

# Biol/Chem 4900/4912

Forensic Internship

Lecture 2

# Legal Aspects in Forensic Science

## Legal Standard

Laws and regulations a social member must abide by.

## Legal Requirement

## Ethical Standard

high standard of honesty & honorable conduct with methods of reinforcement

## Professional Requirement

## Moral Standard

Generally accepted customs of conduct in a given society

## Personal Choice

# Legal Aspects in Forensic Science

**Culture** - a large group of people with shared beliefs, laws, morals, standards, and characteristics.

**Values** - a belief that a specific method of conduct is personally or socially preferred.

**Morals** - specific and generally agreed on standards conduct in society.

**Ethics** - are standards of conduct that prescribe behavior but do not describe actual behavior. General study of ideals regarding human behavior and guiding principles.

# Legal Aspects in Forensic Science

## Forensic Scientist

- ▶ Because their work product may ultimately be a factor in determining a person's guilt or innocence, forensic scientists may be required to testify with respect to their methods and conclusions at a trial or hearing.
- ▶ In this case, they are considered an expert witness (an individual whom the court determines possesses knowledge relevant to the trial that is not expected of the average layperson).



# Legal Aspects in Forensic Science

**Forensic scientists are subject to pressures from four distinct sources:**

- 1. The police who are usually their clients**
- 2. The adversary system, which evaluates their data**
- 3. The science on which the data is based**
- 4. Own personal sense of ethics and morals**

# Legal Aspects in Forensic Science

## Role of the Expert Witness

### Two types

**Consulting Expert (work product protected)**

**Testimonial Expert (work product discoverable)**

**Expert witness cannot have an interest in the outcome of the trial or proceedings.**

# Legal Aspects in Forensic Science

## Role of the Expert Witness

Ethics and scientific testimony are intertwined and affect each other.

Experts must be credible, honest, competent, and neutral.

# Legal Aspects in Forensic Science

**What does the Law say about Evidence?**

**Frye vs US (1923)**

**Admissible scientific evidence must be generally accepted in the field to which it belongs, Frye standard.**



# Legal Aspects in Forensic Science

**What does the Law say about Evidence?**

**Federal Rules of Evidence, an alternative to Frye standard, says that a witness (qualified by knowledge, skill, experience, or training) may testify and provide opinion if:**

**A testimony is based on sufficient facts**

**Testimony is based on reliable methods and principles**

**Witness has applied principles and methods reliable to the facts of the case.**

# Legal Aspects in Forensic Science

**Forensic Scientists as Expert Witnesses**

**Experts can misrepresent the evidence**

**Daubert v Merrell Dow Pharmaceuticals**

**Problem with evidence shaping**

# Legal Aspects in Forensic Science

## Forensic Scientists as Expert Witnesses

### Daubert vs. Merrel Dow Pharmaceuticals, (1993)

Supreme court ruled that the trial judge ensures that the Federal Rules of Evidence are correctly applied, including:

Whether the scientific theory and technique has been tested, subject to peer review, and publication, and general acceptance

Potential rate of error for theory and techniques

Existence and maintenance of standards for the technique

# Legal Aspects in Forensic Science

## Forensic Scientists as Expert Witnesses

### Kumho Tire Co vs Carmichael (1999)

Supreme Court ruled that the trial judge has the gatekeeping role for expert testimony in addition to scientific testimony.

# Legal Aspects in Forensic Science

## Problems that can occur in Court:

- 1) **Misrepresenting qualifications or credentials**
- 2) **Pressured testimony (adrenaline factor)**
- 3) **Omitting unfavorable information**
- 4) **Lying about the knowledge of the evidence planted**
- 5) **Falsifying the data or notes**
- 6) **Biased examination**

# Legal Aspects in Forensic Science

## Forensic Scientists as Expert Witnesses

### The Adrenaline Factor

**Definition:** The emotion caused by the heat of a cross-examination and the testimony to defend what is beyond one's ability and capacity.

Explain some causal factors for this phenomenon.

What are your suggestion to prevent or reduce the phenomenon.

# Legal Aspects in Forensic Science

## Forensic Scientists as Expert Witnesses

### Demeanor

confident, steady speech, truthful, courteous  
educate and communicate - don't argue

### Communication skills

must be clear and on jury level  
use metaphor, analogy, visual aids

### Pretrial Preparation

practice, practice, practice.....

# Legal Aspects in Forensic Science

## Forensic Scientists as Expert Witnesses

### The Trial:

Subpoenas

Depositions

Voir Dire

Direct examination

Cross-Examination



# Legal Aspects in Forensic Science

## Forensic Scientists as Expert Witnesses

### General Rules for Expert Witnesses:

- ▶ Be nervous
- ▶ Always tell the truth
- ▶ Listen to the question
- ▶ Pause, then answer
- ▶ Admit mistakes and problems
- ▶ Admit limitations
- ▶ Admit inability to remember
- ▶ Do not hedge or obfuscate
- ▶ Speak to the jury
- ▶ Maintain a consistent attitude
- ▶ Never argue with counsel
- ▶ Answer just the question

# Assignment

- ▶ Begin Paper Abstract (Topic)
- ▶ Start work log (due the end of the semester)
  
- ▶ Assignment 1: Write (handwrite) 1 page on each case: Fyre, Daubert, Kumho and describe the facts of the case, problems in the case, and how the case affects forensic scientist.
  
- ▶ Read:
  - 1) Legal Aspects and Legal Standards of Forensic Science, Vol 1. Ch. 1, Saferstein and Vol. 3 Ch. 1, Saferstein
  - 2) Ethics in Criminal Justice, Ch. 1&2, Bowen
  - 3) Ethics in the Courtroom: The Scientist's Perspective, Ch. 3 Bowen