

STARS

A Valuable Resource for Health Science Teachers

2006 Health Science Technology Education

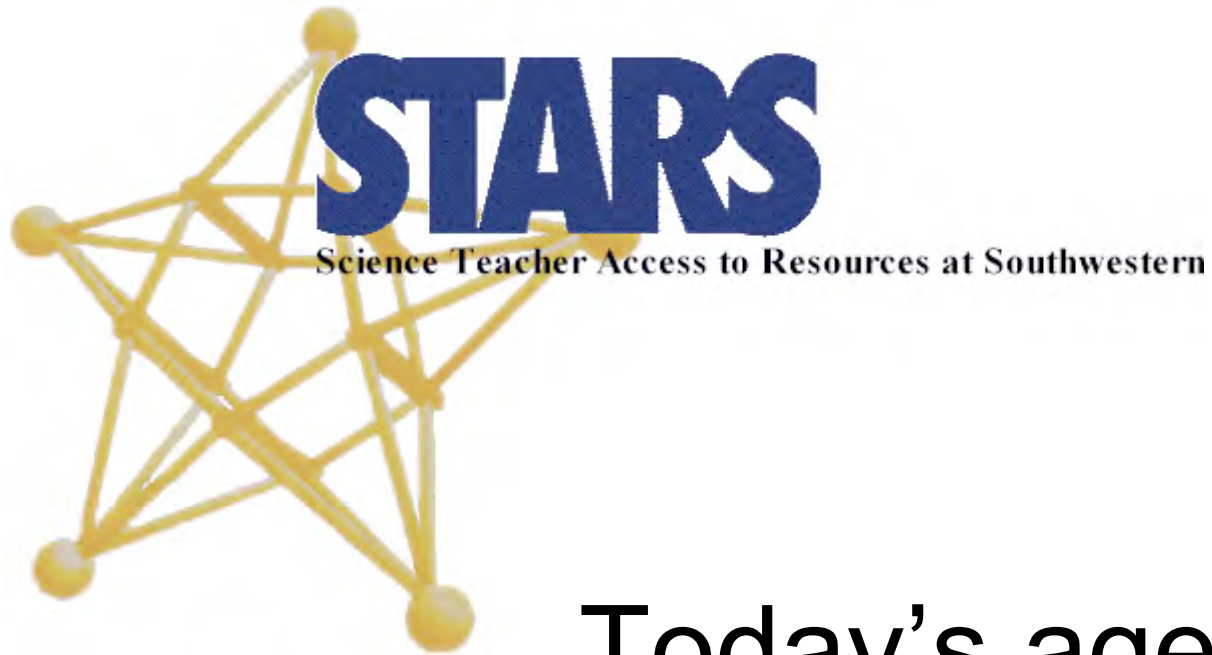
Professional Development Conference

July 19, 2006

Joel M. Goodman, Ph.D.

Professor of Pharmacology

STARS Director



Today's agenda

Introduction to STARS

Suture clinic

What is STARS?

- Science Teacher Access to Resources at Southwestern
- Developed at UT Southwestern in 1991 to improve science teaching in north Texas.
- Currently offer 17 programs and activities for secondary school teachers and students.
- In 2005-06, 555 teachers and 2550 students from 131 schools took part in *STARS* programs and activities.

UT SOUTHWESTERN



UTSW - South Campus



UTSW

North

Campus



Goals of STARS

- Increase science awareness
- Stimulate an appreciation of health-related careers
- Provide ongoing support for science teachers and students
- Improve science education by broadening the knowledge base of teachers
- Assist science education by providing instructional aids

Funding

- Core funding is provided by the state of Texas
- Jan and Bob Bullock Endowment for Science Education
- Greater Dallas Chamber of Commerce
- CitiGroup

STARS Programs

- For teachers
 - Symposia, In-services, Summer research, Workshops, Lab kits
- For students
 - Science fair judging, Science ambassadors, Tours of medical school, Explorer program, Summer research
- OTHERS **IN DEVELOPMENT**
- Google: STARS UT Southwestern

Symposia



STARS Symposia

- Symposia
 - On Saturdays, 9:00 to 3:00
 - Breakfast and lunch provided
- Minisymposia
 - On Monday nights 5:30-8:00
 - Boxed dinner provided
- Speakers are UT Southwestern faculty and guests
- Freebies, door-prizes

2006-2007 Symposia

- Symposia (Saturdays)
 - Cell Membranes October 4
 - Viruses April 28
- Minisymposia (Monday evenings)
 - Gene Silencing September 11
 - Antibiotic Resistance November 6
 - Novel cancer treatments January 8
 - The Kidney March 5
- Special symposium
 - Women in Science and Medicine - February 3
 - In collaboration with the Women in Science and Medicine Advisory Committee (WISMAC)

Inservices



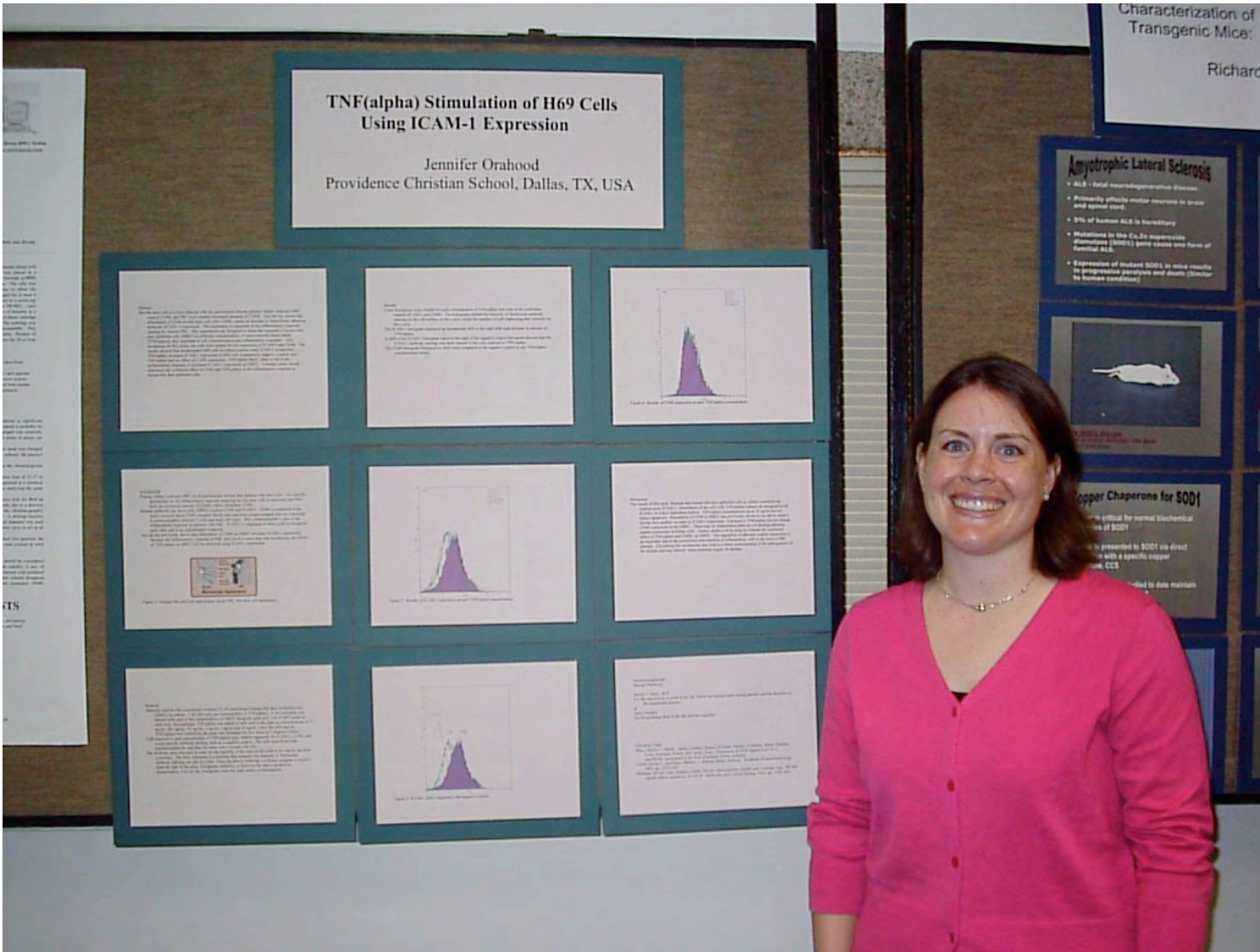
In-services

- On Saturdays, 9:00-3:00
- Past topics: DNA isolation, gel electrophoresis, genome databases, suturing technique, Wildlife CSI (with Museum of Natural History)
- Planned in-service Dec. 2, 2006. Subject TBA (maybe polymerase chain reaction)
- Limited to 24 teachers; first come, first served.

Summer Research Programs



Summer Research



Summer Research

- Eight-week program
- Each teacher is assigned for a laboratory on campus - basic or clinical research.
- Full participation in all laboratory activities
- Competitive - 10 teachers/year are selected from applications (forms available February)
- Teachers make and present posters to show to their classes, and write an action plan
- All teachers receive stipends
- Similar program for high school students

Summer Research Program



In Development

- Grants are being written to support
 - 2-week summer workshop for biology teachers to hone your lab teaching techniques
 - Prepare teachers and students for pre-AP and AP classes, especially biology
 - Collaborate with the Museum of Nature and Science to design new science exhibits and create new programs and museum tours

Tours of UT Southwestern



STARS Special Symposium: Women In Science & Medicine

Organized by the Women In Science and Medicine Advisory Committee (WISMAC)

Program

9:00 – 9:05 a.m.	Dr. George Ordway	Director, STARS Program
9:05 – 9:10 a.m.	Dr. Ellen Vitetta	Chair, WISMAC, Prof., Dir., Cancer Immunobiology Center
9:10 – 9:30 a.m.	Dr. Mark Lehrman	Prof., Pharmacology
9:30 – 9:50 a.m.	Ms. Molly Skelsey	Graduate Student, Graduate School of Biomedical Sciences
9:50 – 10:10 a.m.	Dr. Susanna Parker	Assoc. Dean, Student Affairs
10:10 – 10:30 a.m.	Ms. Alexandra Pratt	Second Year Medical Student
10:30 – 10:50 a.m.	Break	
10:50 – 11:10 a.m.	Dr. Rod Ulane	Assoc. Dean, Medical Scientist Training Program (MSTP)
11:10 – 11:30 a.m.	Dr. Dara Alsuer	MSTP (MD/PhD) student (PhD completed)
11:30 – 11:50 a.m.	Dr. Nancy Fain	Assoc. Dean, Allied Health Sciences School
11:50 – 12:10 p.m.	Ms. Judy Pena	Prosthetics-Orthotics student, Allied Health Sciences School
12:10 – 1:10 p.m.	Lunch	
1:10 – 1:35 p.m.	Dr. Susanne Mumby	Assoc. Prof., Pharmacology
1:35 – 2:00 p.m.	Dr. Margaret Pearle	Assoc. Prof., Urology
2:00 – 2:25 p.m.	Dr. Cynthia Rutherford	Prof., Internal Medicine
2:25 – 2:55 p.m.	Panel Discussion – All Participants	
2:55 – 3:00 p.m.	Closing Remarks Dr. George Ordway	



STARS

Mini-Symposium:

Physiology at the Extremes

The University of Texas Southwestern Medical Center at Dallas

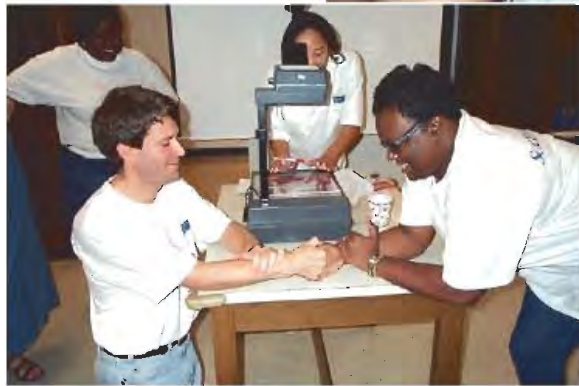
Monday, September 9, 2002

Richardson Hall D1.502

5:30 – 8:00 p.m.

5:30 – 5:55 p.m.	Registration and Refreshments
5:55 – 6:00 p.m.	Welcoming Remarks George Ordway, PhD <i>Professor Physiology & STARS Coordinator</i>
6:00 – 6:45 p.m.	" <i>Physiology at the Top of the World—Lessons From Mt. Everest</i> " Benjamin Levine, MD <i>Associate Professor, Internal Medicine - Cardiology</i>
6:45 – 6:55 p.m.	Questions for Dr. Levine
6:55 - 7:00 p.m.	Break
7:00 – 7:45 p.m.	" <i>A Life Without Oxygen: Physiology of Diving Mammals</i> " Shane Kanatous, PhD <i>Post-Doctoral Researcher, Internal Medicine - Cardiology</i>
7:45 – 8:00 p.m.	Questions for Dr. Kanatous





Agenda DISD Biology Teacher Workshop

Monday, August 5, 2002 900am-915am: Breakfast 915am-930am: Orientation – Workshop expectations (from STARS & teachers perspective) 930am-945am: STARS Program Information 945am-1000am: Parking passes 1000am-1030am: Tour – South Campus – library, cafeteria, lecture halls, Parkland 1030am-1100am: Icebreaker activities 1100am-1130am: Lab safety – share best practices 1130am-1230pm: Lunch in cafeteria 1230pm-100pm: Research Lab set-up and visit George’s lab 100pm-200pm: Scientific Research- How is it done here? & Scientific Inquiry 200pm-300pm: Tours information; Tour TEM & SEM; Tour North Campus.		Friday, August 9, 2002 900am- 3pm: Science Kit & PCR Demo. 1130am-1230pm: Lunch with Narvella West Check Results - Lab # 32 - Controlling Bacterial Growth (15 min) Evaluation	
Tuesday, August 6, 2002 900am-1000am: Using a Compound Light Microscope (50 min) 1000am-1100am: Lab #10 – Comparing Plant & Animal Cells (40 min) 1130am-1230pm: Lunch 100pm-200pm: Lab # 37 - Characteristics of Green Algae (50 min) 200pm-300pm: Lab #38 – Part A - Examining an Algal Bloom (15 min)		Monday, August 12, 2002 900am-1000am: Genetics Inservice – Human Genome Project 1000am-1100am: Lab: Investigating Inherited Human Traits 1130am-1230pm: Lunch with Don Porter (Dallas ISD Teacher) 100pm-200pm: Genome Gallery Activities 200pm-300pm: Genome Gallery Presentations	
Wednesday, August 7, 2002 900am-1000am: Lab # 9 – Characteristics of Prokaryotic & Eukaryotic Cells (50 min) 1000am-1100am: Lab # 31 - Identifying Bacteria (50 min) 1130am-1230pm: Lunch 100pm-200pm: Lab # 32 - Controlling Bacterial Growth (50 min) 200pm-300pm: HIV Activity (30 min)		Tuesday, August 13, 2002 900am-10am: Intro Lecture for Kidney Under Pressure 1000am-3pm: Kidney Under Pressure Lab #38 – Part B Examining an Algal Bloom (30 min)	
Thursday, August 8, 2002 900am-1000am: Nucleic Acid Introduction; The Dogma Sisters of Central High School: A classroom demo of protein folding 1000am-1100am: Lab # 13 – Assembling a Protein Molecule (45 min) 1130am-1230pm: Lunch with SRPT 100pm-200pm: Lab # 14 - Simulation Protein Synthesis (45 min) 200pm-300pm: Science Kit Paper Activities		Wednesday, August 14, 2002 900am-1000am: Genetic Counseling – Dr. Gail Tomlinson 1000am-1200pm: Kidney Under Pressure Continued 1200pm-100pm: Lunch & Career Information Presentation by Pat Afternoon Open to work on write-up and presentations	
		Thursday, August 15, 2002 900am-915am: Breakfast 915am-1130am: Presentations & Evaluations 1130am-1230pm: Lunch & Farewells	

“UT-Southwestern Medical Center offers a superb resource for science teachers in its Science Teachers Access to Resources at Southwestern program. I have participated in STARS events for years and have never been disappointed. The program is open to any science teacher who wants to attend. I have taken advantage of both professional symposia presented by researchers in various fields and staff development programs that supply us with literature and materials for lab-oriented activities. And they always feed us! And it doesn’t cost anything.”

Melinda Ludwig

Museum of Nature and Science

Ennis High School

The Dallas Morning News

STARS Staff

Joel Goodman, Director

Jeannie Han, Program Coordinator

Traydell Beard, Education Assistant

and with special help from

Stuart Ravnik, Assist. Dean

home
welcome
programs
resources
calendar
register
events
contact us



<http://www8.utsouthwestern.edu/utsw/home/stars/index.html>

(or Google: UT Southwestern STARS)

For Questions, or to RSVP for an event: Jeannie.Han@UTSouthwestern.edu

Special Thanks to the Faculty, Staff, and Students of:

- **Southwestern Medical School**
- **Southwestern Graduate School of Biomedical Sciences**
- **Southwestern Allied Health Sciences School**
- **Parkland Memorial Hospital**
- **Children's Medical Center**
- **Zale Lipshy University Hospital**
- **St. Paul's University Hospital**

Suture Clinic

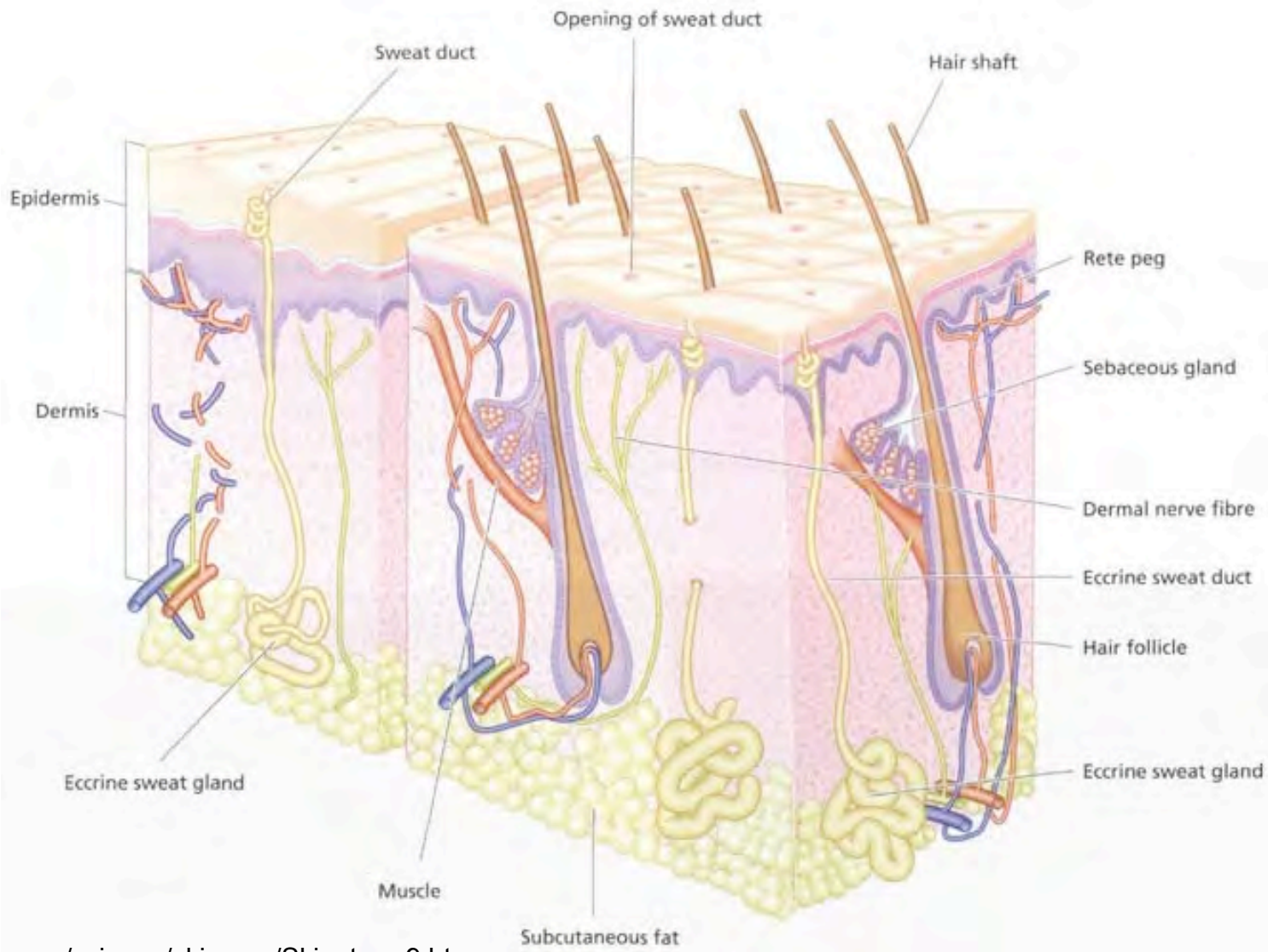
Alay Parikh

Dallas Alvey

Kimberly Szymanski

Lili Ngo

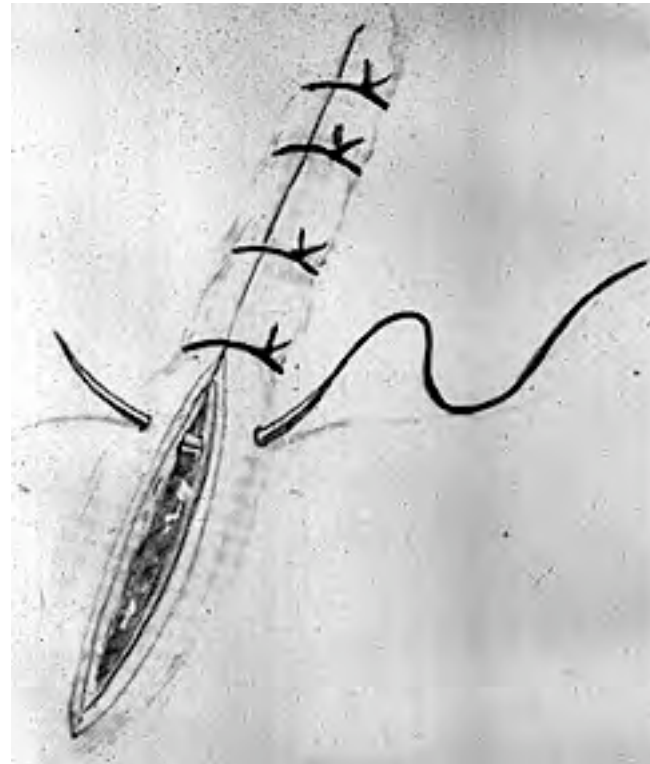
Skin anatomy



Suturing

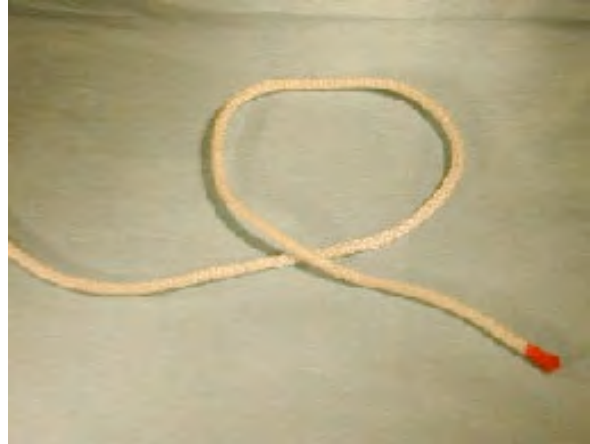
- History: evidence from the Neolithic
- Purpose: to close wound
 - Aids in the healing process
 - Helps reduced the chance of scarring
- Material
 - “Catgut” (collagen) - from animals
 - Synthetics which are absorbable
 - Silk - strong but non-absorbable

Simple Interrupted Suture Pattern



A Square Knot

First Throw



Second Throw

