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Group on Graduate Research, Education, and Training  
Association of American Medical Colleges

MD-PhD Section Meeting  
Keystone, Colorado

**“Career Guidance for the  
Physician Scientist”**

**WILLIAM N. KELLEY, M.D.**  
July 26, 2007



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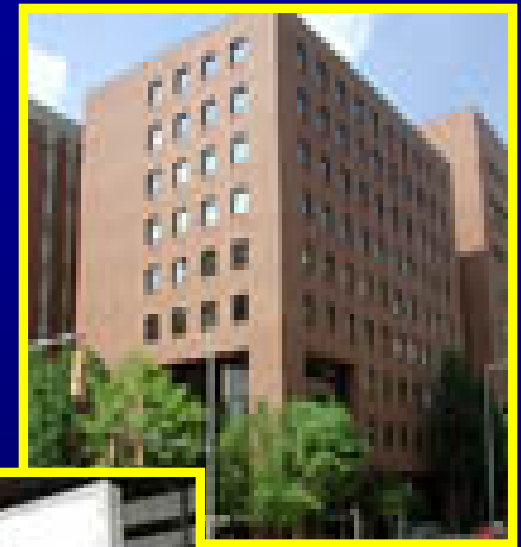
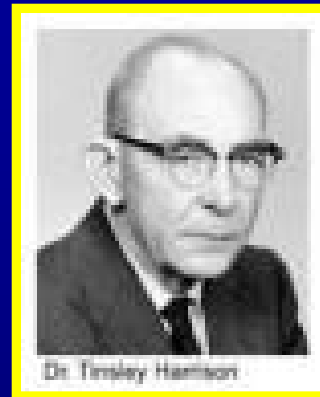
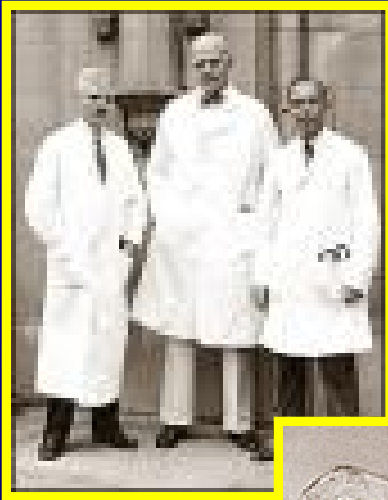
# Tinsley R. Harrison & Internal Medicine

- SERVICE – TRH claimed this as his first priority and best accomplishment
- TEACHING – TRH most famous for this; without peer
  - Individual students/physicians at bedside/office
  - Groups - unexcelled lecturer & bedside teacher
  - Books
    - PIM, Principles of Internal Medicine – 1950 & after
    - Failure of the Circulation – 1935, 1938
    - Ischemic Heart Disease – 1968
    - Your Future Health Care – 1974
- RESEARCH – More than 200 papers & chapters, 1924-1977
  - President of ASCI, 1939
  - Kober Medal of AAP, 1968
  - Many honors & societies, honorary degrees, etc.
- ADMINISTRATION
  - First Chief Medical Resident – Vanderbilt, 1925
  - First Chairman of Medicine – Bowman Gray, 1941
  - First Chairman of Medicine – Southwestern, 1944
  - First Chairman of Medicine – UAB, 1950

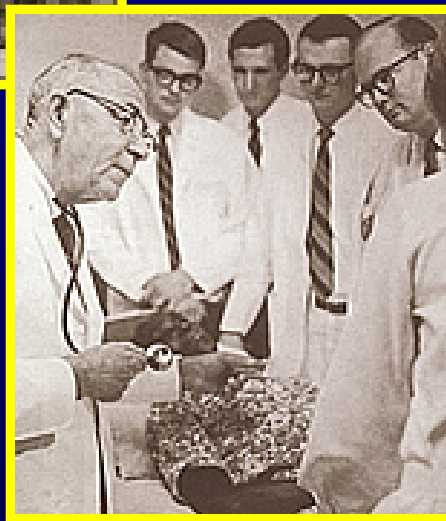


# Tinsley R. Harrison, M.D.

Vanderbilt - 1940  
Chief Medical Resident



UAB - 1964  
Medical  
Student  
Rounds



UAB  
Tinsley Harrison Tower  
Research Building



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# Careers in Medicine

- Mentors
- Reflections on Lessons Learned
- Career Options
- Conclusions



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# Careers in Medicine

- **Mentors**
- Reflections on Lessons Learned
- Career Options
- Conclusions



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# Mentors

- Seek mentors for each stage of your career development



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# What is a Mentor?

Kelley's working definition:

An individual, usually senior to and more experienced than yourself, whom you can trust to provide advice, direction, and counsel with a minimum of conflict or self-interest, other than taking pride in your successes and accomplishments.



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## Most Important Mentors to Me

- Oscar L. Kelley, M.D.
- Donald W. Seldin, M.D.
- J. Edwin Seegmiller, M.D.
- James B. Wyngaarden, M.D.
- P. Roy Vagelos, M.D.



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# Mentors

- Seek mentors for each stage of your career development
- Strive to be an excellent mentor yourself throughout your career



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# Careers in Medicine

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- **Reflections on Lessons Learned**
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# Reflections on Lessons Learned

- It's easier to know how to get there if you know where you're going



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## Know Where You're Going – Tinsley Harrison

“relentless pursuit of the best medical school in the world”

-- from James A. Pittman

J Med Assoc of State of Alabama 1:14, 1997



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# Reflections on Lessons Learned

- It's easier to know how to get there if you know where you're going
- **Sometimes you must take career risks**



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## Take Career Risks – Tinsley Harrison

Time: January 6, 1944

Place: Robert E. Lee Hotel, Winston Salem, NC

Event: Special Meeting of Dean & all 13 Department Chairs, Bowman-Gray

“All 13 departmental chairmen plus the dean were there. But Tinsley was kept outside in an anteroom for most of the meeting, while the others complained about his interfering in their departments and harassing them for the low quality of their appointments. Finally, they invited him in. He immediately proposed a motion that all new recruits, and all faculty to be promoted from within, must be those who will make this the best medical school in the world. His nemesis, a carriage-trade doctor prominent in town, moved to table that motion. The motion carried 7 to 6. Tinsley immediately jumped up, announced that he was resigning from the chairmanship, and in fact resigning from the faculty...”



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# Reflections on Lessons Learned

- It's easier to know how to get there if you know where you're going
- Sometimes you must take career risks
- **Timing is everything**



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# Timing is Everything – Tinsley Harrison

- Summer of 1945, now in Dallas for about 1 year, called by Morris Fishbein, M.D., recently retired editor of JAMA and asked to edit a new medical textbook
- Agrees under the condition that he would have total control of the contents
- Recruits outstanding Associate Editors – Paul Beeson, William Resnik, George Thorn, and Maxwell Wintrobe
- Designs a text to begin with the first third of the book devoted to symptoms and signs experienced by sick people (as contrasted to Cecil, which had previously monopolized the market and was organized exclusively by disease)
- First edition published in 1950



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# Reflections on Lessons Learned

- It's easier to know how to get there if you know where you're going
- Sometimes you must take career risks
- Timing is everything
- **Always complexities and unexpected events**



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## Unexpected Events – Tinsley Harrison

- In 1940, Dr. Harrison accepted the position as Chair of Medicine at Bowman Gray School of Medicine, expecting a major gift from Bowman Gray of the Reynolds Tobacco Co. which would be comparable to the \$10,000,000 from James B. Duke of the American Tobacco Co. to establish Duke University in 1925.
- The gift never materialized.



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# Careers in Medicine

- Mentors
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- **Career Options**
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# Career Options

- Research



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# Research as a Career in Medicine

- Ultimate Entrepreneur



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# Research as a Career – Ultimate Entrepreneur

RESEARCH



Present  
and  
Publish

Success is 99+% up to you



# Research as a Career – Ultimate Entrepreneur

RESEARCH



Present  
and  
Publish

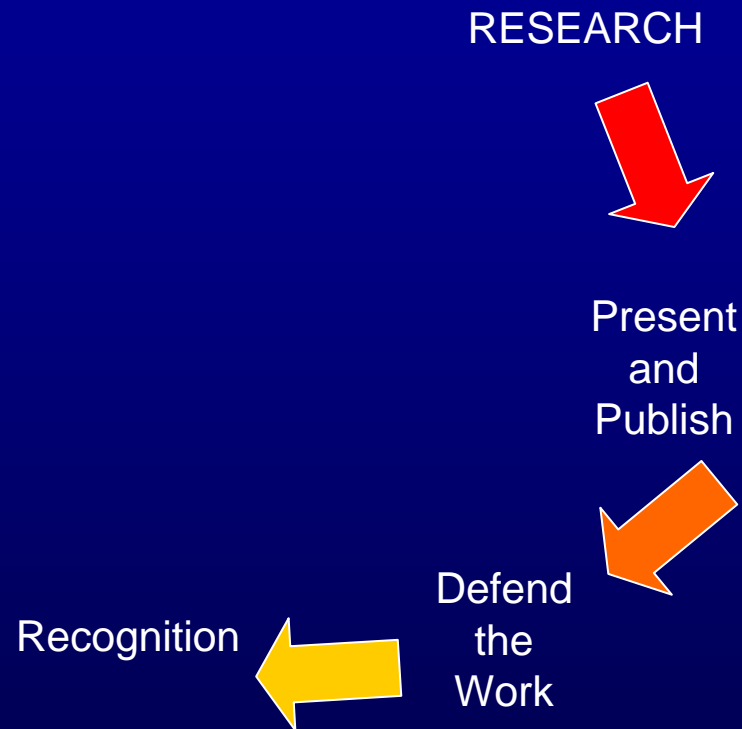


Defend  
the  
Work

Success is 99+% up to you



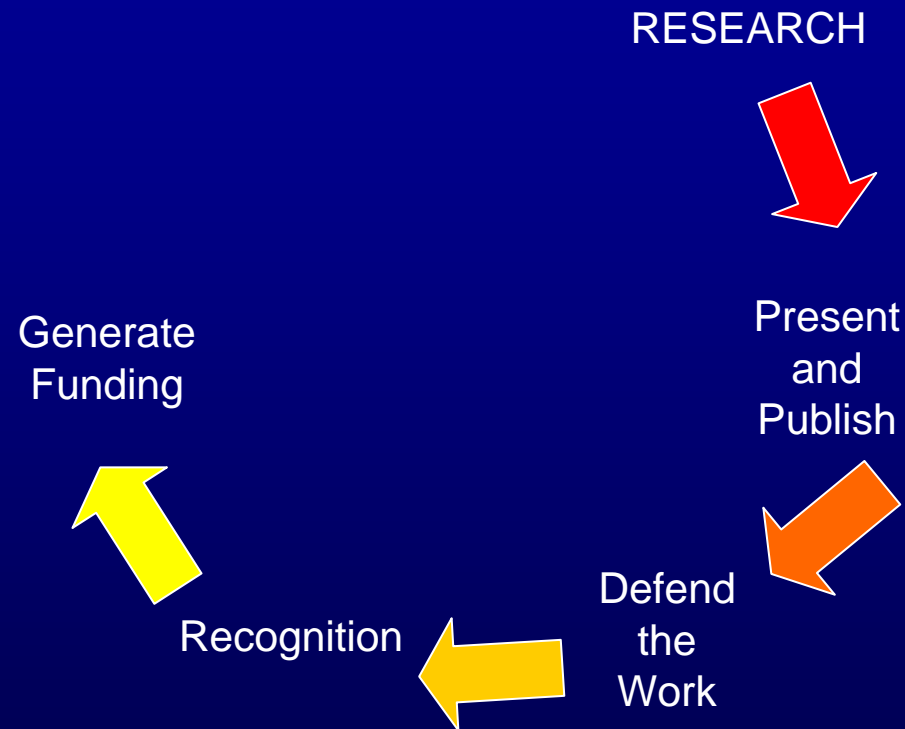
# Research as a Career – Ultimate Entrepreneur



Success is 99+% up to you



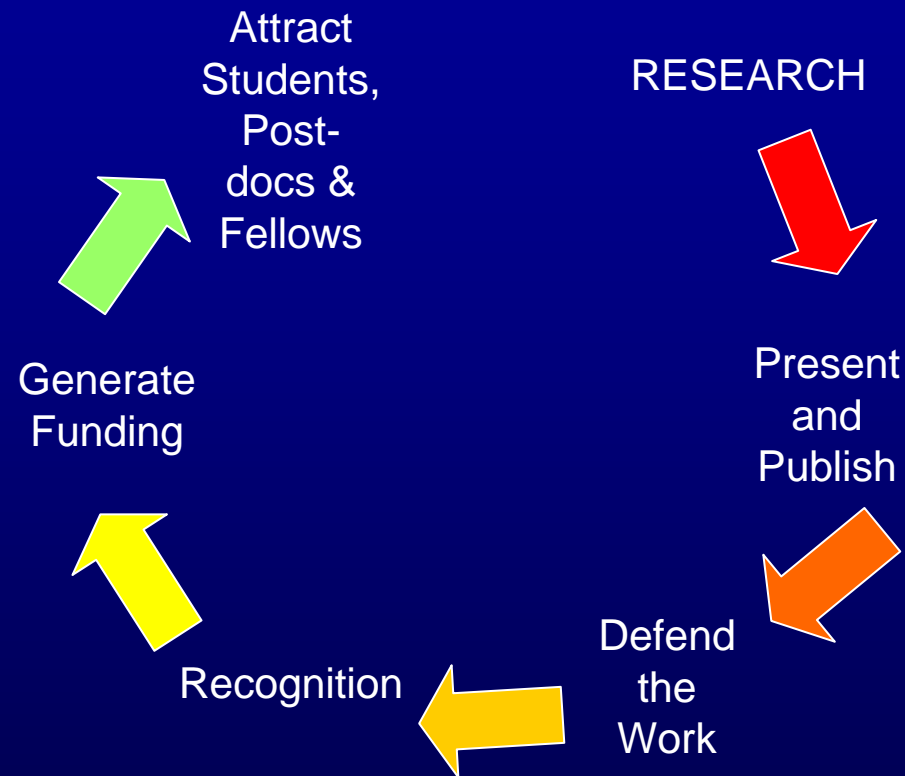
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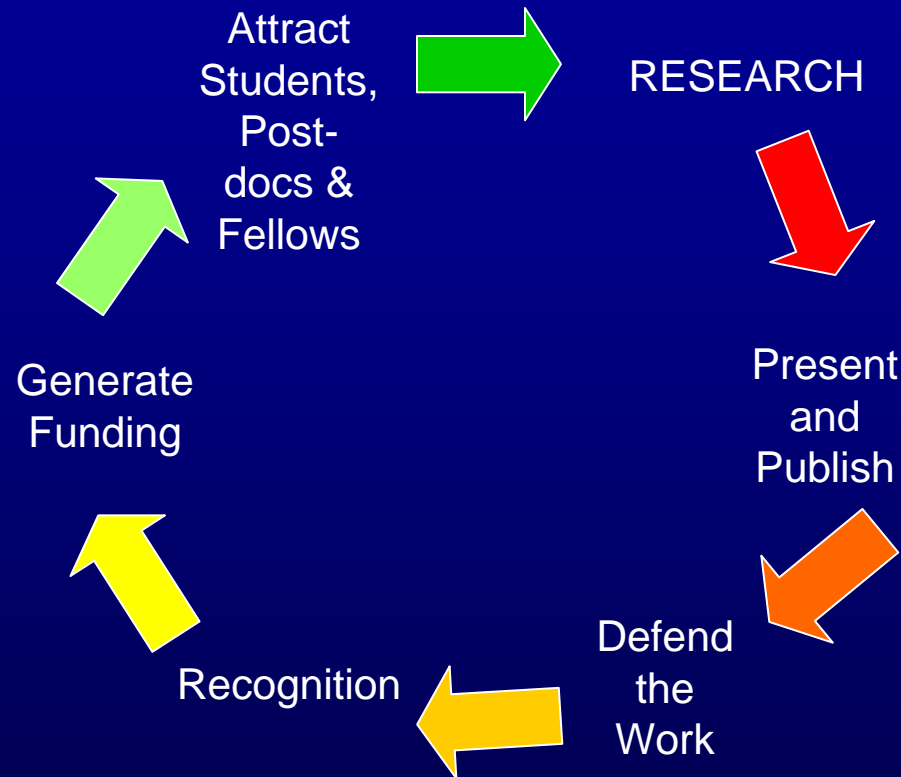
# Research as a Career – Ultimate Entrepreneur



Success is 99+% up to you



# Research as a Career – Ultimate Entrepreneur



Success is 99+% up to you



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# Research as a Career in Medicine

- Ultimate Entrepreneur
- Multiple Approaches



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## Research as a Career – Multiple Approaches

- Multiple approaches to medical research, for example:
  - Basic
  - Translational
  - Patient-Oriented
  - Clinical Trials
  - Health Services

The physician-scientist is particularly well-suited to be able to move between these approaches in a highly productive way.



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# Research as a Career in Medicine

- Ultimate Entrepreneur
- Multiple Approaches
- **Multiple Settings – Initially Usually Academic**



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# Research as a Career – Multiple Settings

- Multiple settings for medical research, for example:
  - Academic
  - Government
    - NIH
    - CDC
  - Research Institutes
  - Industry
    - Pharma
    - Biotech
    - Medical Devices
    - Diagnostics/Laboratory

Mobility is almost always possible and may be desirable, depending on one's interests and goals



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## Research as a Career – Timing is Everything

- Genomic and proteomic revolution provides the backdrop – ready to be expanded and applied
- Currently, a growing national concern about the shortage of physician-scientists
- Proliferation of programs to support the developing physician-scientist



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# Research as a Career – Rewards

- Rewards are potentially immense
  - Discoveries may save lives and help millions of people
  - Findings may provide signal contributions to the progress of science
  - Joy of discovery is highly satisfying in and of itself
  - Opportunities exist in most settings to stay with the most exciting and promising areas of science as they evolve
  - National and international opportunities and recognition can be especially rewarding
  - Since the early 1980s, the institution may apply for patents and, if appropriate, license your intellectual property, thus helping to facilitate the value of your research to all parties
  - Participation in formation of new companies is often possible



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# Research as a Career – Downsides

- Some of the downsides
  - Extended time in training required
  - Potential for increasing debt
  - More complexity
    - Greater regulations
    - Potential and real conflicts of interest
    - Sometimes unforgiving environment
  - Less certain path to success, especially as compared to a practice career, but there is high mobility into other career options



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# Career Options

- Research
- Leadership Roles



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# Leadership Roles

- Examples of Leadership Roles as career options
  - Academic leader
    - Director, Center or Institute
    - Division or Section Chief
    - Department Chair
    - Dean, VP, President, etc.
  - Hospital and/or Health System leader
    - Lab Chief
    - Physician-in-Chief
    - Chief Medical Officer
    - Chief Quality Officer
    - CEO
  - Corporate Leader
    - CEO or other senior executive



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# Leadership Roles

- These career advances may be highly rewarding, for example:
  - sense of accomplishment
  - pride in successes of others
  - financially
- The more senior the role, however,
  - the more one trades off the rewards and benefits of a clinical or research career
  - the less mobility one has back into a purely clinical or research career
  - the less control one has on their own likelihood of success



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# Career Options

- Research
- Leadership Roles
- “New” Opportunities



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# Examples of “New” Opportunities

- Venture capital
- Investment banking
- Wall Street analysts
- Consulting (e.g., McKinsey)
- Health insurance
- Communications
  - Print Media
  - Telecommunications Media
  - Fiction Writing
- Politics



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## “New” Opportunities as a Career

- Possible mobility at mid-career
- May be highly rewarding
- Most will be pretty irreversible, especially back to a purely clinical or research career



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# Conclusions

- Appropriate planning early in one's career will enhance the likelihood of long-term success



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# Conclusions

- Appropriate planning early in one's career will enhance the likelihood of long-term success
- Recognize
  - Sometimes one must take career risks
  - Timing is everything
  - There are always unexpected events



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# Conclusions

- Appropriate planning early in one's career will enhance the likelihood of long-term success
- Recognize 1) sometimes one must take career risks, 2) timing is everything, 3) there are always unexpected events
- **Mid-career shifts are possible for many of the options discussed**



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## Conclusions

- Appropriate planning early in one's career will enhance the likelihood of long-term success
- Recognize 1) sometimes one must take career risks, 2) timing is everything, 3) there are always unexpected events
- Mid-career shifts are possible for many of the options discussed
- **Mentors at every stage are most critical to this process**

