Vice President’s Clinical and Translational (VPCAT) Research Scholars Program

-- Summary Statement --
2021 VPCAT Cohort

Applicant Name: Sabrina Malone-Jenkins, MD

Project Title: Next Generation Genetic Sequencing in the NICU: Improving Healthcare Through Precision Medicine

CRITIQUE 1

1. Career Plan: 2
2. Scientific Mentoring Plan: 1
3. Research Plan: 2
4. Institutional Support: 1
5. Applicant’s Overall Potential: 1

1. Career Plan

Strengths
- The career plan is reasonable and clearly defined
- Has an established niche.
- Coursework described is important and clearly connected to the research trajectory.

Weaknesses
- Not entirely clear where expertise will be for K23 – wishes to incorporate NGS into NICU – but in what specific area will Dr. Malone-Jenkins be expert?

2. Scientific Mentoring Plan

Strengths
- Has established ties to Dr. Tristani (primary mentor) and the mentoring team
- Mentoring team has the needed expertise
- Plan to continue ongoing meetings every other week
- Timeline laying out career progress is reasonable

Weaknesses
- None noted
### 3. Research Plan

**Strengths**
- Clearly defined aims
- Building toward goal of becoming a clinical expert in NGS
- Integrates nicely with other projects
- Establishes feasibility – important for K award

**Weaknesses**
- Not entirely clear where this goes next – is it health services, diagnosis, family impact?

### 4. Institutional Support

**Strengths**
- Very strong support from Division (time and financial support)

**Weaknesses**
- None noted.

### 5. Applicant’s Overall Potential

**Strengths**
- Overall, poised to be a productive physician scientist – clearly early but has full support of division with excellent mentoring.

**Weaknesses**
- Needs an additional 3-5 first author papers to be competitive for a K award

### Reviewer Comments

**CRITIQUE 2**

1. Career Plan: 4
2. Scientific Mentoring Plan: 1
3. Research Plan: 3
4. Institutional Support: 1
5. Applicant’s Overall Potential: 3
### 1. Career Plan

**Strengths**
- Her long-term goal is to become an independent clinical researcher who improves care for newborn infants by integrating the use of genomic testing in the NICU to provide personalized medicine and focused clinical care.
- This is an extension of her ongoing research trajectory. During her fellowship she participated in the development, initiation and implementation of a rapid turn-around, targeted gene panel (RapSeq) for care of critically ill infants in the NICU (with Luca Brunelli).
- She currently serves as the NICU Physician Lead for the Pediatric Personalized Medicine Program

**Weaknesses**
- Her publication record is modest. She has three total publications, two since coming to Utah in 2014.

### 2. Scientific Mentoring Plan

**Strengths**
- She has an excellent mentoring team, all of whom are funded at the R01 level.
- She has ongoing relationships with her mentoring team. Their letters of support are uniformly strong. They all commit to the VPCAT Scientific Mentor Requirements and Expectations.

**Weaknesses**
- None obvious.

### 3. Research Plan

**Strengths**
- Rapid WGS in the NICU is an evolving standard of care that has great potential to optimize outcomes for the candidate infants and – at least equally importantly – their families. She is focusing on three syndromes (arthrogryposis, non-immune hydrops fetalis, and skeletal dysplasias), all of which are final common pathways for many known (and unknown) genetic disorders.
- Her research aims (one retrospective; one prospective) are appropriate for the scope of the VPCAT program and she has already secured funding for these expensive analyses.

**Weaknesses**
- Given the ubiquity of obstetric ultrasound virtually all of the infants affected with the three syndromes proposed in application will be identified well before birth. Some consideration should be given to incorporating prenatal diagnosis and management in her research aims.

### 4. Institutional Support

**Strengths**
- Uniformly strong letters of support from her mentorship team as well as from her Division Chief and Department Chair.

**Weaknesses**
- None obvious.
### 5. Applicant’s Overall Potential

**Strengths**
- Dr. Malone-Jenkins is well-positioned to benefit from the VPCAT program. Her research area is of substantial clinical and economic importance and she has outstanding mentorship.
- She has already been successful in obtaining research funding to support what will be expensive prospective studies.

**Weaknesses**
- Her publication record is weak.

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**Reviewer Comments**

Dr. Malone-Jenkins is board-certified in pediatrics and is board-eligible neonatal-perinatal medicine. Now in her fourth year as an Assistant Professor in the Neonatology Division of the Department of Pediatrics. She has the Gary M. Chan Endowed Chair. Her long-term goal is to become an independent clinical researcher who improves care for newborn infants by integrating the use of genomic testing in the NICU to provide personalized medicine and focused clinical care.

During her fellowship (Utah, 2014-2017) she participated in the development, initiation and implementation of a rapid turn-around, targeted gene panel (RapSeq) for care of critically ill infants in the NICU. This application is an extension of her ongoing research trajectory.

Her training aims (understanding WGS technology and its implementation in the NICU, improving her manuscript, presentation, and grant writing skills) are appropriate in scope as are her two research aims (one retrospective, one prospective). She has an outstanding mentorship team and has already garnered supplemental research funding.

A couple of weaknesses are identified. Foremost is her lack of publications. She has only two publications since arriving in Utah 6+ years ago. This needs to be improved if she is to be successful in procuring NIH-level funding. Of lesser concern is the lack of prenatal considerations in her clinical and economic evaluations.

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**CRITIQUE 3**

1. **Career Plan:** 4
2. **Scientific Mentoring Plan:** 2
3. **Research Plan:** 3
4. **Institutional Support:** 2
5. **Applicant’s Overall Potential:** 3

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### 1. Career Plan

**Strengths**
- Long-term goal is to be a physician-scientist who conducts research that improves care for newborn infants by integrating do you have a testing in the NICU to advance personalized medicine.
- She has 65% protected time for research by her department.
- Clear, detailed training aims that seem to be realistic and reasonable given the timeline

**Weaknesses**
- I’m not sure why she has a her K23 submission as a long-term career goal. This seems to be more like a short-term goal, say the next 2 to 3 years?
- Only 3 publication listed in the CV. One as first author which appears to be a case report.
2. Scientific Mentoring Plan

**Strengths**
- Detailed, clear, reasonable, and realistic
- Excellent messengers that have specific roles that align well with her training plan
- Detailed timeline
- Excellent mentors who are all R01 funded.

**Weaknesses**
- None noted

3. Research Plan

**Strengths**
- Interesting, stage appropriate, and feasible and realistic given a timeline yet compelling and interesting.

**Weaknesses**
- Nothing major noted.

4. Institutional Support

**Strengths**
- Strong letter from Division Chief and Department Chair
- Strong letter from Mentors

**Weaknesses**
- None noted

5. Applicant’s Overall Potential

**Strengths**
- Excellent candidate.
- Strong plans and mentoring team
- Plans for a K23 which is a logical next step.

**Weaknesses**
- Weak publication record.

**Reviewer Comments**
Strong application and plan—I am concerned about prior publication record.