

RMRC, Bhubaneswar

(Laxmi Narayan Memorial Library)

Weekly Current Awareness Service

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“HE HAD A SMALL BUT WELL STOCKED LIBRARY. HE LOVED BOOKS; BOOKS ARE A REMOTE BUT RELIABLE FRIEND.”

– Victor Hugo

About Monday Morning

Monday morning is a weekly E- CAS (Electronic Current Awareness Service) of RMRC Library, Bhubaneswar which carries one Biomedical & health science news item and some useful current medical research links so that the scientists can access the articles. This E- Bulletin starts its journey from 21st Nov. 2016. In this maiden attempt we cordially invite your inputs and suggestions to improve in future.

Dr. Banamber Sahoo, Lib & Inf. Officer
Satyajit Nayak & Twinkle Rout (Lib. Trainee)

Mini-organs to treat facial defects

Tiny functioning segments grown via stem cells from patients with craniofacial deformities

LOS ANGELES: Scientists are growing functioning mini-organs of the skull and face that may help treat facial deformities in newborns.

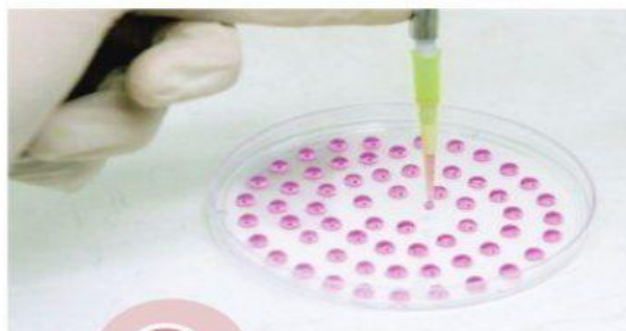
Organs of the craniofacial complex — the skull and face — often go terribly wrong during fetal development.

Deformities of these bones or soft tissues, the most common of birth defects, can cut life short by blocking the airway or circulation.

They can disfigure a face so profoundly that a child struggles to see, hear, or talk. Such deformities may also lead to a lifetime of corrective surgeries and social isolation.

Researchers at the University of California, San Francisco in the US are growing teeth, muscles and tissues that make up the face, salivary glands and 3D printed bones.

Using stem cells from patients with craniofacial deformities, researchers are growing tiny functioning



Source code

As the reservoirs of human development, stem cells renew and differentiate into the myriad cell types required to build out a body from an embryo.

segments of organs, called organoids, to figure out when and how in fetal development

such design flaws occur.

As the reservoirs of human development, stem cells renew and differentiate into the myriad cell types required to build out a body from an embryo.

The organoids model craniofrontonasal syndrome – a birth defect that is caused by a mutation in a single gene and that dramatically impacts the shape of the face and head.

Studies on craniofronto-

nasal syndrome in mice show that the first place something goes wrong is in a cell type called the neuroectoderm.

To create an organoid to study this, researchers obtained skin cells from patients with the syndrome.

“We studied this simple system to see how this mutation affected the organisation of these cells,” said Bush.

His group has filmed cells as they rush about to self-organise when they are mixed together.

In those films, “you can see that the mutated cells, which are dyed red, segregate from the normal cells, which are green,” said Jeffrey Bush, an assistant professor at the UC San Francisco.

The mutated cells completely disrupt the behavior of all the cells. By contrast, in the films of cells without the mutation, all the cells circulate easily among one another.

1. Anti-epilepsy drug restores normal brain activity in mild Alzheimer's disease.

In the last decade, mounting evidence has linked seizure-like activity in the brain to some of the cognitive decline seen in patients with Alzheimer's disease. Patients with Alzheimer's disease have an increased risk of epilepsy and nearly half may experience subclinical epileptic activity -- disrupted electrical activity in the brain that doesn't result in a seizure but which can be measured by electroencephalogram (EEG) or other brain scan technology. For more details click on the below link.

https://www.eurekalert.org/pub_releases/2017-06/bidm-adr062317.php

2. Cancer Drug Gleevec Might Slow Type-1 Diabetes.

Gleevec, the daily pill that turned a killer type of leukemia into a manageable disease, may also help slow the worsening of diabetes, researchers reported Monday. For more details click on the below link.

<http://www.nbcnews.com/health/health-news/cancer-drug-gleevec-might-slow-type-1-diabetes-n771241>

3. IISER Pune: Novel drug delivery system to kill cancer cells.

Researchers at the Indian Institute of Science Education and Research (IISER) Pune have successfully developed a novel cancer drug delivery system using graphene oxide nanoparticles. In a serendipitous discovery, a team led by Dr. Sudipta Basu and Dr. Nirmalya Bhallav from the Department of Chemistry found that when a FDA-approved anticancer drug cisplatin was added, the graphene oxide sheets self-assembled into spherical nanoparticles enclosing the drug within. For more details click on the below link.

<http://www.thehindu.com/todays-paper/tp-features/tp-sci-tech-and-agri/iiser-pune-novel-drug-delivery-system-to-kill-cancer-cells/article19143452.ece>

4. WHO Weekly epidemiological record.

Yellow fever vaccine: WHO position on the use of fractional doses – June 2017

<http://apps.who.int/iris/bitstream/10665/255748/1/WER9225.pdf?ua=1>



E- CAS (Current Awareness Service)

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