Basic and Translational Science
What Do I Need in My First Job To Succeed?

Christina V. Angeles, MD FACS
Assistant Professor of Surgery
University of Michigan/Rogel Cancer Center

@cvangelesMD
Disclosures

• None
My Career Path

- General Surgery Residency at Cornell 2005-2012
- Two year dedicated Basic Science Research Fellowship at MSKCC after PGY3 2008-2010
- Surgical Oncology Fellowship at MSKCC 2012-2014
- First attending job at Dartmouth-Hitchcock Assistant Professor of Surgery 2014-2019
  - “Perfect” clinical job: sarcoma, melanoma, gastric cancer (+breast)
  - 20% research time with opportunities for internal funding
## Timeline

<table>
<thead>
<tr>
<th>Faculty Year</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinic</td>
<td>2 d/wk</td>
<td>2 d/wk</td>
<td>1.5 d/wk</td>
<td>0.5d/wk</td>
<td>0.5d/wk</td>
</tr>
<tr>
<td>OR</td>
<td>2 d/wk</td>
<td>2 d/wk</td>
<td>1.5 d/wk</td>
<td>1d/wk</td>
<td>1d/wk</td>
</tr>
<tr>
<td>Research time</td>
<td>20%</td>
<td>20%</td>
<td>40%</td>
<td>75%</td>
<td>75% -&gt; ?</td>
</tr>
<tr>
<td>Grants</td>
<td>DHMC surgery grant -$ not time</td>
<td>KL2 CTSA - $ and time</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Dartmouth SYNERGY grant – time not $  
ACS-CSDG 50% R01 Co-I 10% K08 scored
More surgeons must start doing basic science

They say they don’t have the time or incentives to do research — and that’s dangerous for translational medicine.

21 April 2017 | Corrected: 25 April 2017

The surgeon–scientist — a dying breed?

Solomon L. Woldu & Ganesh V. Raj

Nature Reviews Urology 13, 698–699 (2016) | Download Citation
So...

you want to be a surgeon-scientist

Resilience

Persistence

Passion for research

Ability to accept failure

Choosing the right job

- What’s available?
- Clinical practice should parallel your research
- Do you want to have your OWN lab?
  - Do you LOVE writing grants???
- Who will you be learning from?
Research Start-up Package

$ for X# of years

Equipment and lab space

Lab staff
Does the institution have a Clinical and Translational Science Award (CTSA)?
NIH - NCATS
Support and Infrastructure

Training and Career Development

Leadership

Mentorship
Sponsorship

#1

Knowledge advancement
YOU NEED TIME!!!!

Dedicated research time

Is it truly protected?
Clinical factors to consider

• Clinical time is ALWAYS more than what is scheduled
  – Calling back patients and referring providers

• More control over your practice will allow more true protected time
  – Supportive colleagues and adequate coverage
  – Outpatient vs inpatient/ complexity of case volume
  – Associate providers

• As you get more established in your research… your surgical practice blossoms (direct referrals, now you are known)
Your lab

• Integrating into a well established lab for a quicker start
  – Shared equipment and resources
  – Easy access to science discussions
  – More face time with mentors and collaborators

• Location
  – Easy back & forth to clinic/OR