

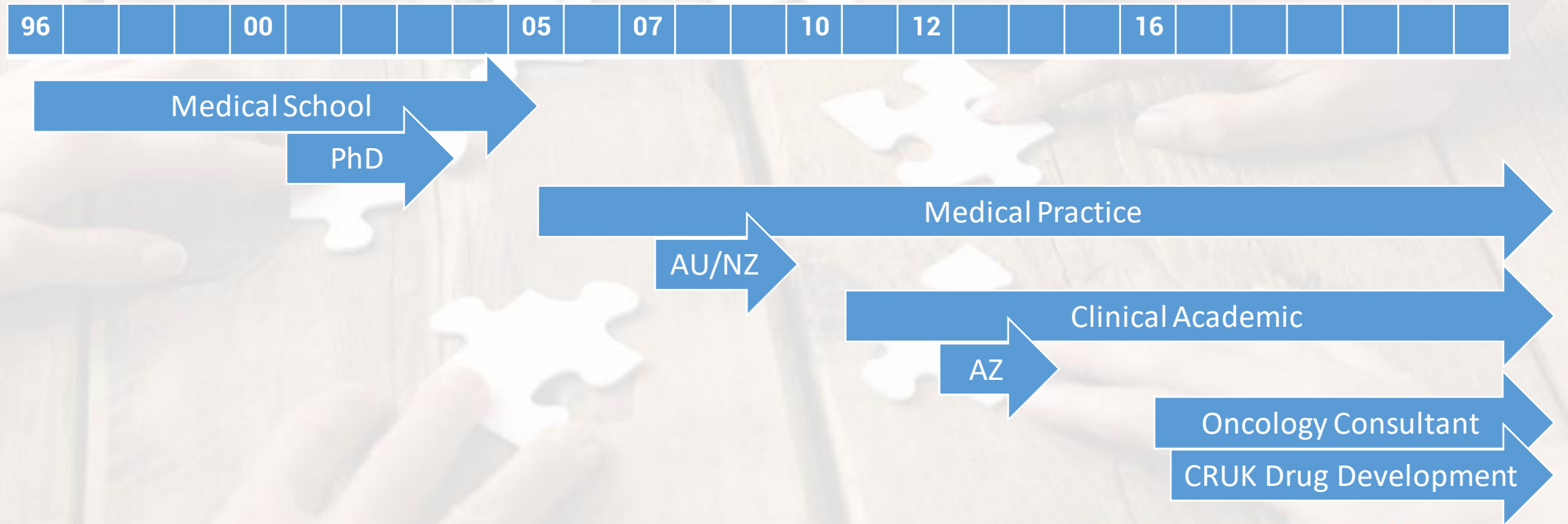
# What I Should Have Asked When I Started My Career in Cancer Drug Development: Clinician Perspective

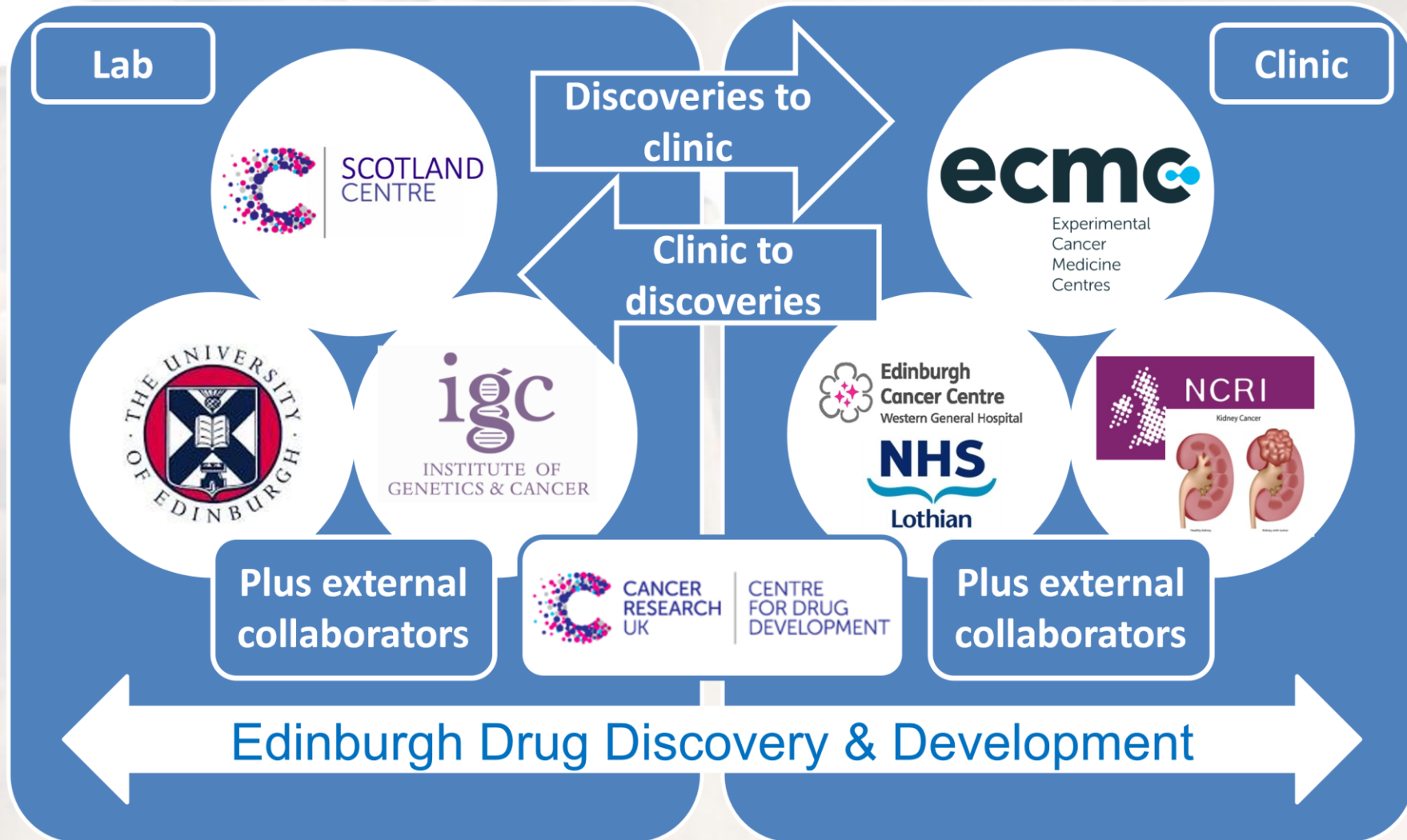
Stefan Symeonides  
University of Edinburgh

# Disclosures

- No personal gain from, or financial interests in, any commercial pharmaceutical entity
- Educational & travel: Ipsen, BMS, EUSA, BioNTech, MSD
- Consultancy (my institution): Duke St Bio, Ellipses, Eugit, Medannex, Vaccitech
- Scientific advisory role (my institution): BMS, Boxer Capital, Eisai, EUSA, Merck Serono, MSD, Pfizer
- Speaker (my institution): BMS, Eisai, EUSA, Ipsen, MSD
- Research funding (my institution): MSD (trial funding and drug supply, trials staff); Verastem (trial funding and drug supply)
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# Timeline





# Timeline



Medical School



# Timeline



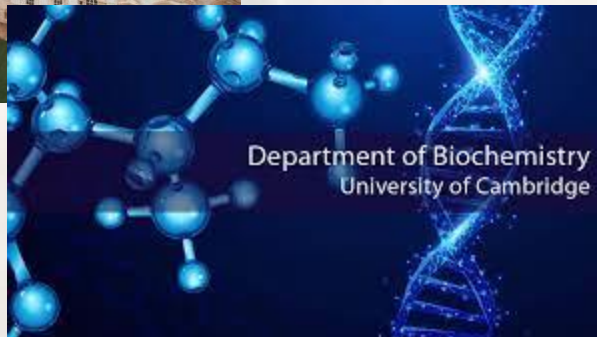
Medical School



# Timeline



Medical School



# Timeline



Medical School

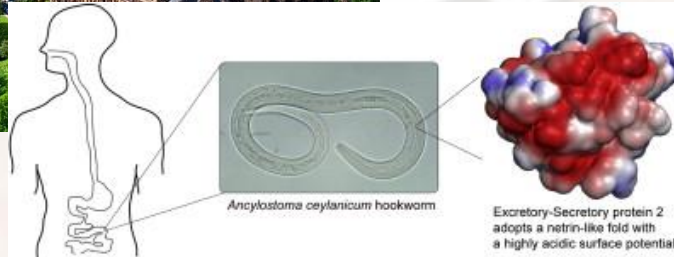
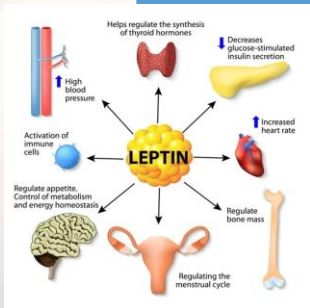




# Timeline



Medical School

# Timeline



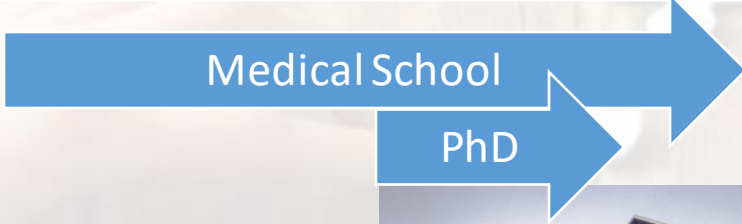
Medical School



# Timeline



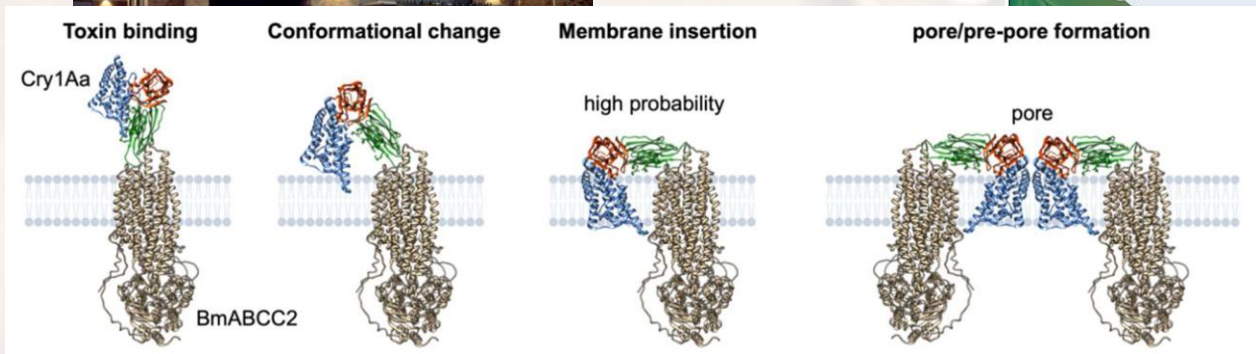
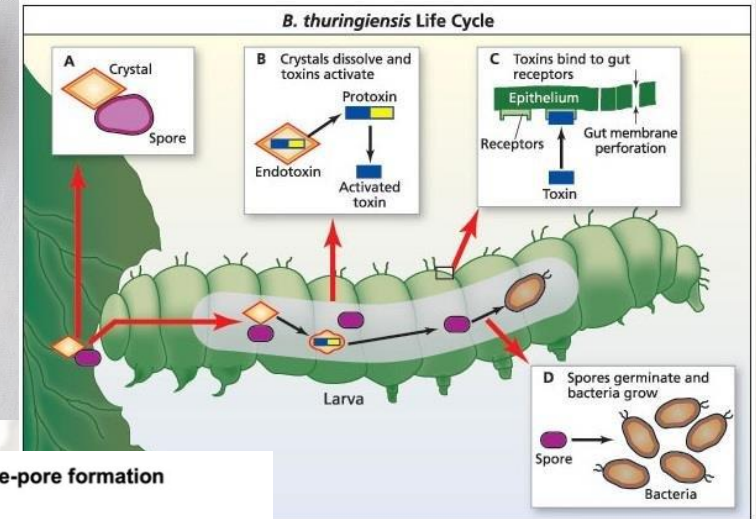
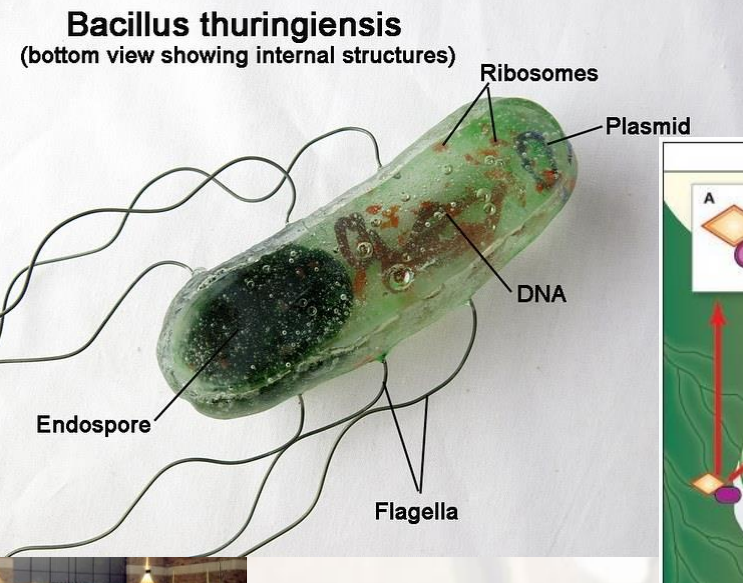
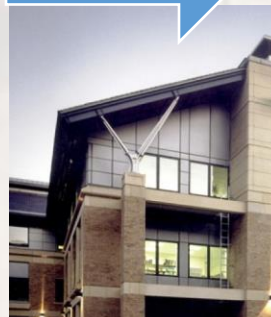
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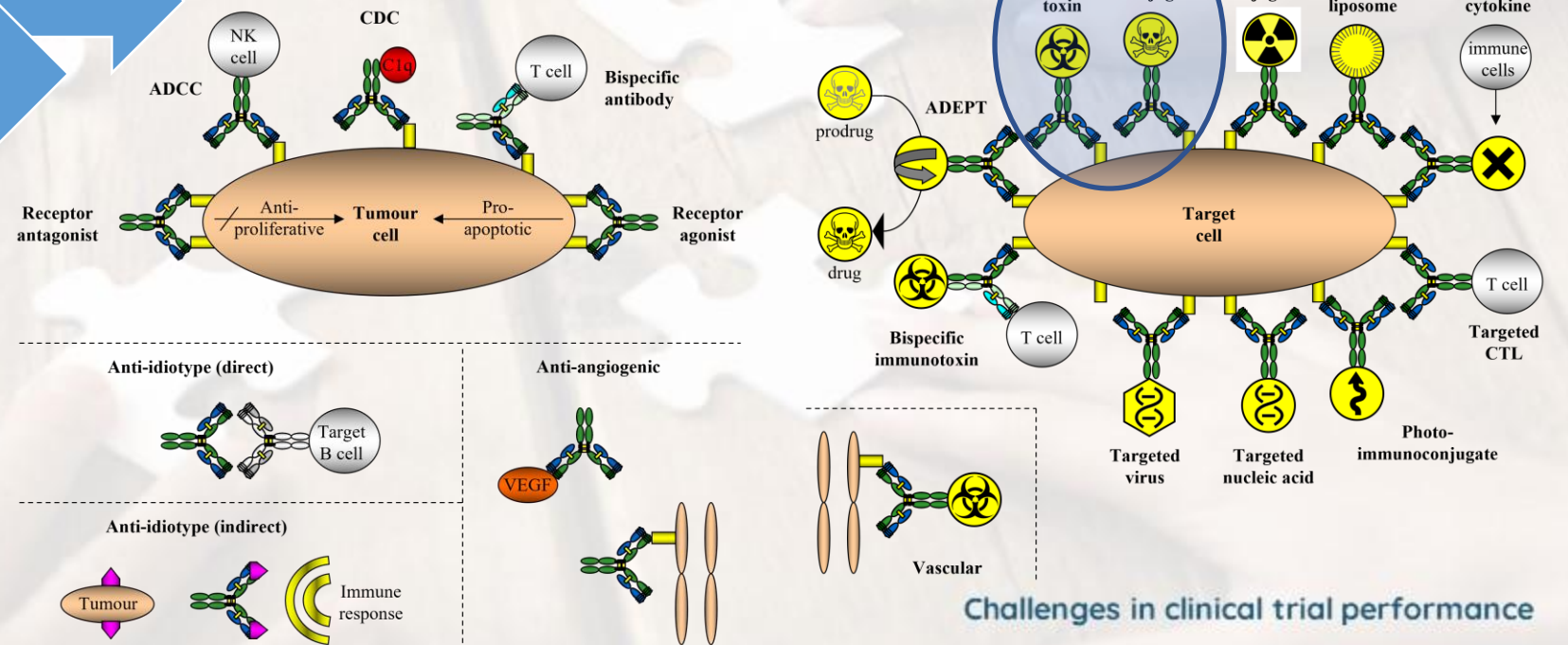
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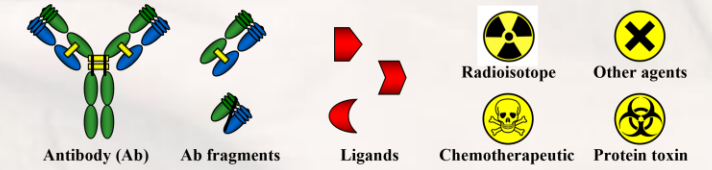
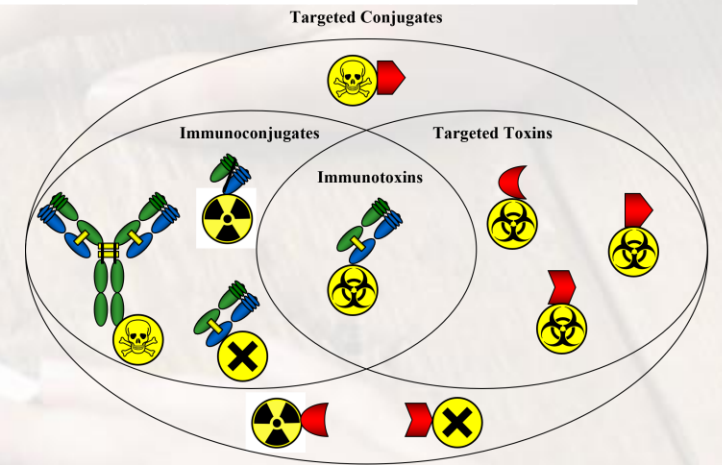
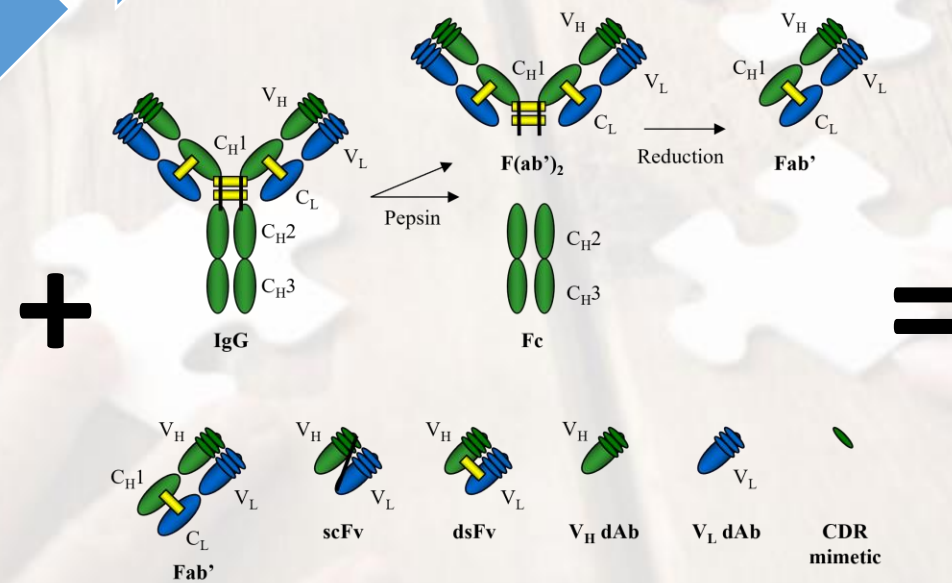
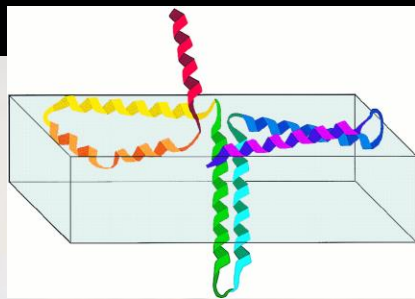
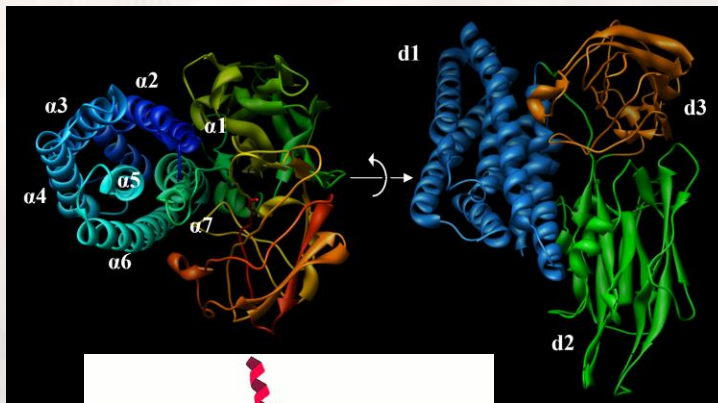
Medical School  
PhD



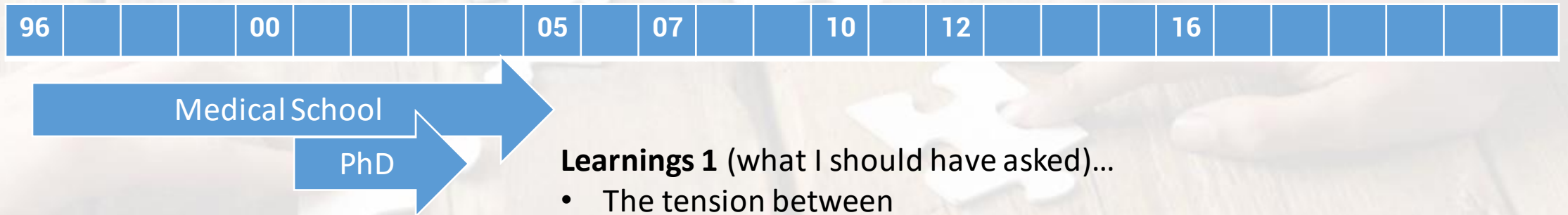
# Timeline



# Timeline



# Timeline

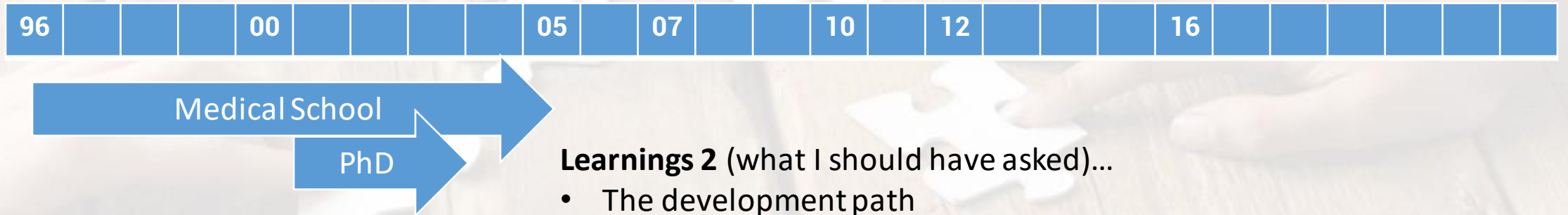


## Learnings 1 (what I should have asked)...

- The tension between
  - Designing to the **problems of yesterday**
    - Especially with the long lag-time of drug development
  - Versus chasing **blue-sky novelty**
    - An academic (and young researcher) drive
    - May involve multiple novel dependencies
- The opportunities in-between: mAbs -> ADCs -> micro-immunolysins?



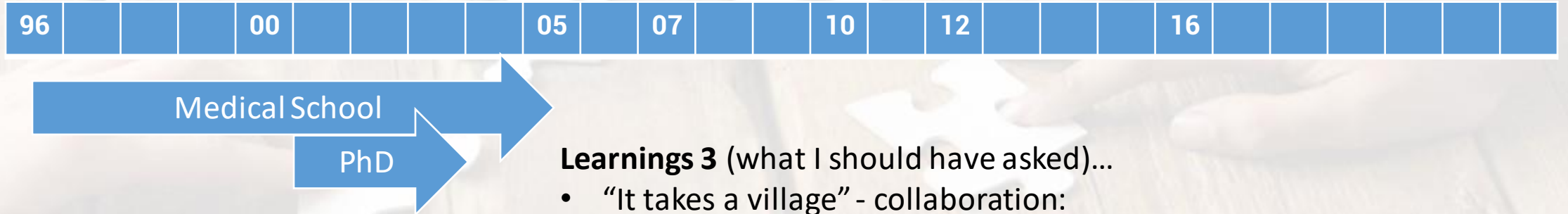
# Timeline



## Learnings 2 (what I should have asked)...

- The development path
  - Consideration of **data required** for next stage
  - Pre-clinical **package** (pharmacology, safety, activity,...)
  - Clinical development **pathway** (stages of onward development)
  - Line-of-sight

# Timeline



## Learnings 3 (what I should have asked)...

- “It takes a village” - collaboration:
  - Laboratory drug discovery
  - Biotech and regulatory
  - Clinical
  - Pharmacology
  - Stats
  - Patients

# Timeline

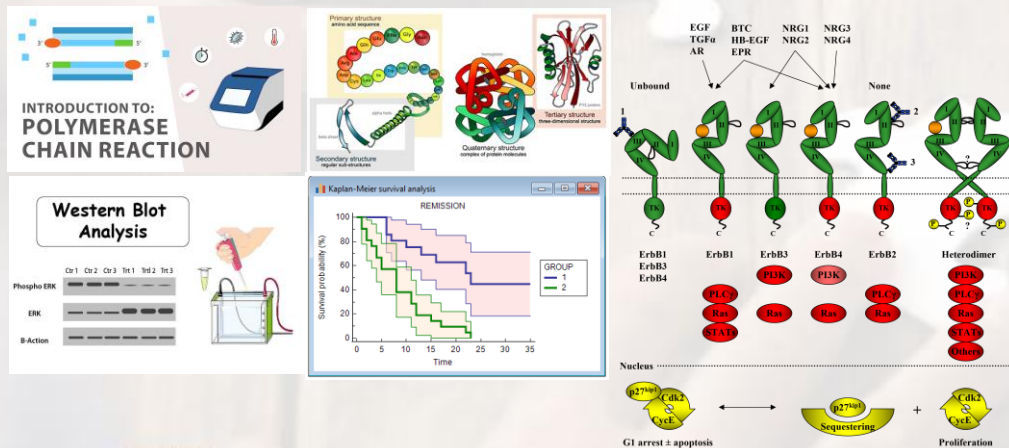


Medical School

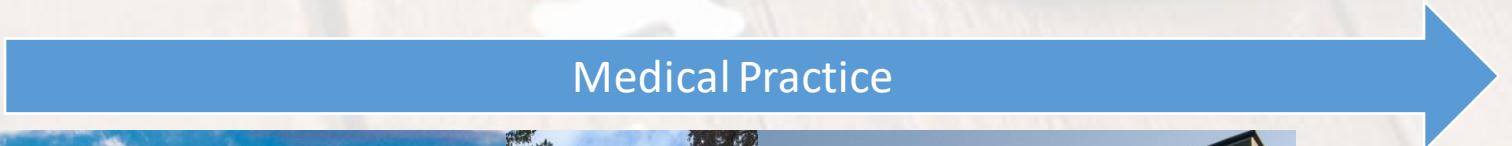
PhD

## Learnings 4 (what I should have asked)...

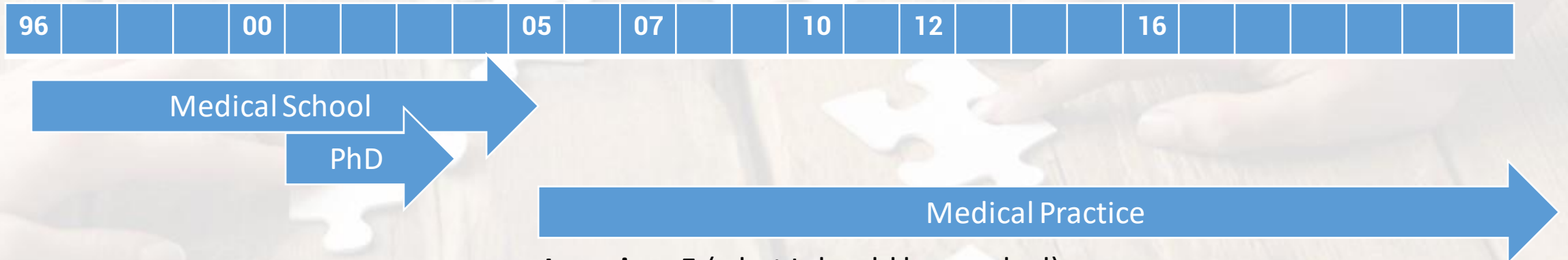
- Transferrable skills:
  - Self-directed work: organisation, prioritisation, learning, meetings
  - Knowledge: laboratory, scientific, regulatory/patent, clinical
  - Practicalities: facilities, teams
  - Critical appraisal: own work and others, scientific literature



# Timeline



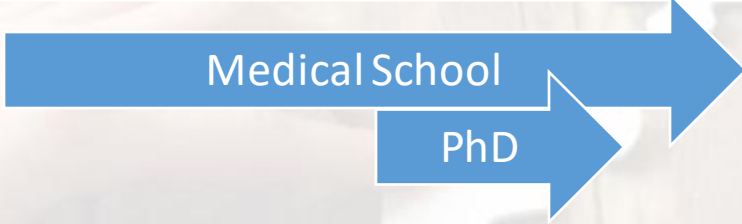
# Timeline



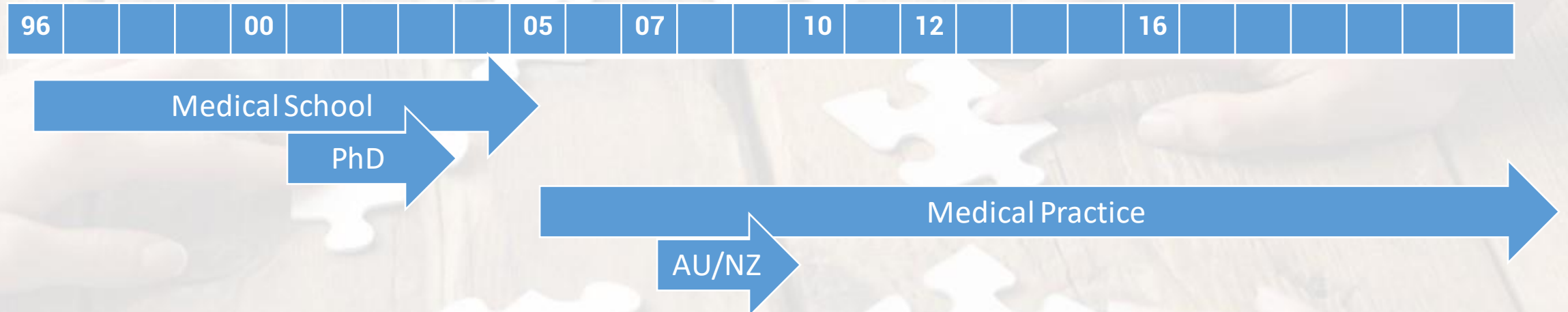
## Learnings 5 (what I should have asked)...

- Careers in clinical drug development:
  - Knowledge of clinical specialties outside of primary & secondary care
  - Academic career routes
  - Pharmaceutical career routes
  - Important we continue to improve this for the next generation
  - ...At least I knew I wanted to do Oncology, and hence Edinburgh

# Timeline



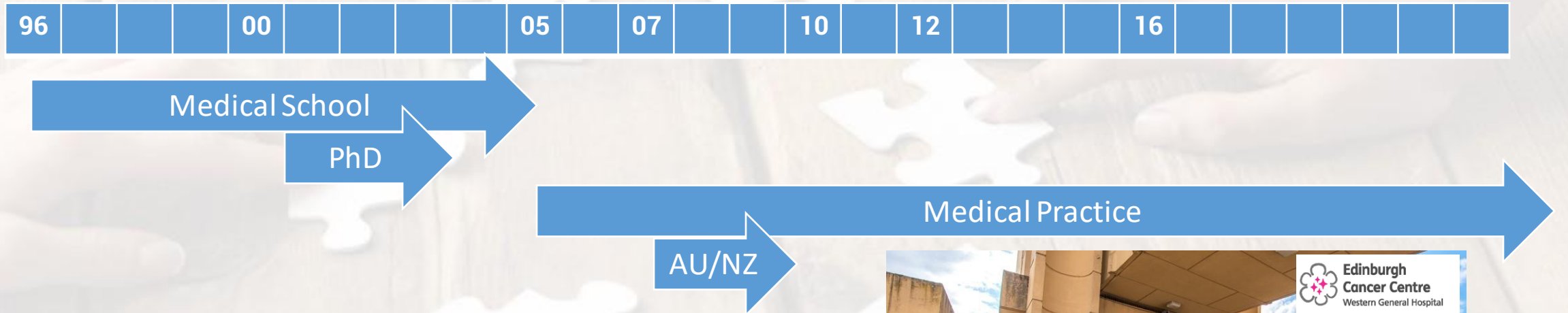
# Timeline



## Learnings 6 (what I should have asked)...

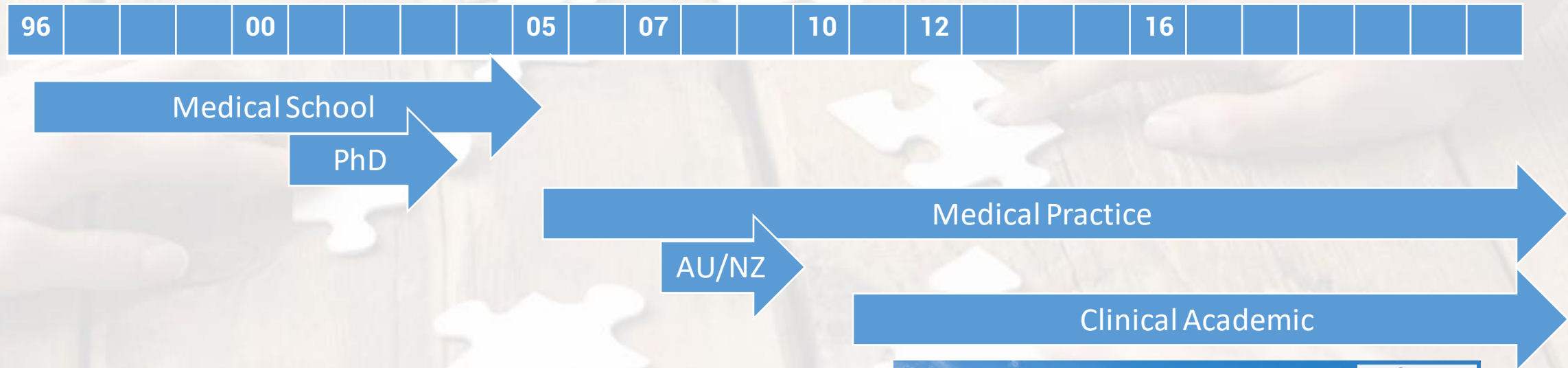
- The value of moving:
  - Career opportunities
  - Specialisation opportunities
  - Global view: different approaches & healthcare systems
  - Connections

# Timeline

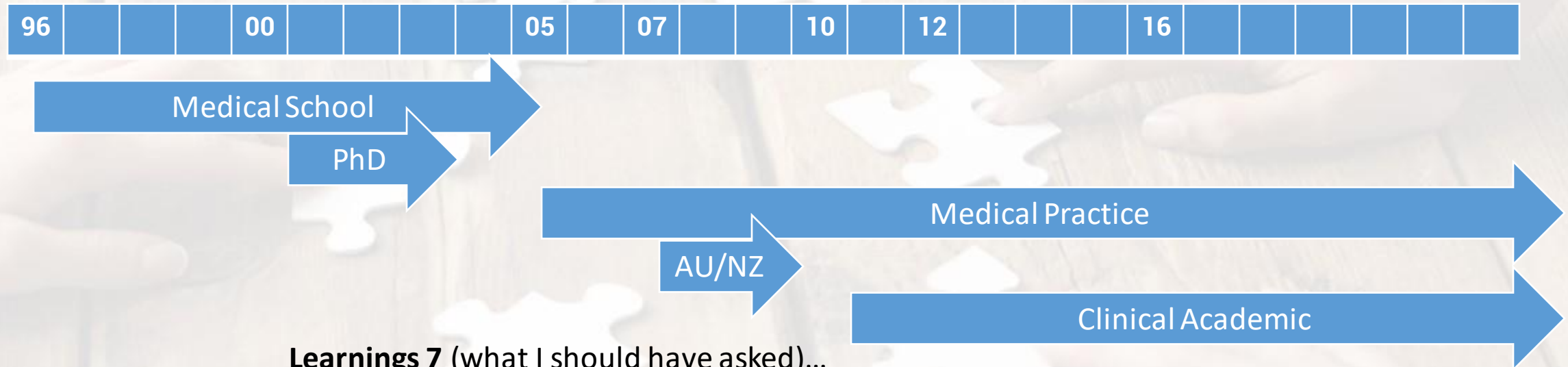




# Timeline



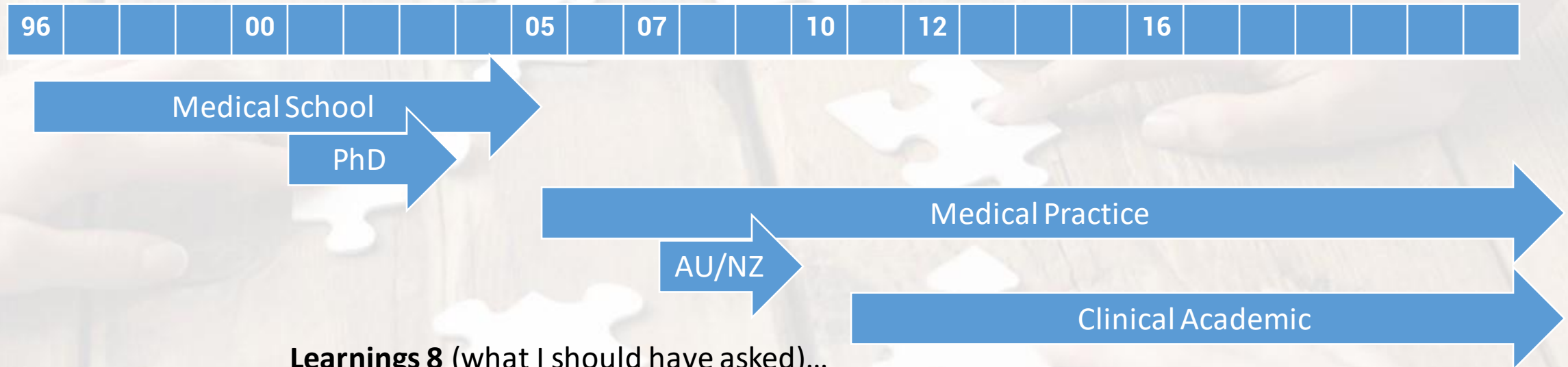
# Timeline



## Learnings 7 (what I should have asked)...

- Clinical Academic careers
  - Bedside - trials (therapies, pharmacology, biomarkers)
  - Bench - discovery, translational, PK/PD, stats, lab, data)
  - Pharmaceutical
  - Clinical practice
  - Mix

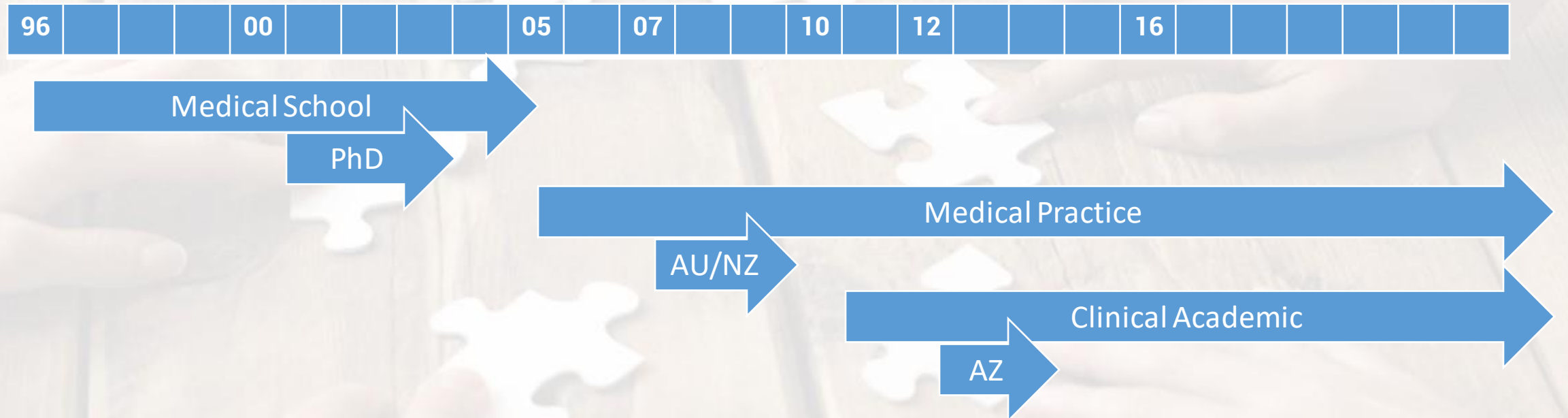
# Timeline



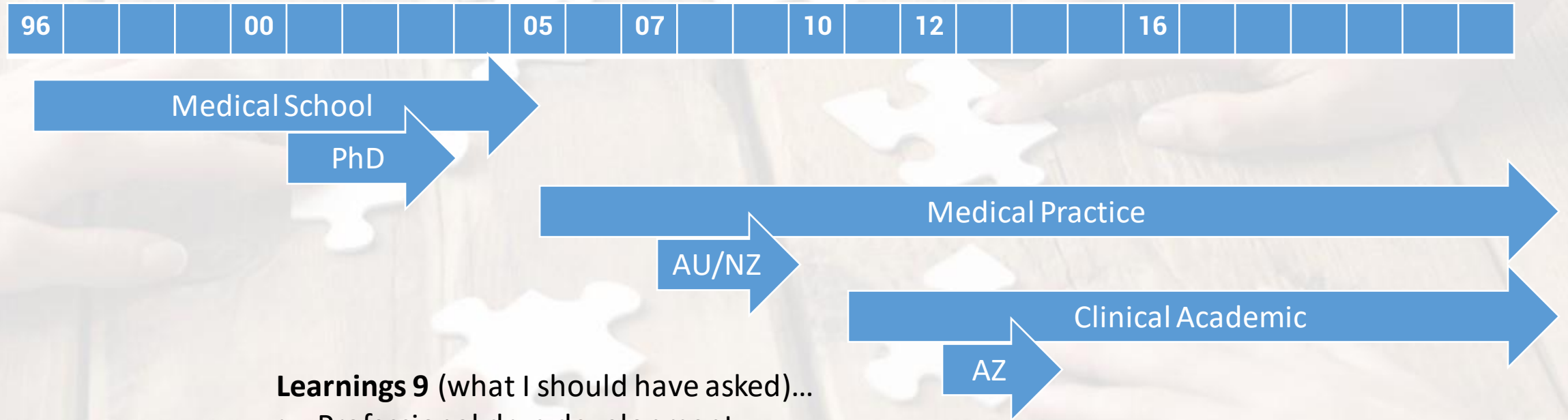
## Learnings 8 (what I should have asked)...

- Funding & opportunities
  - Fellowships
  - Academic grants
  - Pharma (IITs)
  - Trial involvement (centres, units, phases, roles)
  - Networks (e.g. ECMC in UK)

# Timeline



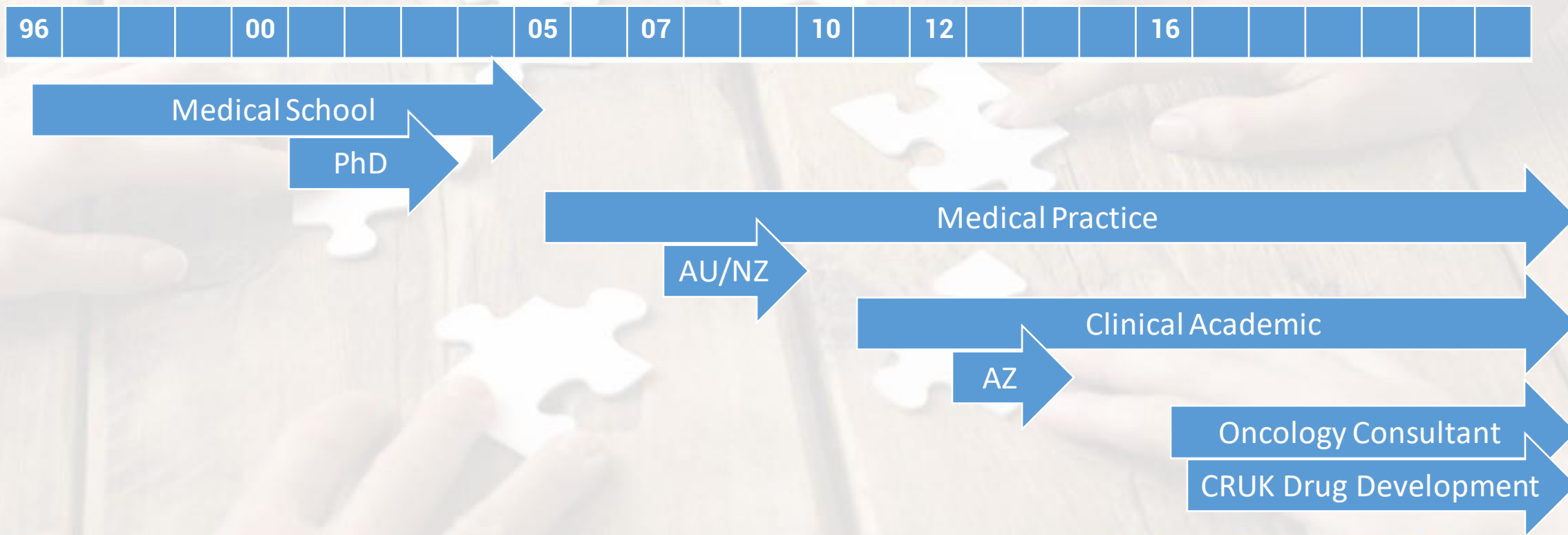
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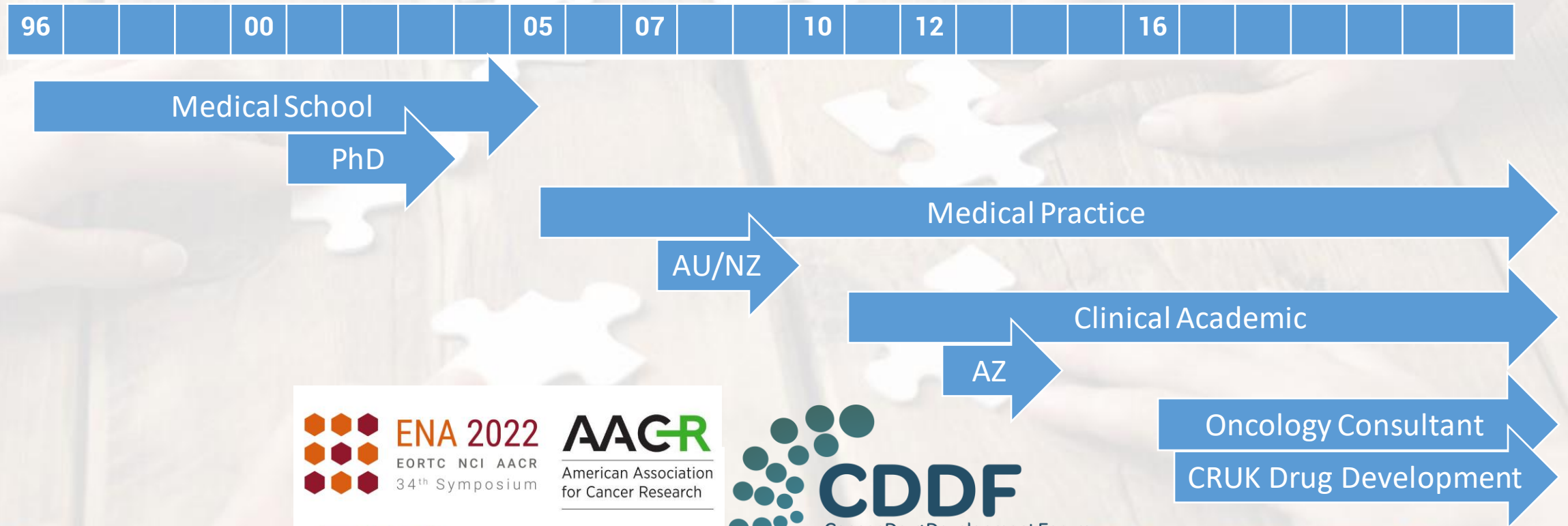
## Learnings 9 (what I should have asked)...

- Professional drug development
  - Trial design: efficiency, decision points, informing on line-of-sight
  - Current & emerging landscape, expert opinions, licensing considerations, reimbursement
  - Multi-disciplinary project teams
  - Project management & delivery: project, documents, recruitment
  - React to emerging data

# Timeline



# Timeline





**ENA 2022**  
 EORTC NCI AACR  
 34<sup>th</sup> Symposium


**AACR**  
 American Association  
 for Cancer Research

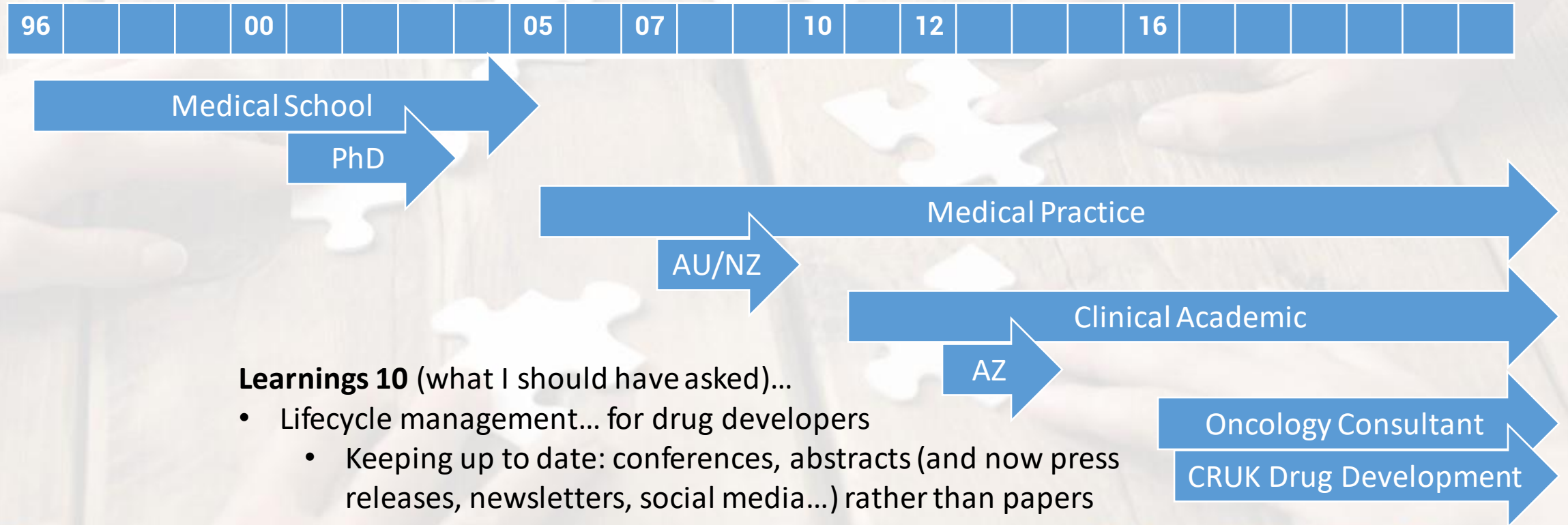

**ESMO**


**ASCO**




**CDDF**  
 Cancer Drug Development Forum

# Timeline



## Learnings 10 (what I should have asked)...

- Lifecycle management... for drug developers
  - Keeping up to date: conferences, abstracts (and now press releases, newsletters, social media...) rather than papers
  - Wider community: organisations, CDDF
  - Improve



# What I Should Have Asked When I Started My Career in Cancer Drug Development

1. Novelty vs established
2. The development path
3. Collaboration
4. Transferrable skills
5. Drug development careers
6. Moving
7. Academic careers
8. Funding & opportunities
9. Learning from industry
10. Maintaining progress

**I should have asked how to develop a drug  
not just how to develop this drug**

# Questions