

Challenges of an Emerging Scientist: Submitting to Mentorship



Dr. habil. Fidele Ntie-Kang
(Principal Investigator: NiDNA Project)

And

Dr. Donatus Bekindaka Eni
(Project Manager: NiDNA Project)

Department of Chemistry, Faculty of Science

Outline

- What is Mentorship?
- Mentorship at Different Levels of the Academic Research Career
- The Typical Scenario and Desired Skills at Each Level
- The Cameroon Model
- Advantages of Mentorship
- Case Study
- Conclusions

What is Mentorship?



- **Definition (1):** Guidance relationship in which a more experienced or more knowledgeable person helps to guide a less experienced or less knowledgeable person (Wiki Online).
- **Definition (2):** The influence, guidance, or direction given by a mentor (Webster, 2022).



Mentorship at Different Levels of the Academic Research Career

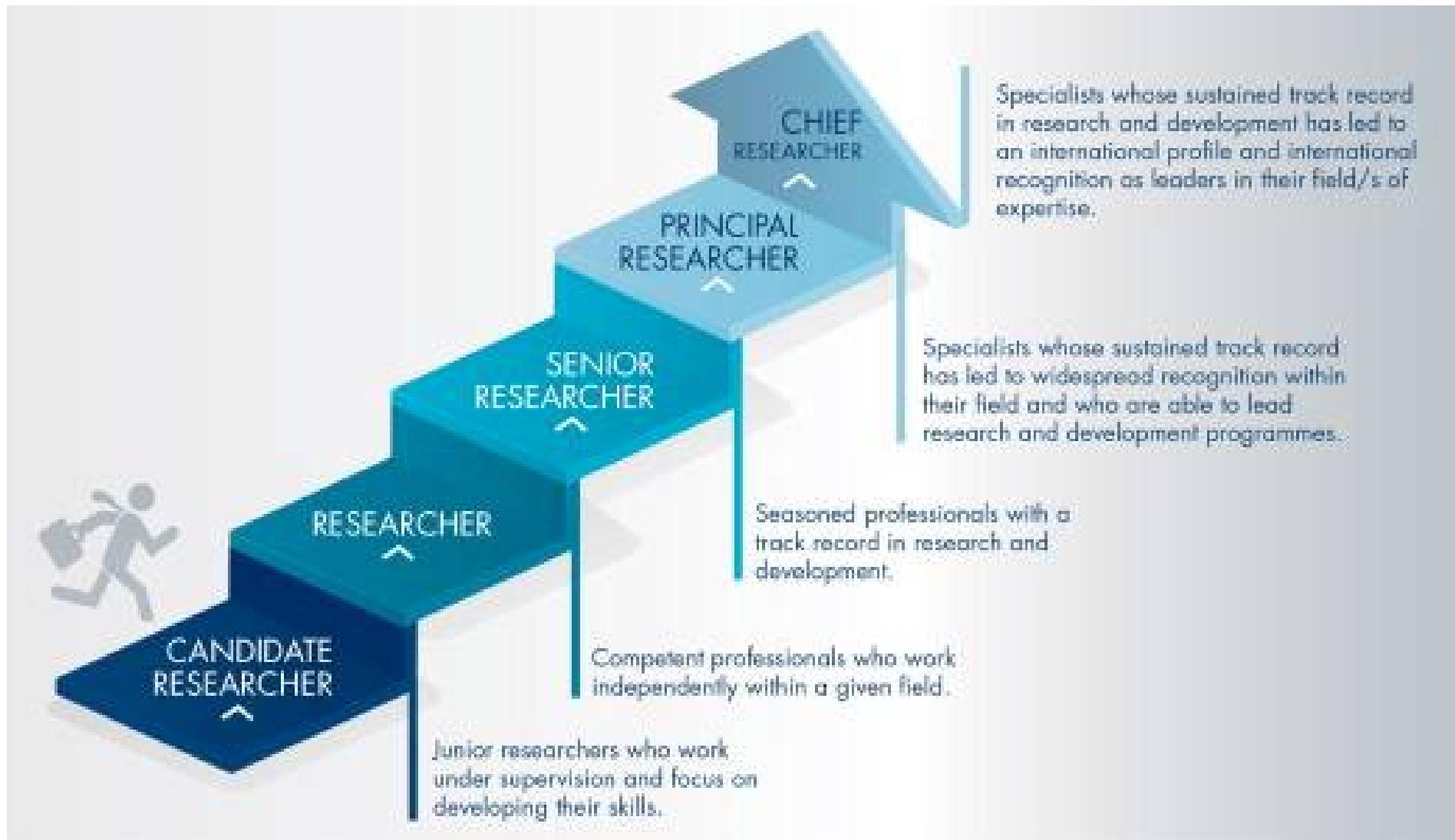
- **Undergraduate:** Teachers/Lecturers
- **Postgraduate:** Lecturers / Research Project Supervisor
- **Post-doctorate:** Research Group Leader / Principal Investigator / Experienced Scientists / Professor
- **Young Principal Investigator:** Experienced Scientists / Professor
- **Experienced or Independent Scientist:** Networking / Research Consortia / Peers of Research Community

Typical Scenario



<https://www.csir.co.za/professional>

Typical Scenario

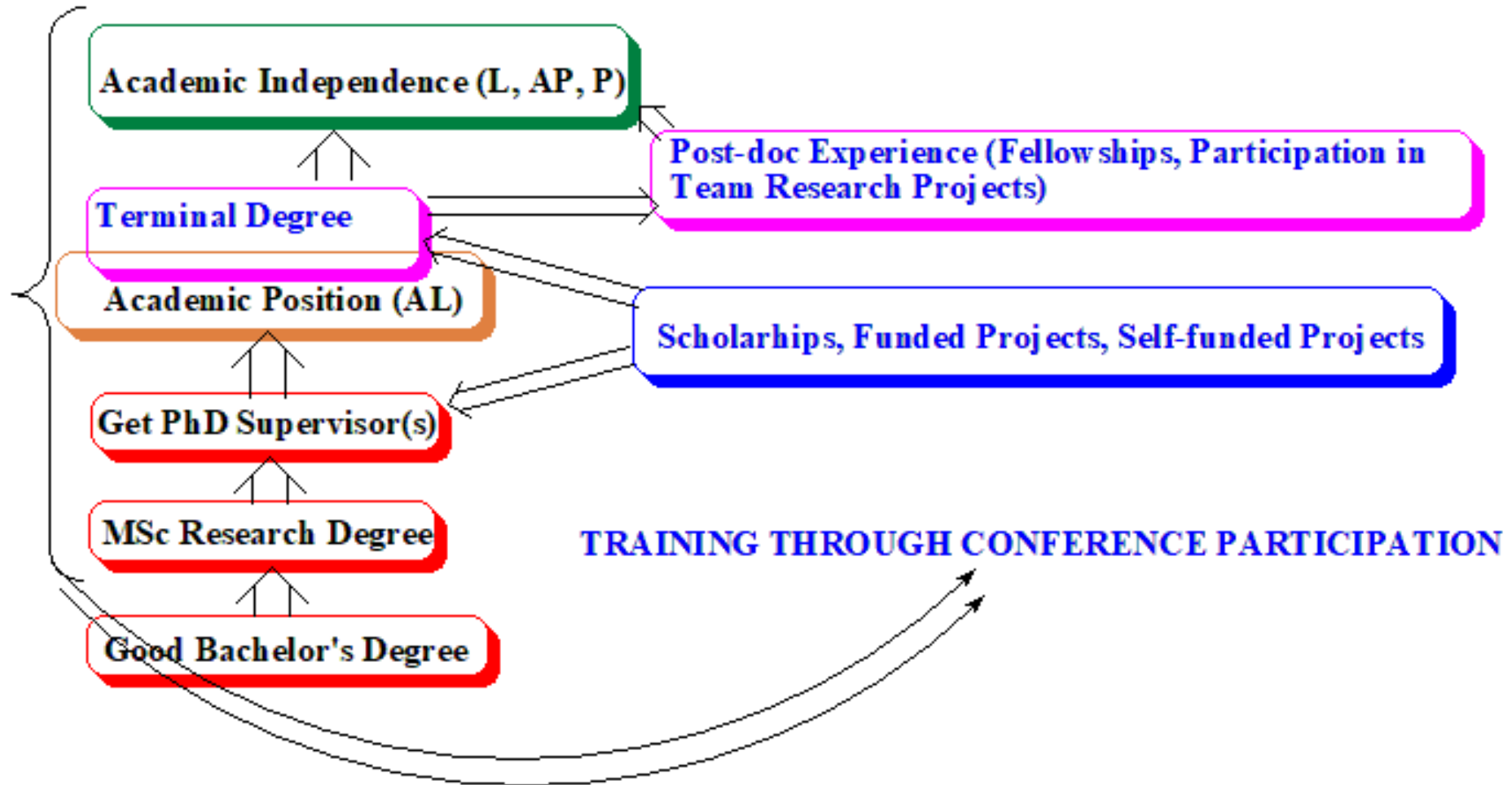


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Desired Skills at Each Level

- **Undergraduate:** Candidate researcher must master basic concepts in an academic discipline from teachers.
- **Postgraduate:** Junior researcher must learn how to gain and develop new knowledge under the guidance of a mentor (supervisor)
- **Post-doctorate:** Emerging researcher must learn the art of academic mentorship and how to lead a team (personal skills, scientific writing, interactive and communication skills, directing research, etc.) from an experienced scientist or professor.
- **Young Principal Investigator:** Must develop own ideas with the advice /counsel from more experienced scientists or professors. Work towards gaining academic independence.

The Cameroon Model



Advantages of Mentorship



<https://www.dreamstime.com/benefits-good-mentoring-seven-image168034285>

Case Studies

- Arnold Sommerfeld never won a Nobel Prize, but supervised the PhD thesis of Werner Heisenberg, who later won a Nobel Prize in Physics at age 31.
- Pierre Curie supervised the PhD thesis of Marie Curie. Pierre Curie shared the Nobel Prize in Physics with Marie Curie and Henri Becquerel. Marie Curie went ahead and won a Nobel Prize in Chemistry alone and later mentored two Nobel Prize winners.
- At age 25, Lawrence Bragg won the Nobel Prize, for his work on Crystal Structure Analysis through the use of X-Rays. He shared the Prize with his own father and mentor (Sir William Henry Bragg). His doctoral thesis had been co-supervised by Sir. J. J. Thompson, another Nobel Laureate.

Conclusions

Advise to Young Scientists:

- (1) From the day you think you've arrived, you'll stop learning.
- (2) Once you stop learning you should stop leading.
- (3) Submission to a mentor or mentors does not make you inferior. It leads to higher heights.

African Proverb: What an old man sees while sitting down, a young man won't see even while on a tree.....

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<https://gcgh.grandchallenges.org/challenge/calestous-juma-science-leadership-fellowship>

<https://gcgh.grandchallenges.org/article/fidele-ntie-kang>



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Thank you for Listening



University of Buea Center for Drug Discovery
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fidele.ntie-kang@ubuea.cm

donatus.bekindaka@ubuea.cm