

Early-Career Research Success: Grant Access and Dual-Career Support

若手研究者を支える：
研究費獲得とパートナーキャリア支援

Fumika Hamada

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UC Davis, USA

濱田文香

カリフォルニア大学デービス校

My life

at
University of
California, Davis:

Research
and
teaching



Research



Teaching

The Hamada lab

Postdoc:

Tadahiro Goda

Graduate Students:

Richard Ramolete

Olivia Lopez

Jr. Specialist:

Gregory Bui

Undergraduate Students:

Jalal Saleh

Cheryl Heng

Grace Heringer

Katherine Lim

Phoebe Nicholas

Kazim Rizvi

Jeff McGee

Victoria Marquez

Alexis Atherley

Anthony Yap

Roslyn Catiis

Cora Fisher



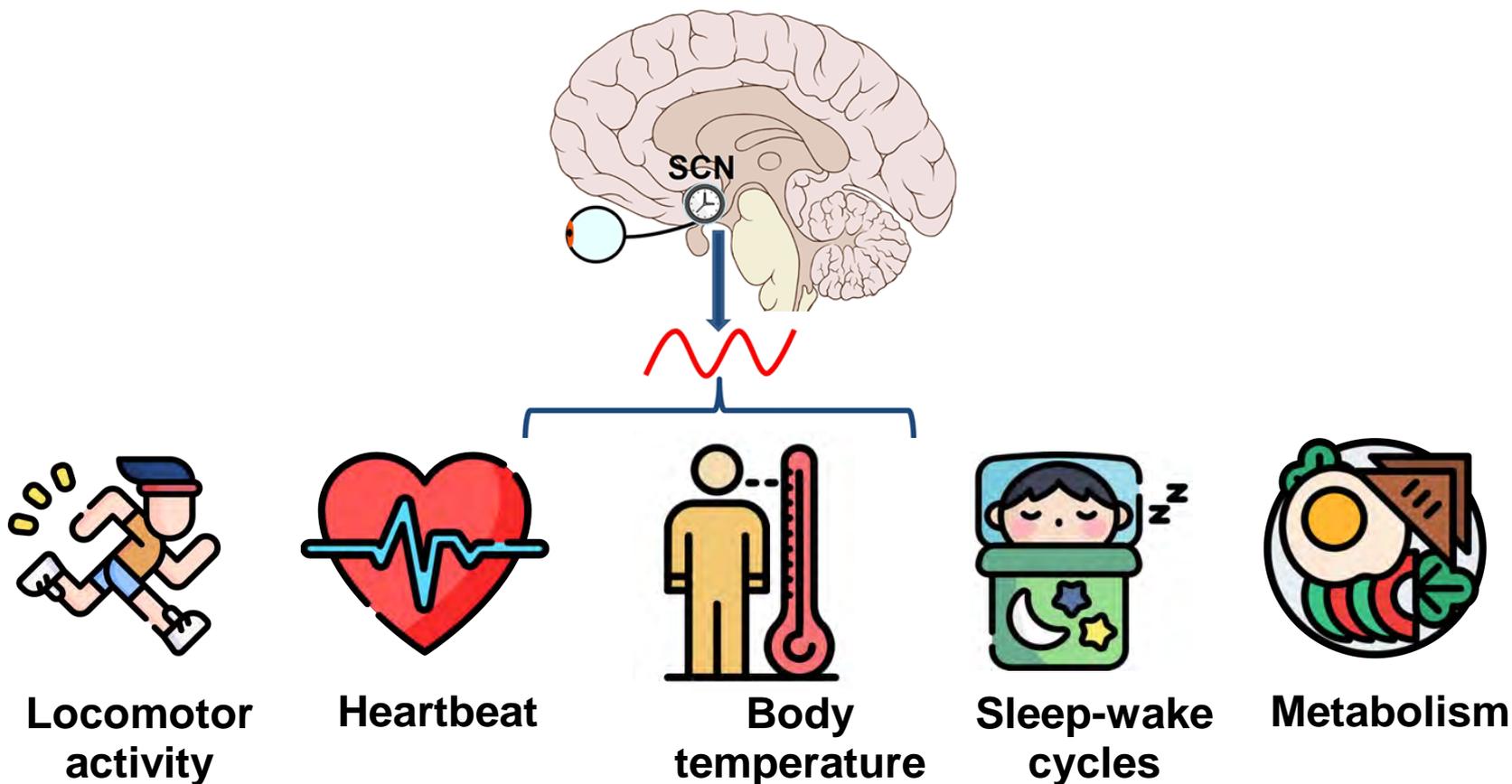
Why and How do we sleep?

from behavior to neural circuits 睡眠のなぜと仕組み



Circadian clocks regulate 24-hour cycles of behavioral and physiological activities

体内時計は、行動や生理機能の24時間周期を調節している



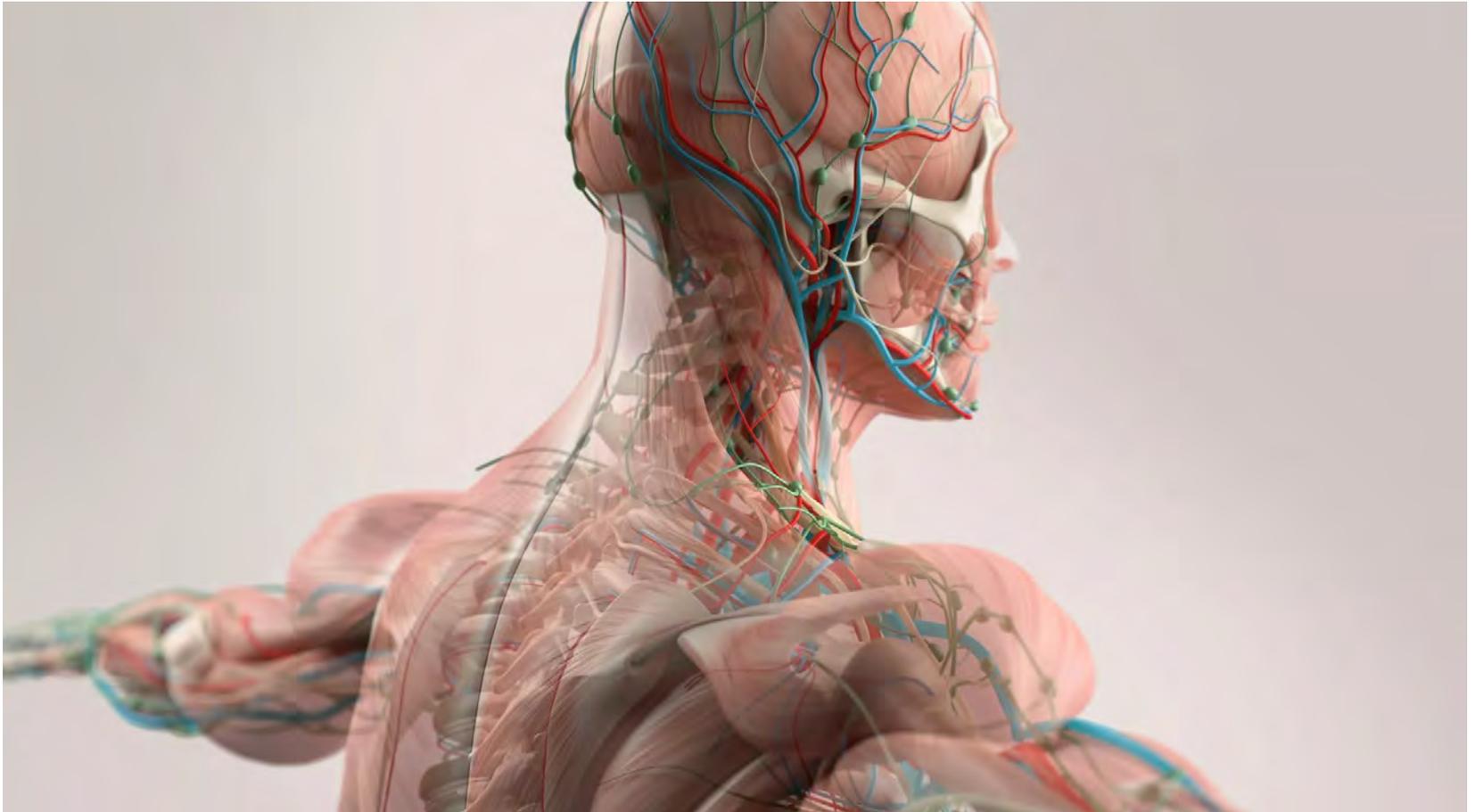
Tokyo: 6 AM

California: 2 PM



時差ぼけ

Teaching : Human physiology



> 500 students, intense class, M-F everyday

TEACHING NEURAL MECHANISMS OF BEHAVIOR

*How does the brain control behavior in the whole animal?
How do techniques help to understand the mechanisms of behavior?*

3 units: Prerequisite(s): NPB100, 101 or 110B



Why I chose to leave Japan for the U.S. なぜアメリカに行ったか？



2004.PhD:Tokyo University of Science

Why I chose to leave Japan for the U.S. なぜアメリカに行ったか？

- **Limited prospects for women in Japanese academia**
日本の学術界では女性研究者が少ない
- **Desire for a more gender-equal environment**
性別に関係なく活躍できる環境を求めて
- **Hope for a more supportive environment for dual-career scientists**
夫婦研究者が支援される環境を望んで
- **ambition to become an independent, impactful scientist**
独立して活躍できる研究者になりたい

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Key Factors That Shaped My Career as a Scientist

私のキャリアを支えてきた最も重要なもの

Key Factors That Shaped My Career as a Scientist

私のキャリアを支えてきた最も重要なもの

**Robust Dual-Career
Support
パートナーキャリア支援**



**Access to Major Grants in
Early Career**

**若手でもシニア並みの
研究費獲得が可能**

Satoshi Namekawa

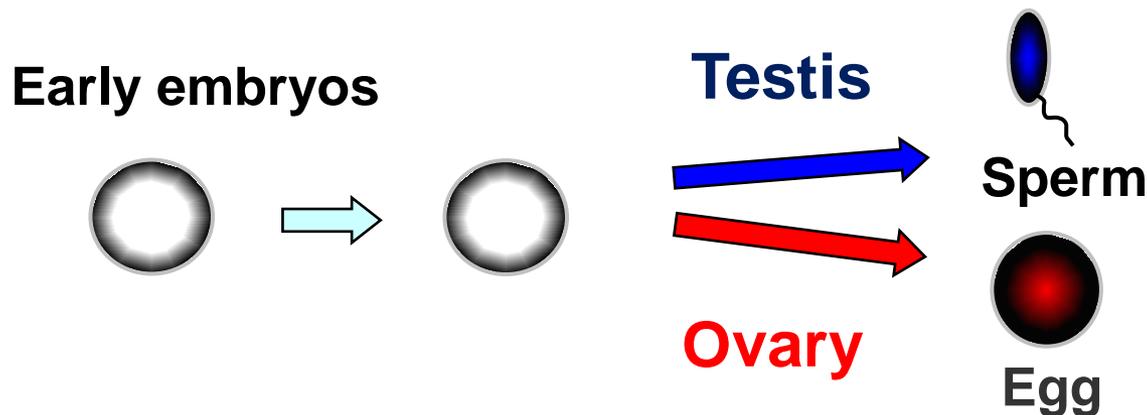
Professor

UC Davis



The secret of Life: sperm and egg

Epigenetic gene regulation in the germline



Dual-career journey



Fumika Hamada

**Neurobiology, Physiology
and Behavior
Department**



Satoshi Namekawa

**Microbiology and
Molecular Genetics
Department**





Dual-career journey

Postdoctoral fellow: Let's go to the US !



**2004.PhD:Tokyo
University of Science**

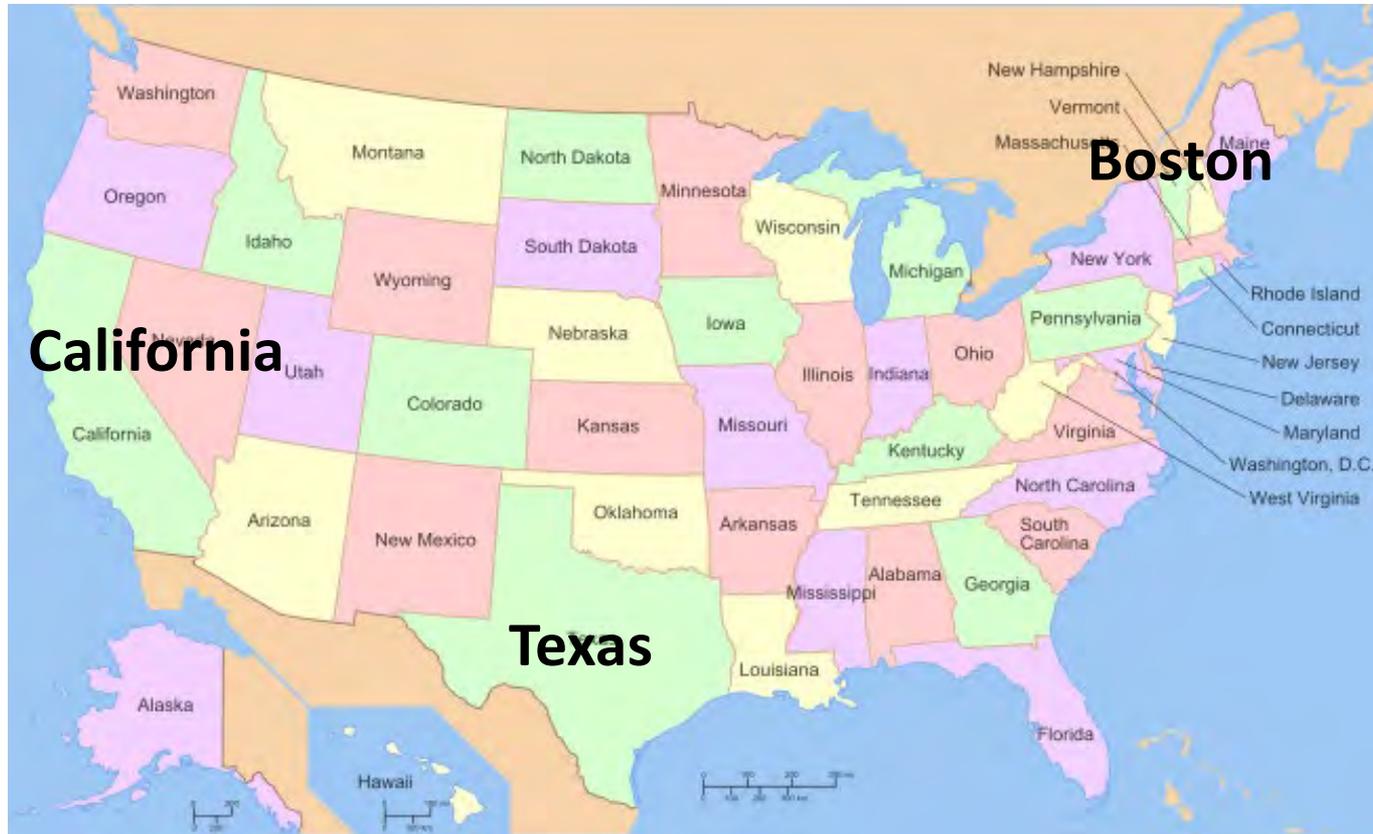
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Dual-career journey

Postdoctoral fellow: Let's go to the US !



~50-100 applications:

Scientific interests are different > Aim to find a different lab in the same area



Postdoctoral fellow

Harvard Medical School

MIT

Brandeis University

Postdoctoral fellow

Harvard Medical School

MGH (Mass General Hospital)



Job application 1:

Goal of Becoming a PI

Aim to have two independent labs



~50-100 applications

1. Less positions in ~2009
2. Two-body problem



What is the Two-Body Problem?

- ❖ **Academic couples often struggle to establish two independent labs in the same area.**
研究者夫婦が同一地域で二つの独立したラボを設立するのは難しい

BECAUSE....

- ❖ **Most institutions usually open only one position at a time.**
ほとんどの研究所や大学では、同時に募集するポジションは一つだけ。
- ❖ **Hiring both partners doubles the cost and resource burden.**
二人を同時に雇うと、コストとリソースの負担が二倍になる

A strategy for early dual-career couples

• Pro 良い点

The possibility of receiving two job offers from the same or nearby institutions

同一または近隣の研究機関から二人分のオファーを得られる可能性

• Con 悪い点

May lose a job offer if the institution cannot open two positions

機関が二つのポジションを用意できない場合、採用オファーを逃す可能性がある

Applicants must carefully choose when to inform the institution:

いつ機関に伝えるかを慎重に判断する必要がある

• **Too early:** may lose the opportunity
早すぎると、機会を失う可能性がある

• **Too late:** limits the institution's ability to secure funding for an additional search
遅すぎると、追加の予算確保が困難になる

2008: Job application 1:

Goal of Becoming a PI

Aim to have two independent labs



2008: Job application 1:

Goal of Becoming a PI

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Ophthalmology
Department

Reproductive
Science
Department

5 faculties
>2 couples



Cincinnati Children's Hospital Medical Center gave us
TWO independent packages: Two Lab spaces, Two start-up.

Institutions see dual-career couples as both an opportunity and a challenge

• Pro 良い点

Attract a great candidate
優秀な人材を獲得できる可能性大

Higher chance to hire two excellent scientists from a single search
一度の公募で二人の優秀な研究者を採用できる可能性大

• Con 悪い点

Expensive
Prepare
Two start-up funds
Two lab spaces
費用がかかる
2人分のスタートアップ資金
2つの研究スペース

Find departments where both can fit
両者が所属できる部門を見つける必要がある



After 11 years, Seek more diversity and better science environment>> another Job search

Job application 2: Seek a better environment

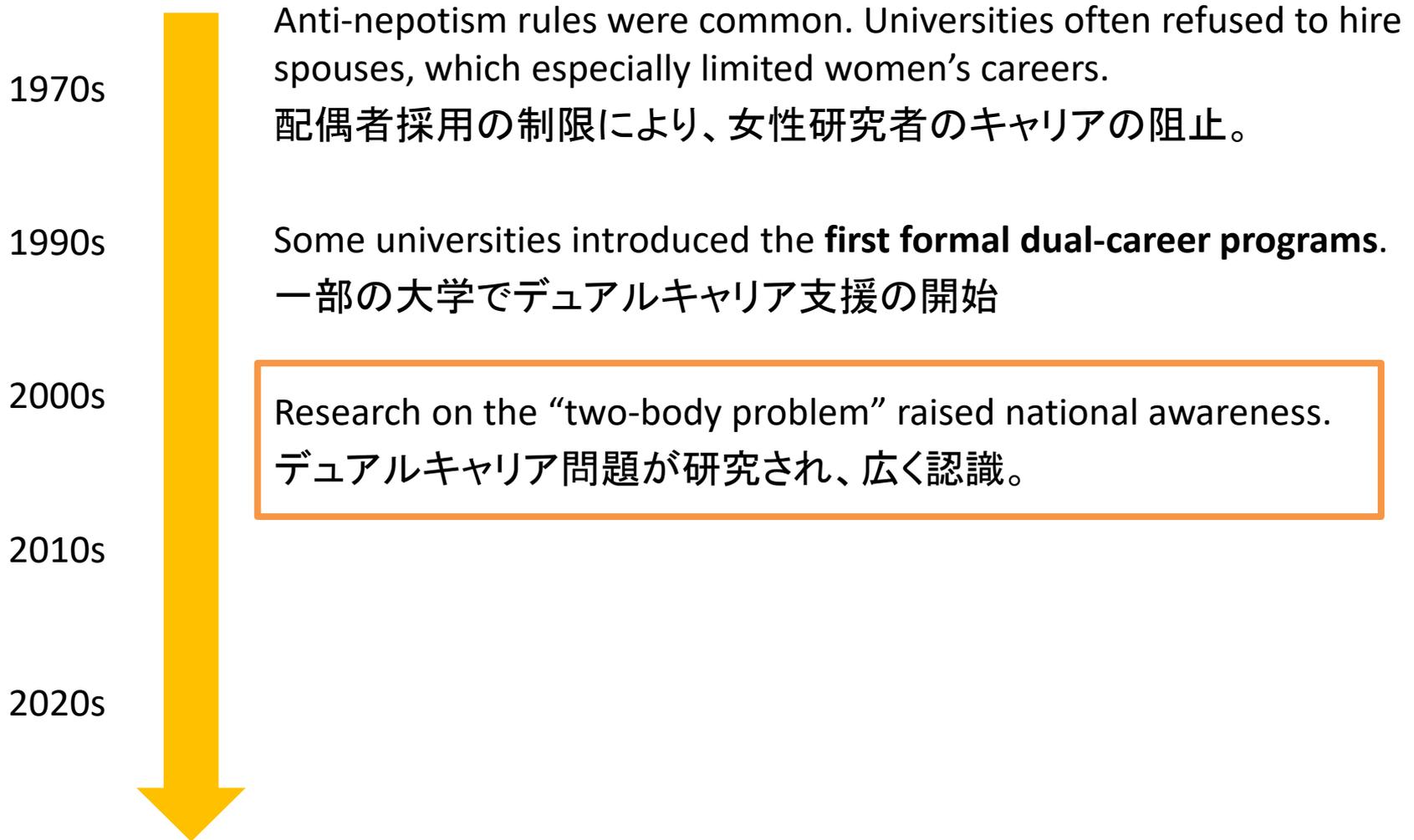


NPB
Department

MMG
Department

UCD has a program to support dual career faculty and gave us TWO independent packages: Two Lab spaces, Two start-up.

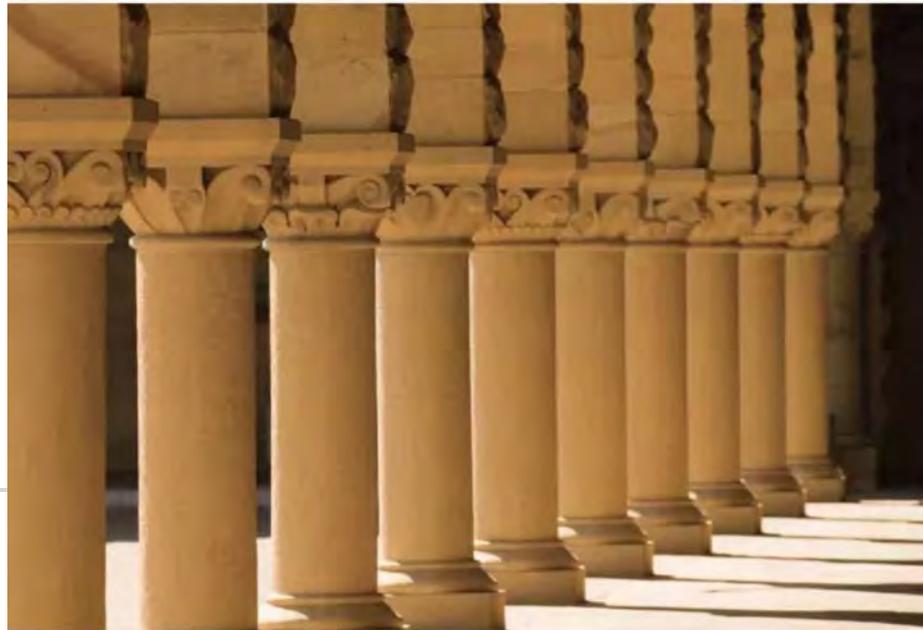
History of dual-career support programs in the US



2008

Dual-Career Academic Couples

What Universities Need to Know



Michelle R. Clayman Institute for Gender Research
Stanford University

2008

Question 1:

What percentage of full-time faculty are in dual-income households

フルタイム教員の何%が共働き世帯ですか？

1. ~5%
2. ~10%
3. ~36%
4. ~50%
5. ~72%

From a major study of 9,043 full-time faculty at 13 U.S. research universities

Modified from Michelle R., Dual-Career Academic Couples, Stanford

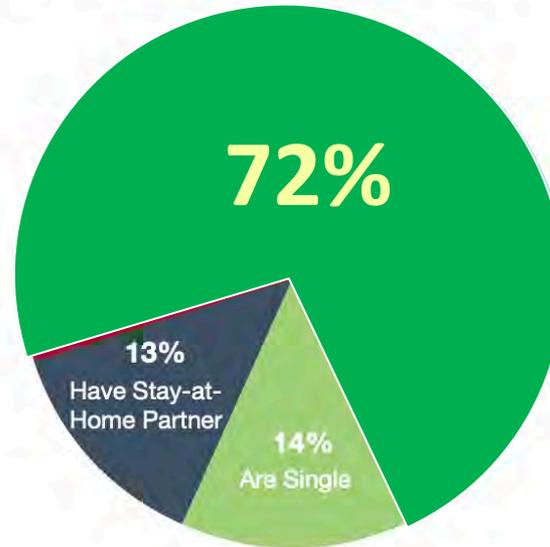
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72% of faculty are in dual-income households

72%のフルタイム教員が共働き

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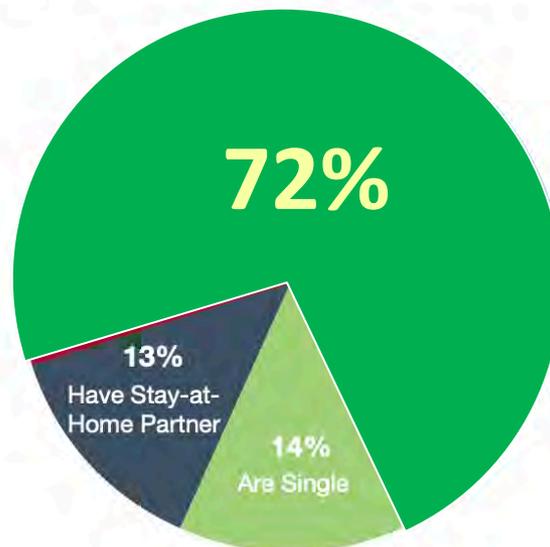
2008

Question 2:

What percentage of full-time faculty have partner also working in academia

何%の教員の配偶者やパートナーがアカデミアで働いているか？

1. ~5%
2. ~10%
3. ~36%
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5. ~72%



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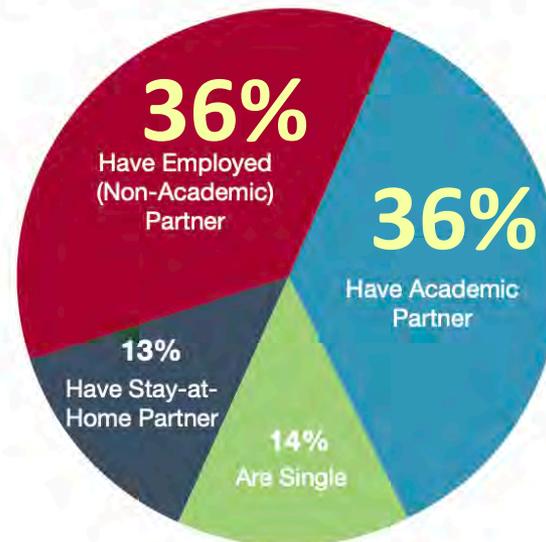
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~36% have a partner working in non-academia



~36% have a partner also working in academia

36%の夫婦（カップル）がアカデミア

From a major study of 9,043 full-time faculty at 13 U.S. research universities

Modified from Michelle R., Dual-Career Academic Couples, Stanford

2008

Question 3:

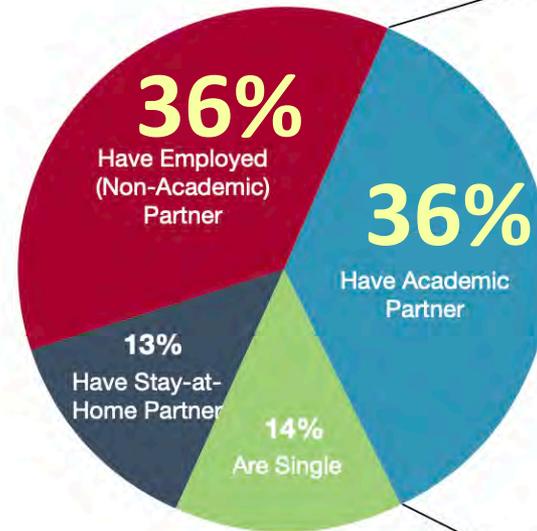
What percentage of coupled are hired through dual career?

Dual Careerで採用された割合は？

10%の夫婦（カップル）が Dual Careerで採用

1. ~5%
2. ~10%
3. ~36%
4. ~50%
5. ~72%

10% of faculty enter the academy through dual hires



Dual Hires: Hired as a couple at current institution(s).

10%

Independent Hires:

Partners hired independently of their couple status. Each partner replied to separate advertisements for positions, or the couple met after each was hired. 17%

Solo Hires: Only one partner in the couple is currently employed in academia.

From a major study of 9,043 full-time faculty at 13 U.S. research universities

Modified from Michelle R., Dual-Career Academic Couples, Stanford

History of dual-career support programs in the US

- 
- 1970s
Anti-nepotism rules were common. Universities often refused to hire spouses, which especially limited women's careers.
配偶者採用の制限により、女性研究者のキャリアの阻止。
- 1990s
Some universities introduced the **first formal dual-career programs**.
一部の大学でデュアルキャリア支援の開始
- 2000s
Research on the “two-body problem” raised national awareness.
デュアルキャリア問題が研究され、広く認識。
- 2010s
Many universities set up **dual-career offices** and clearer partner-hire policies. 多くの大学で支援制度が整う。
- 2020s
Dual-career support is now **widely expected**, and some universities are rated for being “partner-friendly.”
デュアルキャリア支援はほぼ当たり前、支援の充実した大学は高評価

Human Resources

THE UNIVERSITY OF TENNESSEE
KNOXVILLE

DUAL CAREER PROGRAM

UCLA

Academic Affairs and Personnel

Policies & Procedures | Leaves | Compensation | Faculty Development

Home

Dual Careers at UCLA

ATM TEXAS A&M UNIVERSITY
Faculty Affairs

CURRENT FACULTY | **PROSPECT**

Home / Resources / Dual Career

Dual Career

Virginia Tech's

DUAL CAREER PROGRAM

What is the Dual Career Program?

Virginia Tech's Dual Career Program offers customized, hands-on assistance to spouses and partners of newly hired faculty as they search for a new job. Though employment can't be guaranteed, the combination of on-going strategic resources from the program, coupled with your own initiative, will greatly enhance your ability to find the role that fits your career needs.

Who is eligible?

Spouses and partners of newly recruited faculty who are in their first year of employment with Virginia Tech.

I UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

Office of the Provost

About | Assessment | Awards | Budget

Faculty Affairs > Faculty Recruitment > Dual Career Program

Dual Career Program

UC Davis

Academic Affairs

Partner Opportunities Program (POP)

M OFFICE OF THE PROVOST
UNIVERSITY OF MICHIGAN

Dual Career Program

UNIVERSITY of VIRGINIA

DUAL CAREER PROGRAM

U of Southern California

USC Faculty Portal

Dual Career Assistance

Not always work.. But they try to help dual career people.

Japan: Dual-career hiring is less common

- ❖ **~70% of married couples** are in dual-income arrangements
(男女共同参画白書令和4年版より)

50% of women scientists live apart from their husbands in 2017

50%の女性研究者が夫と別居している

Science & Society

EMBO
reports

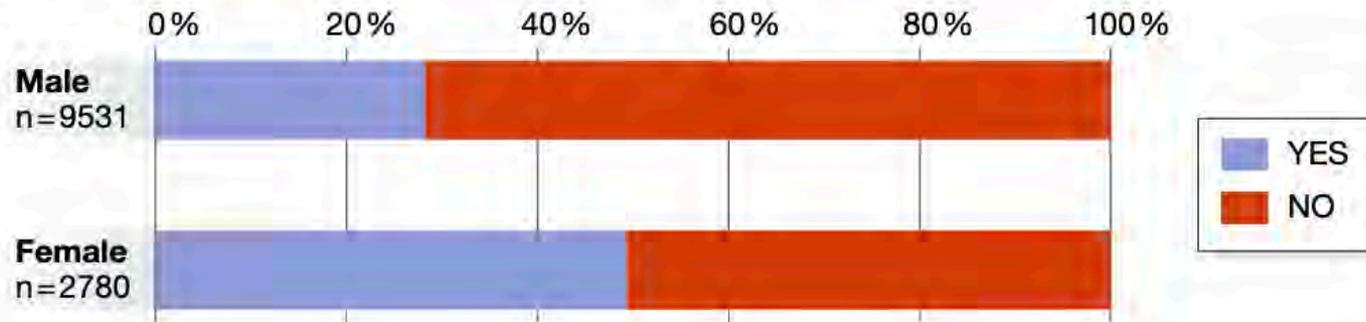
1 Division of Cancer Biology, The Cancer Institute of JFCR, Tokyo, Japan
2 Friedrich Miescher Institute for Biomedical Research, Basel, Switzerland
3 ISREC Foundation, Lausanne, Switzerland
*Corresponding author. E-mail: noriko.saito@jfc.or.jp
DOI 10.15252/embr.202152528 | EMBO Reports (2021) 22: e52528

Nadeshiko revisited

The situation of women in Japanese research and the measures taken to increase their representation

Noriko Saitoh^{1,*} & Susan M Gasser^{2,3}

Living apart from spouse



© EMBO

Figure 4. Half of women scientists must live apart from their husbands.

Female researchers live apart from their spouse (answered “yes”) more often than male researchers. (The 4th Large-Scale Survey of Actual Conditions of Gender Equality in Scientific and Technological Professions, EPMEWSE (2017) p. 38).

Japan: Dual-career hiring is less common

- ❖ ~70% of married couples are in dual-income arrangements
(男女共同参画白書令和4年版より)
- ❖ 2017: 50% of women scientists live apart from their husbands
50%の女性研究者が夫と別居している
- ❖ Researcher couples are relatively likely to live apart geographically.
地理的に離れて暮らすケースが比較的多い

Is it time to consider a dual-career program in Japan

デュアルキャリア・プログラムを考える時期でしょうか？



Accessing grants and funding opportunities in early career stage

Funding opportunity for early career researchers in US

Federal Grants:

Senior and Young Researchers

- NSF: National Science Foundation
- NIH: National Institutes of Health

\$~250K/year

(one million/5 years)

We need to have \$\$\$

Because...

Grant funding is essential to support laboratory personnel, equipment, and supplies

- Research cost
- People salary
 - Postdoc
 - Graduate Students
 - Technician
 - Me (PI)
 - In general,
 - 30-50% for University
 - 50-70% for Research institution



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Advantages for Early-Stage Investigators (ESIs) at NIH: 若手研究者である利点

- **Favorable Reviews:** ESIs often get better peer review scores than non-ESIs.
良いスコアが出やすい
- **Funding Flexibility:** ESIs can be funded at slightly lower percentile cutoffs.
グラントが取りやすい
- **Independence Support:** NIH encourages ESIs to establish independent research programs.
NIHはより若手をサポートする体制

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Many large grants are specifically targeted toward **early-career researchers**

若手研究者限定の大きなグラントがある

Private Grants:

Young Researchers only

- Sloan Research Foundation
\$75K over 2 years
- Searle Scholars Program
\$300K over 3 years
- Pew Program
\$300K over 4 years
- March of Dimes
\$150K over 2 years
- More....

What advantage do Japanese young scientists have that Americans lack?

アメリカにはない、日本の若手研究者の利点とは？

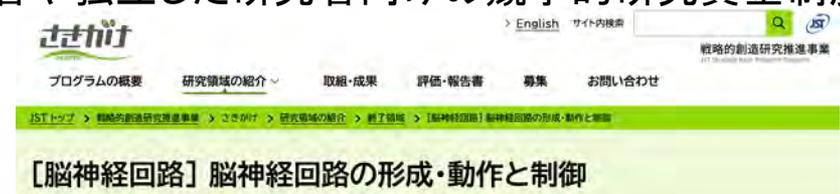
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I won PRESTO in 2010

one of Japan's major competitive research funding programs for early-career and independent researchers, run by the Japan Science and Technology Agency (JST)

若手研究者や独立した研究者向けの競争的研究資金制度



- The group meets every six months for in-depth discussions with senior and early-career researchers
半年ごとの会議で著名なシニア研究者と深い研究討論が行える。

- Benefits: advice from seniors and connections with juniors.
利点はシニア研究者からの指導と、若手研究者とのつながり。

- The “han” system gives Japanese young scientists mentorship and connections rarely found in the US.

アメリカではこのようなシステムはない。

日本の「班」制度は、若手・シニアの研究者の双方にとって独自の利点。

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私のキャリアを支えてきた最も重要なもの

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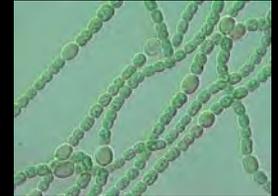
end

A strategy for senior dual-career couples

- ❖ Presenting as a dual-career couple: both have strong publication and grant records, making them attractive to institutions.
二人セットで自分たちをアピールする
- ❖ Each has a solid and interesting scientific track record.
すでにそれぞれ科学的実績がある
- ❖ Relocation from current positions requires two job offers; otherwise, offers will not be accepted.
二人分の採用オファーがなければ、今の研究所からは移らない

Circadian rhythm

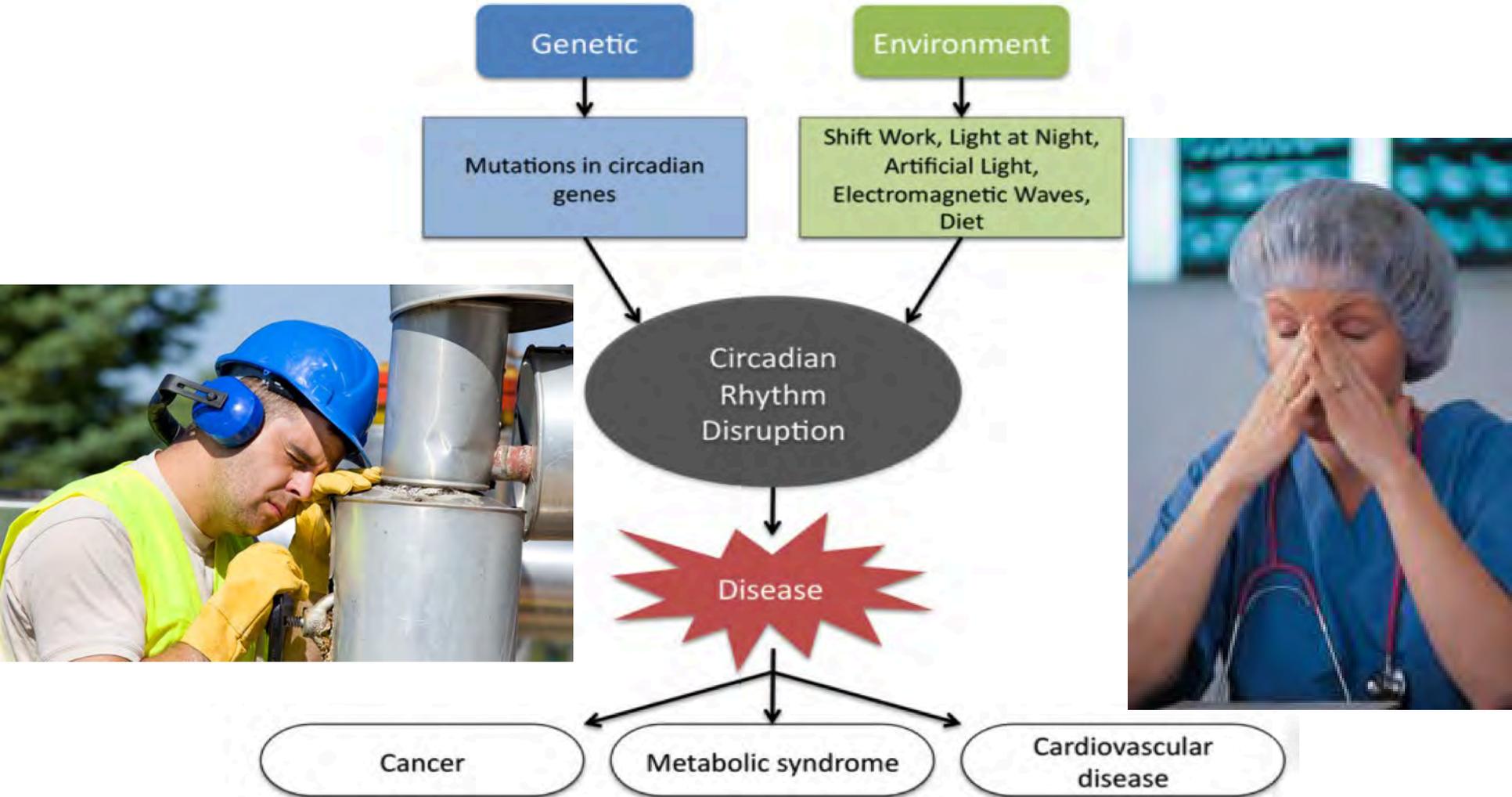
24-hour cycles of behavioral and physiological activities to adapt to the environmental cycles on the earth



Circadian rhythm is controlled by the circadian clocks

Disruption of circadian rhythm increases the risk of diseases

体内時計の乱れは、疾患の発症リスクを高める



Dual career program: USA vs JAPAN

USA

Well-developed dual career program

- ❖ Based on 2008 data
- ~72% of full-time faculty are in dual-income households
- 36% are the dual-career couples in academia.

Japan

Dual-career hiring is less common.

❖ ~70% of married couples are in dual-income arrangements

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