IPRO 308

Creating an Artificial Pancreas

Code of Ethics

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Overarching Principle

To develop an artificial pancreas that will effectively incorporate conventions of previous devices in addition to novel technologies in order to minimize distress experienced by individuals afflicted with diabetes.

Law and Regulation

Pressure: Complete testing sessions before the deadline.
Risk: Use of the lab at an unauthorized time, or use of an unauthorized lab.

Pressure: Receive external funding from public and private grant.
Risk: Falsification of information to make the project more eligible for the funding.

Pressure: Immediate necessity of using a piece of equipment.
Risk: Use of the equipment without having adequate training or permission.

Pressure: Produce a design within the deadline.
Risk: Infringe on patents by not doing the necessary research or by knowingly using a patented design.

Canon: Obey federal and state laws; work within constraints and guidelines to make the technology efficient and reliable.

Contracts

Pressure: Receive credit for achievement.
Risk: Individuals may take credit for tasks they have not done.

Pressure: Receiving lab materials as soon as possible.
Risk: Use of unethical means (borrowing without permission, for example) to obtain necessary materials.

Canon: Respect the abilities and rights of all peers, colleagues, and other persons with whom he or she has contact.

Professional Codes

Pressure: Start lab work early to achieve more.
Risk: Neglect to gather background information on lab techniques.

Pressure: Gain approval from other team members by showing oneself as resourceful.

Risk: Not asking for assistance, even when required, and risking development of the project.

Pressure: Not receiving scrutiny from others.
Risk: Display negative emotion or becoming defensive about honest critique.

Canon: Strive to use and apply the most accurate and current knowledge available, to welcome assistance from experts, to stay objective, and to be open to any possible scrutiny from others.

Industry Standards

Pressure: Develop anaffordable product.
Risk: Use materials and manufacturing processes that compromise the safety of product.

Pressure: Release the product in a timely fashion.
Risk: Sell a product that has not been tested for all parameters.
Risk: Sell a product that does not meet its design intent.

Pressure: Obtain meaningful results.
Risk: Alteration of data to suit testing hypothesis or anticipated results.

Canon: Provide a product that is safe, reliable,and effective in fulfilling its design intent.

Community

Pressure: Develop a product that aids thegeneral consumerinliving a healthier life.
Risk: Develop a product that may not be accessible to everyone in the market.

Pressure: Develop a product that satisfies all design parameters.
Risk: Develop a product that does not work safely or efficiently.

Pressure: Accommodate too many tasks for one lab session
Risk: Leave the lab unorganized and unsafe.

Canon: Understand our responsibility to produce a product with the aim ofbettering the community; prevent any irrevocable damage to the overall environment.

Personal Relations

Pressure: Time constraints
Risk: Not provide feedback to our outside partners and investors in a timely manner.

Pressure: Keep our relationship with our partners on good terms.
Risk: Not provide constructive feedback.

Pressure: Maintain competitive edge.
Risk: Using competitors' findings without notification and consent.

Canon: Keep our relationships with our outside partners and acquaintances in a professional and respectable manner.

Moral Values

Pressure: Develop a product that is marketable.
Risk: Be untruthful in regards to product functionality.

Pressure: Develop a device that meets the design parameters.
Risk: Develop a device that does compromises safety and efficiency at the price of aesthetics.

Pressure: Implement feedback from users thatwill improve the overall effectiveness of the product.
Risk: Limit the influence of the product tester on the product.

Canon: Respect and maintain honesty by avoiding deception to preserve the integrity of the project.