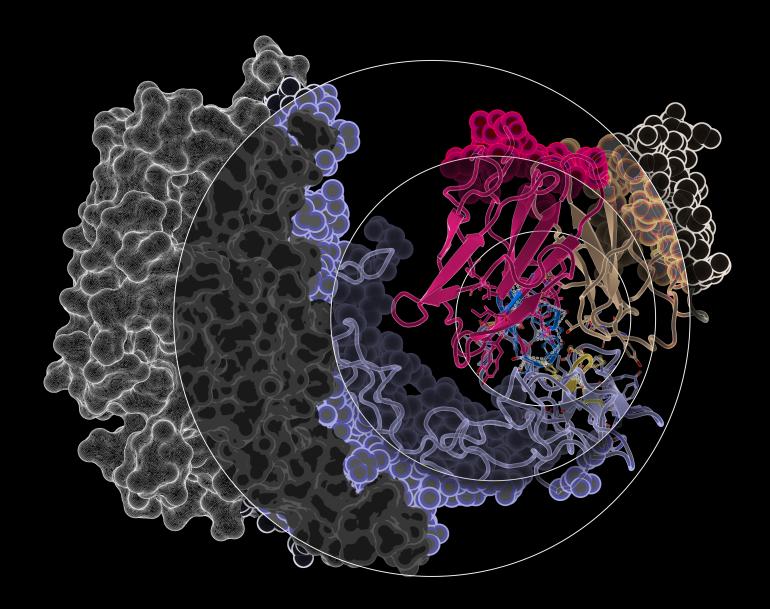
ANTI BODY SOCI ETY

2025 Calendar



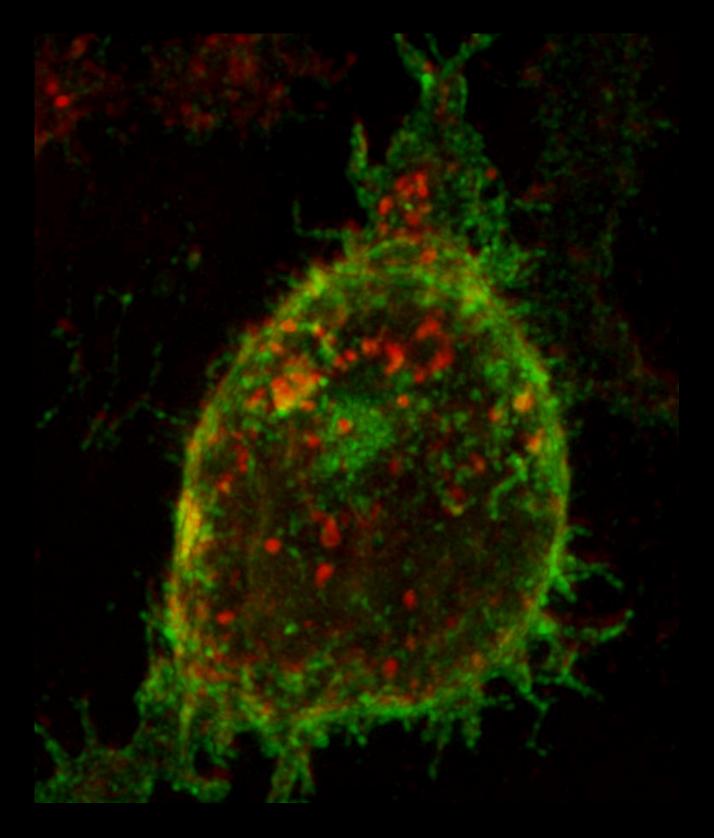
GETTING CLOSER TO BINDING WITH EVERY STEP

The image represents different levels of complexity surrounding antibody-antigen binding. We start from a more general understanding of the interaction kinetics with SPR, then identify the global binding site with cryo-EM, refine the region with HDX-MS to achieve peptide-level resolution, and move forward towards residue- and atom-wise resolution with computational techniques like docking and molecular dynamics. All these steps give us a better understanding of the structural rules behind antibody-antigen binding.

- Eva Smorodina (University of Oslo and Oslo University Hospital, Norway)

Antibodies used:Trastuzumab in complex with HER2 Instrument used:PyMOL, FoldX, IgFold January

М	т	W	т	F	S	S
	A Solution States Anniversary	1 1972: Nobel Prize awarded to G.Edelman and R.Porter discovery of antibody chain-like structure	2	3	4 2016: Genmab Hexabody platform published	5
6	7	8	9	10	11	12
13	14	15	16 1928: UCB founded by Emmanuel Janssen	17 2021: AbCellera granted U.S. patent covering its Trianni Mouse Technology	18 2024: New to antibodues? CHeck out Biointrons history and development blog published today	19
20	21	22	23	24	25	26 2022: FDA approves Genentech's Vabysmo, the first bispecific antibody for the eye
27	28 2020: Antibody Solutions' moved to Santa Clara and celebrated their silver anniversary all in one	29	30	31		g meetings



FcγRIIa RESTING ORGANIZATION

3D maximum intensity projection of N-SIM super resolution images (scale bars 5 μ m) of resting Rat Basophilic Leukemia cells expressing Fc γ RIIa1–EGFP (green) with plasma membrane was stained using wheat germ agglutinin (WGA) AlexaFluor-633 (red)

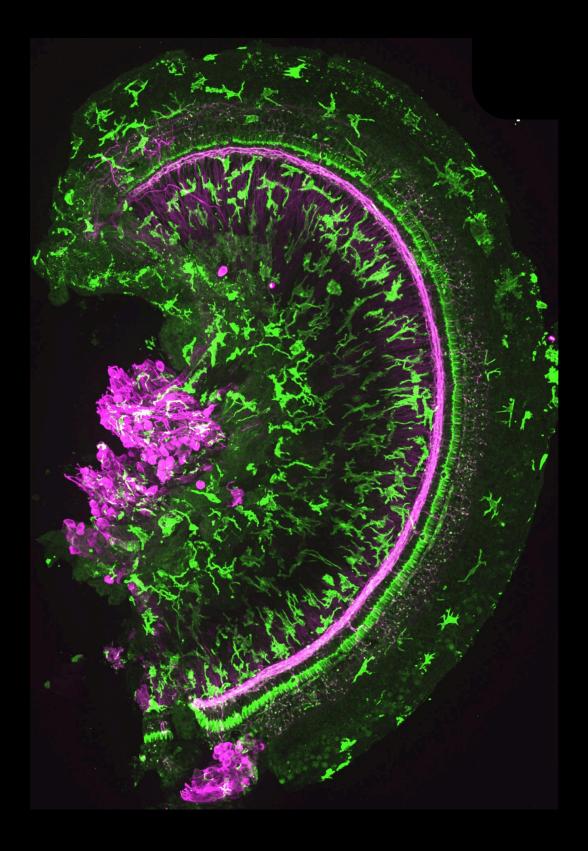
- Jessica C. Anania (University of Southampton, United Kingdom)

Antibodies used: N/A

Instrument used: Nikon N-SIM microscope equipped with 488, 561, and 640 nm lasers, Andor iXON DU897 EM-CCD camera and a 100× oil immersion lens (N.A. 1.49)

February

М	Т	W	Т	F	S	S
B C S C	Upcoming meetings ANTI BODY SOCI SOCI		THIS MONTH: 1978: First commercialisation of mAbs as lab reagents (Sera-Lab)		1 Research competition opens	2
3	4	5	6 2019: FDA approves caplacizumab (Cablivi), the first Nanobody developed by Sanofi	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22 1983: Susumu Tonegawa publishes the mechanism of antibody diversity by V(D)J recombination	23
24	25	26	27	28	·····	tes



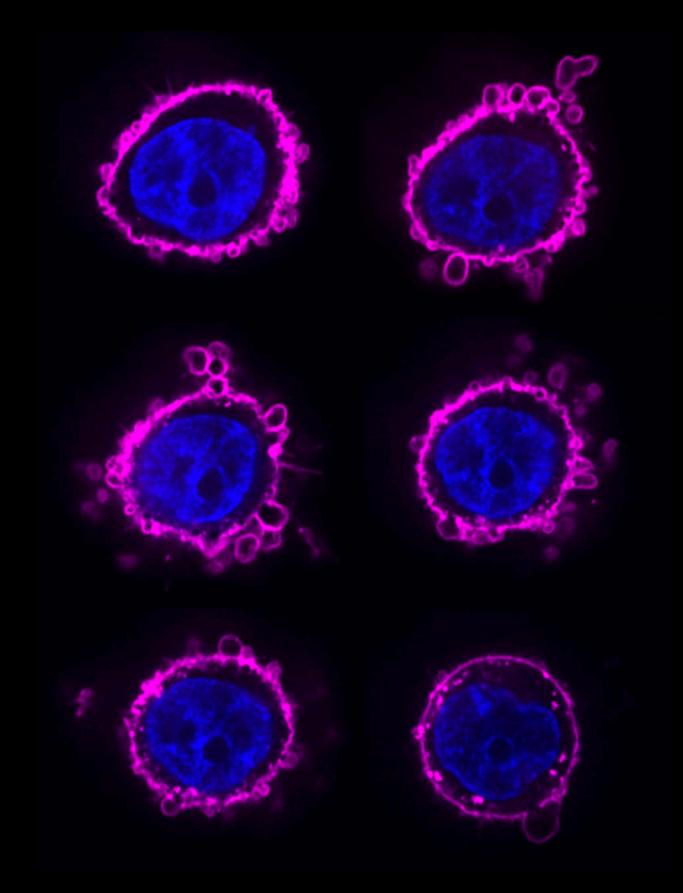
INFLAMMATION IN THE MOUSE COCHLEA

The image is of a mouse cochlea (peripheral auditory system) taken at postnatal day 35, depicting an increased immune response (indicated by the presence of macrophages) after the mouse became profoundly deaf at postnatal day 30 due to a genetic mutation.

- Andrew O'Connor (University of Southampton, United Kingdom)

Antibodies used: Iba1 (green), Class 3 beta tubulin / Tuj1 (magenta). Instrument used:Spinning Disk confocal microscope March

М	Т	W	Т	F	S	S					
Upcoming meetings ANTI INTE BODY SOCI SOCI			THIS MONTH: 1957: Frank Burnet and David Talmage developed the clonal selection theory 2022: Biointron launched Abinvivo		1 Science writing competition opens	2					
3	4 2024:AbTherx Announces Transition from Early Access to Commercialization of its Bispecific and Full Human Diversity Antibody Discovery Technologies	5	6	7	8	9					
10 2022: The US Patent and Trademark Office has granted two patents to Specifica for its innovative Generation 3 Antibody Discovery Platform	11	12	13	14	15	16					
17 2017: Evolocumab shown to effectively cut cholesterol levels, thereby preventing heart attacks and strokes	18	19	20 Vernal Equinox (03:06 GMT)	21	22	23					
24	25	26	27	28	29	30					
31	Notes										
			•••••								



MICROVESICLE RELEASE IN BREAST CANCER

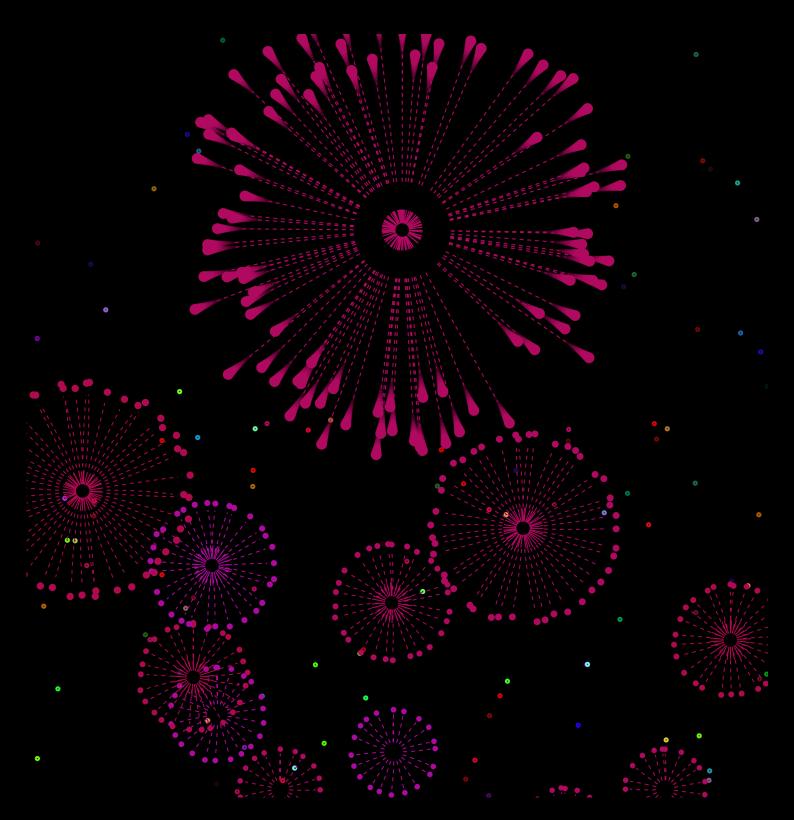
A breast cancer MDA-MB-468 cell was imaged live to visualise microvescicle release.

- Anthony Cheung (King's College London, United Kingdom)

Antibodies used: Nucleus was stained with Hoechst 3342 (blue) and cetuximab was labelled with Alexa Fluor 647 (pink). Each cell image represents a timelapse scan of 5-minute interval. Instrument used: Confocal Microscopy

April

М	Т	W	Т	F	S	S
THIS MONTH: 1982: Monoclonal antibodies generated for routine use in ABO blood typing 2011: Bruker Cellular Analysis was founded	1 Imaging competition opens	2	3 2009: First publication using Merus Multiclonics platform technology	4	5	6 1999: Swedish Astra AB and the British Zeneca Group merged to form AstraZeneca
7	8	9	10 2019: Bioworkshops (Suzhou) Limited registered in China	11	12 1947: Astrid Fagraeus presents definitive evidence that plasma cells secrete antibodies	13
14	15 Research competition closes	16	17	18	19	2009: First approved bispecific antibody in Europe (Catumaxomab)
21	222 2021: FDA approves 100th mAb, GlaxoSmithKline's PD1 blocker dostarlimab	23	24	25	26 2015:Moderna announced first mRNA Vaccine Candidate, mRNA- 1440, induces high levels of immunogenicity	27
28 1994: First mouse strain published producing fully human mAbs (HuMabMouse)	29	30	ANTI BODY SOCI . ETY Upcoming meetings	· · · · · · · · · · · · · · · · · · ·	Notes	
				••••••	• • • • • • • • • • • • • • • • • • • •	



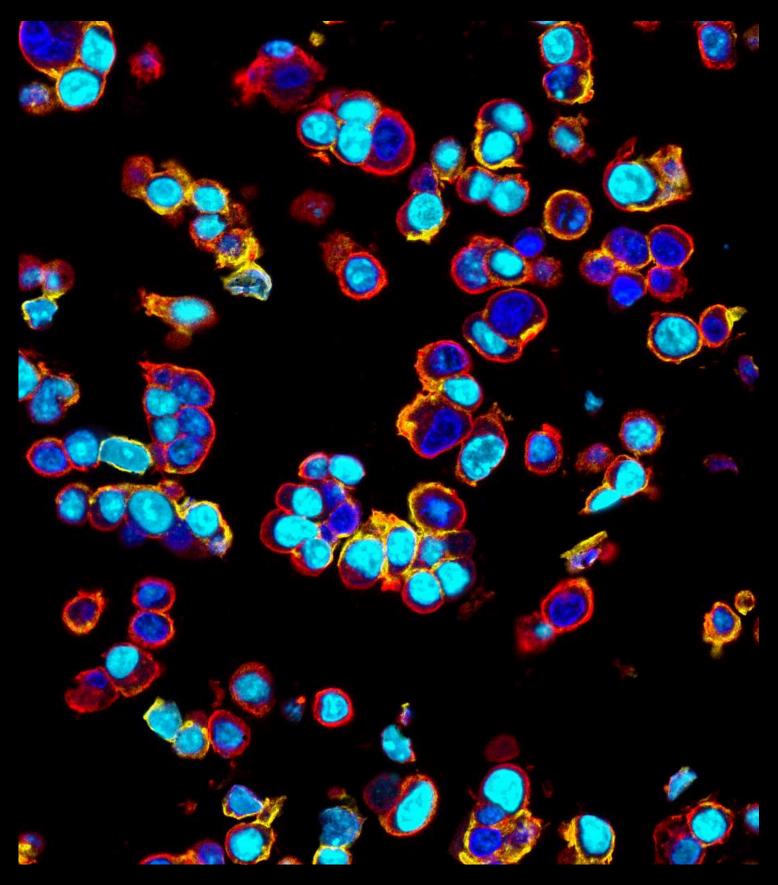
CLONAL FIREWORKS

Visual representation of a B-cell clonal repertoire subset using the programming language R. Each non-singleton clone is represented as a radial plot whose number of elements correlates with the number of subclones that composes it. Singleton clones are represented as single points. Each clone is colored according to their particular V-D-J combination. Similar colors are used to represent clones with similar V-D-J combinations

- Rodrigo Garcia Valiente (Amsterdam UMC, Netherlands)

Antibodies used: N/A Instrument used:R 4.3.1 in an Ubuntu 18.04.6 LTS system. May

М	т	W	T	F	S	S
Notes		THIS MONTH: 1947: Dr. Henry Foster started Charles Rivers 2017: Springer and Kruse co-founded the Institute for Protein Innovation (IPI) ANTI BODY SOCI . ETY	1 2007: Adimab founded by Tillman Gerngross, K. Dane Wittrup and Erikk Anderson	2	3	4
5	6	7	8	9	10	11
12	13	14	15 Science writing competition closes	16	17 1958: G. Nossal & J. Lederberg provided strong evidence that a single cell produces an antibody of unique specificity	18
19	20	21	22	23	24	25
26	27	28	29 1986: First humanised monoclonal antibody created	30	31	Upcoming meetings



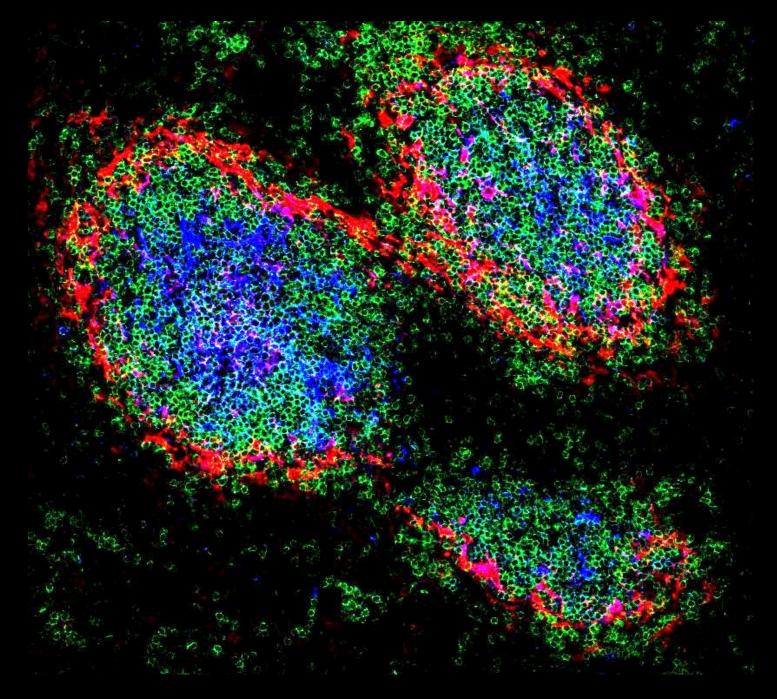
CELLS IN FOCUS

An evaluation of proliferative activity and E-Cadherin/beta-Catenin expression in MCF-7 cells

- Danielle Fails (Bethyl Laboratories, Fortis Life Sciences)

Antibodies used: Bethyl Laboratories, Fortis Life Sciences Ki67 (A700-021) clone: BLR021E, E-Cadherin (A700-088) clone: BLR088G, beta-Catenin (A700-086) clone: BLR086G Instrument used: PhenoImager HT

June								
Μ	т	W	Т	F	S	S		
2021: SeromYx sy	it application filed for mo ystems received its certi	ficate of accreditation -	Croce, Koprowski, Milstei - see how they've grown erence in Basel, Switzerla	BODY SOCI	Upcoming meetings	1 James S. Huston Antibody Science Talent Award opens		
2	3	4	5	6	7 2022: PAIA launched the F.QUANT Titer, high-throughput titer quantification assays for antibodies and Fc fusion proteins	8		
9	10	11 2018: AbbVie launched auto- injection delivery system for adalimumab (HUMIRA®)	12	13	14 1985: Phage display technique was first introduced by George P. Smith for which he was later awarded the Nobel Prize in Chemistry 2018	15		
16	17	18	198 1986:Janssen/John sons and Johnsons Orthoclone OKT3, was the first mAb approved by the FDA for prevention of kidney transplant rejection	20 Summer Solstice (21:50 GMT)	21	22		
23	24 2022: Learn about Molecular Partners DARPin® Drug Platform in this Beyond Antibodies review published today	25	26	27	28	29		
30 2015: Cambridge Innovation Institute (CII) unveiled its current image: Research.	 	Notes						
Collaboration. Advancement.			•••••	•••••	••••••			



FOLLICULAR DENDRITIC CELL ORGANIZE IN GERMINAL CENTRES FOR IMMUNE MEMORY

This image shows the gathering of astrocytes around the blood vessels of a human brain tissue section. Astrocyte endfeet are closely associated with endothelial cells of the blood vessels, helping form an additional protective layer of the blood brain barrier. In doing so they protect the brain parenchyma from the periphery allowing the brain to have a tightly regulated environment.

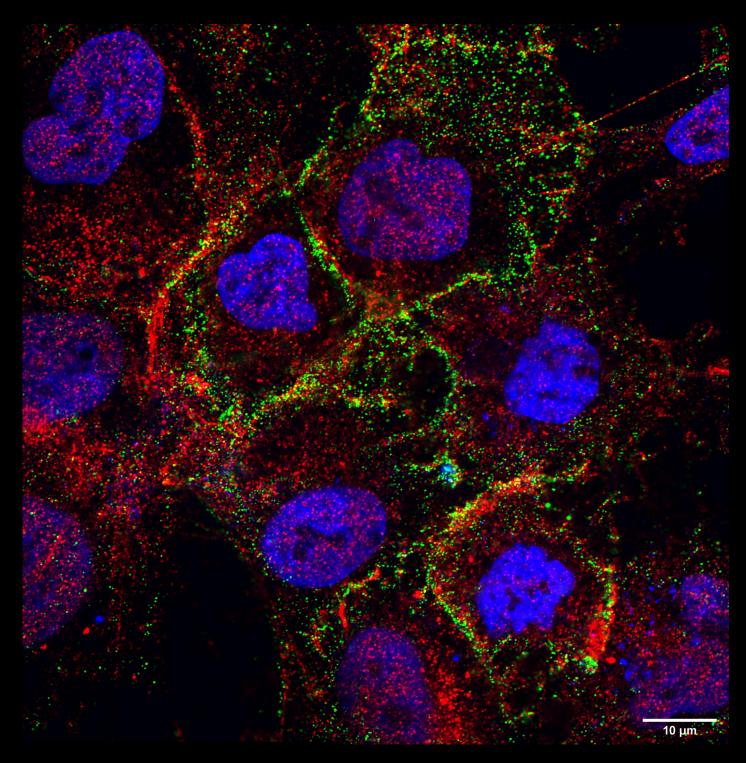
- Jessica C. Anania (University of Southampton, United Kingdom)

Antibodies used: Biotinylated anti-mfge8 (FDC-M1, in house) prepared using EZ-Link Sulfo-NHS-LC-Biotinylation Kit (ThermoFisher Scientific, 21435), BV421 streptavidin (BD Biosciences, 563259), phycoerythrin (PE) rat anti-mouse CD169 (seglec-1/MOMA) (clone 3D6.112) (BioLegend, 142404), Alexa Fluor® 488 Rat Anti-Mouse CD45R (clone RA3-6B2) (BD, 557669).

Instrument used: Zeiss LSM 710 Elyra S.1, AxioObserver confocal microscope equipped with 405, 488, 561, and 633 nm lasers, and Plan-Apochromat 20 ×/0.8 M27.

JULY

М	т	W	т	F	S	S
Heard of AsymBio yet? check our their biological technology and innovation	1	2	3	4	5	6
7	8	9 2024: Novilytic launches Proteometer-UFT Kit - check them out	10	11 2018: Visterra became part of the Otsuka group	12	13
14	15 Imaging competition closes	16	17	18	19	20
21	22	23	24 2009: First OmniAb publication of the OmniRat	25 2022: Cadence Expands into Molecular Simulation, Acquires OpenEye Scientific	26	27
28	29	30	31	ANTI BODY SOCI ETY Upcoming meetings	Not	es



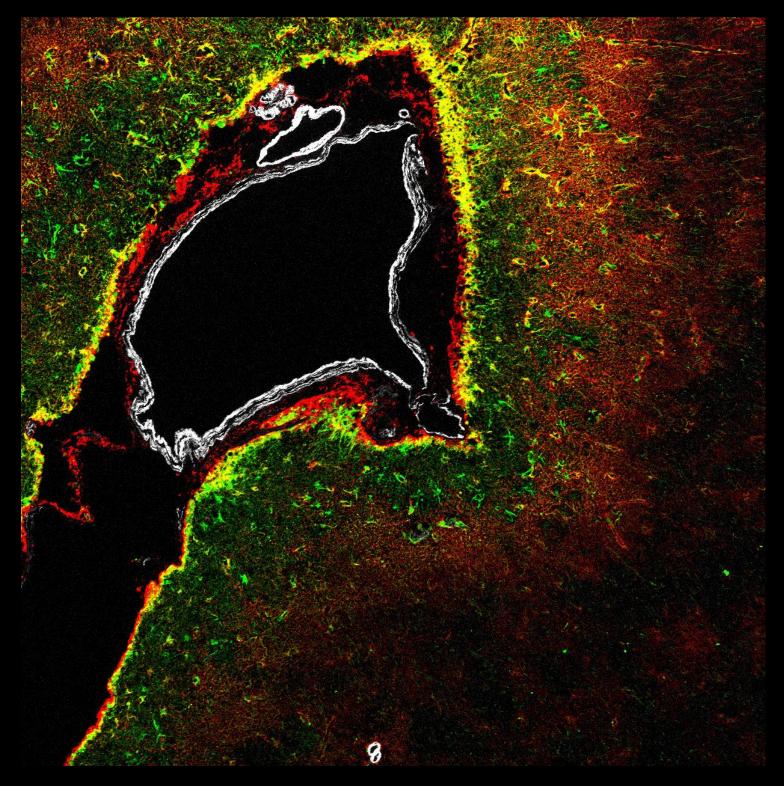
THERAPEUTIC ANTIBODY TARGETING GPC3 IN LIVER CANCER

Glypican-3 (GPC3) is a tumor-specific antigen found in hepatocellular carcinoma (HCC), a major form of liver cancer. GPC3 modulates Wnt/ β -Catenin signaling and promotes cancer progression. YP7 is an anti-GPC3 monoclonal antibody developed by Dr. Mitchell Ho's laboratory at the National Cancer Institute, NIH. In this image, HCC cells are stained with YP7 (Green), anti- β -Catenin antibody (Red), and nuclei are stained with DAPI (Blue). Ongoing clinical studies using CAR-T cells and antibody drugs based on humanized YP7 may establish GPC3 as a novel therapeutic target in cancer.

- Shaoli Lin (National Cancer Institute, United States)

Antibodies used: Mouse monoclonal antibody YP7 Instrument used: Nikon Sora Spinning Disk Microscope August

М	Т	W	т	F	S	S
Upcoming meetings	Notes		THIS MONTH: 2020: Fortis Life Sciences was established 2022: Have you read the BioRad founders fairy tale? Check out their employee blog ANTI BODY SOCI . ETY	1	2	3
4	5	6	7 1975: Cesar Milstein and Georges Kohler published their technique for mAbs	8	9	10
11 2022: argenx announced European Commission Approval of efgartigimod for the treatment of generalized myasthenia gravis	12	13	14	15	16	17 2022:Take a look at the antibody optimization enabled by artificial intelligence happening at Absci
18	19	2012: Ypsomed is founded from Disetronic	21	22	23	24 1998: FDA and European regulatory authorities approved the first monoclonal antibody drug for an autoimmune disease (Infliximab)
25	26	27	28	29	30	31 1909: "Magic bullet" concept started to be developed by a German Nobel laureate Paul Ehrlich in effort to cure syphilis



ASTROCYTES - HELPING PROTECT OUR BRAIN

This image shows the gathering of astrocytes around the blood vessels of a human brain tissue section. Astrocyte endfeet are closely associated with endothelial cells of the blood vessels, helping form an additional protective layer of the blood brain barrier. In doing so they protect the brain parenchyma from the periphery allowing the brain to have a tightly regulated environment.

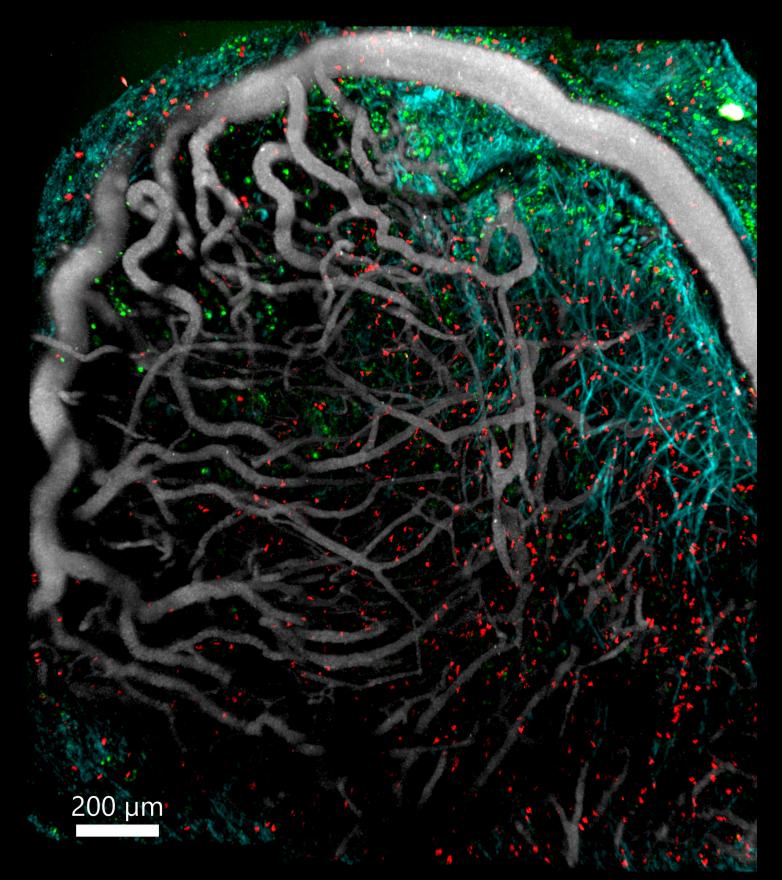
Suzanne Buss (University of Southampton, United Kingdom)

Antibodies used: anti-human smooth muscle actin (1A4), conjugated to 89Y, visualised in white; anti-human GFAP (GA5), conjugated to 176Yb, visualised in green; anti-human AQP4 (rabbit pAb), conjugated to 155Gd, visualised in red.

Instrument used: Hyperion Imaging System (University of Manchester)

September

М	Т	W	т	F	S	S
1 1972: First atomic resolution structure of an antibody fragment published	2	3	4	5	6	7
8	9	10	11	12	13	14
15 James S. Huston Antibody Science Talent Award closes	16	17 2015: Mapps ZMapp was granted fast track status by the FDA	18 2007: First fully human cancer antibody generated using the MorphoSys' HuCAL technology started Phase 1 clinical trials	19	2017: Combination of three monoclonal antibodies reported to protect monkeys from HIV	21
22 Autumnal Equinox (13:43 GMT)	23 2010: Immunopaedia won the American Association for the Advancement of Science's "Science Prize for Online Resources in Education"	24	25 2020: Fusion antibodies celebrated their 200th antibody. What are they up to now?	26 2021: Boehringer Ingelheim and Invetx collaboration agreement to develop novel, species- specific mAbs biotherapeutics	27	28
29	30	THIS MONTH: 2021: Learn more about Ablexis and AlivaMab Discovery Services "Unparalleled success in antibody discovery and development" A N T I B O D Y S O C I . E T Y	Upcoming meetings		Notes	



INTRAVITAL MOUSE MELANOMA: This is an intravital 2-photon image of a mouse melanoma with its tumor-infiltrating lymphocytes (Tdtomato, red), dendritic cells (Venus, green), blood vessels (Qdot, grey), and collagen fibers (second harmonic generation, cyan).

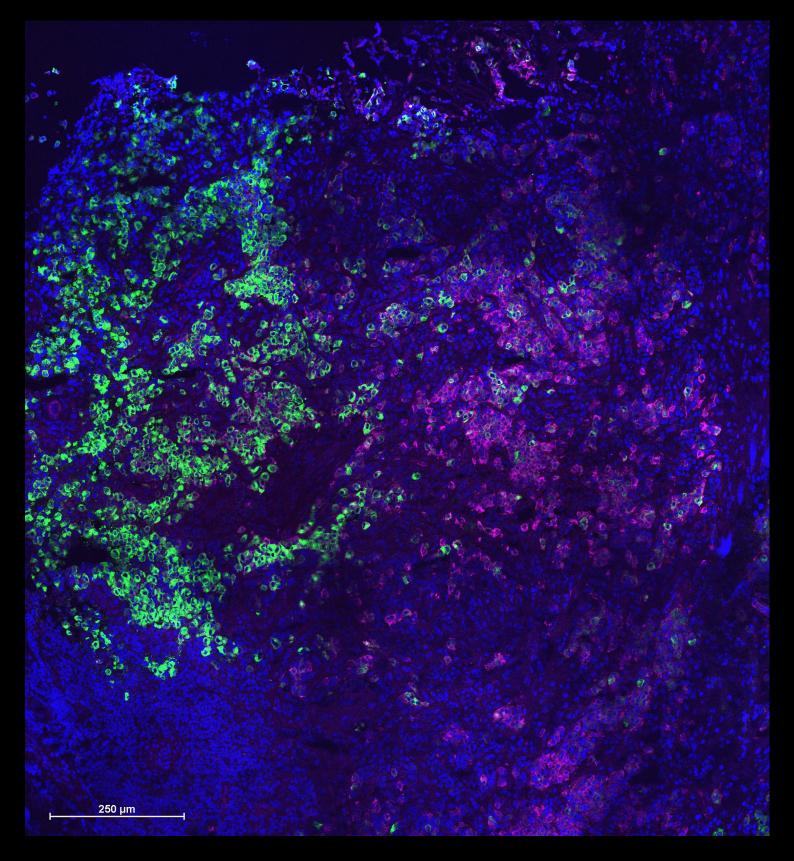
Stefania Vilbois (University of Lausanne, Switzerland)

Antibodies used: Qdot 705 (Tdtomato and Venus are derived from mouse reporter models)

Instrument used:2-photon - Leica SP8 DIVE 2 Lasers confocal laser scanning microscope Leica TCS SP8 (Leica Microsystems)

October

М	Т	W	Т	F	S	S
THIS MONTH: 1976: British government declines to patent monoclonal antibodies ANTI BODY SOCI . ETY	Upcoming meetings	1 2024: ENPICOM launches unified bioinformatics platform for lab and AI scientists	2	3	4 World animal day - why not check out the work Vetigenics are up to	5
6	7 2014: Opening of The Jackson Laboratory for Genomic Medicine in Connnecticut.	8 2024: YUMAB and MOLCURE collaborate with zero-shot AI technology for antibody discovery	9	10	11	12
13	14	15 2021: LAVA Therapeutics announces first US Orphan Drug designation for Gammabody LAVA- 051	16 1984: N.K. Jerne, G.J.F. Köhler and C. Milstein won Nobel Prize "for theories concerning the specificity in development and control of the immune system and the discovery of the principle for production of mAbs"	17	18	199 1972: Rodney R. Porter wins Nobel Prize in Physiology or Medicine "for their discoveries concerning the chemical structure of antibodies"
20	21	222 2024: Revvity Introduces Transcribe AI: Revolutionizing Data Entry in Clinical Laboratories	23	24	25	26
27 1897: Lonza was incorperated	28	29	30	31	N	otes



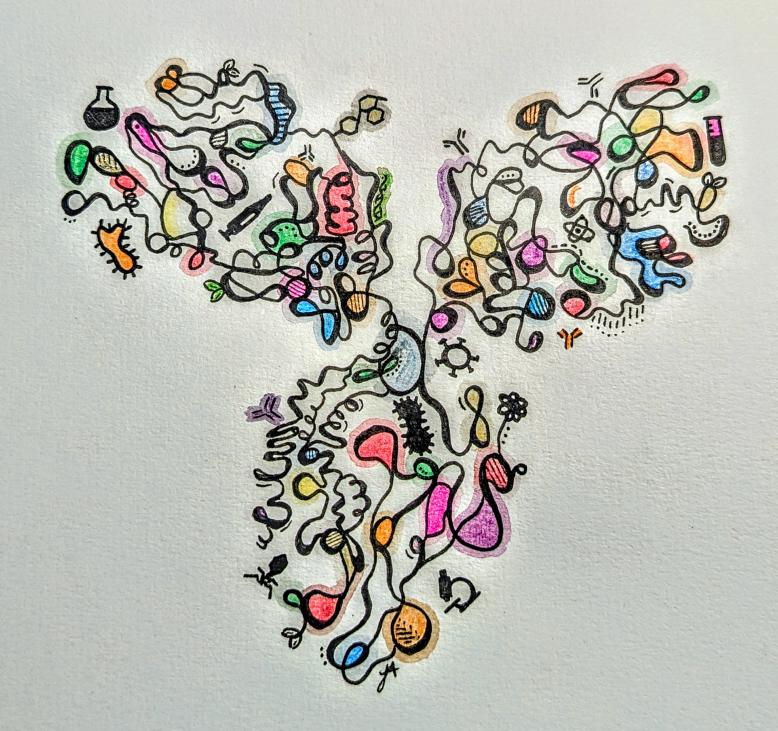
HETEROGENEITY OF MELANOMA

Expression of a potential melanoma antibody therapeutic target throughout a primary melanoma tumour slice, demonstrating the heterogeneity of tumour cells and regions.

- Alicia Chenoweth (King's College London, United Kingdom)

Antibodies used: Mouse anti-melanoma antibody mix (anti-HMB45 + anti-MART-1 M2-7C10 + M2-9E3) plus anti-mouse IgG-Alexa Fluor 488, and human anti-CSPG4-Alexa Fluor 647 Instrument used: Nikon A1 inverted confocal microscope November

М	Т	W	Т	F	S	S
Notes			THIS MONTH: 2018: Beacon Intelligence was founded ANTI BODY SOCI . ETY		1	2
3 2017: First patient treated in first clinical trial using monoclonal antibody drug to treat schizophrenia (Natalizumab)	4	5	6	7 1969: Fluorescence activated cell sorter (FACS) published	8	9
10 1999: Evotec became a listed company	11	12	13	14	15	16
17	18	19	20 2018: Novimmune/Light Chain Biosicences first FDA approval, Emapalumab	21 2020: FDA emergency authorisation for the first mAb for COVID- 19 (Regeneron Pharmaceuticals)	22 1983: Happy birthday ImmunoPrecise Antibodies	23
24 1997: FDA approved the first monoclonal antibody for cancer treatment (Rituiximab)	25	26	27	28	29	30



ANTIBODY KALEIDOSCOPE

From bench to bedside, antibody technology has grown exponentially to encompass elements from the natural world to novel engineered compounds all with the aim of improving biological understanding and ultimately clinical outcome

- Jessica C. Anania (University of Southampton, United Kingdom)

Antibodies used: N/A Instrument used: N/A December

М	т	W	Т	F	S	S	
1	2	3 2012: YUMAB GmbH spun-off from the University of Braunschweig	4	5	6	7	
8	9	100 1997: First humanised monoclonal antibody approved for market (Daclizumab)	11	12	13	14	
15	16	17	18	19	20	21 *** Winter Solstice (09:20 GMT)	
22 1994: First chimeric monoclonal antibody therapeutic approved for market (Abciximab)	23	24	25	26	27	28	
29	30	31 2002: First fully human monoclonal antibody drug approved for market (Adalimumab)	Notes				
	Come find us at The Antibody Engineering & Therapeutics conference in San Diego, California Thanks for another year of support! Look out for our 2026 calender						

