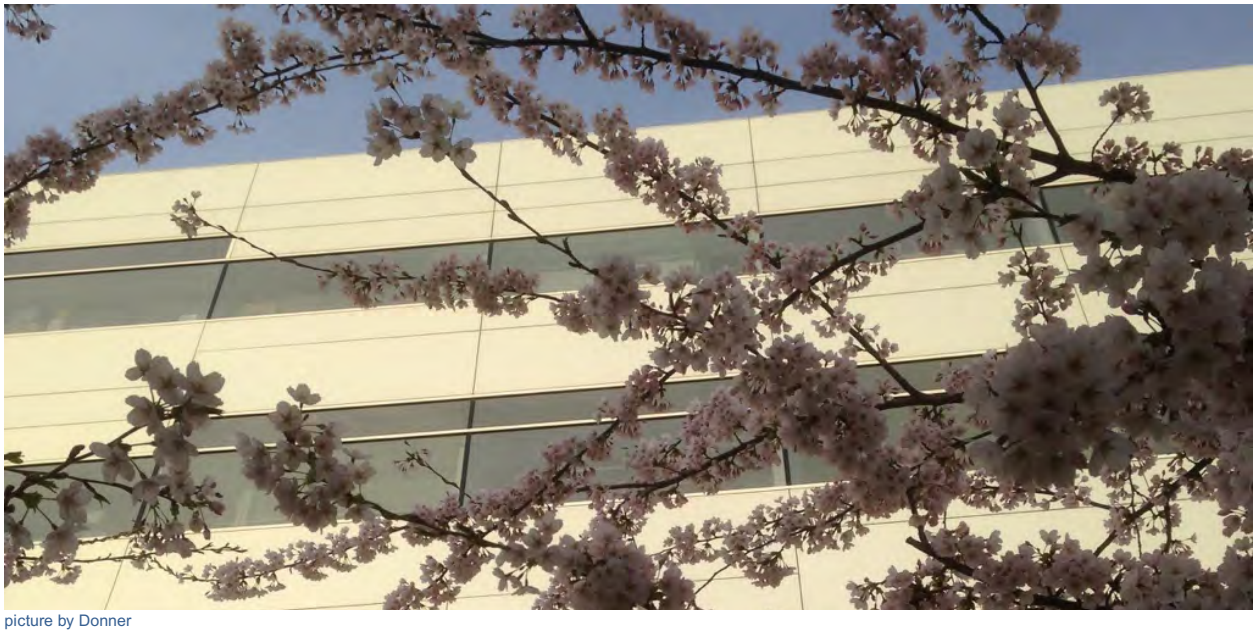
BIOCENTER Newsletter

#05/18



picture by Donner

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Editorial

Dear members of the Biocenter!

You may be surprised to receive yet another Biocenter Newsletter, given the rather stochastic appearance of the former editions of this tabloid. Anyhow, now is as good as any other time in the upcoming weeks and I was aiming mainly to get this off my desk before everyone, including myself will disappear for their well-deserved summer vacation (or vacancies, as some of us used to say ☺).

Given the “short time” that passed since the last edition of the BCNL was released there is actually not so much to report. Nonetheless, we are pleased to congratulate a number of Biocenter members for their success in recruiting FWF funding and publishing nice papers. I am a bit short on social news and gossip, however, as people are a bit reluctant to share.

So, don't forget to send pictures from your most recent Biocenter-related events, so this can be made more colourful and entertaining! I am sure you blocked the date of the Biocenter BBQ in your calendar, 5th of July 2018! I also hope that, similar to our legendary X-mas party, you may be keen to bring some salads or cake to share. As usual, we will provide the basics, meaning sausages, beer, wine and non-alcoholic drinks, for those who insist. BTW – I am still looking for volunteers sharing the duty at the BBQ to feed the hungry masses. So, let me know if you are keen to join the work force that evening!

BTW – a big thanks to all smokers and non-smokers who were joining in the cleaning effort on our terrace recently. Much appreciated – and so much nicer to spend time there now!!! Lets try to keep it that clean for a while!!! Better even, all the time!!!

Have a great day!

On behalf of all involved,

Andreas

Biocenter Research News

Division of Dev. Immunology:

picture by MUI

ÖAW-Stipendium für die Molekularbiologin Katia Schöler

Mit dem Förderprogramm DOC unterstützt die ÖAW hoch qualifizierte DissertantInnen aus allen Gebieten der Wissenschaft. Das gut dotierte Stipendium ermöglicht NachwuchsforscherInnen, sich in konzentrierter Weise der Erstellung ihrer Dissertation zu widmen. Diese Unterstützung wird KATIA SCHÖLER, die in den Niederlanden Molekulare Biowissenschaften studiert und ihr Masterstudium in Cancer Biology in England absolviert hat, nun unter der Betreuung von VERENA LABI an der Sektion für Entwicklungsimmunologie nutzen, um ihre Dissertation zu vollenden. In ihrem Fokus steht dabei die Erforschung der Rolle von microRNAs bei Krebserkrankungen, mit dem Ziel das generelle Verständnis der Mechanismen der Krebsentstehung zu verbessern und effizientere Therapien entwickeln zu können.

ÖAW scholarship for the molecular biologist Katia Schöler

With the DOC funding program, the ÖAW supports highly qualified doctoral students from all areas in science. The well-endowed scholarship enables young researchers to concentrate on writing their dissertation. KATIA SCHÖLER, who studied Molecular Biosciences in the Netherlands and completed her Master's Degree in Cancer Biology will use under the supervision of VERENA LABI this support to complete her dissertation. Her research focuses on the role of microRNAs in cancer, with the aim of improving the general understanding of the mechanisms of cancer development and developing more efficient therapies.

Read more:
https://www.i-med.ac.at/mypoint/thema/716726.html

Division of Dev. Immunology and Div. of Bioinformatics:

picture by MUI

Zwei von drei ERC Advanced Grants der MUI gehen ans Biozentrum

ZLATKO TRAJANOSKI (Bioinformatik) und ANDREAS VILLUNGER (Entwicklungsimmunologie) haben Grund zur Freude: Die Grundlagenforscher der Medizinischen Universität Innsbruck haben die offizielle Förderzusage vom Europäischen Forschungsrat (European Research Council, ERC) erhalten. Die innovativen Forschungsprojekte der Tiroler Wissenschafter werden mit dem begehrtesten Förderpreis für Grundlagenforschung in Europa, dem hochdotierten "Advanced Grant", ausgezeichnet. Damit gehen in den nächsten fünf Jahren etwa 5 Millionen Euro an Forschungsförderung an das Biozentrum.
EPIC: Krebsimmuntherapie bei Darmkrebs anwendbar zu machen, ist das Ziel des ausgezeichneten Bioinformatikers Zlatko Trajanoski. POLICE: Die Aufteilung von DNA genau kontrollieren, um Tumorentstehung zu verhindern, diese Prozess möchte Andreas Villunger in seinem Projekt genau untersuchen. Der dritte im Bunde, Gottfried Baier, forscht an der Sektion für Zellgenetik der MUI.

ERC Advanced Grants: Two “Oscars” of European basic research go to the Biocenter

ZLATKO TRAJANOSKI (Bioinformatics) and ANDREAS VILLUNGER (Developmental Immunology) have a reason to celebrate: the basic researchers of the Medical University of Innsbruck received the official grant from the European Research Council (ERC). The innovative research projects of the Tyrolean scientists are awarded the most coveted prize for basic research in Europe, the highly endowed "Advanced Grant". In the next five years, about 5 million euros in research funding will go to the Biocenter.
EPIC: To make cancer immunotherapy applicable to colorectal cancer is the goal of the excellent bioinformatician Zlatko Trajanoski. POLICE: Exactly controlling the division of DNA to prevent tumor development, Andreas Villunger would like to examine this process in detail in his project. The third member, Gottfried Baier, is researching at the Section for Cell Genetics of the MUI.

Read more:
https://www.i-med.ac.at/mypoint/news/717497.html

Division of Neurobiochemistry and Molecular Biology:

picture by MUI

Der Wissenschaftsfonds fördert fünf neue Projekte, davon drei am Biozentrum
In seiner 67. Kuratoriumssitzung am 5. März dieses Jahres hat der Fonds zur Förderung der wissenschaftlichen Forschung in Österreich (FWF) insgesamt vier neue Einzelprojekte genehmigt, ein weiteres Forschungsvorhaben wird aus dem Matching Funds des Landes unterstützt. Drei Projekte davon werden am Biozentrum umgesetzt.
Protein Kinase N1: Zielmolekül im Schlaganfall: GABRIELE BAIER-BITTERLICH, Sektion für Neurobiochemie**.** Ziel der Forschungsarbeit ist es, neuroprotektive Mechanismen im Gehirn zu erforschen. Wie das Team kürzlich zeigte, spielt PKN1 über die Regulierung des AKT Kinase-Signalwegs eine essentielle Rolle in der Gehirnentwicklung (zur Nedden et al, JCI, in press). Dieses FWF-Projekt spezialisiert sich nun auf die umfassende Analyse der molekularen Prozesse der Neuron-intrinsischen PKN-Regulation und -Funktion sowie der spezifischen Interaktion von PKN1 mit AKT.
Neue antifungale Therapeutika basierend auf 5-Flucytosin: FABIO GSALLER, Sektion für Molekularbiologie, Biozentrum. Weltweit sind etwa 1,7 Milliarden Menschen von Pilzinfektionen betroffen. Mehr als 1,5 Millionen dieser Erkrankungen verlaufen tödlich. Zur Behandlung von invasiven Pilzinfektionen stehen momentan im klinischen Setting vier Klassen antifungaler Substanzen, sogenannte Antimykotika, zur Verfügung. Allerdings steigt die Resistenz gegen diese Medikamentenklassen in *Aspergillus fumigatus*, einem Schimmelpilz, dramatisch an. In diesem Forschungsprojekt soll nun eine Kombination aus molekularer Pilzgenetik, antifungaler Aktivitätstestung sowie 5-Flucytosin-basierender Behandlungsmodelle anwendet werden, um die molekularen Grundlagen des Wirkmechanismus dieser Substanz zu entschlüsseln.
Chromatin Regulation durch CHD1 in Metabolismus und Altern: ALEXANDRA LUSSER, Sektion für Molekularbiologie, Biozentrum. Durch die dichte Verpackung der DNA im Chromatin einer Zelle ist der Zugang und damit das Ablesen der genetischen Information erschwert. Um in sehr präziser und zeitlich sowie räumlich koordinierter Weise Zugang zur DNA zu ermöglichen, wird die Struktur des Chromatins u. a. durch eine evolutionär konservierte Gruppe von Enzymen, den Chromatin Remodeling Enzymen, verändert. Im vorliegenden Projekt sollen anhand der Fruchtfliege als Modellorganismus der biologische Beitrag und die molekulare Wirkungsweise des Chromatin Remodeling Enzyms CHD1 zu Vorgängen des Metabolismus und Alterns untersucht werden.

The Austrian Science Fund is funding five new projects, three of them at the Biocenter
At its 67th meeting of the Board of Trustees on 5 March this year, the Austrian Science Fund (FWF) approved a total of four new individual projects, while another research project is supported by the country's Matching Funds. Three projects will be implemented at the Biocenter.
Protein kinase N1: Target molecule in stroke: GABRIELE BAIER-BITTERLICH, Division of Neurobiochemistry. The aim of the research is to investigate neuroprotective mechanisms in the brain. As the team recently demonstrated, PKN1 plays an essential role in brain development via the regulation

of the AKT kinase pathway (zur Nedden et al, JCI, in press). This FWF project now focuses on the comprehensive analysis of the molecular processes involved in neuron-intrinsic PKN regulation and function as well as the specific interaction of PKN1 with AKT.

New antifungal therapeutics based on 5-flucytosine: FABIO GSALLER, Division of Molecular Biology, Biocenter. Worldwide, about 1.7 billion people are affected by fungal infections. More than 1.5 million of these diseases are fatal. For the treatment of invasive fungal infections, four classes of antifungal agents, so-called antimycotics, are currently available in the clinical setting. However, resistance to these classes of drugs in Aspergillus funigatus increases dramatically. In this research project, a combination of molecular fungal genetics, antifungal activity testing and 5-flucytosine-based treatment models will be applied to decipher the molecular basis of the mechanism of action of this substance.

Chromatin Regulation by CHD1 in Metabolism and Aging: ALEXANDRA LUSSER, Division of Molecular Biology, Biocenter. Through the dense packaging of the DNA in the chromatin of a cell, the access and thus the reading of the genetic information is more difficult. In order to allow access to the DNA in a very precise, temporally and spatially coordinated manner, the structure of the chromatin i.a. altered by an evolutionarily conserved group of enzymes, the chromatin remodeling enzymes. The aim of the present project is to investigate the biological contribution and the molecular mode of action of the chromatin remodeling enzyme CHD1 on processes of metabolism and aging using the drosophila as a model organism.

Read more:

https://www.i-med.ac.at/mypoint/news/717790.html

Division of Neurobiochemistry:

picture by MUI

Spannende Einblicke in ein wichtiges Gehirnprotein

Wie funktionieren neuroprotektive Prozesse im Gehirn? Mit der Beantwortung dieser Frage beschäftigt sich die Arbeitsgruppe von GABRIELE BAIER-BITTERLICH. Jetzt haben die WissenschafterInnen am Biozentrum neue Erkenntnisse über die Proteinkinase N1 generiert, deren physiologische Funktion im Gehirn bisher unbekannt war. In vorangegangenen Arbeiten konnte gezeigt werden, dass die Proteinkinase N1 (PKN1/PRK1) eine Rolle bei der Purinnukleosid-vermittelten Neuroprotektion von durch Sauerstoffmangel gestressten Neuronenkulturen spielt. Abgesehen von diesen in vitro Ergebnissen und der Evidenz einer Deregulierung in neurologischen Erkrankungen war die physiologische Funktion der PKN1 im Zentralnervensystem bisher noch nicht bekannt. Mit ihren jüngsten Forschungsergebnissen ist die Arbeitsgruppe nun einen großen Schritt weitergekommen: Die Erkenntnisse aus Innsbruck wurden im renommierten „Journal of Clinical Investigation“ veröffentlicht.

Exiting insights into an important brain protein
How do neuroprotective processes work in the brain? The working group of GABRIELE BAIER-BITTERLICH deals with this question. Now the scientists at the Biocenter have generated new insights into the protein kinase N1, whose physiological function in the brain was previously unknown. Previous work has shown that protein kinase N1 (PKN1 / PRK1) plays a role in the purine nucleoside-mediated neuroprotection of oxygen-deficient neuron cultures. Apart from these in vitro results and the evidence of deregulation in neurological diseases, the physiological function of PKN1 in the central nervous system has not been previously known. With their latest research results, the working group has now taken a big step forward: the findings from Innsbruck were published in the renowned "Journal of Clinical Investigation".

Read more:
https://www.i-med.ac.at/mypoint/news/717577.html

Science & Society

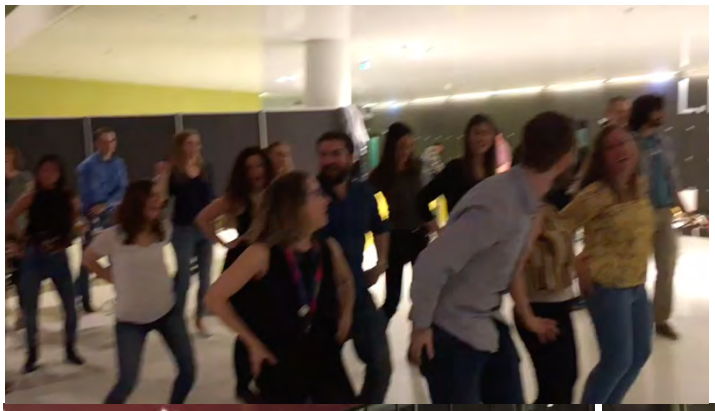
- **Life Science PhD Meeting Innsbruck 2018**

picture by MUI

- **LIFE SCIENCE PHD MEETING**

Eine beeindruckende Leistungsschau junger WissenschafterInnen im Bereich der Life Sciences bot das „Life Science PhD Meeting Innsbruck 2018“. Über 150 DoktorandInnen und Post-Docs der MUI und der LFU präsentierten Anfang April ihre Forschungsarbeiten im Rahmen der zweitägigen Veranstaltung im CCB.
Das ÖH-MUI-Team PhD, das CMBI, MCBO, SPIN und HOROS luden zusammen mit dem CIIT, SFB-F44 und in Kooperation mit FEBS Letters, welche den Workshop „Good Practice in publishing“ organisierten, zu einem gemeinsamen Symposium mit Poster-Präsentationen, Workshops und verschiedene Lectures.
Das gemeinsame Meeting bringt mehrere Veranstaltungen zum Thema unter ein Dach und fand nach den positiven Feedbacks der vergangenen Life Science PhD-Meetings zum dritten Mal in dieser Form statt: „Wichtig ist für uns, dass der gemeinsame Life Science-Standort Tirol betont wird“, erklärt Mitorganisator und MCBO-Sprecher Bernhard Flucher, der vor zwölf Jahren mit dem DK MCBO einen Science Day an der Medizinischen Universität Innsbruck eingeführt hat, bei dem PhD Studierende ihre Forschungsarbeiten präsentierten, Forschungspreise verliehen und GastsprecherInnen eingeladen wurden und dankte repräsentativ für alle engagierten OrganisatorInnen vor allem der ÖH-PhD vertreten durch Bettina Rass, VALENTINA SLADKY und Sebastian Peer.

An impressive exhibition of young scientists in the field of life sciences was offered by the "Life Science PhD Meeting Innsbruck 2018". More than 150 doctoral students and post-docs of the MUI and LFU presented their research work at the beginning of April as part of the two-day event at the CCB.
The ÖH MUI team PhD, the CMBI, MCBO, SPIN and HOROS invited together with the CIIT, SFB-F44 and in cooperation with FEBS Letters, which organized the workshop "Good Practice in publishing", to a joint Symposium with poster presentations, workshops and various lectures.
The joint meeting brings several events under one roof and took place after the positive feedback from the previous Life Science PhD meeting for the third time in this form: "It is important for us that the joint life science location Tyrol is emphasized", explains co-organizer and MCBO speaker Bernhard Flucher, who twelve years ago introduced a Science Day at the Medical University of Innsbruck with the DK MCBO, in which PhD students presented their research papers, awarded research prizes and invited guest speakers. He gave a representative thank-you to all dedicated organizers especially the ÖH-PhD represented by Bettina Rass, VALENTINA SLADKY and Sebastian Peer.



pictures by Villunger

Read more:
https://www.i-med.ac.at/mypoint/news/717613.html

Upcoming Events & Seminars

CCB Lecture Series

Datum	Sprecher
24.09.18	Gunter Meister, Biochemie, Universität Regensburg, DE
01.10.18	Sine Reker Hadrup, Immunology & Vaccinology, Technical University of Denmark, DK
15.10.18	Benoit Kornmann, Biochemie, Zürich, CH
19.11.18	Howard Riezman, Biochemie, Université Geneva, CH
10.12.18	Ralph Ficner, Strukturbiologie, Georg-August-Universität Göttingen, DE
17.12.18	Sarah Hedtrich, Pharmakologie, Freie Universität Berlin, DE
21.01.19	Roland Lill, Zytobiologie und Zytopathologie, Philipps Universität Marburg, DE
18.02.19	Marcus Conrad, Developmental Genetics, HelmholtzZentrum München, DE
18.03.19	Michela DiVirgilio, Max-Delbrück-Centrum für Molekulare Medizin Berlin, DE
29.04.19	Vivek Malhotra, Zell- und Entwicklungsbiologie, CRG Barcelona, ES
20.05.19	Pedro Cravahlo, Zellbiologie, Sir William Dunn School of Pathology, Oxford, GB
17.06.19	Vigo Heissmeyer, Immunology, Ludwig-Maximilians-Universität München, DE
01.07.19	Sebastien Leon, Membrane Trafficking, Ubiquitin & Signalling, Institute Jaques Monod Paris, FR

Recent Publications

1: Reininghaus B, Riedrich K, Dalkner N, Bengesser SA, Birner A, Platzer M, Hamm C, Gostner JM, Fuchs D, Reininghaus EZ. Changes in the tryptophan-kynurenine axis in association to therapeutic response in clinically depressed patients undergoing psychiatric rehabilitation. Psychoneuroendocrinology. 2018 Aug;94:25-30. doi: 10.1016/j.psyneuen.2018.04.029. Epub 2018 May 6. PubMed PMID: 29753175.

2: Gsaller F, Furukawa T, Carr PD, Rash B, Jöchl C, Bertuzzi M, Bignell EM, Bromley MJ. Mechanistic Basis of pH-Dependent 5-Flucytosine Resistance in Aspergillus fumigatus. Antimicrob Agents Chemother. 2018 May 25;62(6). pii: e02593-17. doi: 10.1128/AAC.02593-17. Print 2018 Jun. PubMed PMID: 29610197; PubMed Central PMCID: PMC5971587.

3: Walter C, Gonczarowska-Jorge H, Sickmann A, Zahedi RP, Meisinger C, Schmidt O. Advanced tools for the analysis of protein phosphorylation in yeast mitochondria. Anal Biochem. 2018 May 24;554:23-27. doi: 10.1016/j.ab.2018.05.022. [Epub ahead of print] PubMed PMID: 29803787.

4: Homa M, Galgóczy L, Manikandan P, Narendran V, Sinka R, Csernetics Á, Vágvölgyi C, Kredics L, Papp T. South Indian Isolates of the Fusarium solani Species Complex From Clinical and Environmental Samples: Identification, Antifungal Susceptibilities, and Virulence. Front Microbiol. 2018 May 23;9:1052. doi: 10.3389/fmicb.2018.01052. eCollection 2018. PubMed PMID: 29875757; PubMed Central PMCID: PMC5974209.

5: Marcos-Pérez D, Sánchez-Flores M, Maseda A, Lorenzo-López L, Millán-Calenti JC, Gostner JM, Fuchs D, Pásaro E, Laffon B, Valdiglesias V. Frailty in Older Adults Is Associated With Plasma Concentrations of Inflammatory Mediators but Not With Lymphocyte Subpopulations. Front Immunol. 2018 May 16;9:1056. doi: 10.3389/fimmu.2018.01056. eCollection 2018. PubMed PMID: 29868017; PubMed Central PMCID: PMC5964167.

6: Xia W, Pessentheiner AR, Hofer DC, Amor M, Schreiber R, Schoiswohl G, Eichmann TO, Walenta E, Itariu B, Prager G, Hackl H, Stulnig T, Kratky D, Rülicke T, Bogner-Strauss JG. Loss of ABHD15 Impairs the Anti-lipolytic Action of Insulin by Altering PDE3B Stability and Contributes to Insulin Resistance. Cell Rep. 2018 May 15;23(7):1948-1961. doi: 10.1016/j.celrep.2018.04.055. PubMed PMID: 29768196.

7: Kurucz V, Krüger T, Antal K, Dietl AM, Haas H, Pócsi I, Kniemeyer O, Emri T. Additional oxidative stress reroutes the global response of Aspergillus fumigatus to iron depletion. BMC Genomics. 2018 May 10;19(1):357. doi: 10.1186/s12864-018-4730-x. PubMed PMID: 29747589; PubMed Central PMCID: PMC5946477.

8: Watschinger K, Keller MA, Golderer G, Coassin S, Zschocke J, Werner ER. Biochemical Characterization of AGMO Variants Implicated in Relapses in Visceral Leishmaniasis. J Infect Dis. 2018 May 5;217(11):1846-1847. doi: 10.1093/infdis/jiy090. PubMed PMID: 29741738; PubMed Central PMCID: PMC5946819.

9: Faserl K, Sarg B, Gruber P, Lindner HH. Investigating capillary electrophoresis-mass spectrometry for the analysis of common post-translational modifications. Electrophoresis. 2018 May;39(9-10):1208-1215. doi: 10.1002/elps.201700437. Epub 2018 Mar 8. PubMed PMID: 29389038.

10: Arnhard K, Pitterl F, Sperner-Unterweger B, Fuchs D, Koal T, Oberacher H. A validated liquid chromatography-high resolution-tandem mass spectrometry method for the simultaneous quantitation of tryptophan, kynurenine, kynurenic acid, and quinolinic acid in human plasma. Electrophoresis. 2018 May;39(9-10):1171-1180. doi: 10.1002/elps.201700400. Epub 2018 Feb 5. PubMed PMID: 29327354.

11: Gostner JM, Obermayr E, Braicu IE, Concin N, Mahner S, Vanderstichele A, Sehouli J, Vergote I, Fuchs D, Zeillinger R. Immunobiochemical pathways of neopterin formation and tryptophan breakdown via indoleamine 2,3-dioxygenase correlate with circulating tumor cells in ovarian cancer patients- A study of the OVCAD consortium. Gynecol Oncol. 2018 May;149(2):371-380. doi: 10.1016/j.ygyno.2018.02.020. Epub 2018 Mar 9. PubMed PMID: 29530331.

12: Maschmeyer P, Petkau G, Siracusa F, Zimmermann J, Zügel F, Kühl AA, Lehmann K, Schimmelpfennig S, Weber M, Haftmann C, Riedel R, Bardua M, Heinz GA, Tran CL, Hoyer BF, Hiepe F, Herzog S, Wittmann J, Rajewsky N, Melchers FG, Chang HD, Radbruch A, Mashreghi MF. Selective targeting of pro-inflammatory Th1 cells by microRNA-148a-specific antagomirs in vivo. J Autoimmun. 2018 May;89:41-52. doi: 10.1016/j.jaut.2017.11.005. Epub 2017 Dec 1. PubMed PMID: 29183643; PubMed Central PMCID: PMC5916452.

13: zur Nedden S, Eith R, Schwarzer C, Zanetti L, Seitter H, Fresser F, Koschak A, Cameron AJ, Parker PJ, Baier G, Baier-Bitterlich G. Protein kinase N1 critically regulates cerebellar development and long-term function. J Clin Invest. 2018 May 1;128(5):2076-2088. doi: 10.1172/JCI96165. Epub 2018 Apr 16. PubMed PMID: 29494346; PubMed Central PMCID: PMC5919825.

14: Werner ER, Keller MA, Sailer S, Seppi D, Golderer G, Werner-Felmayer G, Zoeller RA, Watschinger K. A novel assay for the introduction of the vinyl ether double bond into plasmalogens using pyrene-labeled substrates. J Lipid Res. 2018 May;59(5):901-909. doi: 10.1194/jlr.D080283. Epub 2018 Mar 14. PubMed PMID: 29540573; PubMed Central PMCID: PMC5928432.

15: Hovsepian J, Albanèse V, Becuwe M, Ivashov V, Teis D, Léon S. The yeast arrestin-related protein Bul1 is a novel actor of glucose-induced endocytosis. Mol Biol Cell. 2018 May 1;29(9):1012-1020. doi: 10.1091/mbc.E17-07-0466. Epub 2018 Mar 22. PubMed PMID: 29514933; PubMed Central PMCID: PMC5921569.

16: Offermanns V, Steinmassl O, Andersen OZ, Jeppesen CS, Sørensen S, Talasz H, Lindner HH, Foss M, Kloss F. Comparing the effect of strontium-functionalized and fluoride-modified surfaces on early osseointegration. J Periodontol. 2018 Apr 26. doi: 10.1002/JPER.17-0680. [Epub ahead of print] PubMed PMID: 29697142.

17: Hess MW, Vogel GF, Yordanov TE, Witting B, Gutleben K, Ebner HL, de Araujo MEG, Filipek PA, Huber LA. Combining high-pressure freezing with pre-embedding immunogold electron microscopy and tomography. Traffic. 2018 Apr 19. doi: 10.1111/tra.12575. [Epub ahead of print] PubMed PMID: 29673018.

18: Klepsch V, Hermann-Kleiter N, Do-Dinh P, Jakic B, Offermann A, Efremova M, Sopper S, Rieder D, Krogsdam A, Gamerith G, Perner S, Tzankov A, Trajanoski Z, Wolf D, Baier G. Nuclear receptor NR2F6 inhibition potentiates responses to PD-L1/PD-1 cancer immune checkpoint blockade. Nat Commun. 2018 Apr 18;9(1):1538. doi: 10.1038/s41467-018-04004-2. PubMed PMID: 29670099; PubMed Central PMCID: PMC5906604.

19: Rohr-Udilova N, Klinglmüller F, Schulte-Hermann R, Stift J, Herac M, Salzmann M, Finotello F, Timelthaler G, Oberhuber G, Pinter M, Reiberger T, Jensen-Jarolim E, Eferl R, Trauner M. Deviations of the immune cell landscape between healthy liver and hepatocellular carcinoma. Sci Rep. 2018 Apr 18;8(1):6220. doi: 10.1038/s41598-018-24437-5. PubMed PMID: 29670256; PubMed Central PMCID: PMC5906687.

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21: Oemer G, Lackner K, Muigg K, Krumschnabel G, Watschinger K, Sailer S, Lindner H, Gnaiger E, Wortmann SB, Werner ER, Zschocke J, Keller MA. Molecular structural

diversity of mitochondrial cardiolipins. Proc Natl Acad Sci U S A. 2018 Apr 17;115(16):4158-4163. doi: 10.1073/pnas.1719407115. Epub 2018 Apr 4. PubMed PMID: 29618609; PubMed Central PMCID: PMC5910844.

22: Reimer D, Boesch M, Wolf D, Marth C, Sopper S, Hatina J, Altevogt P, Parson W, Hackl H, Zeimet AG. Truncated isoform Vav3.1 is highly expressed in ovarian cancer stem cells and clinically relevant in predicting prognosis and platinum-response. Int J Cancer. 2018 Apr 15;142(8):1640-1651. doi: 10.1002/ijc.31186. Epub 2017 Dec 14. PubMed PMID: 29194596.

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24: Joas S, Parrish EH, Gnanadurai CW, Lump E, Stürzel CM, Parrish NF, Learn GH, Sauermann U, Neumann B, Rensing KM, Fuchs D, Billingsley JM, Bosinger SE, Silvestri G, Apetrei C, Huot N, Garcia-Tellez T, Müller-Trutwin M, Hotter D, Sauter D, Stahl-Hennig C, Hahn BH, Kirchhoff F. Species-specific host factors rather than virus-intrinsic virulence determine primate lentiviral pathogenicity. Nat Commun. 2018 Apr 10;9(1):1371. doi: 10.1038/s41467-018-03762-3. PubMed PMID: 29636452; PubMed Central PMCID: PMC5893559.

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