Medical Research with Neonatal Organs and Tissue

Fast Facts

Organ

Areas of Research

Cardiovascular Disease

- Cardiovascular disease, listed as the underlying cause of death, accounts for nearly 801,000 deaths in the U.S. That's about 1 of every 3 deaths in the U.S.
- About 92.1 million American adults are living with some form of cardiovascular disease or the after-effects of stroke.



Heart researchers now have the ability to identify markers that may predict future cardiac disease for people at risk. These discoveries will make preventative approaches more probable.

Chronic Kidney Disease

- 10% of the population worldwide is affected by chronic kidney disease (CKD), and millions die each year because they do not have access to affordable treatment.
- CKD is a worldwide health crisis, but can be treated. With an early diagnosis and treatment, it's possible to slow or stop the progression.



Kidney researchers have found a direct link in chronic kidney disease (CKD) due to a decreasing trend of nephrons (kidney cells).

The ability to study immature, developing kidneys helps researchers understand the very basic information regarding the number of nephrons with which we are born, enabling physicians to target patients most susceptible to CKD.

Acute & Chronic Liver Diseases

- Chronic liver disease (CLD) represents a major world public health problem. Unlike other chronic diseases such as diabetes, most CLDs can be cured. However, nearly 2 million people with CLDs die every year.
- Liver disease is most commonly caused by viral hepatitis, obesity, alcohol, genetics, autoimmune disorders, drugs, toxins and cancer.



Liver researchers have never before been able to explore immature liver cells before they are assigned the role of stem cell vs. hepatocytes. The information acquired will hopefully unlock secrets of liver diseases such as hepatitis, high cholesterol and fibrosis.

Pulmonary Disorders

- Respiratory Distress Syndrome (RDS) of the newborn, also known as hyaline membrane disease, is a breathing disorder of premature babies. RDS affects about 1 percent of newborn infants and is the leading cause of death in babies who are born prematurely.
- Approximately 40,000 infants and 150,000 adults were reported to have RDS. Translated, these figures mean RDS affected about one person in 6,800.



Lung researchers can now look at how lung tissues and cells develop. This will allow researchers to create an 'atlas' of development. With the newly found information, treatment of early childhood and chronic lung disorders, often a result of premature births, will hopefully be minimized.

Diabetes

Approximately 0.26% of children 19 and under have diabetes. Comparatively, about 12.3 percent of all adults 20 or older have been diagnosed. Reports show that the number of Americans with diabetes continues to rise at an alarming rate, with over 12% of the adult population estimated to have the disease.**





Through the gift of donation, scientists are able to gather important information about how the pancreas grows and develops. In order to discover the cure for type 1 diabetes, they need to learn as much as possible about what happens from the earliest stages. Once researchers understand how the pancreas begins to produce insulin, they may be able to use the discovery to prevent or cure children and young adults who must administer insulin in order to stay alive.



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