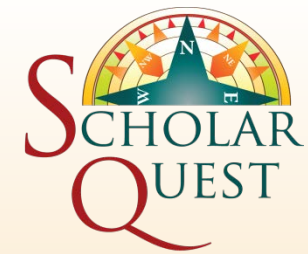


ScholarQuest Orientation 2017

Tomas Nuño, PhD
Research Assistant Professor
Director, ScholarQuest
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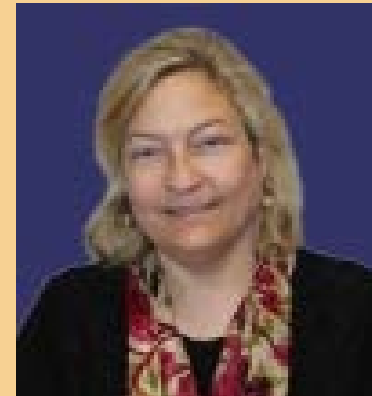


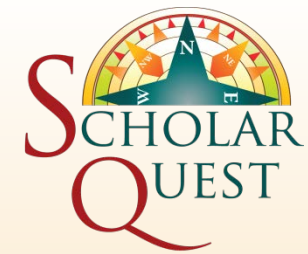
ScholarQuest Team

Kurt Denninghoff, MD
Distinguished Professor of Emergency Medicine
Associate Head, Research
Professor of Optical Sciences
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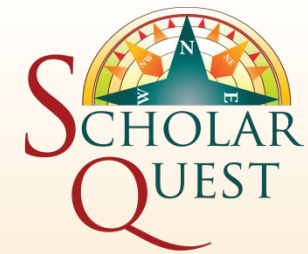
Susanne Olkkola, M.Ed., MPA
Coordinator, Research Grant Support
Administrative Coordinator, ScholarQuest
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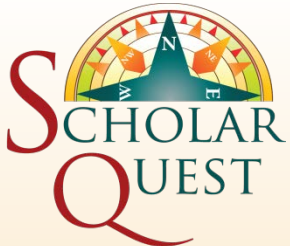
Why ScholarQuest?

- ACGME requires residents perform scholarly activities prior to graduation
 - For residents headed towards a career in academic medicine
 - entering traditional academic pathways (fellowships/academic appts)
 - becoming physician/scientists
 - For residents not headed towards academic career, exposure to research can increase awareness to
 - new clinical research findings
 - need to practice evidence-based medicine



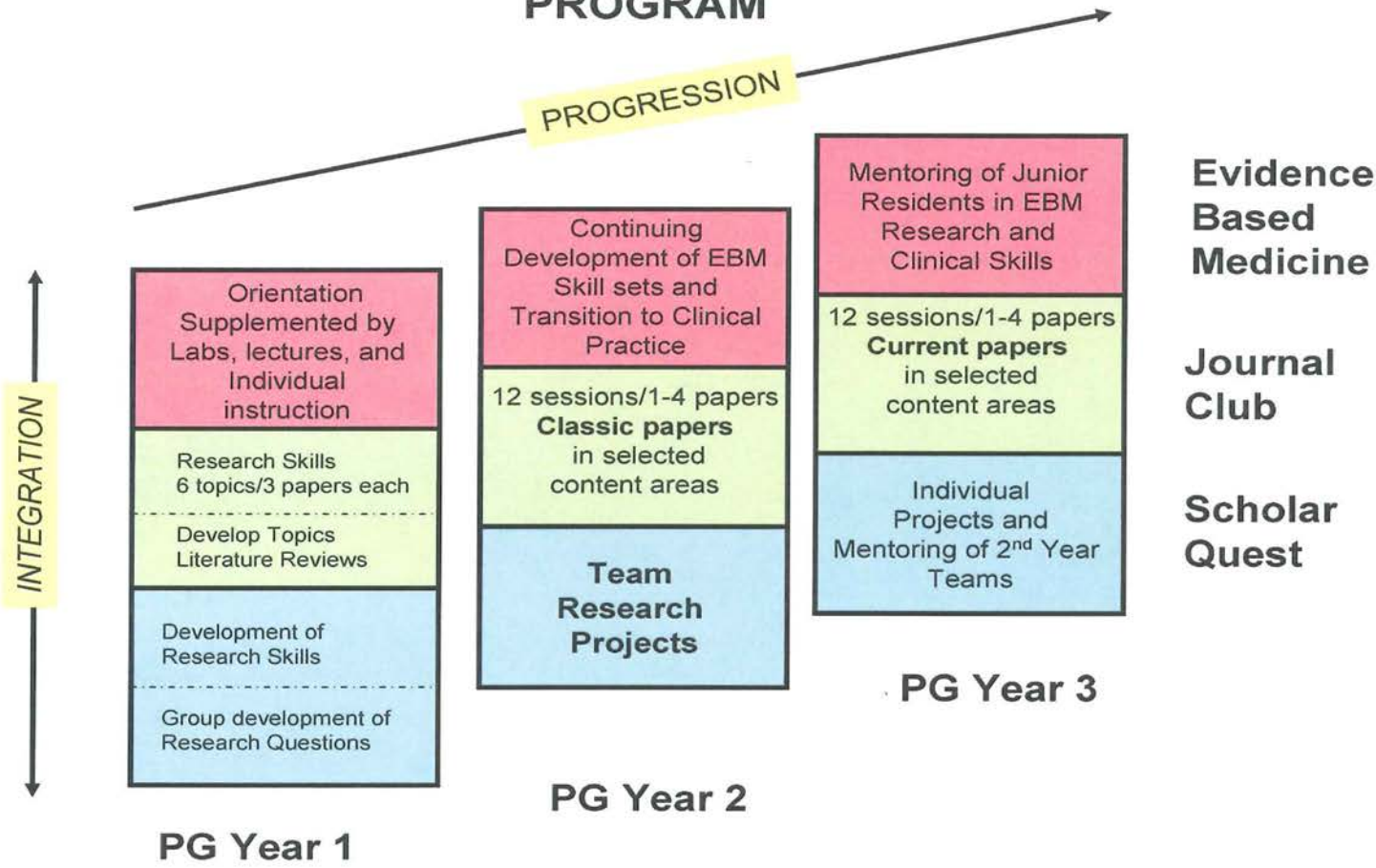
ScholarQuest

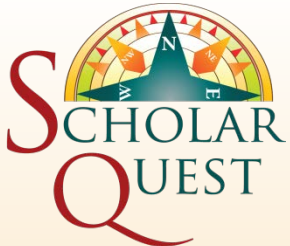
- Two main components
 - Didactic sessions on research methods (e.g., study design, hypothesis testing, data analysis, random error, systematic errors) and workshops on human subjects training
 - Direct assistance with the development of a scientific research project from hypothesis to study completion



Integration into Information Mastery

INFORMATION MASTERY PROGRAM

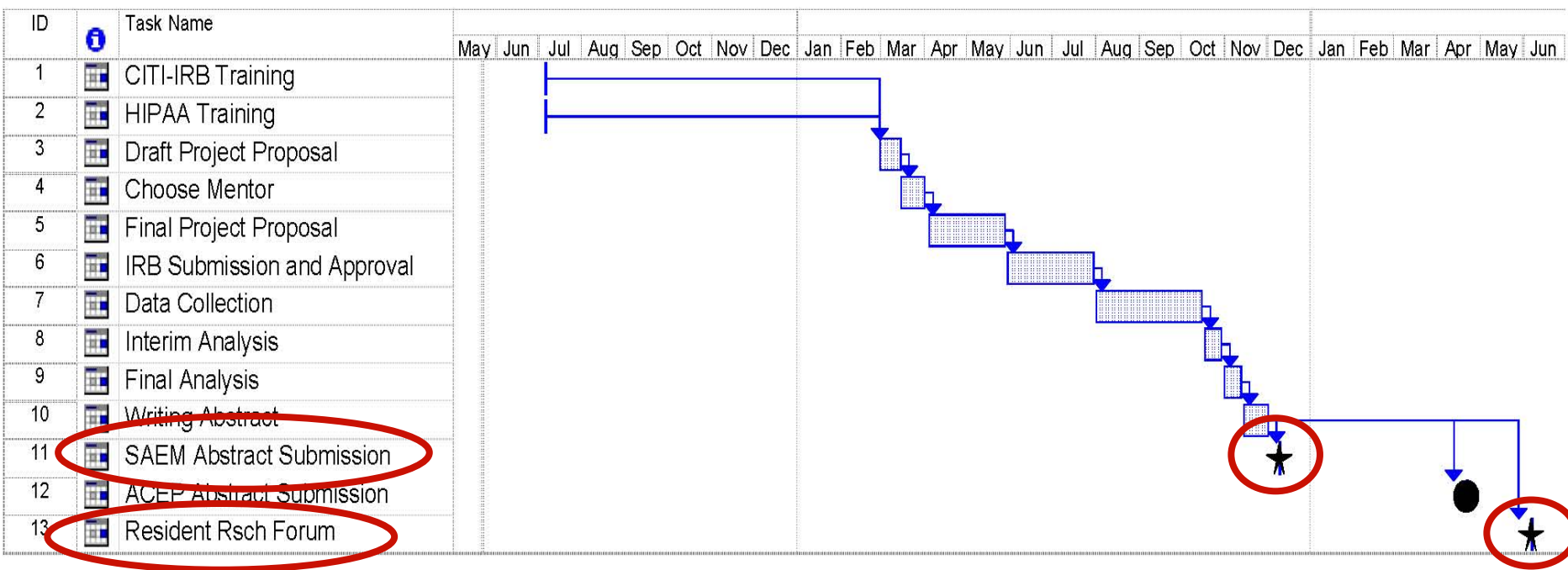




ScholarQuest Research Timeline

Intern Year

Junior Year



ScholarQuest Timeline & Checklist

- IRB & HIPPA Training**
- Generate/present topics**
- Research topic think tanks**
- Faculty Data Blitz**
- Develop quest's & hypotheses**
- Finalize research ?'s**
- Background Literature Search**
- Form Research Teams**
- Assigned Mentor**
- Submit study plan / abst.**
- Biostats / Epi consult**
- Submit IRB application**

(Check off monthly meetings)

J A S O N D J F M A M J

Intern Year (1)

- Biostats / Epi consult**
- Conduct pilot / dry run**
- Implement Study**
- Collect & enter data**
- Preliminary analysis**
- Informal presentation**
- Data analysis**
- RD leadership consult**
- SAEM Abstract submission**
- SAEM Regional/National presentation**
- Present at Annual Research Forum**
- Begin manuscript**

(Check off monthly meetings)

J A S O N D J F M A M J

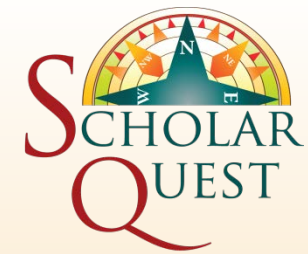
Junior Year (2)

- Complete study**
- Complete manuscript**
- Present at SAEM or other meeting**

(Check off monthly meetings)

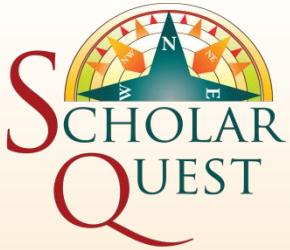
J A S O N D J F M A M J

Senior Year (3)



Research Examples

Name	Project	Group	Mentor
Amber Rice	Misclassification of Presumed Cardiac Arrest Cases in a National Cardiac Arrest Registry	Joseph Bradley Sean Wentworth	Terry Valenzuela
Lindsay Tesar	The HEAT Study: Hyperventilation and End Tidal CO2 in TBI	Abhishek Kulkarni Matthew Lopez Kate Maslan (MS)	Josh Gaither
James Fox	Assessment Of Musculoskeletal Knowledge Amongst Emergency Medicine Physicians	Marvin Griffin Andrew Keyser	Anna Waterbrook
Emily Beck	Teaching sessions with interns about topics including difficult patients, difficult consultants, and breaking bad news	Sara Paradise Jordan Justice Martin Cisneroz (MS)	Alice Min
Erin Tromble	Time-to-Antibiotics for Critically Ill Patients with Suspected Severe Sepsis is Significantly Longer for Pediatric Patients than Adults	None	Jarrold Mosier
Lisa Goldberg	Measuring the optic nerve sheath diameter with ultrasonography using a novel inferior orbital approach	Stephen Houmes Rebecca Milligan	Richard Amini



Research in the News

UA Emergency Medicine Researchers Receive \$2.4 million Grant to Join Federally Funded Pediatric Research Network

August 4, 2015

[The Arizona Emergency Medicine Research Center \(AEMRC\) – Tucson](#) at the University of Arizona Emergency Medicine Department received a \$2.4 million grant to join a prestigious group of researchers and institutions as one of six U.S. Research Node Centers for the [Pediatric Emergency Care Applied Research Network \(PECARN\)](#).

Kurt Denninghoff, MD, distinguished professor of emergency medicine and associate director of AEMRC – Tucson, will lead the newly created Southwest Research Node Center (SW-RNC), a network of three affiliated pediatric emergency departments: the UA, the University of New Mexico and the University of Oklahoma. Clinical researchers from each of these sites will collaborate to develop and conduct PECARN-approved studies that focus on preventing and reducing child and youth morbidity and mortality.

"The inclusion of the UA-based Southwest Research Node Center in the internationally acclaimed PECARN will serve to integrate Arizona and the Southwest, with their unique populations and geographies, into the forefront of pediatric care and research," said **Charles B. Cairns, MD**, dean, UA College of Medicine – Tucson, and assistant vice president for clinical research and clinical trials at the University of Arizona Health Sciences Center.

Founded in 2001, PECARN is funded through grants from the Emergency Medical Services for Children, a branch of the [Health Resources Services Administration Maternal and Child Health Bureau](#). It is the nation's first federally funded pediatric research network dedicated to the prevention and management of acute illnesses and injuries in children.

Pediatric health problems can be difficult to solve because they occur relatively infrequently. PECARN provides the leadership and infrastructure to conduct multicenter research studies, bringing together the large pediatric populations necessary to speed the discovery of answers to important issues affecting children and their families.

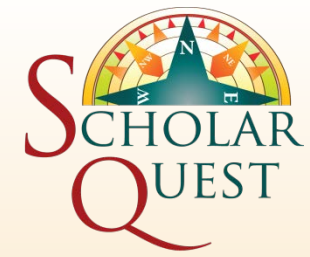


Dr. Kurt Denninghoff

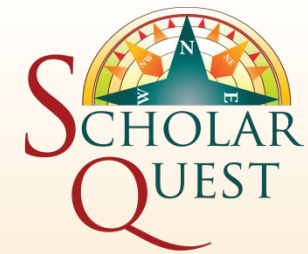


ScholarQuest Project Proposal

- **Project Title/Topic:** Fill in here
- **Group Members:** Fill in here
- **Mentor:** Fill in here



- **Research Question:**
- **Study Rationale / Significance:** Fill in here (3-4 sentences)
- **Study Hypothesis(es):**



- **Study Design:** Fill in here (retrospective, etc.) – please also put the data sources here (name of database, name of hospital, etc.).
- **Main outcome variables and types:** Fill in here (no more than three here) –
Ex: Survival - Binary
- **Data Analysis Technique(s):** Fill in here (ex: Chi Square, Logistic Regression, ANOVA, t-test, Linear Regression, etc.)
- **Possible confounders:** Fill in here
- **Estimated number of cases/patients:** Fill in here



2017-2018 Schedule

University – SQ	South – SQ	Topic
July 18 11a-12p	July 19 11a-12p	SQ Program Requirements - Study Design
Sept 12 11a-12p	Sept 13 11a-12p	CITI Training
Nov 7 11a-12p	Nov 8 11a-12p	Data Blitz
Jan 23 11a-12p	Jan 24 11a-12p	IRB Submission Requirements (8/17/17: Susanne out today. Move this to March, and move March to here.)
March 20 11a-12p	March 21 11a-12p	Project Discussion – Hypothesis Testing

Attendance: > 70% attendance required



2017-2018 University Journal Club

1. Monthly sessions with Seniors and Juniors at a faculty member's residence
 - a) Led by residents / clinical faculty
 - b) Additional methodological readings for Interns



3 Takeaways

1. SQ Research Project

- a) 2-4 members per project required

2. Presentation at a national/regional meeting

- a) Western/SAEM/ACEP/NAEMSP/SCCM/AMSSM/etc.
- b) Western/SAEM abstract submissions in mid-November
Presentations in April and May of each year

3. Presentation at Resident Research Forum

- a) Approximately end of April of each year



Plenary Runner-up Best Presentation Award was given to UA medical student **Ashley Pickering** for her presentation, "Reduction of early VAP after institution of VAP prevention for patients intubated in the emergency department," authors Lawrence A. DeLuca, Paul Walsh, Tyler Burns, Ashley Pickering, James Yeaton, Kurt Denninghoff.



Amber Rice, MD, PGY-III, University Campus received the Outstanding Resident Research Presentation Award for her research, "Misclassification of presumed cardiac arrest cases in a national cardiac arrest registry," authors Amber Rice, Joseph Bradley, Sean Wentworth, Tomas Nuño, Terry Valenzuela.



Elaine Situ-LaCasse, MD, PGY-III, received the Academy of Emergency Ultrasound Resident Research Award for outstanding contributions to Emergency Ultrasound Research. Only one resident in the U.S. is awarded this honor each year.



Residents Elaine Situ-LaCasse, MD, PGY-III, (center) was "Maria, the gallbladder full of stones" and Stephen Houmes, MD, PGY-II (left) and Nicholas Hernandez, MD, PGY I (right) represent the dueling Jets and Sharks.