

Questions

Background

Tell me about your background – where did you grow up?

Parents

Studied English at Yale – correct?

Charlie Cray said you left without graduating – true?

How did you come to join Greenpeace?

Why?

Explain your role – what did you do?

What did you work on the most – Charlie and Rick Hind said on pollutants from incineration.

What did you do there that had the most impact?

Did you feel what you did made a difference in terms of policy or public interest?

How come to be interested in organochlorines? What are they?

Did you testify before Congress?

Book

At what point did you decide to write the book?

How did you juggle the book, and the science and the family?

Rob said he didn't even know you were writing it! (War & Peace)

Also said it was a bit fluffy

What happened when it came out -- was there lots of fuss?

What was the main message of the book?

Why focus on organochlorines/chlorine industry?

Review said you analysed 1000 refs – true?

Darcy said you were **savagely attacked when book came out – true?** What happened

Move to science

What made you decide to go into science?

Did you find that Greenpeace was lacking in hard science?

Were you frustrated by lack of progress in issues you were campaigning for?

What do you see as the big questions your lab is trying to answer?

Talk me through your scientific career....

What was the main focus of your **PhD**? & biggest paper?

How did you **get into this idea of resurrecting ancient proteins?**

Were you the first to come up with the idea of resurrecting proteins – who did? How did you come across it – reading? Talking?

What was the question that interested you?

What exactly did you do, and what did you find?

Talk me through the major papers

What was the first biggie – Science 2003? synthesized an ancestral steroid receptor

Resurrecting the ancestral steroid receptor: ancient origin of estrogen signaling. Science 301:1714-1717, 2003

This done with Darcy or mostly alone?

Talk me through the Science 2006 paper – what did you do and what did you find.

Evolution of hormone-receptor complexity by Molecular Exploitation. Science 312:87-101, 2006.

Did that attract a lot of attention cos of ID?

Explain how the 2007 Science crystal structure paper moved on from the Science 2006 paper

Ortlund EA, Bridgham JT, Redinbo MR, Thornton JW. **Crystal structure of an ancient protein: evolution by conformational epistasis. Science 317:1544-1548, 2007**

Tell me about the Nature 2009 paper on the epistatic ratchet

Bridgham JT, Ortlund EA, Thornton JW. An epistatic ratchet constrains the direction of glucocorticoid receptor evolution. Nature 461:515-519, 2009

General

How much did your background in studying endocrine disruptors influence your choice to study the steroid receptors, which includes the estrogen receptor

Tell me a bit about these receptors

Critics

Does anyone criticise your approach, and say you can't really know how evolution played out?

If you pull back and look at all your work, what d'you think is the main message or result?

Tell me about the impact of your work on ID

Did you choose these problems because of that?

Why did you wade into that battle?

You don't seem shy about talking about the implications of your work for intelligent design – why go there?

Is it right you met George Bush – why, what did he say?

Is this basically the next campaign?

Do you really think it will have any impact on ID proponents? Will this really make any difference?

Would we ever get to the point of, say, tackling a flagellum?

Ken Miller said ID people view your work as threatening – true?

Do you worry about the state of science in this country, and that ID is still a force?

Influence of envt activism

How does your background in environmental activism/Greenpeace influence what you do today?

**Tell me about building your lab or your house – you avoided using PVC? Why?
How else do you adjust your life to avoid organochlorines or other pollutants?
Darcy said something about fretting about your electrical outlets**

Is your lab floor really the biggest legacy of your former activism?

What else in your lab?

Do you avoid BPA?

Websites says you write, lecture and advise environmental organisations – specific example of when last did this?

Do you view yourself as an activist or campaigner still – in environmental issues or ID?

If you still feel strongly about environmental issues such as organochlorines, how do you justify leaving that sector?

Patrick Philips mentioned that you campaigned against changes in the local schools – correct? What happened?

Do you think there is a lack of scientists who are willing to be activists?

How do you feel now about the issues you were campaigning about then -- seen any progress — or frustrating to see lack of progress?

Now & Future

What are working on now?

What most interested in tackling next?

Tell me about this new paper about estrogen receptor. What's the status?

Tony Dean said you and he came up with the term functional synthesis -- true? What does it mean?

Do you see any real progress on the issues you campaigned about at G-peace: organochlorines, or endocrine disruptors? (POPS)

You

Everyone I spoke to described you as very intense -- true? Why is that
Patrick also said you're competitive – true? In everything including softball

Wife – what does she do? Children?

What else do you do – softball. Play music?

How d'you get it all done - do you sleep?!

Funding – how much is HHMI, does that cover you?