From Dirt Roads to the Oval Office
How Life Experiences Prepare You for Reaching Career Goals

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A Vision of Achievement

Different paths to career fulfillment, success

What can you accomplish as a Ph.D. educated scientist: for yourself, your family, for society?

What do you really like to do, not do?
What useful skills have you gained?
Characteristics of Scientists that Translate into Opportunities

People who like challenges, and can meet them
People who know how to acquire information
People who like to/know how to think logically
People who like to/know how to solve problems
People who persevere
People who have the confidence to fail, try again
Good communication skills
Ability to work with others
Characteristics of Scientists that Translate into Opportunities

People who like challenges, and can meet them
People who know how to acquire information
People who like to/know how to think logically
People who like to/know how to solve problems
People who persevere
People who have the confidence to fail, try again
Good communication skills
Ability to work with others who are not like you
Career Options in Science

Research: academic, government, biotech, pharma
Biotech: research, MSL (medical science liaison)
Teaching: CC. colleges, univ, program direction
Law: forensics, patents, IP, tech transfer
Regulation: FDA, clinical trials, EPA, patent office
Museums, zoos
Writing, editing, TV, movies
Public policy (creating, passing, enacting)
Advocacy groups
Consulting
There is no Time Line for a Career

Small towns in Louisiana

Civil Rights

Health Problems
There is NO Time Line for a Career

Do some good

Small towns in Louisiana

Civil Rights

Health Problems
There is NO Time Line for a Career

Small towns in Louisiana

Civil Rights

Health Problems

Do some good
Bambi story
There is NO Time Line for a Career

- Small towns in Louisiana
- Do some good
  - Bambi story
  - Daddy’s Bobo
- Civil Rights
- Health Problems
There is no Time Line for a Career

Do some good
Bambi story
Daddy’s Bobo

Science Fair

Civil Rights
Health Problems
There is no Time Line for a Career

Do some good
Bambi story
Daddy’s Bobo
Science Fair

Civil Rights

Health Problems

La Jr Acad Science
There is no Time Line for a Career

Civil Rights
Health Problems

Do some good
Bambi story
Daddy’s Bobo
Science Fair
La Jr Acad Science
Tutored nursing maj
There is no Time Line for a Career

Do some good
Bambi story
Daddy’s Bobo

Science Fair

Civil Rights
Health Problems

La Jr Acad Science
Tutored nursing maj
GA Queen Regent
There is no Time Line for a Career

Do some good
Bambi story
Daddy’s Bobo

Science Fair

La Jr Acad Science
Tutored nursing maj

GA Queen Regent

College
Scholarships

Civil Rights
Health Problems
There is no Time Line for a Career

Civil Rights

Health Problems

Do some good
Bambi story
Daddy’s Bobo
Science Fair

La Jr Acad Science
Tutored nursing maj

GA Queen Regent
College
Summer Missions
There is no Time Line for a Career

Civil Rights
Health Problems

Do some good
Bambi story
Daddy’s Bobo

Science Fair

La Jr Acad Science
Tutored nursing maj

GA Queen Regent

College
Missions vs Camp counselor
There is no Time Line for a Career

Civil Rights
Health Problems

Do some good
Bambi story
Daddy’s Bobo

Science Fair
La Jr Acad Science
Tutored nursing maj

GA Queen Regent
College
Married
There is no Time Line for a Career

Civil Rights
Health Problems

Do some good
Bambi story
Daddy's Bobo

Science Fair
La Jr Acad Science
Tutored nursing maj

GA Queen Regent

College
Married

Grad school
There is no Time Line for a Career

Civil Rights
Health Problems

Do some good
Bambi story
Daddy’s Bobo

Science Fair
La Jr Acad Science
Tutored nursing maj

GA Queen Regent
College
Married

Grad school
BABY!
There is no Time Line for a Career

- Civil Rights
- Health Problems
- Do some good
  - Bambi story
  - Daddy’s Bobo
- Science Fair
- La Jr Acad Science
- Tutored nursing maj
- GA Queen Regent
- College
  - Married
- Grad school
- Baby! Asthma
There is no Time Line for a Career

Civil Rights
Health Problems

Do some good
Bambi story
Daddy’s Bobo

Science Fair

La Jr Acad Science
Tutored nursing maj

GA Queen Regent

College
Married

Post-doc BCM
Exp worked!!

Grad school
Baby! Asthma
There is no Time Line for a Career

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- Bambi story
- Daddy’s Bobo
- Science Fair
- La Jr Acad Science
- Tutored nursing maj
- GA Queen Regent
- College
- Married

- Civil Rights
- Health Problems

- Post-doc BCM
- Exp worked!!
- NIH Fellowship
- Grad school
- Baby! Asthma
There is no Time Line for a Career

Do some good
Bambi story
Daddy’s Bobo

Science Fair

La Jr Acad Science
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College

Grad school

Civil Rights
Health Problems

R23, R01 grants
Post-doc BCM Fellowship
There is no Time Line for a Career

**Civil Rights**

R23, R01 grants
New goal
Male contraceptive

**Health Problems**

Post-doc BCM Fellowship
Grad school Baby!

**Do some good**

Bambi story
Daddy’s Bobo

Science Fair

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There is no Time Line for a Career

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- Science Fair
- La Jr Acad Science
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- College

- Civil Rights
- Health Problems

- R23, R01 grants
- Faculty dining area

- Post-doc BCM Fellowship

- Grad school
There is no Time Line for a Career

Civil Rights
Health Problems

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Science Fair
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College
Married

Asst Prof

R23, R01 grants
New goal
Male contraceptive

Post-doc BCM Fellowship

Grad school
Baby!
There is no Time Line for a Career

- SMART Program
- Asst Prof
- R23, R01 grants

Civil Rights

Health Problems

- Do some good
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- Science Fair
- La Jr Acad Science
- Tutored nursing maj
- GA Queen Regent
- College
- Camp Counselor

- Grad school
- Baby!
- Post-doc BCM Fellowship
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Civil Rights
Health Problems

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R23, R01 grants

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College

Camp Counselor

Grad school

Baby!

Post-doc BCM Fellowship
Encouraged by Extraordinary Mentors
The SMART Program
Transducing a Signal Promoting Science

- Minority College
- Liberal Arts College
- State Supported College
- State Supported University
- Private University

- Laboratory Mentors
- Seminar Speakers
- Clinical Activities
- Peer Interaction

- Research Progress
- Inspired Speakers
- Enthusiastic Physicians & Grateful Patients

- Faculty Research Activities
- Classes Updated Information
- Students Role models

- Strengthened Commitment to Undergraduate Education
- Enhanced Graduate Programs

The Graduate School of Biomedical Sciences
Baylor College of Medicine
There is no Time Line for a Career

- Civil Rights
- Health Problems

- Post-doc BCM Fellowship
- Grad school
- Baby!
- Director Sp Proj
- SMART Program
- Asst Prof
- R23, R01 grants

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- Married
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Civil Rights

Health Problems

Recruitment UR, IMSD, NSF, etc..
Director Sp Proj
SMART Program
Asst Prof

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Beyond the Beakers
SMART Advice on Entering Graduate Programs
In the Sciences and Engineering

Began as dissemination tool for NSF funded project on developing campus based GRE prep courses (HRD)

GRE prep pointers
Female friendly ethnic inclusive logic problems
16 workshops on preparing and interviewing for graduate study in the sciences and engineering

Download http://www.bcm.edu/gradschool
Click on Resources; click on Beyond the Beakers
BCM Initiative for Maximizing Student Diversity

Five NIH NIGMS IMSD grants (tax $ at work)
1998-2021  $11 million
Provides: salaries (10/80 students), summer bridge program with review sessions, English training, resource library, tutoring, laptop loan, workshops (skills, critical thinking, qualifying exams, writing, mock fellowship review), minority scientist seminars, team building, journal, outreach, AGSD

Impact of grants and program
Grown from 20 to 80+ UR students enrolled in Ph.D, MD/PhD
122 Ph.D.s to UR students (17 MD/Ph.D.s; 11 MS)
85% retention rate of 200 UR Ph.D. students
>370+ awards, 63 fellowships; >300 papers (Science, Nature)
Sample of Awards to BCM UR Ph.D. Students

5 Trenton Awards for Academic Excellence
7 CMB/IMBS Awards for Academic Excellence
17 Awards as Outstanding Ph.D. Student in a Program (~20% UR)
5 Awards to Outstanding Ph.D. Graduate Student
6 BCM Commencement Speakers
~19 Grad Student Symposium Speakers (~20%); 2 top awards
Dozens of poster awards at Graduate Student Symposium
Dozens of awards for presentations at program retreats
63 national fellowships (NIH, NSF, societies)
National, International research awards
Professional development and travel awards for conferences
Christian Marin-Mueller, PhD

MS program in bio-entrepreneurship
Founded biotech company based on selling lab supplies
Wanted to develop new drugs and start his own biotech

Joined BCM Molecular Virology and Microbiology Program
Joined Cathy Yao’s lab, diverse research interest
Christian worked on finding a microRNA that was important in pancreatic cancer (IMSD support one year)

#1 TED talk – also in Spanish
Patented the micro RNA for pancreatic cancer therapy
Founded a biotech company in Costa Rica
Costa Rican President’s Council on Biotech
There is no Time Line for a Career

IRACDA Program
National Leadership
GREAT Group

Recruitment UR, IMSD, NSF, etc.
SMART Program
Asst Prof
R23, R01 grants
Post-doc BCM Fellowship

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**PAESMEM**
- IRACDA Program
- National Leadership
- GREAT Group
- Recruitment UR, IMSD, NSF, etc.
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Woman on the Move
Houston, TX Senate Commendations
PAESMEM
IRACDA Program
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GREAT Group
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College Married
I never expected to have a child. My son could go to any college that accepted him. Award-winning economist, great father. We helped his wife get a terrific college education. Fantastic teacher, awesome mom. Two grandchildren are AMAZING. Live in a wonderful place, with a lot of educational opportunities. My granddaughter said when asked what she wanted to be for Halloween, “A scientist, of course.”
Reaching Goals that Changed

I never expected to have a child
My son could go to any college that accepted him
  Award winning economist, great father
We helped his wife get a terrific college education
  Fantastic teacher, awesome mom
Two grandchildren are AMAZING
Live in a wonderful place
Life isn’t fair, grand daughter has had 2 illnesses
Son wrote a book about coping with fear and doubt
Helped family and others
There is no Time Line for a Career

PAESMEM
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- GREAT Group

Civil Rights
- Health Problems
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Science Career Options

Science and technology have made and will make incredible contributions to the quality of life.

There are many ways to use your interests in science to…
- educate others about science, science careers
- make discoveries and advance the use of science
- promote science
- see that science/technology are used wisely and ethically

Keep…
- learning
- thinking critically and creatively
- believing that we can make the world a better place