Vortragsprogramm: Organoide und ihre Anwendungsmöglichkeiten in der Medizin

- Donnerstag, 21.10.2021, 13:30 – 18:00 Uhr

I. Haut und Pankreas (13:35 –14:55)

1. **Maria Tirler**

Lee, Jiyoon, und Karl R. Koehler. „Skin Organoids: A New Human Model for Developmental and Translational Research". Experimental Dermatology 30, Nr. 4 (April 2021): 613–620.

2. Indervir Aujla

Tiriac H, Belleau P, Engle DD, Plenker D, Deschênes A, Somerville TDD, et al. Organoid Profiling Identifies Common Responders to Chemotherapy in Pancreatic Cancer. Cancer Discov. 2018;8(9):1112–1129.

3. **David Zeugner**

Stock AA, Manzoli V, De Toni T, Abreu MM, Poh Y-C, Ye L, et al. Conformal Coating of Stem Cell-Derived Islets for β Cell Replacement in Type 1 Diabetes. Stem Cell Rep. 2020 Jan 14;14(1):91–104.

15 Minuten Pause

II. Lunge (15:10 – 15:40)

4. **Julian Rainer**

Miller AJ, Dye BR, Ferrer-Torres D, Hill DR, Overeem AW, Shea LD, u. a. Generation of lung organoids from human pluripotent stem cells in vitro. Nat Protoc. Februar 2019;14(2):518–540.

5. **Davor Vrebac**

Yokota E, Iwai M, Yukawa T, Yoshida M, Naomoto Y, Haisa M, u. a. Clinical application of a lung cancer organoid (tumoroid) culture system. NPJ Precis Oncol. 12. April 2021;5(1):29.

6. **Rafael Heinz Knie**

Tindle C, Fuller M, Fonseca A, Taheri S, Ibeawuchi S-R, Beutler N, u. a. Adult stem cell-derived complete lung organoid models emulate lung disease in COVID-19. Elife. 13. August 2021;10:e66417.

15 Minuten Pause

III. Niere (15:55 – 16:45)

7. **Jennifer Friesen**

Calandrini C, Schutgens F, Oka R, Margaritis T, Candelli T, Mathijsen L, u. a. An organoid biobank for childhood kidney cancers that captures disease and tissue heterogeneity. Nat Commun. 11. März 2020;11(1):1310.

8. **Carola Ableidinger**

Schutgens F, Rookmaaker MB, Margaritis T, Rios A, Ammerlaan C, Jansen J, et al. Tubuloids derived from human adult kidney and urine for personalized disease modeling. Nat Biotechnol. 2019 Mar;37(3):303–313.

9. **Fabian Bobich**

Homan KA, Gupta N, Kroll KT, Kolesky DB, Skylar-Scott M, Miyoshi T, et al. Flow-enhanced vascularization and maturation of kidney organoids in vitro. Nat Methods. 2019 Mar;16(3):255–262.

- Freitag, 22.10.2021, 13:30 – 18:00 Uhr

IV. Darm und Herz (13:35 – 14:10)

10. **Gabriel Hackl**

Sugimoto S, Kobayashi E, Fujii M, Ohta Y, Arai K, Matano M, et al. An organoid-based organ-repurposing approach to treat short bowel syndrome. Nature. 2021;592(7852):99–104.

11. **Matthias Metelka**

Kupfer ME, Lin W-H, Ravikumar V, Qiu K, Wang L, Gao L, et al. In Situ Expansion, Differentiation, and Electromechanical Coupling of Human Cardiac Muscle in a 3D Bioprinted, Chambered Organoid. Circ Res 2020;127:207–224

10 Minuten Pause

V. Hirn (14:20 – 15:10)

12. **Leonidas Valerian Pfleger**

Chen HI, Song H, Ming G-L. Applications of Human Brain Organoids to Clinical Problems. Dev Dyn Off Publ Am Assoc Anat. 2019 Jan;248(1):53–64.

13. **Hannah Taylor**

Samarasinghe RA, Miranda OA, Buth JE, Mitchell S, Ferando I, Watanabe M, et al. Identification of neural oscillations and epileptiform changes in human brain organoids. Nat Neurosci. 2021 Oct;24(10):1488–1500.

14. **Helene Pruckner**

Ao Z, Cai H, Wu Z, Ott J, Wang H, Mackie K, et al. Controllable Fusion of Human Brain Organoids Using Acoustofluidics. Lab Chip. 2021 Feb 23;21(4):688–699.

15 Minuten Pause

VI. Diskussion der medizinischen Relevanz der vorgestellten Publikationen (15:25 – 15:50)

VII. Erstellen einer gemeinsamen Presseaussendung (15:50– ca. 16:30)