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Dear Colleagues,

It is a great pleasure for us to welcome you at the 2nd International Liver Cancer Meeting in Heidelberg. We hope that you will find our charming old university city and the modern science campus that is especially dedicated to cancer research an adequate venue.

The meeting primarily originated from the Transregional Consortial Research Grant (SFB/TR 209 supported by the German Research Foundation DFG), Liver Cancer - New mechanistic and therapeutic concepts in a solid tumor model' that was located in Heidelberg, Tübingen and Hannover and coordinated by myself. Our SFB/TRR209 existed from 2017 until 2023 and comprised 25 research groups with over 40 PIs and associated programs dedicated to liver cancer research.

Therefore, a notably part of the contributions originates from the SFB/TR 209 and we are looking forward to discuss the data during the meeting and also set the basis for further national and international collaborations.

Once decided upon the meeting it rapidly became evident that there are numerous liver cancer meetings worldwide that have a strong emphasis on clinical aspects and clinical research aspects, but that there is a lack of meetings covering the research aspects, despite the strong international interest in liver cancer research, thus, it is truly international and support this concept to all organisations.

In this context, we would be excited, if our meeting may act as a starting point for further research project collaborations. We are also especially happy to welcome our international speakers. In addition, we have provided significant time slots for poster discussions and I want to motivate everybody to take this opportunity and discuss at the posters in detail. The quality of the abstracts is highly promising and will certainly make them a central aspect of the meeting.

Our deepest thanks go to Prof. Michael Baumann and the DKFZ for providing the meeting venue and its facilities and to all those that have contributed to the preparation of the meeting, especially UniKT as the organizing company, Dr. Mandy Skunde, who did most of the preparative work and the colleagues of the organizing committee from Heidelberg, Tübingen and Hannover. Most importantly, we thank all of you for your participation and contributions!

We wish us all a successful research conference with interesting oral and poster presentations, stimulating discussions and many resulting collaborations. We are convinced that Heidelberg and its science campus will provide an adequate forum and we hope that you will enjoy the conference.



So again, in the name of the organizing committee I want to welcome you to Heidelberg.  
Peter Schirmacher

## ORGANIZATION

### Conference Chair:

Prof. P. Schirmacher  
University Hospital Heidelberg  
Institute of Pathology  
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Email: Peter.schirmacher@med.uni-heidelberg.de

### Organizing Committee:

Prof. P. Schirmacher, University Hospital Heidelberg  
Prof. S. Roessler, University Hospital Heidelberg  
Prof. M. Heikenwälder, German Cancer Research Center and University of Tübingen  
PD Dr. A. Saborowski, Hannover Medical School  
Prof. N. Malek, University Hospital Tübingen

### Coordinator:

Dr. Mandy Skunde  
Im Neuenheimer Feld 224  
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### Meeting Venue:

German Cancer Research Center (DKFZ)  
Hörsaal Kommunikationszentrum  
Im Neuenheimer Feld 280  
69120 Heidelberg  
www.dkfz.de



# GENERAL INFORMATION

## CONFERENCE REGISTRATION DESK

Will be opened for registration

Wednesday, October 11th, 11:00 am – 07:30 pm

Thursday, October 12th, 08:30 am – 4:00 pm

Friday, October 13th, 08:00 am – 10:30 am

Direct contact: ++49(0)6221-424242

## MEDIA CHECK

The Media Check is located between the entrances of the lecture hall and opened for talk submission. Open daily one hour before the start of the conference and during break times.

Talks have to be handed in as powerpoint presentation latest one hour before the according session starts at the media check in.

## INTERNET ACCESS

WiFi is accessible.

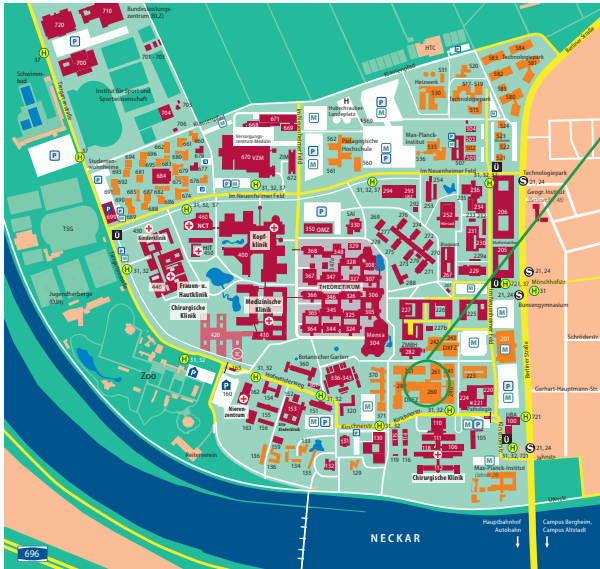
Username: guest-0089 / Password: kXk6Hk9G (cannot be changed)

Validity period: Tuesday, October 10, 2023 - Saturday, October 14, 2023

You are entitled to connect to the internet via unencrypted WiFi. Make sure you have entered „guest“ in the SSID field of your WiFi client software, otherwise you will not be able to connect to the wireless network.

Please note the Terms of Use in the login process to the guest WiFi.

## HOW TO GET THERE



Kommunikationszentrum/  
Communication Center DKFZ

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## By Tramway:

Take the north exit (Kurfürstenanlage) of the Central Station to the tram stop. Take tram number 24 to „Handschuhsheim Nord“, or tram number 21 to „Hans-Thoma-Platz“. With both lines, leave at stop „Jahnstraße“ (right after the Neckar bridge). Cross the street to the left and go to „Jahnstrasse“. Follow that street until you reach the gate on the left. Pass the gate and walk to „Kirschnerstrasse“. About 100 meters down the road you will see the DKFZ main entrance on your right.

## By Bus:

The bus stop is located next to the tram stop. Take Bus number 32 to „Neuenheimer Feld - Kopfklinik“ or number 20 to „Neuenheimer Feld – Sportzentrum Nord“ and get off at stop „Kirschnerstrasse“.

About 100 meters down the road you will see the DKFZ main entrance on your right. For the Rhein-Neckar-Verkehr GmbH timetable information go to <https://www.rnv-online.de/fahrt-info/>.

## Walk:

As the German Cancer Research Center is located only about 1.5 km from the Central Station, one may even walk (15-20 minutes). Upon exiting Central Station, head north and cross „Kurfürsten-Anlage“ (large 4-lane-street). Walk north along „Mittermaierstrasse“ crossing the Neckar river. Right after the bridge, make a left into „Jahnstrasse“. Follow that street until you reach the gate on the left. Pass the gate and walk to „Kirschnerstrasse“. About 100 meters down the road you will see the DKFZ main entrance to your right.



Photos: J. Jung / DKFZ (top), T. Schwerdt / DKFZ (bottom)

### By car:

Approaching Heidelberg on Autobahn A5 from Frankfurt or Karlsruhe, change to Autobahn A656 from direction Mannheim at the junction „Heidelberger Kreuz“. Continue on Autobahn A 656 to Heidelberg, which ends at the Heidelberg City limits. As you enter the city of Heidelberg, follow the signs „Eberbach/HD-Wieblingen/Chirurgie“: Turn left at first traffic light, then right at second. Follow the curve at the next light. Underpass the Neckar Bridge, then turn right twice heading for „Chirurgie/DKFZ“. Having crossed the Neckar River, take the left lane at the first intersection and head for „Chirurgie/DKFZ“. Follow this street (Jahnstr.). Follow the signs to the public paid parking lots. The German Cancer Research Center is the tall building in the street Kirschnerstr. (for your orientation, you can find the house numbers on the top of each building; DKFZ has 280). Go straight ahead along the building, until you can see the main entrance on the right.

Because of the limited number of parking areas in the Neuenheimer Feld, it is recommended to arrive by public transport.

The public parking P25 is located about 10 min walk from DKFZ. If you are using a navigation device, please enter „Kirschnerstraße“ as the destination address.

There is no parking in front of the DKFZ Communication Center.

### PARTICIPATION CONFIRMATION

You can download your confirmation of participation in the registration tool Conftool. (<https://www.conftool.com/hcc2023/>) Please log in with your access data and download the confirmation. Download will be possible after October 13th.

### CONFERENCE DINNER, Thursday, October 12<sup>th</sup>

The Evening Get Together will take place at the Palais Prinz Carl. The Palais Prinz Carl is located in the Old Town of Heidelberg with a beautiful view on Heidelberg Castle.

#### Address:

Prinz Carl Palais, Kornmarkt 1, 69117 Heidelberg

#### How to get there from the venue:

##### By Tramway/ Bus (timetable see: [www.rnv-online.de/fahrtinfo](http://www.rnv-online.de/fahrtinfo))

To reach the Conference Dinner by public transport, you can choose bus line 20. Get on the bus at the stop “Neuenheim, Kirschnerstraße” in the direction of “S-Bahnhof Altstadt”. The bus stop is about 100m away from the conference venue.

You take the bus for about 16 minutes to the stop “Rathaus/Bergbahn”.

Get off there and walk approx. 1 minute to the Prinz Carl Palais.

#### Walk

You can reach the Conference Dinner location with a walk along the Neckar river and through the beautiful Old Town within about a 50 minutes walk.

When you leave the Conference Venue, turn right towards the „Marsilius Kolleg“ (several tall buildings). There you leave the “Kirschnerstraße” and walk the footpath towards the Neckar. Along the Neckar river, passing the „Neckarwiese“, you can enjoy the view of the castle. You cross the river with the help of the Theodor-Heuss-Bridge and walk straight ahead until you reach the “Bismarckplatz”. There you turn into the “Hauptstraße”, the main shopping street in Heidelberg, and follow it to the end at the „Kornmarkt“. Prinz Carl Palais is on the right hand side at Kornmarkt.

#### By car

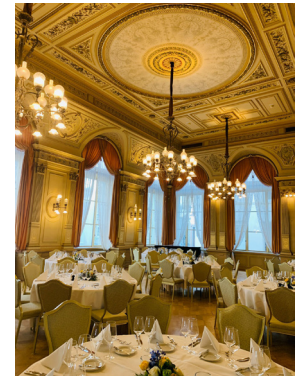
From the conference location you can reach Prinz Carl Palais in about 15 minutes. There are several paid parking garages near the location. To get to the nearest parking garage „Kornmarkt/Schloss P12“, please enter the following address into your navigation device: Zwingerstraße 20, 69117 Heidelberg. You can follow the parking guidance system with the indication „P12“ to the parking garage. From there you can reach Prinz Carl Palais with a few steps.

You will find another parking possibility at „P13 Karlsplatz“. The address is: Hauptstraße 214, 69117 Heidelberg. You can follow the parking guidance system with the indication „P13“ to the parking garage. From here it is only a short walk to the location.

Please note that parking in the Old Town is not possible outside the parking garages.

#### By Taxi

For this purpose, you can order a cab by calling +49 6221 302030.



**Characterization of the effect of chronic immobilization stress on the structural and functional state of the liver of mother rats and their one-month-old offspring as a risk factor for liver cancer**

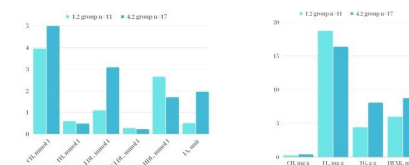
Kuznetsova Milena<sup>1</sup>, Bibichenko Victoria<sup>1</sup>, Kuznetsova Iryna<sup>1</sup>, Sarapulova Snizhana<sup>1</sup>  
<sup>1</sup>Kharkiv national medical university, Kharkiv, Ukraine

**Question(s):** Gastrointestinal tumors are the second most common cause of disability and death of the able-bodied population both in Ukraine and in other European countries. The influence of various types of stress has been established to be one of the factors resulting in damage to the hepatobiliary system, both in the mother and in the fetus. Thus, it has been proven that conditions unfavorable for the fetus lead to the creation of prerequisites for the development of diseases in adulthood, in particular arterial hypertension and diabetes, liver cancer.

**Methods used:** The study was conducted on 13 WAG female rats, 50% of which were the control group. A complex of morphometric, immunohistochemical and biochemical studies of liver tissue and blood serum was carried out. Seventeen one-month-old offspring were removed from the experiment one month after birth.

**Result(s):** Morphometric study showed structural and functional changes in the liver in 100% of the mother rats of all groups, namely: moderate discomplexation of the beam-radial structure, fatty dystrophy of hepatocytes, their uneven swelling around the portal tracts, and proliferation of the stroma of the portal tracts and around the central veins with an increase in SPI by 46.2%. In mother rats, the expression of eNOS and iNOS changed, indicating damage to the endothelium of the liver vessels. At the same time, morphological changes in the liver of the offspring were generally similar to those of their mothers, but less pronounced, and there was no dystrophy of hepatocytes and thickening and sclerosis of arterial walls. Lipidography of experimental animals revealed only one regularity: an increase in AI (by 1.2, 3.9 times in females and one-month-old rats), but its causes were somewhat different. In females, it occurred due to a significant increase in VLDL (2.3 times) and a slight increase in HDL (1.1 times) (at a normal level of cholesterol), in one-month-old rats due to an increase in the level of LDL (2.8 times) and a decrease in HDL (1.6 times) (with an increased level of cholesterol by 1.6 times).

**Conclusion(s):** Therefore, according to the findings of this study, it can be concluded that immobilization stress leads to the same type of changes in mother rats and one-month-old offspring, but the extent of changes was greater in mothers. The structural and functional changes found in the organs of the offspring are explained by the inclusion of epigenetic programming mechanisms and may form the basis of the development of tumors in the liver at later stages of ontogenesis.



**Graphic 1:** Morphometric indicators and structural elements of the liver maternal rats under the influence of chronic stress (Me [25; 75])

**Graphic 2:** Biochemical indicators of lipid metabolism in the blood serum of maternal rats under influence of chronic stress (Me [25; 75])

**Graphic 3:** Fraction composition of lipids and glycogen in the liver of maternal rats under the influence of chronic stress (Me [25; 75])

**Graphic 4:** Morphometric indicators and structural elements of the liver offspring of rat mothers exposed to chronic stress (Me [25; 75])

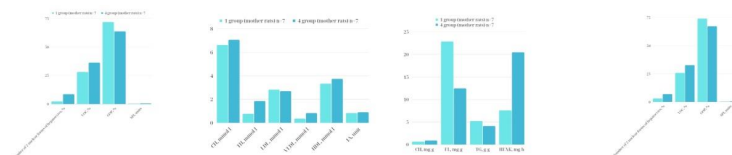
**Graphic 5:** Biochemical indicators of lipid in blood serum of the offspring maternal rats exposed to chronic stress (Me [25; 75])

**Graphic 6:** Fractional composition of lipids in the liver homogenate of rat offspring exposed to chronic stress (Me [25; 75])

**References**

1. He S, Tang S. WNT/ $\beta$ -catenin signaling in the development of liver cancers. *Biomed Pharmacother.* 2020; 132: 110851.
2. Satriano L, Lewinska M et al. Metabolic rearrangements in primary liver cancers: cause and consequences. *Nat Rev Gastroenterol Hepatol.* 2019; 16(12): 748-766.
3. Nault JC, Villanueva A. Biomarkers for hepatobiliary cancers. *Hepatology.* 2021; 73(1): 115-117.

**Support & Funding:** This work is a continuation of cathedral research on this topic.



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