# SPOKES

## Promoting active grassroots involvement of scientists

**Friederike Kohrs**

QUEST Seminar on Responsible Research
December 6th, 2022

# The SPOKES Team

**Tracey Weissgerber**
SPOKES Team Leader

**Friederike Kohrs**
SPOKES Project Manager

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SPOKES Project Manager
(Nov. 2019 – June 2022)

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# What is SPOKES?

## Sub-project of the Charité/BIH Wellcome Trust Translational Partnership

*"The overarching goal of the translational partnership between the Wellcome Trust and the BIH/Charité is to effect a change in research culture, thus maximising the possibilities for translational medicine to benefit patients and society at large."* [1]

- 2019: Translational Partnership was established
- 2020: SPOKES part of the Partnership

# What is SPOKES?

**Sub-project of the Charité/BIH Wellcome Trust Translational Partnership**

- SPOKES supports projects that increase the quality, trustworthiness, and reproducibility of translational research

**Focus is on early and mid-career researchers**

- Involved in grassroots activities to enhance translation or improve research culture or practice

**SPOKES participants = unofficial ambassadors for improving science and translation**

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# Why is SPOKES essential?

**ECRs are important stakeholders**

1. Future players / leaders in the scientific community
2. More diverse than senior scientists
3. Might be more open to new solutions than senior scientists
4. Motivation might be higher
5. Make up the majority of the workforce in research

**ECRs face several challenges when working to reform science**



**PLOS BIOLOGY**

🔓 OPEN ACCESS

CONSENSUS VIEW

**Recommendations for empowering early career researchers to improve research culture and practice**

Brianne A. Kent, Constance Holman, Emmanuella Amoako, Alberto Antonietti, James M. Azam, Hanne Ballhausen, Yaw Bediako, Anat M. Belasen, Clarissa F. D. Carneiro, Yen-Chung Chen, Ewoud B. Compeer, Chelsea A. C. Connor, Sophia Crüwell, [ … ], Tracey L. Weissgerber ✉ [ view all ]

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# Why is SPOKES essential?

**Our consensus statement reveals several major challenges:**

- Research improvement work is often not rewarded/incentivized
- This work is often seen as detrimental to career progression
- Difficult to acquire funding for research improvement work

*"Unless the system changes, those who excel at research improvement are likely to be forced out of science"*

**Challenges for ECRs working to improve science**

- Science improvement activities are not recognized or rewarded and may take time away from other activities that are rewarded for career advancement
- Lack of faculty positions for meta-scientists and those working on science improvement

- Lack of funding for systemic efforts to improve research
- When funding is available, grant eligibility criteria often exclude ECRs

- Hierarchies exclude ECRs from decision making roles

- ECRs lack protected time for research improvement activities

- Belief that ECRs don't understand the system well enough to change it

- Systemic and structural prejudices make it more difficult for ECRs from marginalized or underrepresented groups to advocate for change

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# What are the goals of SPOKES?

## Overarching goals

- Stimulate and support grassroots activities to improve science and translation

## Three main approaches

1. **Fellowship** (*ongoing*)

2. **Project Incubator** (*just started*)

3. **Think Tank** (*completed*)

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# 1. Fellowship *(ongoing)*

Small grants for mid-career researchers to improve translation and the quality of science in their local environment

## 1st cohort [May 2020 - Nov 2021]



Dr. Katarina Braune | Hanne Ballhausen
**The OPEN Project**

Dr. Felix Fischer
**PROM2PRO**

Dr. Toivo Glatz | Jessica Rohmann
**PEERSPECTIVES**

Dr. Wolf-Julian Neumann
**FAIR Translational Neuromodulation**

Dr. Sophie Piper
**iBikE Smart Learner**

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# 1. Fellowship – Selection of successes from the 1st cohort

**Katarina Braune and Hanne Ballhausen – The OPEN Project**

- 5 peer-reviewed publications
- Keynote at the D-Data Exchange in June 2021

**Felix Fischer – PROM2PRO**

- Development of an app prototype to collect and aggregate PRO data from published studies

**Toivo Glatz and Jessica Rohmann – Peerspectives**

- Peerspectives evaluation study complete, manuscript in preparation

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# 1. Fellowship – Selection of successes from the 1st cohort

**Wolf-Julian Neumann – FAIR Translational Neuromodulation**

- Implementation of a data standardization strategy
- Organization of a Data Week on methodology and data management techniques
- 1 peer-reviewed publication in eLife

**Sophie Piper – iBikE Smart Learner**

- iBikE SMART Learner effectiveness study complete, manuscript in preparation

SPOKES - Promoting active grassroots involvement of scientists

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# 1. Fellowship *(ongoing)*

Small grants for mid-career researchers to improve translation and the quality of science in their local environment

## 2nd cohort [June 2022 – July 2023]



Mag. Dr. Gregor Liegl | Dr. Alizé Rogge
**PROCES**

Dr. Roxanne Lofredi
**FAIR motor symptom assessment**

Dr. Seyedamirhosein Motamedi
**Standardized pipeline for data management & analysis**

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# 1. PROCES – Patient-Reported Outcomes Consultation for Effective Science

**Gregor Liegl & Alizé Rogge**



**Goals**

- Development and evaluation of a standardized patient-reported outcome consulting framework at the Charité

**Successes**

- Focus group interviews have been conducted
- Implementation of a survey with international experts and guests
- Planning of a Design-Thinking workshop has begun
- Coordination of meeting with international experts on PRO and consulting services

http://patient-centered-outcomes-research.org/

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# 2. Towards computational reproducibility of motor symptom assessment in brain disorders

**Roxanne Lofredi**

**Goals**

- Development of an objective and reproducible computer-vision approach to motor symptom assessment

**Successes**

- Assessment of available video database
- Creation of dedicated GitHub repository
- Development of metadata categories (symptom and disease specificity, clinical stage, and individual patient information)

http://sfb-retune.de/
https://neurologie.charite.de/forschung/arbeitsgruppen/bewegungsstoerungen_andrea_kuehn/

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# 3. Implementation of a Data Management and Image Analysis Pipeline for Translational and Interdisciplinary Retinal OCT

## Seyedamirhosein Motamedi

## Goals

- Development of a pipeline for standardized OCT data management and image analysis

## Successes

- Work on a stable and reliable segmentation method has begun
- Research stay to implement the segmentation algorithm

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# 1. Fellowship *(ongoing)*

**Program highlights**

1. Monthly meetings – opportunity for group problem-solving and exploration of shared interests

2. Joint meeting between past & present Fellows

3. Individual meetings

4. Fellows have participated in virtual brainstorming events to meet others in Germany, and around the world, working to improve research culture and practice
   - Most fellows were authors on our consensus statement paper in PLOS Biology [2]

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# 2. Project Incubator *(just started)*

To connect Berlin-based researchers who are passionate about improving science and translation

**[Sept. 2022 – ongoing]**

**Kick-off event -** "How can ECRs and grassroots initiatives contribute to the improvement of translation and research quality?"

- Interactive panel discussion
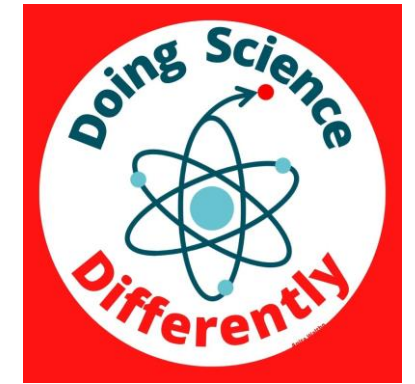- Small group discussions
- Brainstorming session

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# 2. Project Incubator *(ongoing)*

**Program highlights**

1. Monthly meetings
   - To build a community of early and mid-career researchers involved in activities to improve translation and research practices
   - To strengthen individual initiatives, foster collaborations, and share lessons learned
   - Topics include: communication, successes & obstacles, sustainability, participation & engagement

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# 3. Think Tank (completed)

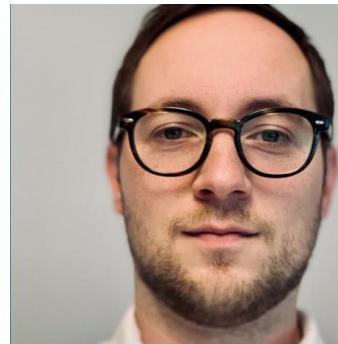ECRs from the Charité/BIH research community developed a podcast that explores issues in research culture and practice

**Think Tank Team [Nov. 2020 – Dec. 2022]**



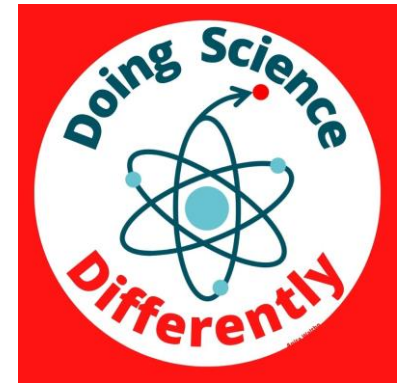Christine Knoll

Joachim Fuchs

Constantin-Yves Plessen

Marta Oliveira

Eric Danner

# 3. Think Tank *(completed)*

ECRs from the Charité/BIH research community developed a podcast that explores issues in research culture and practice

## Think Tank Support



Anita Waltho
**Social Media Manager**



Giorgio Cattaneo
**Sound Editor**

# 3. Think Tank (completed)



## Episodes

1. **Power abuse in academia**
   - Sabine Oertelt-Prigione, professor for sex- and gender-sensitive medicine and organizational consultant
   - Topics: power abuse, harassment, workplace bullying

2. **The Reproducibility Project: Cancer Biology**
   - Timothy Errington, Senior Director of Research | Metascience at the Center for Open Science
   - Topics: Reproducibility, replicability, preregistrations, open methods



https://doingsciencedifferently.start.page/

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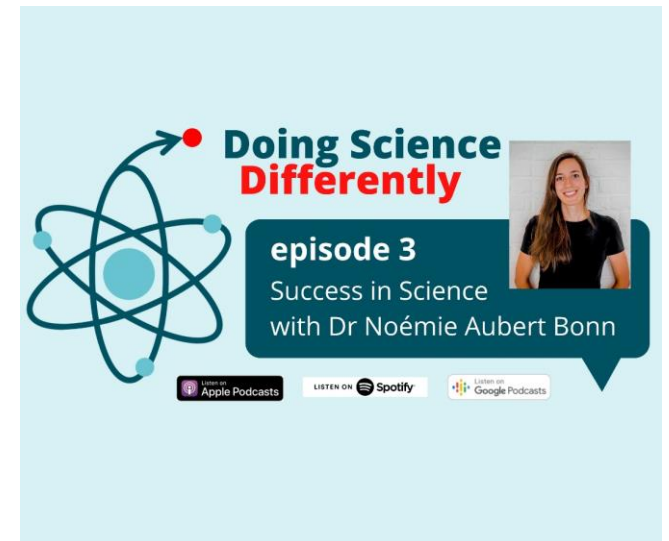
# 3. Think Tank *(completed)*

## Episodes

### 3. Success in science

- Noémie Aubert Bonn, meta-researcher
- Topics: research assessment, research integrity, success, 'publish or perish'

### 4. Mental health in academia

- Wendy Marie Ingram, CEO and Co-founder of non-profit Dragonfly Mental Health
- Topics: mental health literacy, imposter syndrome, depression

https://doingsciencedifferently.start.page/

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# What is the future of SPOKES?

**Fellowship**

- Fellows continue working on their individual projects
- Monthly meetings with the SPOKES Team for mentoring and problem solving

**Project Incubator**

- Monthly meetings to build a community of early and mid-career researchers

**Due to restructuring at Wellcome, funding for SPOKES will likely end in mid-late 2023**

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# SPOKES – Take-home message

*"We need to support ECRs in their work to improve the culture and practice of research as they are important stakeholders in the systemic change."*

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# Contact us!

SPOKES Team at QUEST:



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**https://www.bihealth.org/en/quest/projects/spokes**

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# Sources

1. Press release (02.12.2019): https://www.charite.de/en/service/press_reports/artikel/detail/wellcome_trust_establishes_first_translational_partnership_in_germany_with_charite_and_the_bih/

2. Kent BA, Holman C, Amoako E, Antonietti A, Azam JM, et al., (2022) Recommendations for empowering early career researchers to improve research culture and practice. *PLOS Biology* 20(7); e3001680. https://doi.org/10.1371/journal.pbio.3001680

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# Thank you!

https://www.bihealth.org/en/quest/projects/spokes

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