senior research fellow positions! (that meant 80% salary and 200 000 sek a year….)
- I went from postdoc to senior researcher o/n, scary!!
- Just like magic, about 50% of my grant applications have been funded since then

Old Astra Zenaca Tox Labs in Gärtuna, Södertälje

My journey to ERC

- During my time at Swetox, I made actual progress:
  - → First grants as PI obtained, first people recruited
  - → Many collaborations started
  - → First single cell map of human ovaries
  - → First chemical analyses in human fetal tissues
  - → First use of ovarian tissue culture in chemical research
- All fun comes to an end; Swetox was decommissioned, my lab was moved to CLINTEC, and more money was desperately needed….

Swetox funeral, December 2018, Gärtuna

- First attempt at ERC CoG in 2021. No interview, but very useful reviewer reports. I realized that *a)* I wasn't that bad, and *b)* a regular "cool single cell stuff" application would never work -> I had to stick out more.
- Second attempt with refined application with a new focus on "cool single cell stuff & female reproductive toxicology" -> success!

European ambitions

- Zero pollution
- Toxic-free environment
- Chemicals safe-by-design
- No animal testing

Toxicological challenges

- Thousands of chemicals
- Animal testing cumbersome
- Relevant *in vitro* assays missing

European ambitions

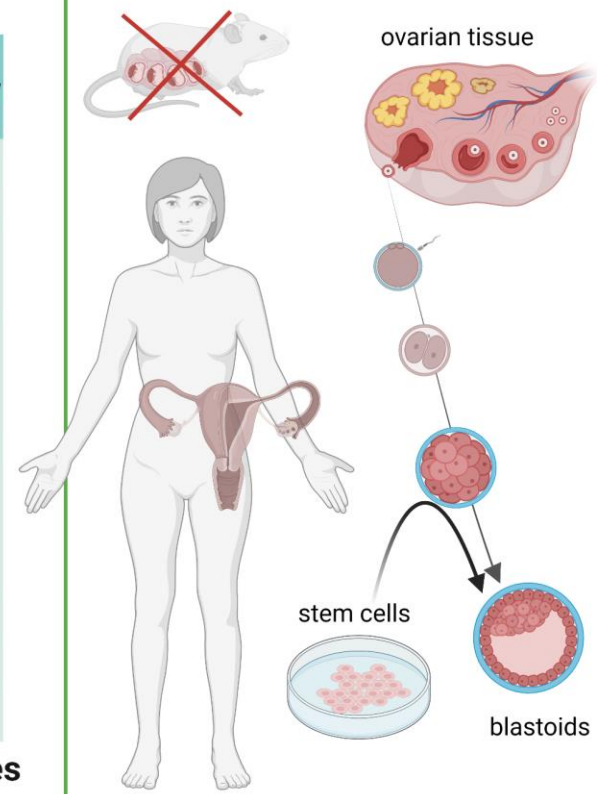
- Zero pollution
- Toxic-free environment
- Chemicals safe-by-design
- No animal testing

Toxicological challenges

- Thousands of chemicals
- Animal testing cumbersome
- Relevant *in vitro* assays missing

SAFER solution for safeguarding women's health

novel human cell assays for chemical toxicity in ovaries and embryos



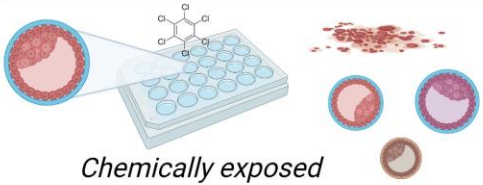
Ovarian tissue samples from healthy donors
Established human embryonic stem cell lines

Aim 1 Mechanisms of toxicity in ovaries

Chemically exposed ovarian tissue culture

- Multi-omics single-cell profiling
- Histology & hormones

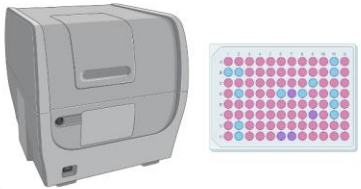
Aim 2 Mechanisms of toxicity in blastoids



Chemically exposed blastoid culture

- Multi-omics single-cell profiling
- Morphology & implantation

Aim 3 Novel *in vitro* assays for reprotoxicity



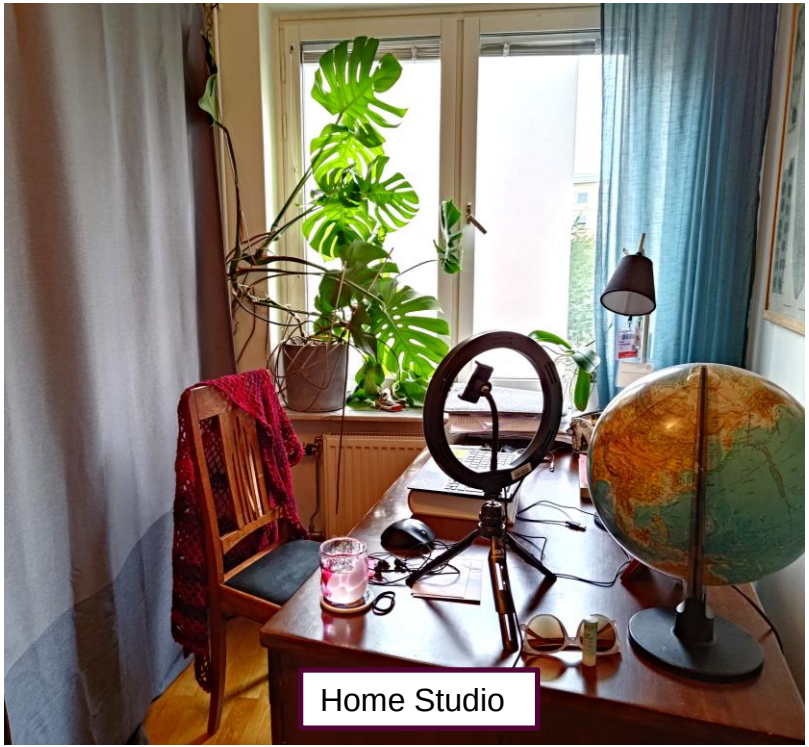
High Content Assay

- New immortalized ovarian cell lines
- Reporter genes flagging mechanisms of toxicity
- High-content assays for screening of reproductive toxicity

ERC process also includes an interview…

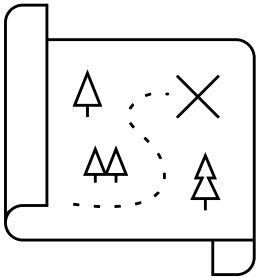
- Online interview with an “expert panel”
- Me: 8 min presentation + 17 min QA

- I spent more time on preparing my presentation than writing the application!
- Study the panel composition; practice with similar people (many times)
- Be responsive and adjust the talk based on feedback (they have to “get it”)
- Presentation skill courses are good!
- It’s not a science talk, it’s a pitch.


Home Studio

Some thoughts about writing

- A grant application is not a research article. It is a pitch. To sell your idea, you must make the audience to understand it, or even better, relate to it!
- In my writing, I avoid:
  - → abbreviations (aim is to have none because I simply hate them)
  - → long and complicated sentences
  - → fancy words
- In my grants, I always:
  - → start with a short summary (“sales pitch”) and/or graphical abstract
  - → portion the text to small paragraphs with sub-headers that state the content
  - → use color to highlight the hierarchy (headers) but not otherwise
- If anyone is willing to read and comment your grant, use the opportunity (time is money). Listen to the comments; they always reveal something about your text.



A map to success?

- Planning is everything but plans are worth nothing!

  Grab the opportunities when they arise, regardless of if they are in your “5-year plan” or not
- When you take the opportunity, use it meaningfully
- Rebrand: in the end, my “sillsallad” profile had all the pieces for the ERC project!
- Research is not a solo sport: your success will always depend on your students, collaborators, colleagues and network; spend time on them
- To me personally, mentors, supervisors, advisors, peers, students, random research friends, and anonymous external evaluators have made all the difference!
- Find your cause; what questions keep you awake at night; how do you want to save this world? That’s what your next project should be about!
- Every map to success is unique. Don’t believe what career coaches and inspirational lectures tell you…

Karolinska Institutet

pauliina.damdimopoulou@ki.se