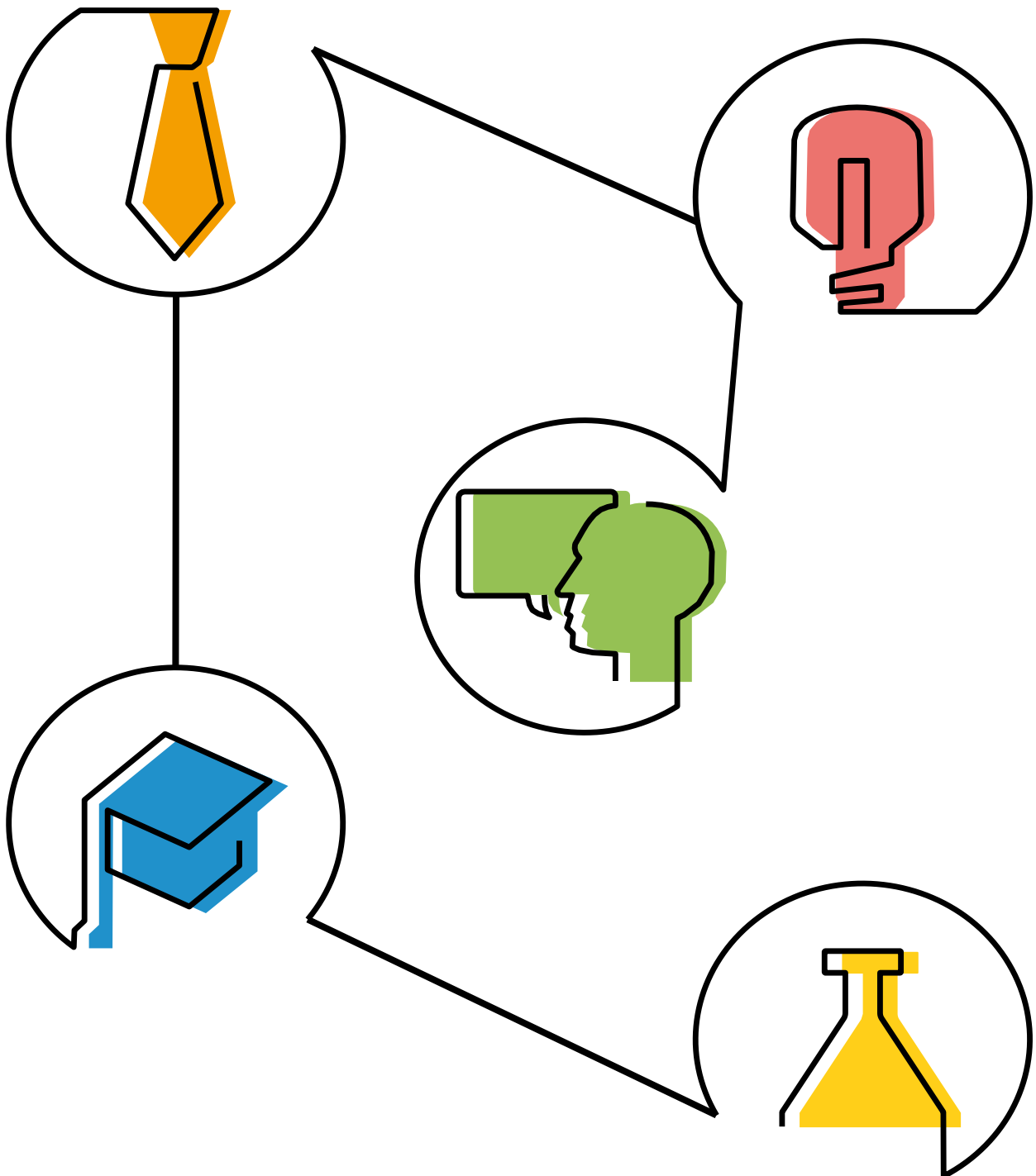




Life Science Zurich Jahresbericht 2022



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1. Einleitung

Dr. Silvie Cuperus

Um die Öffentlichkeit gezielter über aktuelle Forschungsthemen informieren zu können und Forschende in den Life Sciences stärker zu vernetzen, wurde im Herbst 2001 Life Science Zurich ins Leben gerufen. Die offizielle Gründung als eigenständige Einheit beider Hochschulen fand im Frühjahr 2002 statt. Seither setzen wir uns für den Dialog zwischen Wissenschaft und Bevölkerung ein. Wir fördern die Verankerung von Zürich als nationales und internationales Zentrum für Spitzenforschung, erstklassige Ausbildung und wirtschaftliche Innovation im Bereich der Life Sciences. Seit dem Start richtet sich Life Science Zurich mit seinen vielfältigen Aktivitäten an diverse Zielgruppen.

Im Mai 2022 feierten wir mit Gästen der ETH und der Universität Zürich das 20-jährige Jubiläum von Life Science Zurich. Mit unseren Referenten Ernst Hafen, Alexandra Trokla und Lucie Kralickova diskutieren wir vergangene, aktuelle und zukünftige Herausforderungen in der Wissenschaftsvermittlung und wie wir diese angehen können.

Nach den pandemiebedingten Einschränkungen der vergangenen Jahre können wir auf ein aktives Jahr 2022 zurückblicken. So konnten wir unsere regelmässigen Aktivitäten wie vor Covid realisieren (BrainFair, FameLab, Science Talks am Zurich Film Festival, Café Scientifique und Nationaler Zukunftstag am Campus Irchel) und zwei neue Angebote lancieren: «Forscher*innen teilen Wissen» und «Einblicke in die Forschung mit Tieren».

2022 konnten wir eine bessere Bekanntheit von Life Science Zurich innerhalb und ausserhalb der Hochschulen erreichen. Die Anzahl Abonnenten der Newsletters nahm weiter zu, und unsere Social Media Follower wurden zahlreicher. Life Science Zurich wird zunehmend für verschiedene Anliegen angefragt (Vermittlung von Experten, Mitwirkung bei Outreach-Projekten in den Life Sciences an der UZH und ETH, Anfragen zur Unterstützung bei der Kommunikation von Veranstaltungen für die Öffentlichkeit usw.)

Das Labor des LSZ Learning Centers war mit Kursen für Schulklassen von der Primarschule bis zur Matura sowie Lehrerweiterbildungen weiterhin praktisch ausgebucht. Der Erfolg des Projekts «Mit dem ABC des Forschens»: Forschkisten zum naturwissenschaftlichen Denken und Handeln an der Volksschule, welches 2017 begonnen wurde, setzte sich fort. Die Forschkisten wurden weiterentwickelt und werden nun an pädagogischen Hochschulen angeboten.

Ein gut ausgelastetes Kursprogramm gab es auch an der Life Science Zurich Graduate School: Fast 700 Doktorierende unserer Trägeruniversitäten haben einen der 41 organisierten Kurse besucht und sich in den Bereichen «Gute wissenschaftliche Praxis und Ethik», «Methoden» und «Wissenschaftliches Schreiben und Kommunikation» weitergebildet oder ihre Sozial- und Selbstkompetenzen gestärkt.

Das Young Scientist Network kann ebenfalls auf ein erfolgreiches Jahr zurückblicken. Am letzten Zürich Life Science Day «Navigating the Career Maze» im Februar 2023 haben etwa 700 Personen teilgenommen. Auch die weiteren Veranstaltungen im Jahr 2022 waren gut besucht.

Eine solche Vielfalt an unterschiedlichen Projekten erfolgreich durchzuführen, ist nicht möglich, ohne Kooperation mit unterschiedlichen Partnern. Das Kernteam von Life Science Zurich besteht lediglich aus 8 Personen, die sich 410 Stellenprozente teilen. Viele Personen an den Hochschulen wie auch externe Partner unterstützen Life Science Zurich und tragen zu unseren vielfältigen Aktivitäten tatkräftig bei. Für das Engagement und die Unterstützung bedanken wir uns bei allen.

2. Allgemeines

Life Science Zurich ist eine gemeinsame Plattform der Universität Zürich und der ETH Zürich. Life Science Zurich (LSZ) besteht aus den Einheiten Learning Center, Graduate School, Communication & Events und dem Young Scientist Network. Ebenfalls zu Life Science Zurich gehört das von der ETH und UZH unabhängige Business Network. Mit Life Science Zurich lose verknüpft ist auch Open Innovations in Life Sciences (OILS).

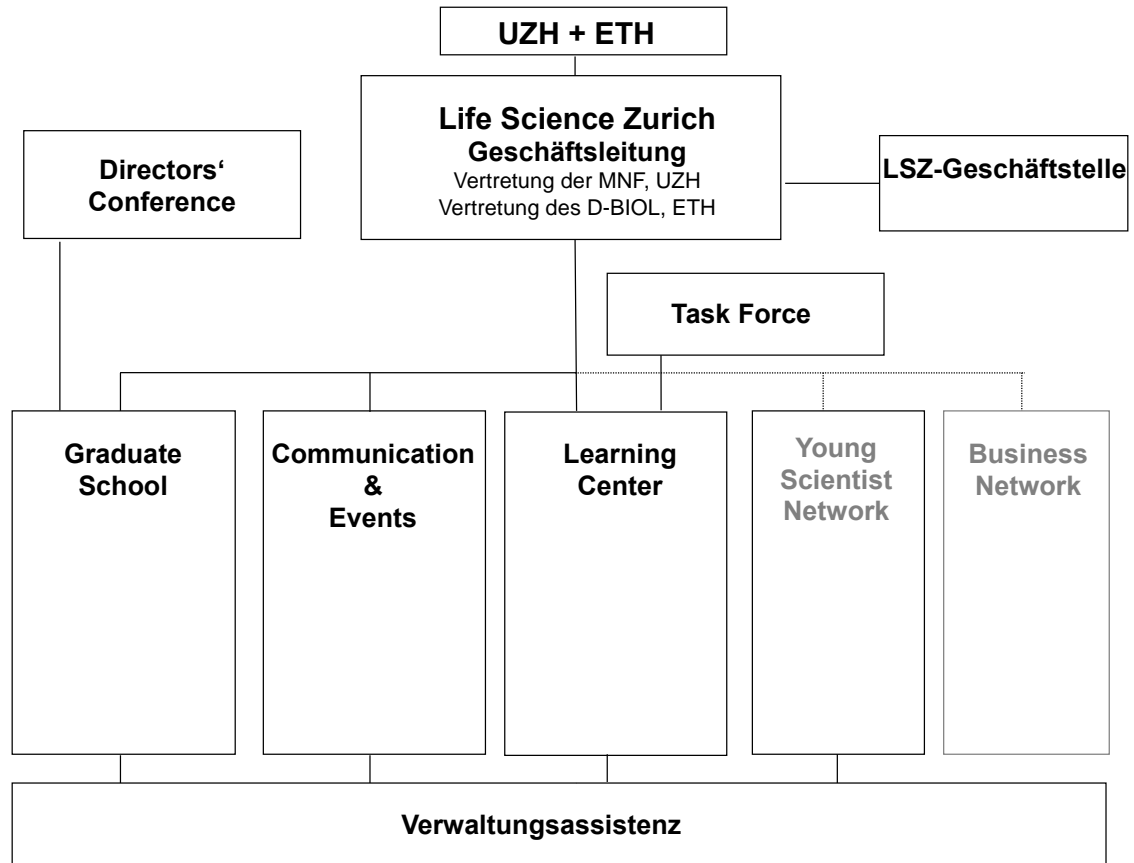
Life Science Zurich

- unterstützt und fördert den qualitätsorientierten und modernen Life Science-Unterricht von der Primarschule bis zur Sekundarstufe II (Life Science Zurich Learning Center)
- bietet weltweit eine der besten Doktorierendenausbildungen auf dem Gebiet der Life Sciences und bereitet junge Forschende darauf vor, Führungspositionen in Akademie, Industrie sowie im öffentlichen Sektor einzunehmen (Life Science Zurich Graduate School)
- fördert den Dialog zwischen Hochschulen, Öffentlichkeit und Industrie und schafft ein Klima von gegenseitigem Verständnis, Respekt und Vertrauen (Life Science Zurich Communication & Events)
- baut Kooperationsnetzwerke auf, in welchen die wichtigsten Akteure aus Akademie, Industrie und öffentlichem Sektor zusammenarbeiten (Life Science Zurich Business Network und Life Science Zurich Young Scientist Network)

Finanziell wird Life Science Zurich durch die Universität Zürich und die ETH Zürich getragen. Organisatorisch gehört die Einheit zum Fachbereich Biologie der mathematisch-naturwissenschaftlichen Fakultät der UZH. An der ETH ist LSZ teil des Departements für Biologie. Die strategische Führung obliegt der Geschäftsleitung, die sich aus je einem Vertreter oder einer Vertreterin der Universität Zürich (Prof. Thierry Hennet) und der ETH Zürich (Prof. Ernst Hafen bis März 2022, Prof. Paola Picotti ab April 2022) sowie den Verantwortlichen der einzelnen LSZ-Einheiten zusammensetzt.

Folgende Personen mit insgesamt 410 Stellenprozenten arbeiteten 2022 für Life Science Zurich:

- Susanna Bachmann, Koordinatorin LSZ Graduate School, 40 %
- Claudia Bischoff, wissenschaftliche Mitarbeiterin LSZ Learning Center, 60 %
- Michael Brügger, Laborant LSZ Learning Center, 10 %
- Alex Butschi, wissenschaftlicher Mitarbeiter LSZ Learning Center, 60 %
- Silvie Cuperus, Leiterin Communication & Events, 70 %
- Jochen Hilchenbach, Laborant LSZ Learning Center, 10 %
- Daniel Kiper, Leiter LSZ Learning Center, 80 %
- Helen Stauffer, Verwaltungsassistentin für LSZ Learning Center, Graduate School und Communication & Events, 80 %



3. Life Science Zurich Communication & Events

Dr. Silvie Cuperus



Im vergangenen Jahr konnte Life Science Zurich Communication & Events ein breites Programm verschiedener Aktivitäten und Veranstaltungen realisieren sowie zwei neue Angebote lancieren.

Jährliche stattfindenden Aktivitäten

- BrainFair seit 2009
- FameLab seit 2012
- Science Talks am Zurich Film Festival seit 2016
- Café Scientifique seit 2018
- Nationaler Zukunftstag am Irchel seit 2010

Neue Angebote

- Forscher*innen teilen Wissen
- Einblicke in die Forschung mit Tieren

3.1 Aktivitäten

BrainFair 2022 «Hirnverletzung»



Die BrainFair konnte erstmals wieder nach 2019 vor Ort durchgeführt werden. Die BrainFair Zürich wird jährlich im Rahmen der internationalen Woche des Gehirns von Life Science Zurich, dem Zentrum für Neurowissenschaften, der UZH, dem Universitätsspital und weiteren Partnern organisiert. Die BrainFair informiert die breite Öffentlichkeit über den aktuellen Stand in der Hirnforschung.

Die Veranstaltungsreihe widmete sich ausführlich dem Thema Hirnverletzung in vier Diskussionsforen und an einem Nachmittag mit Kurzvorträgen. Ein Parcours mit Betroffenen ermöglichte es den Besuchenden sehr eindrücklich zu erfahren, was es heisst, mit einer Hirnverletzung zu leben.

Themen der Diskussionsforen:

- **Hirnverletzung beim Kind**, mit Claudia Kuzan-Fischer (Universitäts-Kinderspital Zürich), Carla Raselli (Rehabilitationszentrum für Kinder und Jugendliche Affoltern a. A.) und Vanda Mathis (Verein Hilfe für hirnverletzte Kinder)
- **Schweres Schäden-Hirn-Trauma**, mit Emanuela Keller (USZ), Markus Oertel (USZ) und Christian Sturzenegger (Rehaklinik Bellikon)
- **Hirnschlag – wie wirksam sind heutige Therapien?**, mit Susanne Wegener (USZ), Mira Katan Kahles (USZ) und Zina-Mary Manjali (Schulthess Klinik)
- **Hirnschlag: Erstversorgung, Rehabilitation und Alltag**, mit Stefan Müller (Schutz und Rettung Zürich), Klemens Winder (USZ) und Katrin Rauen (Psychiatrische Universitätsklinik Zürich)

Ebenfalls haben in der BrainFair-Woche Forschende (PhD-Studierende, Postdoktorierende und Professoren und Professorinnen der ETH und UZH) online über verschiedenste Themen für Jugendliche referiert. Das Schulprogramm umfasste 21 Referate für Schülerinnen und Schüler im Alter von 12-18 Jahren. Am Schulprogramm haben 50 Gymnasial- und Berufsschulklassen mit insgesamt 800 Schüler*innen teilgenommen. (Siehe Anhang).

FameLab 2022



FameLab ist ein internationaler Science Slam - Wettbewerb für junge Forschende, der vom British Council ins Leben gerufen und gefördert wurde. Life Science Zurich koordiniert den nationalen Wettbewerb und organisiert die Vorrunde in Zürich sowie das nationale Finale. Als weitere Partner sind folgende Organisationen involviert: Science Slam Club der Universität Basel, Graduate Center der Universität Basel und das BioScience Network Lausanne. British Council hat sich als FameLab-Partner zurückgezogen, und eine [neue Webseite](#) wurde eingerichtet.

FameLab hat zum Ziel, neue Kommunikationstalente aus den Bereichen Naturwissenschaften, Mathematik, Ingenieurwissenschaften, Medizin und Psychologie auf der ganzen Welt zu entdecken und zu fördern. FameLab lädt junge Wissenschaftlerinnen und Wissenschaftler ein, einem breiten Publikum auf spannende und unterhaltsame Weise die Forschung des 21. Jahrhunderts näherzubringen. Das Format unterstützt jungen Forschenden, sich die notwendige Präsentationsfähigkeit anzueignen, um vor einem

Laienpublikum aufzutreten. Die Teilnehmenden haben 3 Minuten Zeit, um die Jury mit einer originellen und unterhaltsamen Präsentation zu überzeugen. Diese muss einerseits wissenschaftlich korrekt sein, soll andererseits aber auch ein Laienpublikum mitreissen. Wer den Schweizer FameLab-Ausscheidung gewinnt, nimmt am internationalen Wettbewerb teil.

FameLab Zurich fand Ende März per Einzelvideoaufnahmen am UZH Campus Irchel statt. Florence Steiner, PhD-Studentin, Psychologie UZH, Khushdeep Sharma, PhD-Student in Polymere Materialien, EMPA und Miguel Garcia, Postdoktorand in Neuroökonomie UZH haben die Vorrunde gewonnen. Die Jurymitglieder waren Daniel Kiper, Life Science Zurich, Gerhart Helmuth, D-BIOL ETH und Sara Carmignani, Facts & Reasons. Die Aufnahmen von allen Zürcher Beiträgen sind auf dem [Youtube-Kanal von LSZ](#) publiziert.

Das Final mit den 8 Finalist*innen fand am 23. September 2022 im PROGR in Bern statt. Natascha Hedrich, Postdoktorandin in Physik an der ETH ist der Gewinnerin von FameLab Switzerland 2022. Die Aufnahme des Finals ist auf dem [Youtube-Kanal von FameLab Switzerland](#) aufgeschaltet. Nach dem Event lud die britische Botschafterin Jane Owen in ihrer Residenz in Bern zu einem Empfang ein.

Science Talks am Zurich Film Festival

Gemeinsam mit dem Verein «Eye on Science» (EOS) konnte LSZ zum sechsten Mal während des Zürcher Film Festivals (ZFF) Science Talks zu ausgewählten Filmen aus dem Wettbewerb organisieren. Erstmals fanden die Talks «Science Check» im Anschluss an die Filmvorführungen im Kinosaal statt.



Filme und Expert*innen

- **«Fire of Love»**, Gespräch mit Oliver Bachmann, Professor für Vulkanologie, ETH
- **«Rubikon»**, Gespräch mit Oliver Ulrich, Luft- und Raumfahrtmediziner und Direktor des UZH Space Hub und Calista Fischer, Archäologin und Religionswissenschaftlerin, Leiterin Communication UZH Space Hub
- **«TikTok Boom»**, Gespräch mit Fabrizio Gilardi, Professor für Politikanalyse und Direktor des Digital Democracy Lab, UZH und Noemie Festic, Forscherin am Institut für Kommunikationswissenschaften, UZH
- **«Alpenland»**, Gespräch mit Irmi Seidl, Professorin und Leiterin der Forschungseinheit Wirtschafts- und Sozialwissenschaften, WSL und Bernhard Tschöfen, Professor für Kulturwissenschaftliche Raumforschung, UZH

Café Scientifique



Die Cafés fanden in der Coworking Lounge Tessinerplatz in Zürich statt. Sie boten interessierten Personen die Gelegenheit, sich in einer entspannten und unkomplizierten Atmosphäre von spannenden Themen aus Wissenschaft und Forschung inspirieren zu lassen. Nach einem kurzen Referat eines eingeladenen Gastes der UZH bzw. der ETH fand eine offene Diskussion mit dem Publikum statt. Die Cafés Scientifiques wurden über die Kanäle von Life Science Zurich sowie auf

Meetup ausgeschrieben. Die [Meetup Gruppe](#) umfasste knapp 1'000 Mitglieder. Die Cafés Scientifiques werden 2023 weitergeführt.

Sechs Cafés Scientifiques konnten 2022 realisiert werden:

- Montag, 11. April 2022 – **Evolutionary Medicine: A scientific look at our past, present... and future?** Mit Prof. Frank Rühli, UZH, 24 Teilnehmende
- Montag, 16. Mai 2022 – **Growing Brains: Studying the Building Blocks of Human Behaviors.** Mit Prof. Nora Raschle, UZH, 34 Teilnehmende
- Montag, 13. Juni 2022 - **The sustainable development goals as a framework for change.** Mit Janet Hering, EAWAG, 22 Teilnehmende
- Montag, 11. Juli 2022 – **Small(er) plastics, big(ger) problems?** Mit Prof. Denise Mitrano, ETH, 22 Teilnehmende
- Montag, 14. November 2022 – **Circulating tumor cells – understanding how cancer spread to design new therapies.** Mit Prof. Nicola Aceto, ETH, 23 Teilnehmende
- Montag, 12. Dezember 2022 – **Egopharmacology – can chronic substance influence social decision making?** Mit Prof. Boris Quednow, UZH, 18 Teilnehmende

Nationaler Zukunftstag am Campus Irchel



Der nationale Zukunftstag am Campus Irchel wird von Life Science Zurich gemeinsam mit Simone Tix (Biochemisches Institut, UZH), Irène Studer-Rohr (Institut für Chemie, UZH), und Katharina Müller (Science Lab UZH) organisiert. Der Nationale Zukunftstag wurde zum elften Mal auf dem Irchel Campus für Kinder von UZH-Mitarbeitenden angeboten. Er fand am 10. November statt. 133 Schülerinnen und Schüler der 5. bis 7. Klasse haben am Nachmittagsprogramm am Campus Irchel

teilgenommen. Die Kinder wurden entweder für zwei Ateliers von je einer Stunde eingeteilt oder sie konnten sich für einen Workshop anmelden.

Ateliers

- **Magnetismus – vom Kühlschrankmagneten bis zum Erdmagnetfeld**, Johannes Lade, Science Lab UZH
- **Leben in Meeren und Ozeanen**, Morana Mihaljevic, Science Lab UZH
- **Physiologie: Einblick in die Niere**, Carsten Wagner, Vartan Kurtsuoglu, Institut für Physiologie UZH
- **Schwerkraft – wie schwer bin ich auf dem Mond?**, Silvia Garbari, Science Lab UZH
- **Was Knochen über die Zweibeinigkeit erzählen**, Eveline Weissen, Anthropologisches Institut UZH
- **Impfen macht schützende Antikörper gegen Viren – wer hat die meisten Antikörper?** Amapola Manrique, Institut für Medizinische Virologie UZH

Workshops

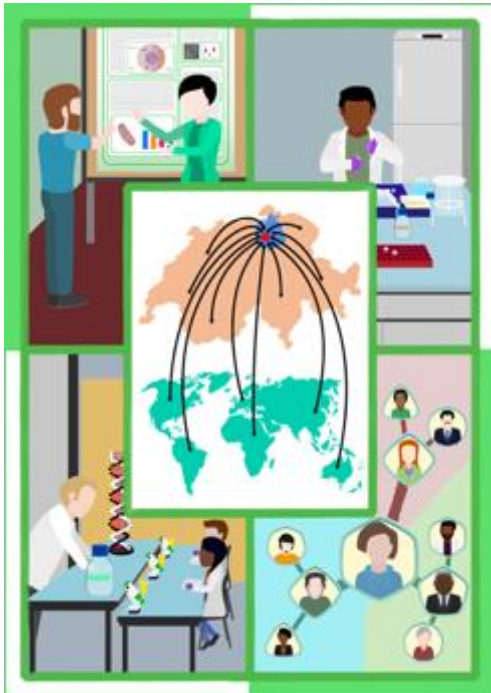
- «**Schlüsselanhänger aus dem 3D-Drucker: wie geht das?**» für Mädchen und Buben, Monika Kriemler und Olivia Pirolt, Hauptbibliothek
- «**Bau dir deinen eigenen Schaltkreis**» für Mädchen und Buben, Daniel Kiper, LSZ Learning Center
- «**Programmiere dein eigenes Computerspiel mit Scratch**» für Mädchen, Steve Rast, Biochemisches Institut
- «**Aus eins macht zwei - DNA Verdopplung und Zellteilung**» für Mädchen und Buben, Massimo Lopes und Jana Krietsch, Institut für Molekulare Krebsforschung
- «**Schichten Schichten und Farbiger Lavasprudel**» für Mädchen und Buben, Claudia Bischoff, LSZ Learning Center
- «**Chamäleonfarben aus Pflanzen**» für Mädchen und Buben, Susanne Juhnke, LSZ Learning Center
- «**Wasser im Wandel**» für Mädchen und Buben, Petra Seibert, Science Lab UZH



Ateliers am Zukunftstag (Fotos: Organisationsteam Campus Irchel)

Am Ende des Nachmittags trafen sich alle Kinder im Hörsaal für die Experimental-Vorlesung «Chemie» mit René Oetterli, Science Lab UZH. Das Programm des Zukunftstags mit den Ateliers, Workshops und der Vorlesung kam bei den Kindern sehr gut an.

20 Jahre Wissen teilen – 20 Jahre Life Science Zurich



Life Science Zurich feierte das 20-jährige Bestehen am 19. Mai an der ETH im Zentrum.

Welche Themen werden uns in der Life Science-Forschung und in der Wissenschaftskommunikation in Zukunft besonders beschäftigen? Wie kann die Stimme der Wissenschaft in der Gesellschaft und Politik gestärkt werden? Als LSZ vor 20 Jahren gegründet wurde, fehlten Informationen über wichtige, politisch relevante biowissenschaftliche Themen in der Bevölkerung. Die Covid-Pandemie hat gezeigt, dass Desinformation und Wissenschafts-Skepsis immer noch verbreitet sind. Wie können wir als Wissenschaftler*innen, als Hochschulen und als Institution diesen Herausforderungen begegnen? Diese und weitere Fragen haben wir mit unseren Referenten*innen und mit den Gästen diskutiert. Die Einladung wurde von Marco Garbelli, PhD-Student der LSZ Graduate School, gestaltet.

Referent*innen:

- Ernst Hafen, Prof. em. für Molekulare Systembiologie, ETH
- Alexandra Trkola, Professorin für Medizinische Virologie, UZH
- Lucie Kralickova, PhD-Studentin in Molekulare Systembiologie, ETH

Benedikt Meyer, Historiker und Autor, hat das Programm mit Science Slams umrahmt. Die Moderation des Anlasses hat Isabel Klusman, Leiterin des Zoologischen Museums UZH und ehemalige Leiterin von Life Science Zurich (bis 2017) übernommen.

Nach dem offiziellen Teil hat Life Science Zurich zu einen Apéro im Dozentenfoyer der ETH eingeladen. Knapp 100 Personen haben an der Jubiläumsveranstaltung teilgenommen.





Forscher*innen teilen Wissen



Ende 2022 wurde ein neues Angebot von LSZ lanciert. Mit [«Forscher*innen teilen Wissen»](#) informieren wir die Öffentlichkeit über aktuelle Forschungsthemen in den Biowissenschaften und ermöglichen gleichzeitig den Dialog mit dem Publikum. Unser Ziel ist es, aktuelle wissenschaftliche Themen durch persönliche Kontakte zu Forschenden leichter zugänglich machen. Schulklassen und weitere interessierte Gruppen können Online-Referate mit Forschenden aus dem Life Science-Bereich an der ETH und UZH buchen.

Referate zu folgenden Themen werden angeboten:

- **Humanbiologie – Medizin:** Hautkrebs, Prävention von Osteoporose und Knochenbrüchen, Appetitregulation und Obesitas
- **Humanbiologie – Neurowissenschaften:** Gehirn-Computer-Schnittstellen, Künstliche Intelligenz, Schlaganfall, Das neugierige Gehirn von Jugendlichen und sein Verhältnis zu Substanzen, Nervenzellen und Gedächtnis, Gehirnentwicklung und Lernen
- **Ingenieurwesen und Biologie:** Personalisierte Krebstherapie
- **Mikrobiologie- Bakterien und Viren:** Natürliche Feinde von Bakterien und wie wir diese für uns nutzen könn(t)en, Einfluss der Umgebung auf mikrobiologisches Wachstum, Labor vs. natürliche Nische, Bakterien aus dem Ozean - Naturstoffe und ihr Nutzen für uns

- **Molekular-und Zellbiologie und Biochemie:** RNA und Krankheit, Entstehung von Ribosomen, Computergestützter Arzneimittelentwurf, Dichte in der Zelle, CRISPR in Grundlagen- und Translationaler Forschung
- **Pflanzenwissenschaften – Ethnobotanik:** Meisterwurz und ethnobotanisches Wissen in Val d'Anniviers, Wallis
- **Physiologie und Anatomie:** Die Rolle des Nervensystems in der Hautregenerierung
- **Zoologie – Tierversuche:** Tierwohl, Tierschutz, 3R
- **Zoologie – Primatenforschung:** Geschlechterverhältnisse in nichtmenschlichen Primaten, Schutz von wilden Schimpansen und ihren Lebensräumen

Weitere Themen sollen folgen. Eine detaillierte Themenliste ist [hier](#) zu finden. Für 2023 wurden bereits vier Referate gebucht.

Einblicke in die Forschung mit Tieren



Die Universität Zürich lädt in Zusammenarbeit mit Life Science Zurich Gymnasialklassen ein, einen Blick hinter die Kulissen ausgewählter Labors zu werfen. Als spannende und lehrreiche Ergänzung des Unterrichts gedacht, zeigen die Wissenschaftler*innen auf, wie und zu welchem Zweck an der Universität Tierversuche durchgeführt werden, wie diese gesetzlich geregelt sind, und was alles für das Tierwohl unternommen wird. Selbstverständlich kommen dabei auch der Austausch und Dialog mit den jungen Besucher*innen nicht zu kurz.

Folgende Labors und Zentren öffnen ihre Türen für Besucher*innen:

- **Laboratory Animal Services Center:** Zucht und Haltung von Labormäusen- und Ratten, Gregor Fischer
- **Institut für Experimentelle Immunologie – Tumorigenese:** Brustkrebs-Metastasen mit Immunzellen eindämmen, Maries van den Broek
- **Institut für Molekulare Biologie – Neurobiologie:** Menschliche Krankheiten mit Zebrafischen erforschen, Stephan Neuhaus

Die Laborbesuche wurden Ende 2022 ausgeschrieben. Auf der [Website](#) sind weitere Informationen und die Termine aufgeschaltet. Die ersten vier Schulklassen haben sich für Besuche im Jahr 2023 angemeldet

Weitere Veranstaltungen

Life Science Zurich hat die Organisation und Durchführung folgender Tagungen und weiterer Veranstaltungen unterstützt und an verschiedenen den Anlässen teilgenommen.

Das **Science and Nature Festival Irchel** fand am 11. Juni 2022 statt. Life Science Zurich war mit dem Workshop des Learning Centers [«Vielfalt der Insekten»](#) am Programm beteiligt.



Als Mitglied des Advisory Boards von **Open Innovation in Life Sciences** (OILS) hat Silvie Cuperus die Planung und Organisation der [OILS conference](#) am 27. und 28. Oktober unterstützt. Life Science Zurich war mit einem Info-Stand am Networking Apéro präsent.

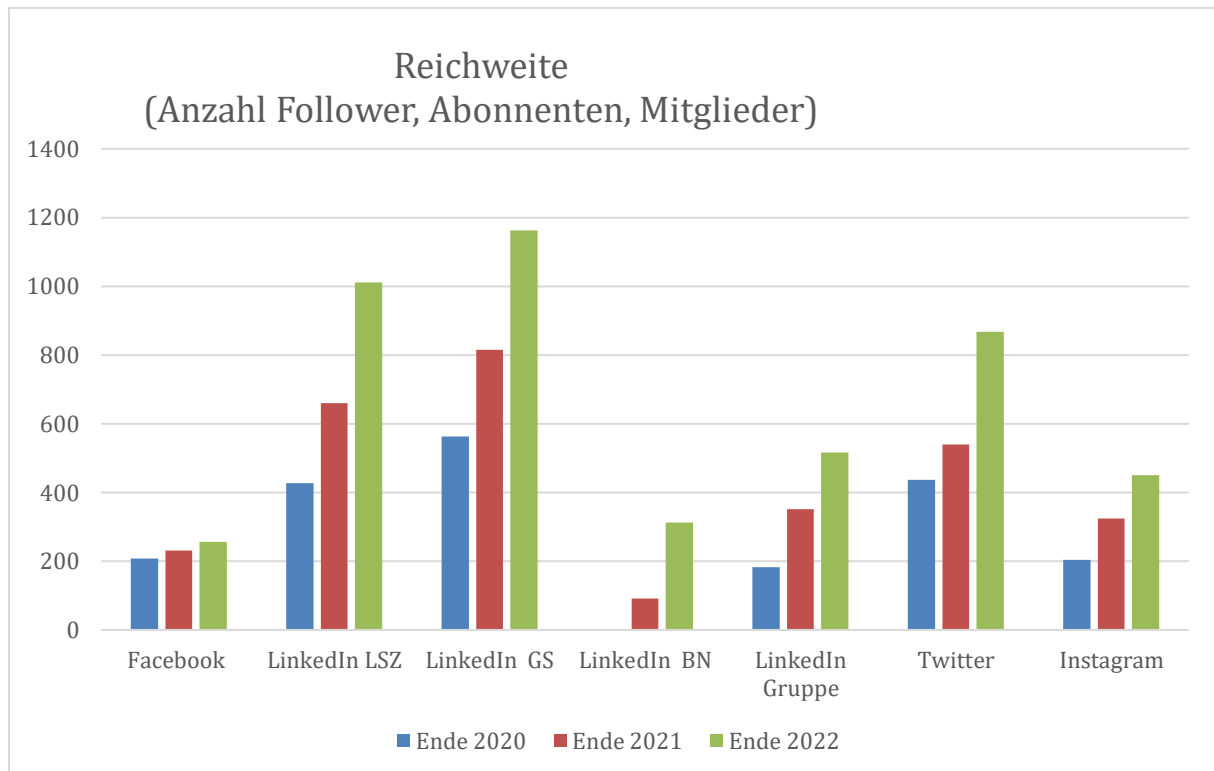
Planung und Ausblick 2023

Im Jahr 2022 wurden mit der Planung und Organisation folgender Aktivitäten begonnen.

- BrainFair 2023 zum Thema «Lernen bei Mensch und Maschine» in der dritten Märzwoche
- FameLab Switzerland 2023 mit Vorausscheidungen in Basel, Lausanne und Zurich
- Das fünfte Global Science Film Festival vom 31. März bis 2. April
- Ringvorlesung der Volkshochschule zum Thema «Mikrobiom» im April und Mai 2023
- Dritte Life Science Zurich Impact Konferen des LSZ Business Networks zum Thema «Data for Health» am 23. Mai 2023 im Technopark Zürich

3.2 Social Media

Life Science Zurich ist auf verschiedenen Social Media-Plattformen aktiv und führt folgende Kanäle: Facebook, LinkedIn LSZ, LinkedIn Graduate School, LinkedIn Business Network, Twitter und Instagram. Die Reichweite der Social-Media-Kanäle ist in der folgenden Graphik dargestellt.



Am meisten Follower verzeichnet LinkedIn. Alle drei Seiten (Graduate School, Life Science Zurich und Business Network) hatten zusammen Ende 2022 knapp 2'500 Abonnent*innen, was einer Steigerung um 1'000 Personen gegenüber Ende 2021 entspricht. Im vergangenen Jahr wuchs die LinkedIn-Gruppe von 350 auf über 500 Mitglieder.

Auf Facebook führt LSZ noch zwei weitere Seiten, eine für die Cafés Scientifiques und eine für die BrainFair. Auf dem Youtube-Kanal von Life Science Zurich finden sich die Aufnahmen der FameLab Talks. Insgesamt erreichten wir auf Social Media regelmässig etwas über 4'500 Personen.

3.3 Netzwerke / Kommissionsarbeit / Kontakte und weitere Aufgaben

Silvie Cuperus ist Mitglied folgender Netzwerke und Kommissionen:

- **Netzwerk Kommunikation der UZH** (Jürg Dinner und UZH-Kommunikationsteam): Austausch zwischen der Abteilung Kommunikation, den Kommunikationsbeauftragten der Fakultäten, dem Bereich Lehre, der Personalabteilung und LSZ. 3 - 4 Treffen pro Jahr.
- **MNF Arbeitsgruppe Kommunikation** (Calista Fischer): Austausch zwischen den Kommunikationsbeauftragten der MNF-Fachbereiche, den Ständevertretungen und LSZ, Science Lab UZH und den Museen. Ca. 4 Treffen pro Jahr.
- **MNF-Kaderkonferenz der UZH** (Roland Sigel & Stab): Austausch zwischen Institutsdirektorien und Institutsgeschäftsführungen der MNF. 2 Treffen pro Jahr.
- **Netzwerk Hochschulkommunikation ETH** (Team der ETH-Hochschulkommunikation): Austausch zwischen der Hochschulkommunikation und den Kommunikationsbeauftragten der Departemente in Form von Lunch-Box-Veranstaltungen zu spezifischen Themen. 2-3 Treffen pro Jahr.
- **Kommission UZH-interdisziplinär**, die den Auftrag hat, den interdisziplinären Dialog mit einer breiteren Öffentlichkeit zu fördern. Die Kommission organisiert und finanziert jedes Semester die Ringvorlesungen von Angehörigen der Universität Zürich mit explizit interdisziplinärer Ausrichtung. 1-2 Kommissionssitzungen pro Semester. [Webseite](#)
- **Senat UZH**, welcher zuhanden des Universitätsrates den Antrag auf Wahl und Entlassung der Rektorin oder des Rektors sowie der Prorektorinnen und Prorektoren stellt. Er kann zu Fragen von gesamtuniversitärer Bedeutung Stellung nehmen. 1-2 Senatsitzungen im Jahr. [Webseite](#)
- **Steuergruppe feminno**, Karriere-Programm zur Förderung von Frauen in Life Science-Disziplinen. Das Programm wird vom Zurich-Basel Plant Science Center realisiert. 2-3 Treffen pro Jahr. [Webseite](#)
- **Advisory Board Open Innovation in Life Sciences (OILS)**. Der Verein setzt sich für Open Science und Open Innovation an der Universität Zürich und ETH Zürich ein. Er besteht aus jungen Wissenschaftler*innen in den Life Sciences, von Student*innen bis PostDocs an beiden Zürcher Hochschulen. Der Advisory Board trifft sich halbjährlich. [Webseite](#)

Weitere Aufgaben von LSZ Communication & Events sind der Ausbau und die Pflege der Webseiten, sowie das Erstellen und der Versand des LSZ-Newsletters auf Deutsch und Englisch und des Newsletters des Learning Centers (auf Deutsch). Der LSZ-Newsletter erscheint alle zwei Monate und geht an ca. 1'500 Interessierte (25 % mehr als 2021). Der Learning Center-Newsletter wird zwei mal jährlich versendet und erreicht etwa 370 Personen. Hier können die Newsletters abonniert werden: [Life Science Zurich Deutsch](#), [Life Science Zurich English](#), [Learning Center](#).

Anhang 1: BrainFair



Lernen bei Mensch und Maschine

Haben Sie sich schon mal gefragt, wie wir lernen?

Wir wissen, dass unser Gehirn aus einem Netzwerk von Nervenzellen besteht und dass sich dieses Netzwerk anpassen muss, um das Lernen zu ermöglichen. Doch die Mechanismen, die diese Prozesse regulieren, werden noch intensiv erforscht: Welche Rolle spielen genetische Faktoren und Erfahrungen, die wir in unserem Leben sammeln? Wie wird Wissen im Gehirn abgespeichert? Welche Nervenzellen werden beim Lernen verstärkt oder abgeschwächt? Und warum zeigen einige Kinder Entwicklungsverzögerungen oder eine Leseschwäche?

Die Universität Zürich möchte diese Fragen beantworten und hat dafür im Jahr 2021 den Universitären Forschungsschwerpunkt «Plastische Hirnnetzwerke für Entwicklung und Lernen» (UFSP AdoBD – Adaptive Brain Circuits in Development and Learning) gestartet. Die Erkenntnisse aus diesem Schwerpunkt werden helfen, Diagnose und Therapie von Lernstörungen zu verbessern.

Ein grösseres Wissen über biologische Lernprozesse soll zudem dazu beitragen, lernende Maschinen nach biologischen Vorbild weiter zu verbessern. Die Algorithmen der Künstlichen Intelligenz lösen heute zwar einige Aufgaben schon sehr gut, sie können aber noch bei weitem nicht die ganze Komplexität menschlichen Denkens und Lernens nachbilden.

Die BrainFair 2023 wird gemeinsam mit dem UFSP AdoBD organisiert – damit sind wir ganz nah an der aktuellen Forschung zum Thema Lernen. Kommen Sie vorbei und diskutieren Sie mit!

Diskussionsforen

Wie lernt unser Gehirn? – Einfluss von Genen, Umwelt und Erziehung

Montag, 13. März, 18.30 – 20.30

Grosser Hörsaal NORD1, D 304

Mit Esther Stoeckli (Direktorin des UFSP AdoBD, Neurobiologin, UZH), Roxandra Bachmann-Gagescu (Genetikerin, UZH) und Nora Raschle (Neuropsychologin, UZH)
Moderation: Marina Villa (Medientrainerin)

Buchstabensuppe und Zahlsalat: Wie entstehen Lernstörungen und was hilft?

Dienstag, 14. März, 18.30 – 20.30

Grosser Hörsaal OST, HOER B10

Mit Karin Kucian (Neurobiologin und Expertin für Rechenstörungen, Kinderspital Zürich), Silvia Brem (Neurobiologin und Expertin für Lese-Rechtschreibschwäche, UZH) und betroffenen Familien.

Moderation: Isabel Klusman (Wissenschaftskommunikatorin)

Im Foyer: Die Firma Alemina demonstriert die Programme Calcularia und Orthograph, Lernsysteme im Bereich der Grundfertigkeiten in Mathematik und Rechtschreibung.

Lernen und entscheiden Menschen anders als Tiere?

Mittwoch, 15. März, 18.30 – 20.30

Grosser Hörsaal NORD1, D 304

Mit Fritjof Helmchen (Direktor des UFSP AdoBD, Neurowissenschaftler, UZH), Christian Ruff (Kognitionswissenschaftler, UZH), Valeria Manhe (Neuroinformatikerin, UZH/ETH) und Anja Zai (Neuroinformatikerin, UZH/ETH)
Moderation: Monika Schärer (Kulturjournalistin)

Wie hilft uns Künstliche Intelligenz in der Medizin?

Donnerstag, 16. März, 18.30 – 20.30

Grosser Hörsaal NORD1, D 304

Mit Victor Staartjes (Neurochirurg, USZ), Sandrine Zweifel (Augenärztin, USZ) und Markus Christen (Neuroinformatiker und Ethiker, UZH)
Moderation: Marina Villa (Medientrainerin)

Lernende Maschinen und Bewusstsein

Freitag, 17. März, 18.30 – 20.30

Grosser Hörsaal NORD1, D 304

Ausschnitte aus dem Film «The Brain – Cinq Nouvelles du Cerveau» mit deutschen Untertiteln. Anschliessende Diskussion mit Benjamin Grewe (Neuroinformatiker, UZH/ETH) und Wolfgang von der Behrens (Neurobiologe, UZH/ETH)
Moderation: Monika Schärer (Kulturjournalistin)

Kurzvorträge

Samstag, 18. März, 11.00 – 13.00 und 14.00 – 15.40

Grosser Hörsaal NORD 1, D 304

Forschende berichten über die neuesten Resultate ihrer Arbeit und diskutieren mit dem Publikum.

Moderation: Isabel Klusman und Cornelia Schaut

11.00 – 11.20

Lernen von der Wiege an

Lea Mörsdorf (Entwicklungspsychologin, UZH)

11.20 – 11.40

Menschen lernen bewusst und unbewusst

Katharina Henke (Neuropsychologin, Universität Bern)

11.40 – 12.00

Lernen und Schlaf

Reto Huber (Neurobiologe, Kinderspital Zürich)

12.00 – 12.20

Ein Leben lang neue Hirnzellen aus Stammzellen

Coro Olpe (Stammzellforscherin, UZH)

12.20 – 12.40

Dybuster: Ein Lernprogramm für Personen mit Lese- und Rechenschwächen

Markus Gross (Informatiker, ETH)

12.40 – 13.00

The Beautiful Brain – Stem Cells & Columns

Film auf Englisch mit deutschen Untertiteln.
Regie: Lorenzo Gesuita (Neurowissenschaftler, UZH)

Pause

14.00 – 14.20

Arbeitsgedächtnis – die Drehscheibe des Denkens

Klaus Oberauer (Kognitionspsychologe, UZH)

14.20 – 14.40

Wie menschliche und künstliche Intelligenz sich ergänzen können

Menna El Assady (Informatikforscherin, ETH)

14.40 – 15.00

Wie sich Synapsen selbst stabilisieren

Marin Müller (Neurowissenschaftler, UZH)

15.00 – 15.20

Störungen der kognitiven Entwicklung: Früherfassung und -förderung

Michael von Rhein (Kinderarzt, Kinderspital Zürich)

15.20 – 15.40

The Beautiful Brain – Cell Migration & Towers

Film auf Englisch mit deutschen Untertiteln.
Regie: Lorenzo Gesuita (Neurowissenschaftler, UZH)

Referate des Schulprogramms

Datum	Zeit	Referent	Thema / Titel
Mo, 14. März 2022	11:15 - 12:00	Ariane Orosz	Stress und Stressbewältigung im Körper
	11:15 - 12:00	Paulina Scheuren	Neuropathische Schmerzen: Die unsichtbaren Folgen einer Querschnittlähmung
	12:30 - 13:15	Newsha Ghasemi	Warum Ablenkung für unser Gehirn verlockend ist.
	12:30 - 13:15	Martin Müller	Von Fliegenhirnen lernen?
	16:00 - 16:45	Boris Quednow	Das neugierige Gehirn von Jugendlichen und Drogen
Di, 15. März 2022	11:15 - 12:00	Miriam Kretschmer	Epigenetische Vererbung von stressbedingten Krankheiten.
	11:15 - 12:00	Mirella Manfredi	Humour in learning context
	12:30 - 13:15	Johannes Sarthein	Was uns einzelne Nervenzellen über unser Gedächtnis verraten.
	12:30 - 13:15	Edna Grünblatt	Erforschung der Neuroentwicklungsstörung ADHS: Modellierung mit Hilfe personalisierter induzierter pluripotenter Stammzellen.
	16:00 - 16:45	Céline Steger & Alexandra De Silvestro	Herz und Hirn: Beeinflusst ein Herzfehler die Entwicklung des Gehirns?
Mi 16. März 2022	11:15 - 12:00	Florence Steiner	Versteckt und trotzdem nicht unsichtbar - Wie wir ins Gehirn sehen und seine Funktionsweise untersuchen
	12:30 - 13:15	Laura Meine	Welche Rolle spielen Prozesse im Gehirn bei der Stressbewältigung?
Do, 17. März 2022	11:15 - 12:00	Hendrik Heiser	Geheimnisvolles Gedächtnis – Wie unser Gehirn lernt und vergisst
	11:15 - 12:00	Kathi Ging	Using the CRISPR technology to identify genes modifying the activity of a lysosomal enzyme involved in Parkinson Disease
	12:30 - 13:15	Nora Raschle	Krach machen - das jugendliche Gehirn im Umbau
	12:30 - 13:15	Sim Jae Hoon	Objective assessment of middle-ear surgeries
	16:00 - 16:45	Carl Zipser	Leben mit Querschnittlähmung: wie geht das, wenn nichts geht?
Fr, 18. März 2022	11:15 - 12:00	Amelie Haug	MRI und Gehirn-Computer-Schnittstellen
	11:15 - 12:00	Imre Kertesz	Kommunikation im Gehirn
	12:30 - 13:15	Hendrik Heiser	Wenn Maschinen wie Gehirne lernen – Wie sehr Alexa, FaceID & Co. von unserem Gehirn inspiriert sind
	16:00 - 16:45	Peter Brugger	Zufall und Gehirn

4. Life Science Zurich Graduate School

Dr. Susanna Bachmann



Photos: ETH Zürich

4.1 Executive summary

While the Covid-19 pandemic phased out and was officially declared as “ended” in Spring 2022, the next disaster had already surged: with Russia waging war against Ukraine, a lurking energy crisis and soaring inflation rates, there was no return to “normality” as it was known before the Corona virus hit. Though the daily business of the Life Science Zurich Graduate School (LSZ GS) was not affected in the same direct way as during the pandemic, there was also no atmosphere of departure to be experienced, as we might have hoped for.

In the year 2022, the Life Science Zurich Graduate School did not undergo any major organizational changes, there are still 16 PhD programs and one MD-PhD program assembled under the roof of the Graduate School. At present, 1'660 early stage researchers are performing their doctorate in a program affiliated with the LSZ GS (as of 31 December 2022). Compared to 2021, the number of doctoral students increased within the usual scope of the last years (1'655). 60% of our doctoral students are female and more than 71% came from abroad. 66% of them are enrolled at the University of Zurich, 32,5% at ETH Zurich and 1.5% at other academic institutions in Switzerland (mainly at the Universities of Basel and Berne).

The LSZ GS had already gained quite some experience with the organization of the two-step recruitment with a first, virtual round of “lab visits” and a second, optional round of in-person meetings. On-site visits were for both rounds clearly more numerous than the year before with travel and gathering restrictions in place, and the LSZ GS stuck to its established scheme of individual lab visits instead of inviting all candidates for the same dates to Zurich as it was usual before the pandemic. Although the Program Directors' Conference (PDC) had already decided unanimously in November 2021 to keep the 2-step intake in place for the time being, PIs and candidates are not entirely satisfied with the individual lab visits, which elongates the already long-lasting intake process unnecessarily. Therefore, the recruitment shall again undergo some adaptations in the coming year, but it is not yet determined whether minor changes will suffice or whether the course of action needs a profound overhaul.

In general, the recruitment numbers are a bit a mixed bag of downward and upward trends. In 2022, the application numbers (1'458) were slightly higher for the 1 July deadline compared to the previous December 2021 round (1'259) and the following December 2022 intake (1'300). Overall, the numbers were a bit lower than the year before. Nevertheless, the LSZ GS is not too concerned about this trend. On the one hand, many competitor programs in Europe experienced the same dip in 2022, for some of them it was in fact rather pronounced. On the other hand, fluctuating numbers seem to be the only stable continuum of the recruitment process. All in all, the matching rates and those of the filled positions are a bit on the lower side but still within the average of past years. We shall see whether the planned adaptations of the recruitment process will have positive effects on these rates.

With 41 transferable skills courses and 696 participants the LSZ GS reached again the level of the pre-pandemic years. 12 courses were jointly offered together with a doctoral program or another university institution. After the pandemic years, many participants enjoyed the personal exchange and the possibility to meet again on campus. Nevertheless, the Graduate School will continue to offer some of its courses in online format. Mainly so, if the topic is well suited for remote teaching and the facilitator can save a trip, and with this carbon emission, to come to Zurich.

4.2 Introduction

The idea to found a graduate school that houses all the different PhD programs in the Life Sciences offered at the University of Zurich and the ETH Zurich came up in September 2005. On 8 December 2005, the Life Science Zurich Graduate School was officially launched and became an autonomous branch of the Life Science Zurich Initiative. The LSZ Graduate School currently consists of seventeen highly competitive PhD programs. Thanks to a strong teaching curriculum and a clear mentoring system these programs attract the best students worldwide.

4.2.1 Mission

The aim of the Life Science Zurich Graduate School is to promote first-class graduate education in the life sciences at the University of Zurich (UZH) and the ETH Zurich (ETH). The LSZ GS offers centralized services (e.g. recruitment administration, assistance in identifying new funding possibilities) and products (e.g. transferable skills courses) that support established PhD programs and facilitate the development of new programs in the Life Sciences. The centralized administration of these services enables the individual PhD programs to focus on the education of their graduate students within the respective research fields. The individual PhD programs are thereby relieved of administrative tasks and ensuing costs in areas not directly related to their specific research fields.

Specifically, the Life Science Zurich Graduate School aims:

- to increase the visibility and attractiveness of the LSZ-PhD programs world-wide in order to reach excellent undergraduates who consider doing a PhD in the life sciences
- to initiate the recruitment process to attract the best students internationally
- to improve the coordination of recruitment, avoiding redundant reviews of applicants
- to support the development of new PhD programs
- to improve the coordination of teaching for PhD programs with common areas of interest and/or curricula
- to support the PhD programs by providing a centralized course program in relevant transferable skills for all graduate students
- to provide support on career development for the graduate students; alumni of the LSZ GS should be equipped with the key attributes for successfully entering the competitive job market in the life sciences
- to identify and pursue new funding opportunities for the Graduate School and its member PhD programs (e.g. European funding, foundations, SNF)
- to ensure *quality* and *sustainability* of the services and products of the LSZ GS

**The LSZ Graduate School:
a family of PhD programs spanning the Life Sciences**

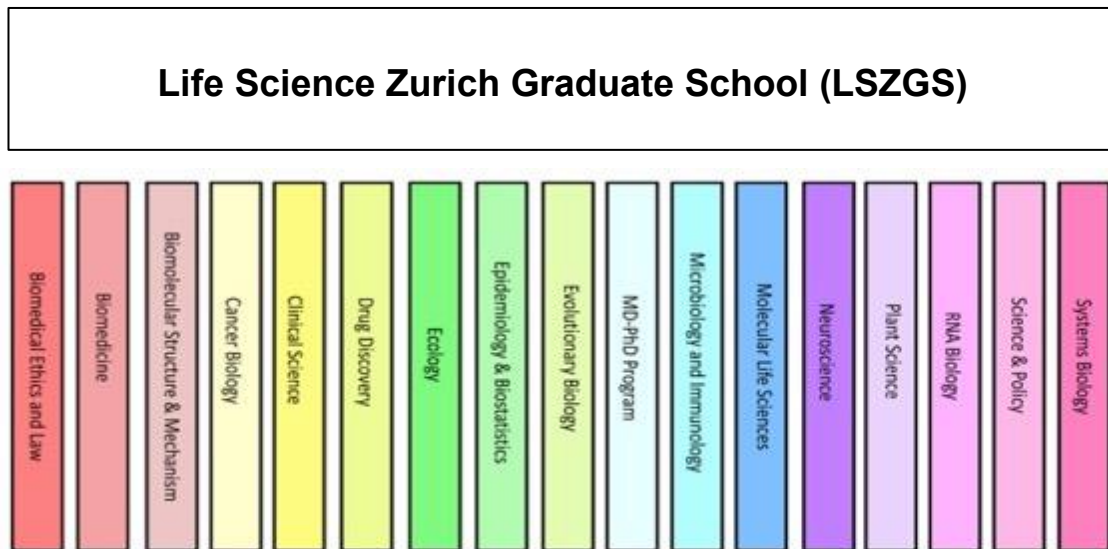


Figure 1: Chart of the LSZ Graduate School PhD programs

Numbers: •16 PhD programs and 1 MD-PhD program • over 500 research groups • more than 1600 students

4.2.2 Strategy and products of the LSZ GS

The major units of the LSZ GS are:

- LSZ GS Directors' Conference (program directors from each PhD program form the steering committee)
- PhD programs
- Graduate School office: administration

Table 1: Roles and responsibilities of the LSZ GS units

Unit	Roles and responsibilities
LSZ GS steering committee	<ul style="list-style-type: none">• Strategic development of LSZ GS• Advice and support for the PhD programs and GS administration• Development of common criteria for quality assurance of the PhD programs• Promotion of relevant contacts within the scientific community of life sciences• Identification of common course needs• Development of a transferable skills curriculum• Identification and development of joint funding initiatives
PhD programs	<ul style="list-style-type: none">• Evaluation and acceptance of students into the program• Development, implementation and funding of a discipline-specific graduate curriculum• Quality assurance• Fundraising for a specific PhD program• Tracking development of the students within each program• Funding travel expenses and accommodation for interview candidates from abroad
Graduate School office	<ul style="list-style-type: none">• Increasing visibility of the PhD programs world-wide• Advertising the graduate school and its recruitment procedure (advertisements on web platforms, posters etc.)• Coordination of the recruitment process (application forms, internal and external communication, i.e. information to PI and to candidates)• Organization of interviews• Funding for PR, the common application platform and the transferable skill courses• Development and maintenance of the LSZ GS web site for dissemination of information• Financial planning and financial controlling of the LSZ GS activities (esp. recruitment and courses)• Advice and support for the development of new programs (practical procedures, know-how transfer)• Fundraising for LSZ GS in areas <i>independent</i> of a specific research field (e.g. for common activities or for fellowships for students from a specific country)• Development and organization of a centralized Transferable Skills Course Program for all graduate students, including acquisition, commitment and support of internal and external facilitators, advertising the courses (GS web site) and coordinating sign-up• Support for the career development of graduate students (courses, activities, web-information)• Assurance of quality and sustainability of the services and products of the LSZ GS office• Exchange and collaboration with other units of the Life Science Zurich• Exchange and collaboration with other graduate schools, both in- and outside of Zurich

4.2.2 a) LSZ GS Steering committee and participating PhD programs

With the fusion of the Integrative Molecular Medicine (imMed) and the Molecular and Translational Biomedicine (MTB) program to the new Biomedicine (BioMed) program that was approved in May 2019 by the PDC, the Life Science Zurich Graduate School got reduced to sixteen PhD programs and a MD-PhD program. Each program is presided by a director, who generally represents the program in the steering committee (see list below). In 2022, this steering committee met twice in order to decide on the strategic orientation and development of the Graduate School. Since July 2017, Prof. Eilika Weber-Ban, Institute of Molecular Biology and Biophysics (ETH) is presiding the LSZ GS as chair. Prof. Alex Hajnal, Institute of Molecular Life Sciences (UZH) is the current vice-chair.

Table 2: Directors of the LSZ GS PhD programs

Program	Director
Biomedical Ethics and Law [medical track]	Prof. Nikola Biller-Andorno (Institute of Biomedical Ethics, UZH)
Biomedicine	Prof. Christian Grimm (Division of Ophthalmology, USZ) Prof. Katrien de Bock (as of 2023) Prof. Christian Wolfrum (until end of 2022) (Institute of Food, Nutrition and Health, ETH)
Biomolecular Structure and Mechanism (BSM)	Prof. Martin Jinek (Institute of Biochemistry, UZH)
Cancer Biology	Prof. Maries van den Broek (Institute of Experimental Immunology, UZH)
Clinical Science	Prof. Dr. med. Beatrix Latal (Children's hospital Zurich)
Drug Discovery	Prof. Michael Arand (Institute of Pharmacology and Toxicology, UZH)
Ecology	Prof. Anna-Liisa Laine (Institute of Evolutionary Biology and Environmental Studies, UZH)
Epidemiology & Biostatistics	Prof. Torsten Hothorn (Institute of Social and Preventive Medicine, UZH) Prof. Milo Puhan (Institute of Social and Preventive Medicine, UZH)
Evolutionary Biology	Prof. Kentaro K. Shimizu (Department of Evolutionary Biology and Environmental Studies, UZH)
MD-PhD Program	Prof. Adriano Aguzzi (Institute of Neuropathology, UZH) Prof. Alexandra Trkola (Institute of Medical Virology, UZH)
Microbiology & Immunology (MIM)	Prof. Rolf Kümmerli (Department of Quantitative Biomedicine, UZH) Prof. Jörn Piel (Institute of Microbiology, ETH)

Program	Director
Molecular Life Sciences (MLS)	Prof. Ohad Medalia (Department of Biochemistry, UZH)
Neurosciences (ZNZ)	Dr. Wolfgang Knecht (Institute of Brain Research, UZH)
Plant Science (PSC)	Prof. Samuel Zeeman (Institute of Agricultural Science, ETH)
RNA Biology (RNA)	Prof. Frédéric Allain (Institute of Biochemistry, ETH)
Science and Policy	Prof. Ueli Grossniklaus (Institute of Plant Biology, UZH)
Systems Biology	Prof. Uwe Sauer (Institute of Molecular Systems Biology, ETH) Prof. Jörg Stelling (Department of Biosystems Science and Engineering, ETH)

Program administrators, who are in charge of day-to-day affairs, normally also participate in steering committee meetings, although without voting rights. They have their own meetings to discuss more practical issues as well as administrative matters. They get together irregularly throughout the year and gather also informally for lunch or coffee. The following persons currently act as program administrators:

Table 3: Administrators of the LSZ GS PhD programs

Program	Administrator
Biomedical Ethics and Law [medical track]	Dr. Roberto Andorno Michelle Heimgartner (Institute of Biomedical Ethics, UZH)
Biomedicine (BioMed)	Andrea Schmitz (ZIHP, UZH)
Biomolecular Structure and Mechanism (BSM) Cancer Biology	Judita Tillova (Institute of Biochemistry, UZH) Bettina Rausch (Institute of Molecular Cancer Research, UZH)
Clinical Science	Lea Schwab (Dean's Office of the Faculty of Medicine UZH)
Drug Discovery	Susanne Holliger (Institute of Pharmaceutical Sciences, ETH) Olga von Niederhäusern (Institute of Pharmacology and Toxicology, UZH)
Ecology	Dr. Debra Zuppinger-Dingley (Institute of Evolutionary Biology and Environmental Studies, UZH)
Epidemiology & Biostatistics	Dr. Marco Kaufmann (since July 2022) Dr. Sarah Ziegler (until July 2022) (Institute of Social and Preventive Medicine, UZH)
Evolutionary Biology	Dr. Tony Weingrill (Anthropological Institute, UZH)
MD-PhD Program	Artemi Bendandi (since July 2022) Jacqueline Wiedler (until July 2022) (Institute of Neuropathology, UZH)
Microbiology & Immunology (MIM)	Judith Zingg (Institute of Microbiology, ETH)
Molecular Life Sciences (MLS)	Dr. Susanna Bachmann (Institute of Molecular Life Sciences, UZH)
Neurosciences (ZNZ)	Heidi Gauss (Neuroscience Center Zurich, UZH & ETH)
Plant Science (PSC)	Dr. Melanie Paschke Dr. Luisa Last Dr. Yvonne Steinbach (Institute of Plant Science, ETH)
RNA Biology (RNA)	Rahel Büchi (Institute of Biochemistry, ETH)

Program	Administrator
Science and Policy	Dr. Luisa Last (Institute of Plant Science, ETH)
Systems Biology	Dr. Andrea Huber Brösamle Swantje Pless (until February 2022) Simone Zuber (since February 2022) (Department of Biosystems Science and Engineering, ETH)

Graduate School student body 2022

Table 4: Graduate School Student Body

Details of each program are published in the appendix 2.

Total numbers as of 31 December 2022	
Total students	1664
Affiliated at UZH	1095
Affiliated at ETH	539
Other affiliation	31
Track I students	568
Track II students	1096
Female students	801*
Male students	540*
International students	952*
Swiss students	378*
Program drop-outs	82*
Completed PhD	247*
Program alumni	2909*

* - without the data from Neuroscience Program

4.2.2 b) Graduate School office

Since 1 April 2006, the Graduate School has its own administrative office. Dr. Susanna Bachmann is employed on a part-time basis of 40% and attends the day-to-day business of the LSZ GS. Since June 2011, Helen Stauffer is working as assistant for Life Science Zurich. She dedicates about 25% of her employment to the LSZ GS.

The school administrator attended the coordinator meeting in Barcelona from 10 to 11 November. Furthermore, she met in Frankfurt with the other members of the GRADE (Goethe Research Academy for Early Career Researchers) advisory board on 28 November for the annual encounter.

In addition, she attended a webinar on "Virtual Conferences" organized by the Graduate Campus of the University of Zurich on 17 March. Later that month she followed as a guest the LERU Doctoral Studies Policy Group Meeting that was held in Zurich. As in the years before the pandemic she participated in the D-BIOL symposium in Davos from 13-15 June. Towards the end of the year, on 23 November, she took part in the PRIDE webinar on Scientific Integrity.

4.3 Activities

4.3.1 Recruitments

As in former years, for both recruitment rounds the applicants of the Indian subcontinent (India, Pakistan and Bangladesh) formed the largest group (approximately 1/4 of all applicants of the December and the July deadline). They were followed by students from China, Iran Italy, Nigeria and Germany in varying order for the two deadlines (see appendix 3).

Table 5: Complete applications per PhD program in 2022

	1 Dec. 2021	1 July 2022	1 Dec. 2022
Biomedical Ethics and Law (med. Track)	no data	no data	no data
Biomedicine	79	108	90
Biomolecular Structure and Mechanism	56	33	37
Cancer Biology	203	186	210
Clinical Science	20	63	12
Drug Discovery	80	88	99
Ecology	28	39	37
Epidemiology and Biostatistics	63	149	64
Evolutionary Biology	12	12	17
Microbiology and Immunology	172	222	210
Molecular Life Sciences	176	187	200
Neuroscience	170	138	153
Plant Science	75	121	56
RNA Biology	24	28	23
Science and Policy	34	20	12
Systems Biology	66	58	76
TOTAL	1258	1452	1296

A glance at the total of application numbers in figure 2 makes it obvious that these numbers are constantly varying and it is difficult to find a satisfying answer why there is such steady boom and bust. Nevertheless, the constant up and down moved for the past two years in more or less the same range of 1'200 complete applications for the winter round and roughly 200 applications more for the summer round. From other European programs in the Life Sciences we know that many of them experienced a pronounced dip of application numbers in 2022. Although the Life Science Zurich Graduate School was spared dramatic decreases, we clearly did not reach the peaks of 2020, the first pandemic year. Whether the following dips have to do with the difficulties of planning and travelling or whether they are rather an expression of a general depression or fatigue caused by the imponderabilities of the pandemic for this cohort of applicants is difficult to know for sure.

Interestingly, the phenomenon of high numbers of unfinished or not submitted applications could also be observed in 2022. Maybe it has to simply be accepted as a fact that in the course of an application round, more than half of the students give up their initial plans to apply with the Life Science Zurich Graduate School and abandon their candidature. This might, of course, have many different reasons. Though it can sometimes be observed that students “come back” and apply again six or twelve months later, it is difficult to find convincing explanations why half of the applicants of a given round decide against submitting their application.

In any case, the reviewers and members of the interview panels often had to evaluate the skills and experiences of Master students who had spent in the lab very few to no hours at all. Many Masters theses were literature studies carried out at home with more or less guidance from a remote supervisor. This made it obviously utterly difficult for the committee members to appropriately assess how trained the applicants were. Having said that, the recruiting PIs were, by and large, quite satisfied with the quality of the applicants in the past years.

With the pandemic, the whole recruitment process underwent in summer 2020 for the first time a fundamental re-organisation. The LSZ GS switched to a two-step recruitment with a first virtual round of admission interviews and online meetings with PIs and group members. This first round was carried out during the same time as usual (Wednesday to Friday of week 6 and 36) but thereafter the applicants and PIs were free to arrange personal meetings or to come to a job agreement without having met each other in person. This two-step process remained in place in 2021 and 2022 although in most countries the pandemic restrictions were entirely relieved in Spring 2022 when it became clear that the Corona virus had largely become endemic. In fact, the Directors' Conference had already decided in November 2021 that the LSZ GS will keep for the time being this two-step process. Main driver for this decision was at that time actually not the pandemic situation anymore or the saved costs but the aspirations of the Faculty of Science to reduce carbon emissions of the unit. However, this project has no defined outlines up to date or it lost priority with the war in Ukraine, the threatening energy crisis and the soaring prices caused by rampant inflation rates.

Although drop-out and matching rates were also during pandemic times within the range of previous years, a considerable number of PIs and applicants are unhappy with individual lab visits extending over several months. As results and statements in the different recruitment questionnaires show, applicants miss the cohort feeling and the possibility to exchange experiences with other candidates. Many PIs prefer meeting all candidates within three to four days, so that job offers can be made after a week and the slots are filled relatively quickly. A working group of the LSZ GS attended these requests and suggested two main changes to find a good timely succession of virtual and on-site events: Firstly, the entire recruitment process should be shortened. The programs should carry out the evaluation of the applications in two instead of four weeks. That would it make possible to have the virtual round of interviews roughly one month after the application deadline (instead of currently approximately 9-10 weeks later). Secondly, the in-person lab visits should again happen for all candidates at the same time. Ideally, the visits can take place four weeks after the virtual interviews, though this time span might have to be extended to six weeks, if it turns out to be too short for obtaining a visa for applicants residing outside Europe. As in past years, only applicants who are invited by at least one PI will be asked to come to Switzerland. In this way, the Life Science Zurich Graduate School is still making a contribution to carbon reduction and it might help to keep the budgets of the programs within limits. Even though it is currently difficult to predict whether costs for flights and other means of transportation continue to rise and which impact the energy shortage in Europe might have on our mobility. Most likely the LSZ GS will have to further adapt and amend the whole recruitment process, if it wants to remain an attractive player with a good visibility in order to recruit a satisfactory number of excellent PhD applicants.

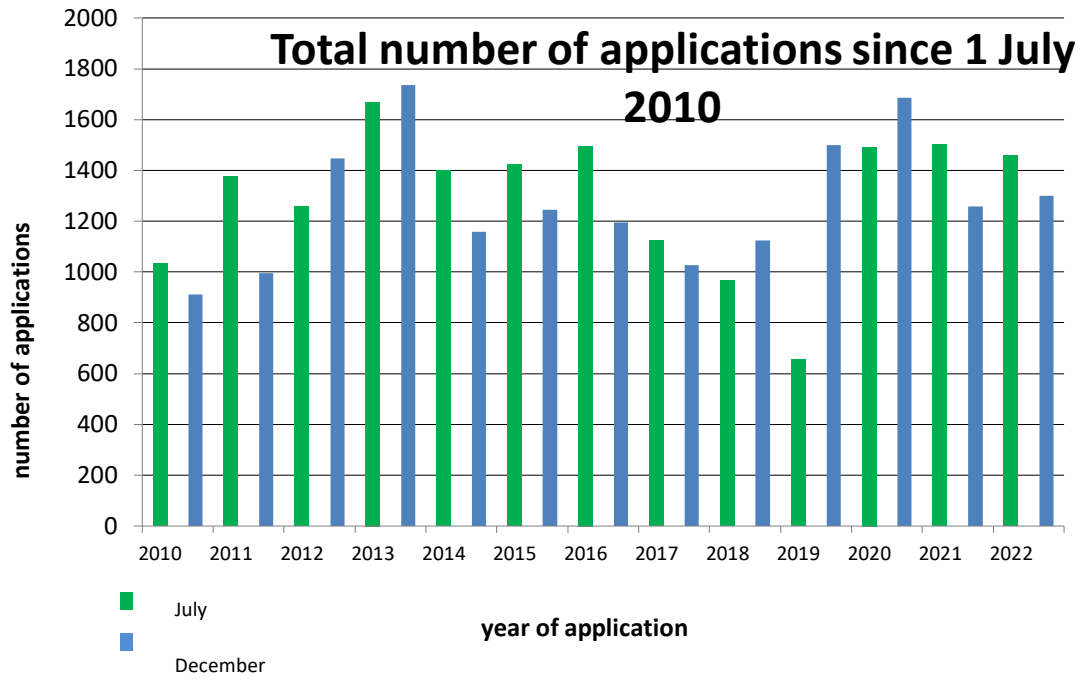


Figure 2: Total number of applications since 1 July 2010.

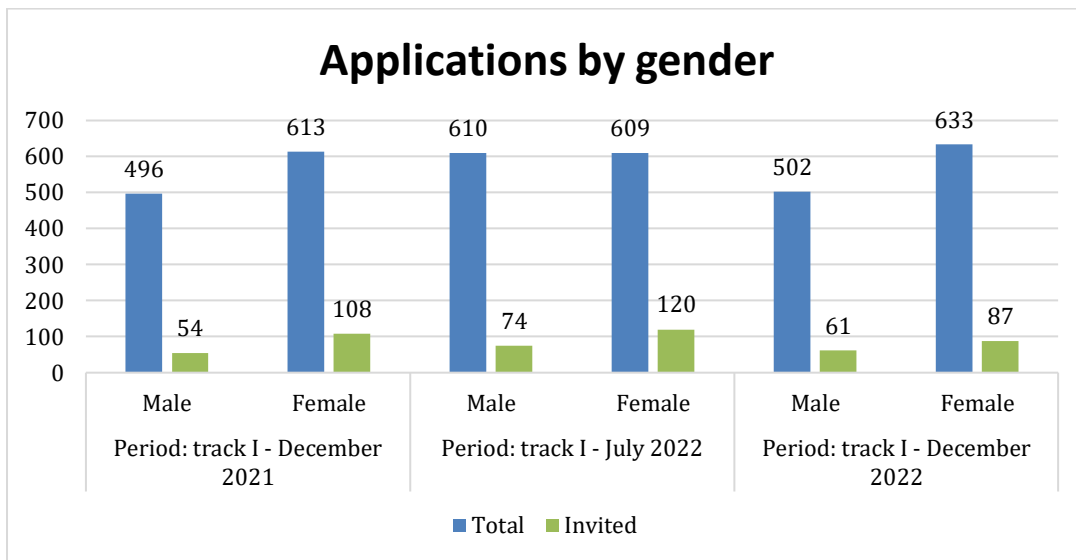


Figure 3: Total number of applications by gender

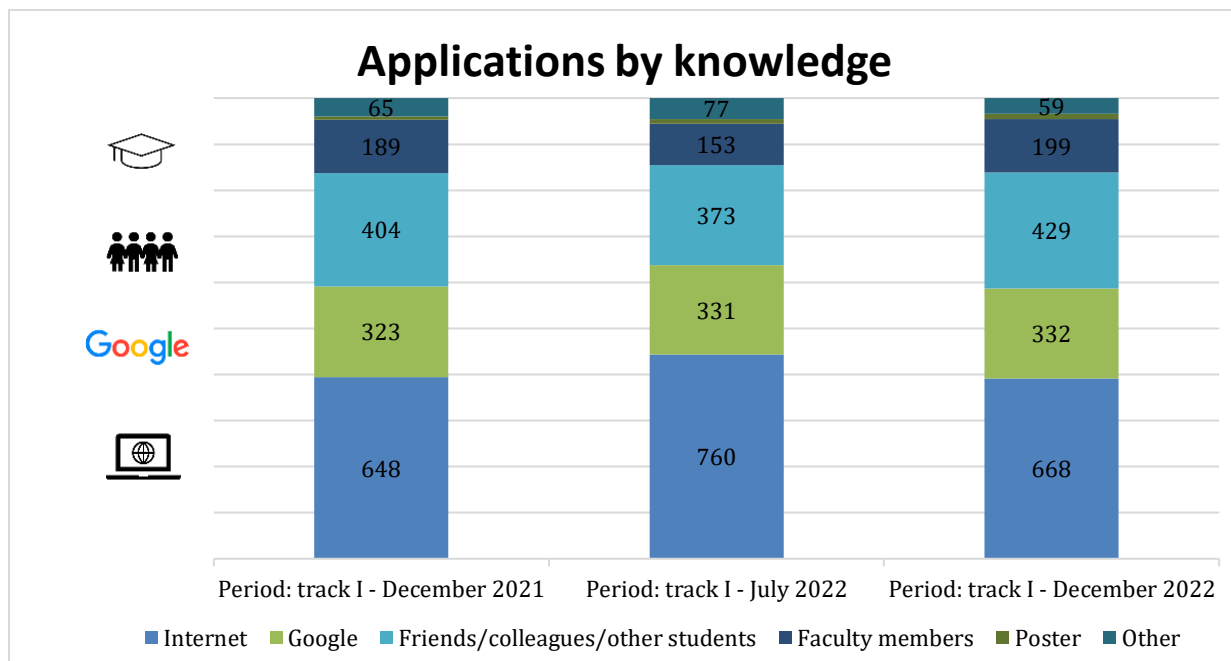


Figure 4: Total number of applications by knowledge

The trend we observed in the past years with the female students slowly but steadily catching up in number with the male applicants remained more or less on the level of the past years. In December 2021, we obtained 63 applications more from female than from male students. In July 2022 the male applicants outnumbered the females by a difference of 47. As for the previous recruitment rounds, with a ratio of nearly 2:1 we invited clearly more female than male candidates for an interview. Most of the applicants learned about the program from the internet (from our own web page or ads on different recruiting web sites, a fourth indicated google search). As in former years, applicants also learned about the program from friends who have once applied to the LSZ GS or who are performing their PhD in one of the programs. While the Graduate School definitely gave up the poster as a recruiting tool with the pandemic, the staff was several times present at online recruiting fairs organised by the recruiting platform “FindAUniversity”. It is difficult to quantify the outreach of this marketing tool, namely so, because we informed all applicants that we would be present there in case they have questions about the application process or the Life Science Zurich Graduate School in general.

After the admission committees of the different programs had reviewed the applications, the top 12-14% of the applicants were invited to virtual admission interviews. Whereas in December, only 41% of the interviewed candidates were offered a position in Zurich, this rate was with 46% a bit higher in July. Both rounds were on the average side of recruitment success compared to previous years. In the winter round, 21% of the accepted candidates rejected a position offered by our group leaders, dropped out of the recruitment process after the virtual interview or the in-person visit. In contrast, with 10% this ratio was quite a bit lower in summer and just within the range of past rounds (4-10%). Many of the students who turned down our offer probably joined other very strong programs in Europe or in the US. The drop-out rate before the interviews was with 19% for the December deadline rather on the high side and with 17% for the July deadline within the average of former recruitment rounds (15-20%).

Table 6: LSZ GS recruiting statistics in 2022

	Dec. 1, 2021	July 1, 2022	Dec. 1, 2022
Complete applications	1259	1458	1300
Invited candidates	163	200	*
Drop-outs before interview	31	35	*
Candidates at interview	132	165	*
Free slots	94	128	*
Occupied slots	54	76	*
Matches	52	73	*
Candidates without matches	37	60	*
Decision against LSZ GS	28	16	*
Rejected candidates	7	10	*

*data will be included in 2023 annual report

In February 2022 (December 2021 deadline), we managed to fill 57% of the open positions – clearly less than the 70% we had achieved a year before. With 60% this ratio was about the same in September 2022. Still both rates correspond to the average of the last years. Compared to the year 2021 when especially during the February interviews only 18 of the 151 candidates at interview came or could come for a visit to Zurich (this number does not include Switzerland-based students unless they claimed travel costs with the LSZ GS office) because of travel restrictions, again more matches happened after a personal meeting of the doctoral candidate with the prospective supervisor. Nevertheless, a few matches – mainly, but not only with oversea candidates - occurred without PI and applicant meeting personally.

Because not all open positions can be filled during a given recruiting round and some outstanding applicants don't want to wait for 6 months, if they have just missed an application deadline, all programs also accept "track II" candidates. Track II students are students who have applied independently to (and have been accepted by) a group leader who is a member of a specific PhD program. This more traditional way of recruiting students is more pronounced in some programs than in others. Currently, about 5 out of 8 students are hired via track II. Applications of track II students are administrated directly by the different programs.

4.3.2 Data systems and webpages

Databases play a crucial role for accomplishing the different administrative processes of the Life Science Zurich Graduate School. Coping with the many tasks the office has to handle nowadays seems more or less impossible without all the bespoke tools we have at our disposal. However, the tools get quickly useless, if the data systems are not professionally serviced and updated. The LSZ GS learned this the hard way with DissGo, the database to administer the doctoral process from the beginning to the end. The tool is a collaborative project with an external company that is responsible for the programming and technical aspects. Since the Program Directors' Conference decided - under reserve that there is a solution for the administrative handling of the ETH students - to give up "DissGo" in favor of the "studentadmin" datasystem the Faculty of Science (MNF) had introduced in early 2019, the service and further developments have been reduced to an absolute minimum. While the company still put in place essential security updates and maintained the most basic services in the early days of the pandemic, communication with them stopped completely at the beginning of 2022. Thanks to the support of

different IT staff at UZH and ETH, the Graduate School could keep the system running more rough than ready but had to find several times awkward workarounds for annoying problems. It became quickly clear that the only the solution to all the trouble was to give up the datasystem – the faster the better. Fortunately, the Faculty of Science was very obliging and offered the LSZ GS to use the studentadmin as a basis for a new tool with some add-ons for the UZH students and a separate login and access for the ETH students. Much to our relieve, Carsten Rose, IT manager at the Department of Mathematics, and his very cooperative team offered us to set up the DissGo “follower”. They have also programmed the highly sophisticated “join” application database for us. Collaborating with them has not only provided us with excellent online tools but has also been a great pleasure over the years. The switch of databases is now planned for – hopefully early - 2023.

Things got also actuated in the case of the course database the LSZ GS has been using for many years. Programmed by a meanwhile emerited professor, the tool was very solid but also got a bit long in the tooth. Luckily, the Graduate School got informed by the current service person that other units of UZH were testing a course administration tool developed by a third party. Eventually, the University of Zurich decided to acquire the licence for the TrainingPlus course administration software. Except for a one-time fee for setting up the database and get it running there are no costs involved in the use of this professional course administration tool for the Life Science Zurich Graduate School. Hopefully, the necessary adjustments will be completed by the beginning of 2023, so that the courses running in Spring can already be administrated in the new data system.

4.3.3 Transferable skills courses

Besides the centralization of the application process, one of the main motivations to found the Graduate School was to offer common courses, which are not related to the specific scientific focus of a program. The transferable skills course (TSC) program of the Life Science Zurich Graduate School focuses on the development and training of some key skills early-stage researchers should dispose of for carrying out their dissertation project as well as for their future career, be it as scientist or in a leading position in industry or the public sector. The offered courses can roughly be grouped in 5 categories: Best Scientific Practice and Ethics, Communication & Presentation Skills, Methodical Skills, Scientific Writing and Publishing as well as Social and Self-Management Skills.

Nearly 700 PhD students took part in one or several of the 41 courses that were organized by the LSZ GS in 2022. 12 of the offered courses were organized together with a PhD program or another unit of the universities, such as the Functional Genomics Center Zurich or the Animal Welfare and 3R. 3 course formats were offered by in-house staff and thus not liable to costs. The program administrators agreed on the following policy for joint courses: the organizing program obtains half of the seats for its own students, if the LSZ GS bears half of course costs. Should the program need more seats, the LSZ GS reduces its financial support accordingly.

For organizational reasons, the LSZ GS also offers a few methodological courses within the TSC: DNA Next Generation Sequencing and Transcriptomics RNA Sequencing. These courses are normally taught by the facility centers of the universities, such as the Functional Genomics Center or the Flow Cytometry and the Microscopy and Imaging Centers. In 2018, we therefore renamed the course program webpage slightly to “Transferable and Methodological Skills Course Program”. This way it should be obvious to our PhD students that they can also find some courses in our program, which help to improve their methodological skills.

At the end of February 2022, most of the coronavirus restrictions were dropped and Switzerland has been taking a decisive and important step towards normality. After two years of online and remote work, most of the educational institution were allowed to go fully back to the live format. The Graduate School also decided to move back from online format to on-site for their transferable skills course program. However, still the third part of the courses were conducted online and in hybrid format in 2022. During the pandemic most of the professional trainers changed and adopted their courses to specific settings of remote teaching and learning.

In fact, several trainers offer in the meantime very sophisticated webinars in which self-study parts, plenum discussions and Q/A sessions with the trainer are ideally balanced. It is therefore to expect that

courses without a strong focus on social interactions of the participants may remain online for the time being. Actually, a choice of different formats – in-person, embedded, online or hybrid – will make the TSC even more attractive and most likely the enormous impulse the pandemic had on the digitalization of society will have a continuous impact on how we teach and learn – also at the Life Science Zurich Graduate School.

Table 7: Courses offered by the LSZ Graduate School from January to December 2022

Transferable skills courses for PhD students 2022	Number of courses	Number of participants	UZH affiliation (+USZ&Kispi)	ETH affiliation	other
Best scientific practice & ethics	8	255	153	93	9
BIO 663 The Impact of Ethics on Doing Science (2 x on-site)	2	35	21	14	
Intro to Scientific Integrity lecture (2 x online, 1 x on-site)	3	168	99	62	7
BioEntrepreneurship & Innovation Program (BEI) Module A: Kickoff, From Scientist to BioEntrepreneur. Creation of a marketable product (on-site)	2	46	33	11	2
Value-based design; Enhancing value-sensitivity in use and development of emerging technologies	1	6		6	
Communication & presentation skills	10	128	84	38	6
Effective Visual Communication for Science (2 x online)	2	40	26	14	
Logic and Reasoning for Scientists (online)	1	15	8	6	1
Self-presentation & networking (online)	1	15	8	5	2
Oral Presentation (online)	1	15	10	5	
Storytelling & Storyboarding Science (2 x on-site)	2	13	10	2	1
6th Science Filmmaking Marathon (on-site)	1	13	7	4	2
Presenting Science (on-site and online)	1	9	8	1	
Science Events Planning (on-site)	1	8	7	1	
Methodical skills	3	24	19	5	0
BIO 680 DNA Next Generation Sequencing (on-site)	1	8	7	1	
BIO 675 Transcriptomics RNA Sequencing (2 x on-site)	2	16	12	4	

Scientific writing & publishing	6	97	65	30	2
BIO661 Scientific Writing (2 x on-site)	2	34	21	11	2
Writing Fellow Training (on-site and online)	1	16	12	4	
Scientific Writing and Publication in the Life Sciences (2 x online)	2	32	21	11	
Social & self-management skills	14	192	127	61	4
The Successful Start of a Professional Career (2 x on-site)	2	25	16	8	1
Project Management for Advanced Stage researcher (on-site)	1	13	11	2	
Career Cornerstones (on-site)	1	12	8	4	
Time & Career Management (online)	1	12	5	7	
Unfolding your Self-Confidence (2 x on-site)	2	22	12	10	
Managing difficult working relationships (on-site)	1	12	9	2	1
Teaching Science at the University (on-site and online)	1	12	9	2	1
Networking for Conferences, Collaboration & Career (on-site)	1	10	4	5	1
Academic Track (online)	1	24	19	5	
Mindfulness & Meditation: a beginner's guide (on-site)	1	16	8	8	
The postdoc workshop: getting funded, choosing the right lab, and understanding the academic job market (on-site)	1	18	15	3	
Project Management for early-stage researchers (on-site)	1	16	11	5	
Total of all courses	41	696	448	227	21

4.4 On-going projects

We have just pointed out in one of the previous chapters that the different databases are absolutely crucial for the Graduate School to perform its tasks and to render the desired services for all costumers in a timely and reliable manner.

It is still an utmost concern of the LSZ GS to bring the disconcerting and for the students of the Faculty of Science rather confusing situation of two parallel data systems to an early end. Even more so that DissGo is going stale and it dose not make much sense to put time and money in a database, which has to be given up rather sooner than later. For these reasons, the Graduate School is very grateful to the Dean of Studies that he as allowed adding additional data and certain features from DissGo also in the studentadmin database and - even more important – to make it possible that also the doctoral students from ETH can get separate access to the studentadmin. This way all the data will be again stored in one and the same system offering the LSZ GS the possibility to also manage data in its own right that is not needed by the other graduate schools of the faculty of science. It is definitely in the LSZ GS's best interest to make good use of this window of opportunity and to press ahead with the project.

In contrast, the project to implement a new course database is already more advanced and the tool is expected to be up and running at the beginning of the coming year. Although the course administration is running quite solidly, many details are still done manually. Hence, the micromanagement of cancellations, operating the waitlist and fining late cancellations as well as no-shows is very time-consuming.

Last but not least, the application database “join” constitutes the very core of our application process and we will be continuously improving or adding features in order to keep the entire process as smooth as possible. By all means, we should avoid running into troubles caused by missing system and security updates. Although there are at the moment no major extensions planned, it is evident that smaller or bigger changes in the recruitment process may require rearrangements or adaptations. Depending on how satisfying the planned changes of the application deadlines and the recruitment process will work out, things might be in a state of flux for a longer while.

Another persisting issue will be the quest for stable and long-term funding for the Graduate School and its PhD programs. Despite the extra support of ETH and UZH that partially makes up for the losses caused by the ending of the swissuniversities scheme, the financial adversities are only deferred for a short while – officially the aid is granted until the end of 2024. Since the negotiations failed to obtain support for the coordinators’ salaries from the faculties, the structural funding problems of the LSZ GS need still to be addressed. Although chances are minimal that new funding sources will be available in the short run, we need to keep taps on this issue in order to seize any opportunity that may show up. Maybe the working group who has assumed office in summer 2022 can dedicate some of their time and energy to find a convincing solution for this everlasting issue.

Appointing a working group was one of the recommendations that resulted of the third cycle evaluation initiated in 2020. There were no official meetings between the evaluation office and the graduate school taking place in 2022, as we are still in the implementation phase. However, the most central recommendation from the point of view of the LSZ GS – the increase of the FTE from 65% to 100% by the faculty of science – still remains unacknowledged and most likely we will have to put more effort in this utmost concern, if we would like to get in approved.

4.6 Outlook

As shown in the previous paragraphs, a substantial and sustainable improval of the financial situation of the Graduate School and its programs has again become a distant perspective. In the light of the current global crisis with Russia waging war against Ukraine, a lurking energy crisis in Europe and with many a country up to their ears in debts, financial prospects are dire. In times of growing military spending, educational budgets are usually freezing, if not shrinking. For these reasons, it is rather obvious that the LSZ GS and their PhD programs cannot hope for a budget increase but they will have to go over their expenses and see whether cuts or a redistribution of funds is possible. Some of the organisational changes the pandemic provoked for the courses and the recruitment might be a chance to save costs in the longer run. Cutting expenses should also be possible, if a switch to fully virtual recruitments is not actionable because – understandably - PIs and candidates wish to meet in person before they decide to embark on a doctorate and work together for the next four to five years.

It will be worthwhile for the Graduate School not to focus too much on financial matters but rather to rivet on improving the quality of their services without increasing the budget. Hopefully, the merge of the studentadmin and DissGo database as well as the introduction of the new course administration tool will be a success and allow the LSZ GS to tackle other projects. Since the working group has now assumed office, it is to expect that they will throw light on some aspects they consider to be worth improving. This might well concern internal structures and processes but also the core business of the Graduate School: the quality assurance of the doctorate. After the pandemic years and in the view of new global crisis, things feel again in a state of flux. Though it is not clear where these imminent changes will take us, the Life Science Zurich Graduate School has to make sure that its early stage researchers can get prepared in the best way to meet future challenges.

Appendix 1: Graduate School student body

As of 31 December 2022	Total number of students	Affiliated at UZH	Affiliated at ETH	Other affiliation	Track I students	Track II students	Female students	Male students	International students	Swiss students	Program drop-outs	Completed PhD.	Program Alumni
Graduate School total *	1660	1091	539	31	564	1096	798*	539*	949*	377*	80*	247*	2909
Biomolecular Structure & Mechanism	81	59	22	1	36	45	41	40	61	20	1	9	164
Biomedicine	126	106	20	0	53	73	85	41	92	34	8	21	301
Cancer Biology	141	125	16	0	90	51	95	46	104	37	6	25	343
Clinical Science **	54	54	0	0	13	41	35	19	36	18	6	7	19
Drug Discovery **	14	8	6	0	7	7	7	7	9	5	2	7	12
Ecology	94	54	40	0	8	86	61	33	44	38	3	10	217
Epidemiology & Biostatistics	49	45	4	0	19	30	30	19	31	18	1	14	74
Evolutionary Biology	73	72	1	0	4	69	35	38	52	21	3	14	168
Microbiology & Immunology	253	171	82	0	89	164	154	99	166	87	15	46	459
Molecular Life Sciences	180	100	80	0	119	61	103	77	147	33	3	33	590
Molecular & Translational Biomedicine	9	4	5	0	4	5	6	3	8	1	0	9	87
Neuroscience	323	212	107	4	40	283	-	-	-	-	-	-	136
Plant Science	113	41	56	15 Basel+ 1	9	104	68	45	81	32	29	9	139
RNA Biology	29	16	7	6	13	16	17	12	24	5	0	36	36
Science & Policy	56	15	37	4 Basel	30	26	32	24	42	14	5	1	53
Systems Biology	69	13	56	0	34	35	32	37	54	15	0	6	111

* Without the data from Neuroscience Program; ** Numbers extracted from the DissGo

Appendix 2: Statistics intake rounds

LSZ GS Intake round 1 July 2022, number of applicants by nationality

(Figures include more data groups than shown in table 5)

Country	Not invited	Invited	Total
All countries	1076	200	1276
India	249	17	266
Pakistan	115	2	117
China	78	19	97
Iran	80	2	82
Italy	42	26	68
Nigeria	66	2	68
Germany	23	26	49
Turkey	26	7	33
Ghana	30	1	31
Spain	20	11	31
Switzerland	9	21	30
Ethiopia	27	0	27
Greece	20	5	25
Russian Federation	15	2	17
Egypt	12	1	13
Bangladesh	12	0	12
Kenya	12	0	12
Democratic Republic of the Congo	11	0	11
France	8	3	11
USA	8	2	10
Netherlands	4	5	9
Poland	5	4	9
Portugal	6	3	9
Uganda	7	2	9
Canada	4	4	8
Lebanon	6	2	8
Romania	8	0	8
Mexico	6	1	7
Philippines	6	1	7
Austria	3	3	6
Cyprus	6	0	6
Malaysia	5	1	6
Nepal	6	0	6
Sudan	6	0	6
UK	4	2	6
Benin	5	0	5

Kazakhstan	5	0	5
Rwanda	5	0	5
Sri Lanka	5	0	5
Taiwan	5	0	5
Viet Nam	3	2	5
Belgium	3	1	4
Czech Republic	2	2	4
Peru	4	0	4
Republic of Korea	2	2	4
Senegal	4	0	4
South Africa	4	0	4
United Republic of Tanzania	3	1	4
Algeria	2	1	3
Brazil	3	0	3
Cameroon	2	1	3
Côte d'Ivoire	2	1	3
Indonesia	3	0	3
Ireland	2	1	3
Jordan	3	0	3
Serbia and Montenegro	2	1	3
Slovenia	0	3	3
Syrian Arab Republic	3	0	3
Zambia	3	0	3
Zimbabwe	3	0	3
Albania	2	0	2
Argentina	1	1	2
Azerbaijan	1	1	2
Burkina Faso	2	0	2
Colombia	1	1	2
Croatia	1	1	2
Ecuador	2	0	2
Eritrea	2	0	2
Finland	1	1	2
Guinea	2	0	2
Hungary	2	0	2
Kosovo	2	0	2
Lithuania	2	0	2
Madagascar	2	0	2
Malawi	2	0	2
Morocco	2	0	2
Singapore	1	1	2
Thailand	2	0	2

Tunisia	2	0	2
Afghanistan	1	0	1
Armenia	1	0	1
Australia	1	0	1
Bhutan	1	0	1
Bosnia and Herzegovina	0	1	1
Chad	1	0	1
Estonia	1	0	1
Georgia	1	0	1
Guatemala	1	0	1
Honduras	1	0	1
Iraq	1	0	1
Israel	1	0	1
Libyan Arab Jamahiriya	1	0	1
Myanmar	1	0	1
Namibia	1	0	1
Republic of Moldova	1	0	1
Saudi Arabia	1	0	1
Sierra Leone	1	0	1
Slovakia	0	1	1

LSZ GS Intake round 1 December 2022, number of applicants by nationality

(Figures include more data groups than shown in table 5)

Country	Not invited	Invited	Total
All countries	1012	149	1161
India	267	8	275
China	163	16	179
Germany	41	29	70
Pakistan	56	0	56
Iran	51	1	52
Italy	38	14	52
Turkey	35	6	41
Switzerland	23	15	38
Nigeria	26	1	27
Spain	17	6	23
UK	15	7	22
France	18	3	21
Russian Federation	14	5	19
Egypt	18	0	18
Ghana	16	0	16
Greece	14	1	15
USA	12	2	14
Poland	10	3	13
Canada	6	4	10
Brazil	8	0	8
Ethiopia	8	0	8
Philippines	8	0	8
Cyprus	7	0	7
Netherlands	4	3	7
Romania	5	2	7
Sri Lanka	7	0	7
Bangladesh	6	0	6
Hungary	4	2	6
Kenya	6	0	6
Lebanon	6	0	6
Kazakhstan	5	0	5
Portugal	4	1	5
Republic of Korea	4	1	5
Serbia and Montenegro	4	1	5
Taiwan	5	0	5
Zimbabwe	5	0	5
Austria	1	3	4
Indonesia	4	0	4

Mexico	3	1	4
Albania	3	0	3
Bulgaria	1	2	3
Lithuania	1	2	3
Singapore	2	1	3
Slovenia	2	1	3
Sudan	3	0	3
Uganda	3	0	3
Ukraine	2	1	3
Belarus	2	0	2
Cameroon	2	0	2
Gambia	2	0	2
Iraq	2	0	2
Kosovo	2	0	2
Morocco	2	0	2
Namibia	2	0	2
New Zealand	1	1	2
Peru	2	0	2
Syrian Arab Republic	2	0	2
Tunisia	2	0	2
Viet Nam	1	1	2
Zambia	2	0	2
Angola	1	0	1
Australia	1	0	1
Belgium	1	0	1
Belize	1	0	1
Benin	1	0	1
Colombia	1	0	1
Croatia	1	0	1
Cuba	1	0	1
Czech Republic	1	0	1
Denmark	0	1	1
Eritrea	1	0	1
Estonia	0	1	1
Finland	1	0	1
Ireland	1	0	1
Jordan	1	0	1
Latvia	1	0	1
Luxembourg	0	1	1
Malaysia	1	0	1
Mali	1	0	1
Mauritius	1	0	1

Mongolia	1	0	1
Myanmar	0	1	1
Nepal	1	0	1
Norway	1	0	1
Oman	1	0	1
Rwanda	1	0	1
Sweden	0	1	1
Thailand	1	0	1
The former Yugoslav Republic of Macedonia	1	0	1
Togo	1	0	1
Trinidad and Tobago	1	0	1
Uzbekistan	1	0	1

TOP 5 LSZ GS Intake round 1 July 2022

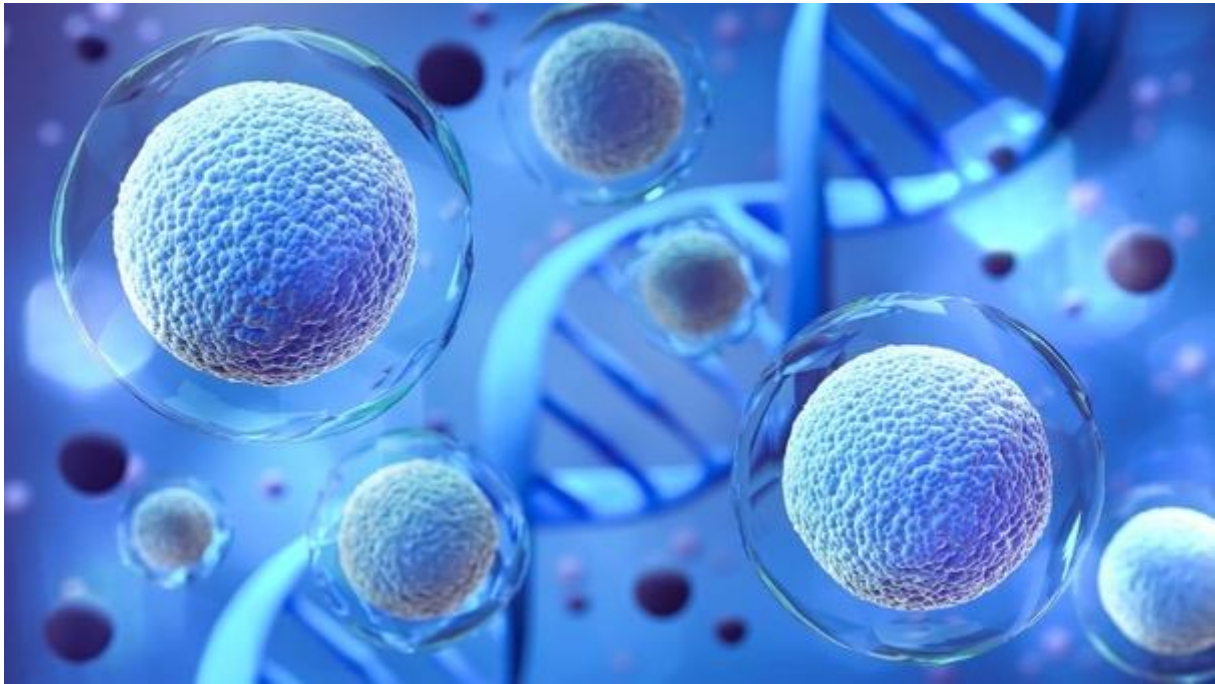
Country	Not invited	Invited	Total
Asia			
India	249	17	266
Pakistan	115	2	117
China	78	19	97
Iran	80	2	82
Turkey	26	7	33
Europe			
Italy	42	26	68
Germany	23	26	49
Spain	20	11	31
Switzerland	9	21	30
Greece	20	5	25
Africa			
Nigeria	66	2	68
Ghana	30	1	31
Ethiopia	27	0	27
Egypt	12	1	13
Kenya	12	0	12

TOP 5 LSZ GS Intake round 1 Dec. 2022

Country	Not invited	Invited	Total
Asia			
India	267	8	275
China	163	16	179
Pakistan	56	0	56
Iran	51	1	52
Turkey	35	6	41
Europe			
Germany	41	29	70
Italy	38	14	52
Switzerland	23	15	38
Spain	17	6	23
UK	15	7	22
Africa			
Nigeria	26	1	27
Egypt	18	0	18
Ghana	16	0	16
Ethiopia	8	0	8
Kenya	6	0	6

5. Life Science Zurich Learning Center

Prof. Daniel Kiper



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5.1 Introduction

The Life Science Zurich Learning Center (LSLC) continues to be of the leading organizations building bridges between the University of Zurich (UZH) and Swiss Federal Institute of Technology of Zurich (ETHZ), and the Swiss German school system. In 2022, after the Covid pandemic, the LSLC has re-established its offer and given practical courses to school classes from the primary to gymnasial level, organized continuing education modules for practicing biology teachers, and developed projects to allow teachers and students to get insight into modern biological research.

5.2 Administration

5.2.1 Infrastructure

The LSLC comprises a laboratory used for practical courses and an office for the LSLC team. For the C-elegans course (see below), the LSLC also uses an additional laboratory/teaching room on the campus.

5.2.2 Human Resources

Daniel Kiper is the director of the LSLC (since 2012, 80% position). Claudia Bischoff (since 2010) continues to work for the LSLC with a 60% position and is responsible for the public school (primary and secondary levels) offers. Dr. Alex Butschi (60% position) is in charge of the courses for gymnasial classes and the development of continuing education modules. The LSLC also employed Jochen Hilchenbach and Michael Brügger for technical support, each with a 10% position. The LSLC administration is performed by Helen Stauffer (circa 30%).

The practical courses were given, in addition to the members of the LSLC team, by a team of 17 graduates students working in different laboratories of the Irchel Campus. Several new course instructors have been trained and supervised by LSLC members or experienced course instructors. We have more and more instructors who partially fulfill their PhD Teaching requirement by offering courses in the LSLC. These students teach circa 50 hours (without pay) before being given the option to join the permanent instructor pool.

5.3 Activities

The regular LSLC activities can be sorted into the following categories:

- 1 - Continuing Education for biology teachers
- 2 - Courses for school classes (from primary school to end of gymnasium)
- 3 - Events for the general public
- 4 - Third party funded development of pedagogical material for school classes.

5.3.1 Continuing education for biology teachers

In collaboration with Dr. A. Wittwen (Institute of Education, UZH), the LSLC organized 3 different modules offered to biology teachers of the secondary II level:

- Insekten (Outdoor – 23 May 2022 and 22 September 2022)
- CRISPR-Cas9: Revolution der Gentechnik mit Tricks aus Bakterien (17 November 2022)

5.2.3 Practical courses for school classes

The regular practical courses offered by the LSLC in 2022 were:

Secondary Level II:

Molekularbiologie 1: [Gentransfer auf Bakterien - Bakterientransformation](#)

Molekularbiologie 2: ["Wer war am Tatort?" - Genetischer Fingerabdruck](#)

Molekularbiologie 3: [Völkerwanderung - Sequenzierung der eigenen DNA](#)

[Molekularbiologie 4: Personalisierte Medizin am Beispiel von Alzheimer](#)

Biochemie: [Rund um die Milch](#)

Neurobiologie: [Fokus Gehirn](#)

Mendelgenetik 1: [Klassische Zuchtexperimente mit der Taufliege *Drosophila melanogaster*](#)

Entwicklungsgenetik 1: [Der Fadenwurm C-Elegans: Ein kleiner Wurm ganz gross.](#)

Mandatory school (Secondary I and Primary):

DNA-Isolation 1 (secondary level): [Im Zellkern liegt unsere Verwandtschaft zur Gurke](#)

Grundlagen Genetik (sec.): [Genetik an der Taufliege *Drosophila melanogaster*](#)

Biochemie (sec.): [Rund um die Milch](#)

Neurobiologie (sec. and primary levels): [Fokus Gehirn](#)

Entwicklungsbiologie (primary level): [Aug in Aug mit der Taufliege *Drosophila melanogaster*](#)

DNA-Isolation 2 (prim.): [Die Suche nach dem Geheimcode in den Lebewesen](#)

Ökologie (prim): [Mit dem Salzkrebschen auf Tauchstation](#)

The course «Biochemie» has been completely remodeled in 2022 and now focuses on milk and lactose intolerance in place of the previous module ("Was geschieht mit einem Ei bei -200 Grad"). The previous module had lost in popularity and had been less and less booked, which prompted us to develop and implement new biochemical experiments.

A total of 153 courses were offered in the LSLC in 2022, for a total of 2651 students (see Figs. 1 and 2 in the Annex). These numbers are back to pre-Covid levels (170 courses in 2019, for 3069 students)

5.3.3 Special courses and offers for school children and students:

The usual LSLC activities such as the "Kinderuni" took place 3 times in 2022 (30.3, 9.4 and 30.11).

5.3.4 Offers for the general public

The activities for the general public to which the LSLC usually actively contributes were the UZH Science Info Day, the BrainFair, and the Nationaler Zukunfttag.

5.4 Special projects

“MINT Projects of the Swiss Academy of Natural Sciences”

The success of the project „Mit dem „ABC des Forschens“: Forschkisten zum naturwissenschaftlichen Denken und Handeln an der Volksschule“ (<http://www.lifescience-learningcenter.uzh.ch/de/forschzeit.html>, see 2017, 2020 and 2021 annual reports) has continued in 2022. Claudia Bischoff developed and started to deliver the research boxes to an increasing number of "Pädagogischen Hochschulen" in the German part of the country. Furthermore, many additional

continuing education modules based on the use of these boxes have been offered by C. Bischoff and her team in the LSLC.

“Synthetic Biology courses with IGEN”

The IGEN team of the UZH (a student group focusing on synthetic biology) offered an introductory course on synthetic biology, for one school class on 3 October 2022.

5.5 External collaborations

The LSLC has continued its collaboration with the World Food System Center of the ETHZ to offer a common continuing education module for biology and other interested teachers. The resulting course “Bittersweet stories of chocolate” has been offered again in 2022.

5.7 Appendix

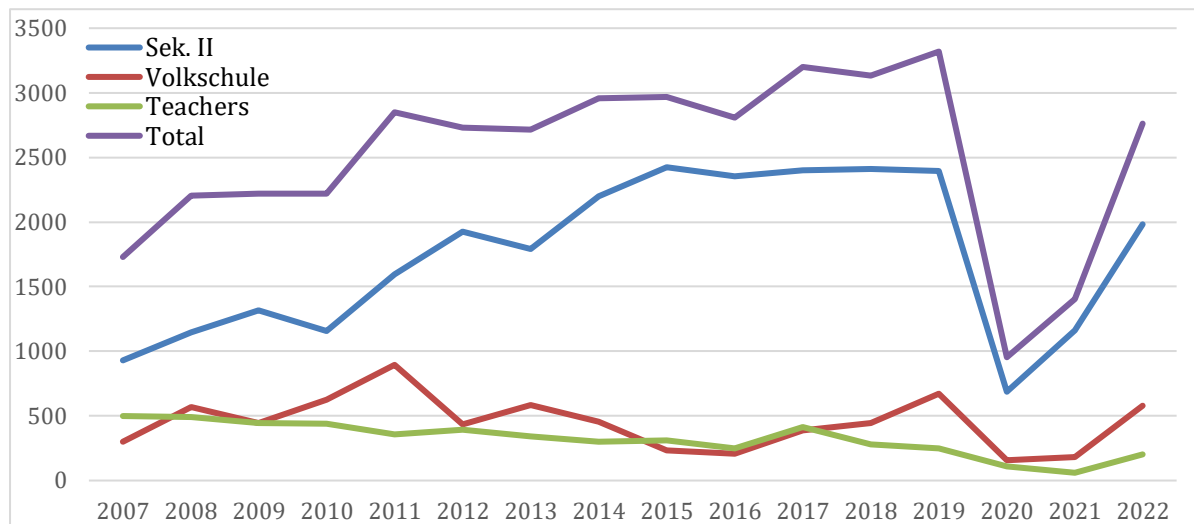


Figure 1: Number of participants in the practical courses, continuing education and training modules since 2007

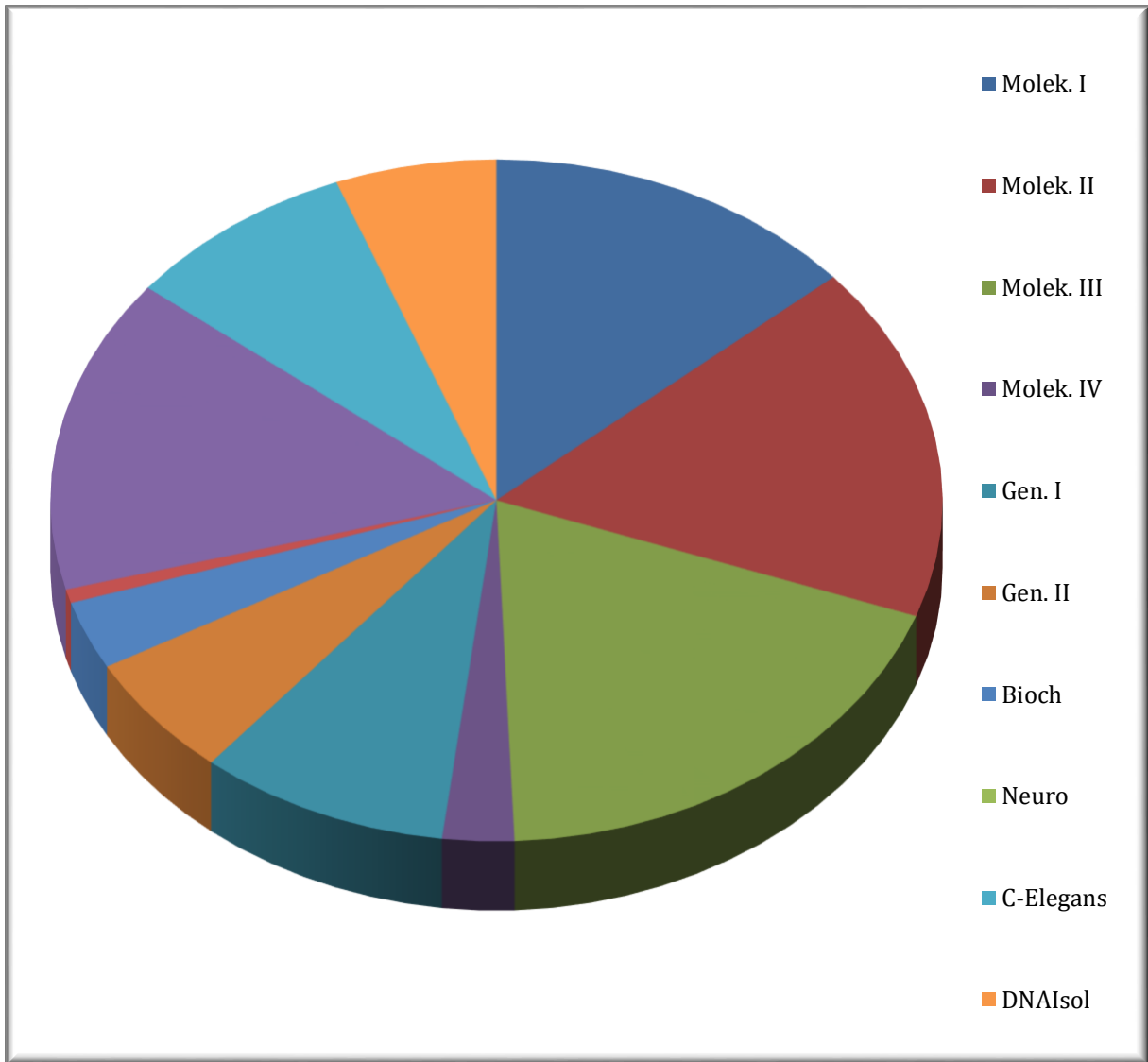


Figure 2: Relative distribution (in %) of LSLC practicals (all levels)

6. Life Science Zurich Young Scientist Network

Andrea Bosakova, Chair-woman



This report represents a condensed summary of the complete yearly report of the Life Science Zurich Young Scientist Network, which can be obtained upon request via (info@lszysn.ch). Generally, all events including respective photographs, feedback and programs are archived at www.lszysn.ch.

The Life Science Zurich Young Scientist Network (LSZYSN) is a non-profit organization founded and run by a group of graduate students/post-docs of the University (UZH) and the ETH Zurich. The network was created by a fusion of the Swiss branch of the Young European Biotech Network and the Life Science Zurich Biotech Network. It is officially part of the Life Science Zurich, a joint initiative of UZH and ETH aiming to promote excellence in life sciences in Switzerland. In its broader sense, the main mission of LSZYSN is to connect life scientists to career opportunities beyond academia. To achieve this, the LSZYSN is engaged in a wide range of activities aiming to build sustainable relationships with companies operating in the life sciences/healthcare sphere and to promote networking. In addition to that, the LSZYSN is committed to providing a collection of industry-related resources and to hosting events to allow its members to explore the world of biotechnology and to stimulate constructive interactions between people from various life science sectors. We envision that our efforts will contribute to the formation of a well-informed, competitively skilled, and well-connected local and global life science community.

In the following section this year's activities will be summarized, sectioned into our functional groups.



6.1 Zurich Life Science Day

This year the career and networking event Zurich Life Science Day (ZLSD) took place in Irchel Campus on the 7th of February 2023. This was the first time back on-site after two years of a virtual event due to the Covid-19 pandemic.

This year's slogan "Zurich Life Science Day – Navigate the Career Maze" was chosen to emphasize the possibility that our career fair offers of getting in contact with the company representatives 1-to-1 and to build a personal network. For the first time, we used an app "B2match" where participants could register for the event, book their 1-to-1 meetings, CV checks and CV pictures plus select the talks they wished to attend and organize their agenda.

The event started at 9am with a welcome presentation about the LSZYSN and a Keynote Lecture by Prof. Dr. Hans Clevers from Roche entitled "Lgr5 Stem Cell-Based Organoids in Human Disease". Throughout the day we had 10 parallel talks plus a talk by Bruno Casimiro entitled "Hidden Job Market" where some insights about strategies to be successful in the job market were given to the participants. Different topics were covered by the talks: working in a non-profit organization (Greenpeace), Food industry (Essento), Job Search Strategies (Career Center ETH), Medical Affairs (Gilead), Science Communication (CERN), working in a Start up (Molecular Partners), Health Care Consulting (SyneosHealth), being a Venture Capitalist (Nextech Invest) and the last two parallel talks including Regulatory Affairs (Roche) and for the first time a Q&A format with four different speakers from Roche. The event closed with a Networking Apéro.

This year, 668 participants were present. During the whole day, the Company exhibition was on going and partnering companies had the chance to present themselves in a booth, and network on site again.

The exhibition hall was filled with a total of 182 company representatives and 32 exhibiting companies; of which 1 was Diamond sponsor, 18 Gold, 7 Silver, 2 Platinum and 4 Start-up sponsors plus one LSZYSN booth. During the event, participants had the chance to register for individual 1-to-1 meetings with selected companies. These 1-to-1 meetings were booked through the B2match app and in total we registered 765 meetings booked. The participants also had the opportunity to get their CV checked and to take a professional CV picture on the venue by our long-term partner Steven Kohl Photography. For CHF 25.- participants could book a slot to have their CV picture taken. As expected, this offer was popular and many slots were booked early upon opening of the registrations. However, in the day, several participants still tried to register for CV pictures which ended up not being the best solution and this is something we should improve next year.

In an internal feedback round we defined the changes we want to implement for the next edition of the ZLSD in 2024. One of the main points to be addressed is the registration in the morning. There is a big flow of participants coming at the same time and the registrations turned out to be quite disorganized. We should perhaps give more time for registration to avoid delays and organize the registration desk in a more efficient way.

In general, the feedback from both participants and company representatives was very positive and they were happy with the organization of the event.

The LSZYSN would like to thank Life Science Zurich specially Silvie Cuperus and Helen Stauffer for all the support provided as well as the University of Zurich and ETH Zurich for providing the infrastructure and support in event logistics. Thanks to all the partnering companies, sponsors and speakers for their support of our events. A special thank you to Prof. Hans Clevers for accepting our invitation and inspiring us with a fantastic keynote lecture. It was a pleasure for the LSZYSN to bring together on site this amazing event once more.



Zurich Life Science Day 2023

Navigate the career maze

7TH FEB 2023



08:30 - 09:00	Registration	
09:00 - 10:15	Welcome & Keynote Lecture: Lgr5 Stem Cell-Based Organoids in Human Disease Prof. Dr. Hans Clevers Head of Pharma Research & Early Development, Roche	
10:15 - 10:45	Coffee Break & Company Exhibition	
10:45 - 11:25	A Career with Purpose: My Journey from Biomedical Research to Fighting Climate Change in a Non Profit Organisation Dr. Sc. Andreia Fernandes Project Manager, Greenpeace International	Food Science: From a Plant-Based to Planet-Based Food Industry Martina Ghisletta Head of Research & Development Essento Insect Food
	Job Search Strategies Interactive Presentation Anja Pauling & Franziska Liese ETH Career Center, ETH	Medical Affairs Mission & Role Dr. Thomas Grabinger Senior Medical Manager, Gilead Sciences
12:10 - 13:40	Lunch Break & Company Exhibition	
13:40 - 14:20	Hidden Job Market Bruno Casimiro Career Coach Consultant	
14:25 - 15:05	Science Communication Daniela Maria António Communications Officer, CERN	Start-Up Dr. Nicolas Leupin Chief Medical Officer, Molecular Partners AG
	Coffee Break & Company Exhibition	
15:50 - 16:30	From Science to Health Care Consulting Laetitia Thieren, Jacopo Sgualdino & Nadja Ulrich SyneosHealth	The Quest for Unicorns A Day in the Life of a Venture Capitalist Anna Guinot Aguado Associate, Nextech Invest
	Career Spotlight a Q&A Session with Roche Dr. Marina Bacac, Dr. Sara Colombetti, Dr. Sven Ebert and Dr. Florian Kast	Regulatory Affairs Corinne Wenger Head of Regulatory Affairs, Roche
17:15	Networking Apéro	

6.2 Career Mentoring Program Team

The Career Mentoring Program is a collaboration between researchers of ETH/University of Zurich and industry. It brings together professionals from life science companies (mentors) and PhD students/PostDocs (mentees). Mentors from a diverse range of positions will share their personal experiences and insights from an industry environment while also guiding early career scientists in finding their path in the world of business, science and global corporations. Mentees will get the

opportunity to learn about the internal structure, projects and entry-level positions of the company and what requirements are necessary to pursue certain careers. This program was brainstormed in 2021 and established in 2022 with an official team of 5 active members, Stephanie Lüthi, Blanca Echeverria, Jessica Medina, Marvin Kreuzer, Sarah Klinnert (who left LSZYSN in February 2023), Ceasare di Nitto (who left the LSZYSN in March 2023) and Daniela Sequeira (team leader). Altogether, we contacted 16 Life Sciences companies, with offices in Switzerland. Five of these showed interest in a collaboration and wished to be contacted again in early 2023.

Finally, Sanofi confirmed their interest in participating in our newest program with 3 mentors from the Rotkreuz office. We will have our kick-off event on April 19th in Rotkreuz, where mentors and mentees will get to know each other after being matched on a 1:1 basis by the Sanofi HR department. A first round of selection will be conducted by the Career Mentoring team members, selecting the 6 best candidates taking the quality of their CV and cover letter into account. Sanofi HR will then select the final 3 participants. The program will last from May-August, possibly ending with an apéro. The mentors/mentees will meet at least 4x times during the program, onsite or online, with full flexibility to schedule the meetings.

It is our goal to organize two Mentoring programs/year from now on and two companies have contacted us already for the next events.

6.3 Company Visits Team

The Company Visits team has received some new members in 2022 while other members left. By the end of 2022, the team was made up of 8 people, 3 of whom were newly recruited members. The main goal of our Company Visits is to provide participants with the inside opportunity to visit company/factory sites. A typical event consists of a few presentations from employees about their positions and career paths, a tour around the company and a concluding networking apéro between the participants and the company representatives. In 2022 we organized one Company Visit on-site, being the first CV happening again physically after the Covid 19 pandemic and in the beginning of 2023, we organized another visit. The two visits were:

1. Planted Foods AG, 28/06/2022 in Kempthal
2. Roche, 23/2/2023 in Basel

The event in Planted was limited to 25 participants, requiring a registration prior to the event. The participants had different backgrounds, mainly UZH/ETH PhD students. A 25 CHF fee was required from each participant to cover costs of the apéro since this time the company did not offer the apéro. The train tickets were covered by the CV team. The participants were overall satisfied with this company visit and for it to be back on site.

The event in Roche was limited to 60 participants and it was organized together with PSA from ETH. Roche took care of the main parts of the organization of this event so no transportation was organized, therefore, no fee was required from the participants. During the visit different speakers presented their work at Roche and we had a great networking coffee break. The feedback from the event was great.

6.4 Career Chats Team

The main objective of the career chats team is to invite company representatives for a 30-40 min talk. The event usually takes place at the University of Zurich on the Irchel campus or at ETH Hönggerberg. Since the pandemic started and we had to hold CCs online, we mostly organize hybrid events to enable more people to join on-site, as well as online. The idea is that the presenters discuss their career paths: how they managed to climb up the professional ladder successfully, the challenges

and pitfalls they faced and how it is to work in the company they are currently employed with. Potential job opportunities and required skills for the job of the speaker are also usually discussed in this seminar series. During 2022, the career chats team experienced a change in leadership and team members. Elisabeth Abs and Valentine Berger left the team and passed the project leadership on to Raquel Mendes and Svenja Rotter. Furthermore, two new members joined the team throughout the year, which adds up to a total of 9 members at the moment. The team meets up at the beginning of the first semester to discuss the speakers to be contacted for the annual year. The objective is to have about 4 talks per year.

In 2022, we were only able to host three career chats instead of four, as we experienced cancellations of prospective speakers toward the second half of the year. The three career chats were organized with the following companies and speakers:

1. 02.05.2021 Blue Horizon / Speakers: Dr. Friederike Grosse-Holz
(95 subscriptions)
2. 05.07.2023 Octapharma/ Speaker: Dr. Valentin Friedrich and Dr. Paul MacEoin
(67 subscriptions)
3. 16.11.2021 Novartis/ Speaker: Dr. André Serra Roma
(112 subscriptions)

The Career Chats with Blue Horizon and Novartis were organized as a hybrid-event followed by an Apéro, while Octapharma took place only in zoom, as wished by both speakers.

Overall, our seminar series has been greatly appreciated by the participants that valued the online and hybrid offer in the current time. We are very thankful to all the speakers and the respective companies for their incredible support. We appreciate their investment of time and belief in the goals of the Network to connect Life Scientists to career opportunities beyond academia. For 2023 we already received numerous requests of prospective speakers, who are interested in sharing their career paths with life science students and graduates.

6.5 Zurich Life Science Week Team

The Zurich Life Science Week aims to present Master, PhD and Postdoc graduates several ways to find job opportunities outside of Academia, and to provide tools to achieve a successful job hunt. Within five evening sessions, our coaches teach the participants the basics of career planning, DO's and DON'Ts of job interviews, the opportunities within the hidden job market as well as insights into a productive use of LinkedIn. More than the theory, the ZLSW offers interactive workshops, with hands-on practical activities.

The last ZLSW took place between the 2nd and 6th of May in the Irchel Campus of the University of Zurich. 19 participants were selected (out of 25 applicants) based on the quality of their motivation letter, prioritizing those in their final year of studies or looking to transition to industry in the near future. From the selected pool of candidates, 7 were PostDocs, 1 person was a recent Msc graduate, and 11 were PhD students. We received written feedback from 11 participants (PhD students and PostDocs) and, for those, the general expectations were fulfilled for 90.9%, and 81.8% indicated that they felt more confident about their future applications. Over 90% of respondents, were satisfied with both sessions lead by Bruno Casimiro; 72% were satisfied with the 3rd session lead by Dr. Daniela Gunz, over 90% with Thursday's session given by ETH Career Center which included a live mock interview and, over 80% with Dr. Roger Gfrörer's last session. We organized a small apéro on the last day of the event which allowed for more exchange with the speakers and students. We also received great feedback from the coaches, who highlighted the LSZYSN professionalism and expressed interest in participating in the next edition.

The present team consists of 7 people including the new team leader Raquel Mendes and the members Kateryna Selcuk, Martina Luthi, Annie Khalid, Alessandro Genovese, Stephanie Luthi and Blanca Echeverria.

6.5 MindSet Team

MindSet is an annual event with the aim to expand the scope of LSZYSN to discuss and tackle currently trending scientific as well as technological and life-style topics. The main goal of this panel discussion is to bring scientists and the public together and create a platform, where interesting topics can be discussed.

In 2022, the topic was “Care for the rare: a debate on ethical and societal challenges” with the focus on development and financing treatment for patients with rare diseases. We have invited four speakers from various fields: Orestis Briasoulis (Global Medical Lead at Idorsia), Martina Weiss-Radtke (Head Negotiation/Reimbursement Pharmaceuticals at Helsana), Jasmin Barman-Aksözen (Scientist, Vice-President of the International Porphyria Patient Network, and patient suffering from Erythropoietic protoporphyria), and Sebastian Wäscher (Expert in Biomedical Ethics and Member of ITINERARE Steering Committee). The entire event was moderated by Francesca Pietrafesa and Noor Khalid, who guided the audience through the interesting discussion, using data from a survey, which was sent to the public in advance.

This year, the event was fully on site with around 60 participants, and it was followed by Aperó. Afterwards the members of the MindSet team had the chance to join a dinner with all the speakers (Martina Weiss-Radtke had to cancel last minute) and continue the discussion about rare diseases and their treatment. In February 2023, Francesca Pietrafesa became the new co-lead of the MindSet team. The transition will be smoothly taking place in the upcoming months. Currently, the MindSet team consists of eight active members: Andrea Bosakova, Francesca Pietrafesa, Niculò Barandun, Marvin Kreuzer, Lisa Dietsche, Noor Khalid, Camilla Beccarini, and Jacqueline Kientsch.

University of Zurich | ETH zürich

LSZYSN
Life Sciences Zurich
Young Scientists Network

CARE FOR THE RARE

A DEBATE ON ETHICAL AND SOCIETAL CHALLENGES

SEBASTIAN WÄSCHER
BIOMEDICAL ETHICS RESEARCHER

JASMIN BARMAN-AKSÖZEN
MOLECULAR BIOLOGIST
PORPHYRIA RESEARCHER

ORESTIS BRIASOULIS
GLOBAL MEDICAL LEAD (IDORSIA)

MARTINA WEISS-RADTKE
PEDIATRIC HEAD NEGOTIATION/
REIMBURSEMENT PHARMACEUTICALS

DATE 06. OCTOBER 2022, 6PM

PLACE ETH ZÜRICH ZENTRUM, RÄMISTRASSE 101
ROOM HG ES

REGISTRATION mindset.lszysn.ch TAKE PART IN OUR SURVEY!

www.lszysn.ch JOIN THE APÉRO AFTER THE EVENT! MindSet

6.6 Internal Functioning Team

The internal functioning team is responsible for organizing internal events and the annual retreat, and serves as the main contact point for the YSN-alumni. Together with the board and the network we decided to restrict the summer retreat to a one-day event within Zurich and include an evening activity after a full day of work. To facilitate team building and recharge after the Zurich Life Science Day, we added a weekend retreat in Ticino 8 – 10 April 2022.

The annual summer retreat for the planning of the Zurich Life Science Day took place on 23 July 2022 with 24 people. The winter retreat took place in Trin on 3 – 5 March 2023 with 18 people.

In 2022, we had two alumni events to make up for the long pause due to the pandemic. The first alumni event took place on 20.10.2022, the second event had a christmas theme and was hosted with Fondue at the christmas market on 29 November 2022.

6.7 HR Team

The HR team was able to welcome 5 new members to the LSZYSN in spring 2022 just in time for the planning phase of the ZLSD 2023 and another 4 new members in the winter recruiting round. All the newbies have been actively participating in the various activities of the LSZYSN and are each member of multiple different teams depending on their personal interests and which teams currently need the most support.

Over the course of the past year, 8 seasoned active members made the transition to the LSZYSN alumni network, and the HR team thanked them for all their input over the past years with a small token of appreciation and a hand-written card for each member. With the 9 newbies joining and 8 active members leaving, membership in the LSZYSN has been stable over the last year. The HR team currently consists of four members and would like to have another 1-2 members join over the course of 2023. Towards the end of 2022 Ludovica Rizzo stepped down as team leader due to her upcoming defense and handed over the role to Stephanie Lüthi. The HR team has worked together closely with IT to ensure that new members are properly introduced to the network and receive access to all the necessary tools. We hope to continue this smooth collaboration for future recruitment rounds!

For the upcoming year, the HR team plans on running two rounds of newbie recruitment in both the spring and fall of 2023 and hopes to be able to slightly increase the number of active members of the LSZYSN. Additionally, we are planning a small surprise for members leaving the network.

6.8 IT Team

During the 2022/2023 year, the IT Team continued to work on similar tasks as in the previous years. The Team lead was transferred to Melanie Arndt in August 2022. We recruited 2 new members for the team, which now consists of 5 people.

As every year, one major task was to establish access to all of our platforms (Slack, Trello, Gdrive, E-Mail) for 9 new members of the network. Furthermore, we spent a lot of work on maintaining the digital infrastructure for the network to ensure a smooth running of operations as well as updating the homepage with advertisements for our events. We have started to transfer important files such as the annual reports, minutes of the general meetings and the active member lists to the UZH archive on a yearly basis in addition to their storage on our Gdrive server.

The responsibility for the company database containing all relevant information about our partners for the Zurich Life Science Day was integrated into the tasks of the IT team. The company database is currently hosted by the servers of the Biochemistry Department of the UZH. One major task for the upcoming year will be to switch to a suitable external host for the database to preserve its

accessibility and to ensure a smooth transition of this information to future IT team members of the network.

6.9 Marketing Team

Team Lead: Fabienne Tschanz (Jan-Mar), Rojapriyadharshini Gandhimathi (Apr-Jan), Lisa Dietsche (Feb-); **Co-Lead:** Kateryna Selcuk (Apr-Nov), Lisa Dietsche (Dec-Feb), Alessandro Lotti (Mar-)

The marketing team is responsible for the advertising of our network and our events. Our main channels include our newsletter, LinkedIn, Facebook, Instagram and Twitter.

In 2022 we posted upcoming events such as company visits, career chats, the Zurich Life Science Week, MindSet and all the promotion concerning the Zurich Life Science Day.

We continued the “fact series” with information about special days and holidays.

We started the “alumni series” where we introduced LSZYSN alumni and the positions in industry they are now working in. We announced all our new members with a post containing a picture and a description of themselves and their career.

Further, we hosted 3 networking events with the aim to spread knowledge of the network, advertise our events and acquire new people interested in joining our team:

Irchel campus on the 30.05.22 Beer Break
ETH Höggerberg on the 23.09.22 Beer Break
Irchel campus on the 01.12.22 Mulled Wine event

We collaborated with several other organizations and student associations to cross-share event posts. We employed these cross-sharing posts for the advertisement of the ZLSD23. On the ZLSD23 the marketing was responsible for the design of the LSZYSN booth (poster printing), printing signs and hanging posters around the location to promote the network and our events. We had several marketing team meetings, some online some on-site.

Overall, the marketing team is satisfied about the activities in the period 2022_2023.

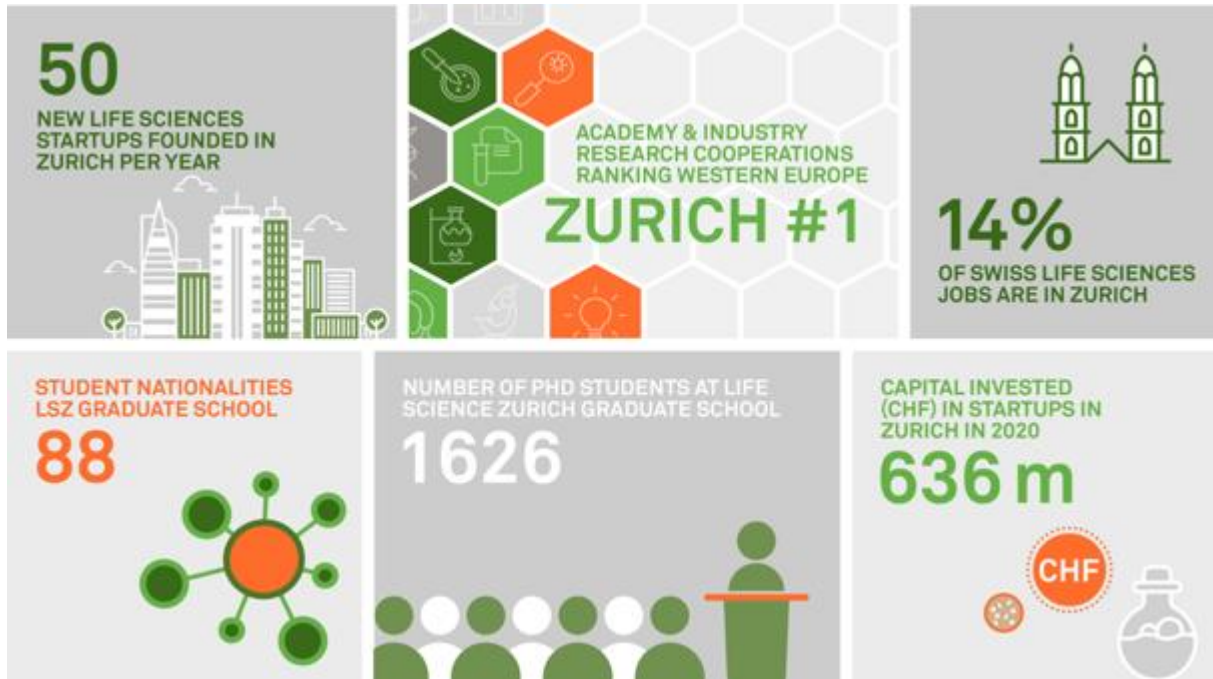
In general, we aim to improve the distribution of task a bit better among the different team members. The marketing team lead will coordinate this.

6.10 Financial matters 2022-2023 period

The finances of the network were distributed over the same projects as last year. Due to the stable financial situation, increasing success of our network and the end of the Covid pandemic, the budget for every team was slightly increased compared to previous years. As our logo changed in 2021, we had an additional budget for rebranding our flags and booth, this rebranding process is still ongoing. The biggest challenge of this year was to organize the Zurich Life Science Day back on site and estimate the budget necessary to cover catering, marketing, the event app and registration platform and other organizational costs that were not present in previous online formats. However, thanks to the amazing effort of all our network members we had a very successful partnering phase and over 900 registrations for the Zurich Life Science Day 2023. Thereby, the income of the Zurich Life Science Day 2023 can easily cover its costs as well as the subevents that we organize throughout the year. The leftover budget can be invested in our growing network and in making our events even more qualitative next year (see the next page).

7. Life Science Zurich Business Network

Danielle Spichiger



Das von der UZH und ETH Zürich unabhängige Business Network ist als Verein organisiert. Es fördert die Vernetzung und Zusammenarbeit der verschiedenen biowissenschaftlichen (life sciences) Institutionen im Grossraum Zürich mit Hochschulen, Spitälern, Firmen, Behörden und anderen Organisationen und Personen in der Schweiz und im Ausland.

7.1 Aktivitäten

7.1.1 Networking-Veranstaltungen

Folgende Netzwerktreffen des Business Networks fanden 2022 statt:

- Am 21.3.2022 traf sich das LSZBN im UZH Zentrum. Dr. Oliver Stoller, Executive Director von RESC informierte uns über die Aktivitäten des RESC, Competence Centre for Rehabilitation Engineering and Science ETH. Zudem präsentierte uns Jamie Duarte, Co-Founder von Myoswiss den Myosuit, der Unterstützung und Kraft bei schwachen Beinen bietet und so zu mehr Mobilität verhilft. Die Orthese, der Myosuit, konnte sogar vor Ort getestet werden.
- Die GV fand am 29.6.2022 im Circle in den Räumlichkeiten der Universitätsspital Zürich statt. Nach der GV führten uns Luzius Suter, Leiter Facility Management USZ Flughafen, und Patrick Eiholzer, Gesamtprojektleiter des USZ Circle, durch das USZ Flughafen, durch das Ambulanzspital mit universitärer Kompetenz und medizinischen Hightech-Geräten. Schliesslich genossen die Mitglieder und Gäste einen feinen Aperó Riche im Restaurant Zoom.
- Das Herbsttreffen vom 21.11.2022 führte uns nach Schlieren zu Cosanum, dem grössten und wahrscheinlich innovativsten Gesundheitslogistiker der Schweiz. Head Coach Bruno Schefer zeigte uns auf der Betriebsführung einige Innovationen von Cosanum Innovationen, z.B. Regale, die den Nachschub an Verbrauchsmaterial selbst managen und erläuterte, wie Cosanum Operationsmaterial für den jeweiligen Patienten personalisiert direkt in den OP liefert. Spannend waren auch seine Ausführungen zur innovativen Firmenkultur und tiefer Fluktuation der Mitarbeitende (resp. Happy cosaMembers).

An den Netzwerktreffen nahmen die Mitglieder des LSZ Business Network teil. Die Advisors sowie ausgewählte Gäste werden eingeladen.

7.1.2 Planung und Organisation LSZ Impact Konferenz

- Die Vorbereitungen für die LSZ Impact Konferenz zum Thema «Data for Health» vom 23. Mai 2023 im Technopark Zürich, liefen an. Erstmals haben wir mit *SHE (Science, Health, Economics) Meetings* professionellen Support bei der Organisation.
- Partner der Konferenz sind neben dem Kanton und der Stadt Zürich die ETH Zürich, die Universität Zürich und die Zürcher Hochschule für Angewandte Wissenschaften ZHAW. In mehreren Partnermeetings wurden Thema und Programm miteinander erarbeitet.
- Als Sponsoren konnten folgende Organisationen gewonnen werden: Roche Diagnostics, Swiss Institute for Bioinformatics, das Universitätsspital Zürich sowie das Wyss Translational Center Zurich.
- Es haben sich (Stand März 2023) bereits 300 Personen angemeldet. Wir rechnen mit ca. 400-450 Anmeldungen.
- Wiederum wird es eine Industry Exhibition sowie ein 1-1 Networking geben, organisiert und finanziert durch Innosuisse resp. Enterprise Europe Network.
- Das detaillierte Programm ist auf der Konferenz Webpage einsehbar: [LIFE SCIENCE ZÜRICH IMPACT CONFERENCE | Agenda \(b2match.io\)](https://www.life-science-zurich.com/IMPACT-CONFERENCE-Agenda)

7.1.3 Weitere Aktivitäten

- Vom 1. bis 3.2.2022 fand der **educational Workshop «Digital Health – The Regulatory Landscape»** in Zusammenarbeit mit ETHZ Industry Relations und der Standortförderung im Amt für Wirtschaft und Arbeit des Kantons Zürich statt. 350 Personen meldeten sich an, 180 nahmen tatsächlich an allen drei Tagen teil. Unser Partner Medidee führte gewohnt kompetent in einem sechsstündigen Workshop, der auf drei Tage verteilt wurde, durch den Workshop (Flyer im Anhang).
- **Logo-Präsenz:** Vom 27.-28.10.2022 fand die **Zurich Open Innovation in Life Science Conference** statt, die durch die gleichnamige Organisation und LSZ organisiert wurde. Die Standortförderung unterstützte den Anlass, das LSZBN hatte eine Logo Präsenz, ebenso an der Konferenz **Biointerface** vom September 2022 organisiert durch das NTN Innovative Surfaces, Empa und ETHZ sowie an den **Trendtagen Gesundheit Luzern** vom 23. und 24.3.2022 (aufgrund des kantonalen Supports des Startup Corner des Healthtech Cluster Switzerland).
- Im 2022 fanden drei Ausgaben des **Biotechgate Digital Partnering von Venture Valuation** statt. Aufgrund der Partnerschaft zwischen der Standortförderung des Kantons Zürich und Venture Valuation war das LSZBN jeweils mit Logo vertreten.
- Ebenfalls mit Logo vertreten war das LSZBN beim jährlichen Life Science Trend Analysis Report von Biotechgate / Venture Valuation.

7.2 Vereinsorganisation

Im Jahr 2022 durften wir **vier neue Mitglieder willkommen heissen** (fett hervorgehoben). Die Vereinsorganisation blieb bis auf ein Vorstandsmitglied unverändert: Ernst Hafen als Vertreter des Bio-Technoparks tritt nicht mehr zur Wiederwahl an. Mario Jenni wird an seiner Stelle in den Vorstand gewählt. An der GV 2022 bedankt sich Danielle Spichiger bei Ernst Hafen herzlich für seinen langjährigen und tatkräftigen Einsatz im LSZBN. Nicht nur die Ursprünge des LSZBN sondern auch die Ursprünge von Life Science Zurich gehen u.a. auf Ernst Hafen zurück. Ernst hat das LSZBN auch sehr bei der LSZ Impact Konferenz unterstützt, sei es als Programm-Gestalter, Kontakt-Vermittler und Moderator. Er wird dem Verein weiterhin als Advisor zur Seite stehen.

Mitglieder:

- Balgrist Campus AG, vertreten durch Caroline Sciallo
- BIO-TECHNOPARK Schlieren-Zürich, vertreten durch Ernst Hafen und Mario Jenni
- **Cosanum AG, vertreten durch Bruno Schefer**
- **Digital Health Center Bülach (dhc), vertreten durch Stefan Lienhard**
- Grow Wädenswil, vertreten durch Dolf van Loon
- Standortförderung des Kantons Zürich, vertreten durch Danielle Spichiger
- House of LAB SCIENCE, vertreten durch Christian Hoffmann
- House of Winterthur, vertreten durch Antonietta Lomoro
- **Innovation Campus Horgen (Arbeitstitel) vertreten durch Yang Zhao (Artam)**
- Start Smart Schlieren, vertreten durch Barbara Angelsberger
- **Superlab Suisse, vertreten durch Zhang Xi**
- Toolpoint for Lab Sciences, vertreten durch Hans Noser
- Universitätsspital Zürich, USZ, vertreten durch Matthias Herrmann
- Wirtschaftsförderung der Stadt Zürich, vertreten durch Yves Bisang
- ZHAW – Departement Life Sciences, vertreten durch Thomas Ott
- Zürich Tourismus Kongressbüro, vertreten durch Vanessa Reis

Vorstand:

- Danielle Spichiger (President)
- Dr. Silvie Cuperus (Vice-President)
- Hans Noser (Treasurer)
- Barbara Angelsberger
- Yves Bisang
- Prof. Dr. Ernst Hafen (bis Juni 2022)
- Mario Jenni (ab Juli 2022)
- Prof. Dr. Dolf van Loon

Weitere Kooperationspartner sind als «**Advisors**», eingebunden, was der Funktion eines Beirats entspricht. 2022 waren dies folgende Personen (neue Advisors sind fett hervorgehoben)

- Michael Altorfer, Swiss Biotech Association
- Prof. Dr. med. Onur Boymann, UZH and USZ
- **Dr. Wolfram Grüning, ETH Entrepreneurship**
- **Prof. Dr. Ernst Hafen, Professor emeritus ETH Zürich, Präsident des Vereins Gesundheitsdatenraum Schweiz**
- Prof. Dr. Michael Hengartner, ETH Board
- Lukas Huber, Greater Zurich Area AG
- Dr. Hans-Anton Keserue, rqmicro
- **Dr. Maria Olivares, UZH Innovation Hub**
- Prof. Dr. med. Gabriela Senti, USZ
- Adrian Sigrist, Unitectra

Anhang

(1) Flyer Basics of Regulatory Affairs in Medtech

Online Workshop
Digital Health
The Regulatory Landscape
Tuesday to Thursday
01 – 03 February 2022
10.00 – 12.00 CET

Department of Zurich
Department for Economic Affairs
Office for Economy and Labour

ETH zürich

life science zürich
business network

Organizer

Business & Economic Development (AWA), Canton of Zurich

ETH Zurich Industry Relations

Life Science Zurich Business Network

Partner

Medidee Services AG

With its headquarter in Lausanne and a branch office in Olten and offices in Germany, Denmark, Belgium, Philippines and USA, Medidee is a global services provider serving companies of all sizes ranging from academic start-ups to majors. Services cover scientific, regulatory, clinical and quality system support along all steps of product development, from initial project idea to certification or regulatory clearance. Key services include regulatory / clinical strategy, development of Clinical Investigations Protocols, Clinical Evaluation Reports, technical documentation, verification & validation support incl. statistics in V&V and clinical, development of scientific rationales for V&V e.g. biological risk assessments, risk management, post market surveillance and PMCF, supporting Notified Body and competent authority contacts, supporting competent authority inspections e.g. FDA, quality system implementation and maintenance, MOSAP readiness. Medidee's product expertise covers active implants, medical devices incl. substance-based devices and IVD.

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This training provides you with the basics of regulatory affairs related to digital health. Get an overview of the regulatory landscape, hear about the basic concepts and principles, get insights into the necessary steps and anticipate typical pitfalls when bringing a digital health product to the market.

Discuss with the experts.

Training Objective

- Get an overview of the regulatory landscape and requirements surrounding digital health applications
- Understand the major principles, concepts and processes
- Learn to sequence the necessary steps and build awareness of possible pitfalls when bringing a digital health product to the market
- Know where and how to find required information

Target Audience

- Researchers in the field of translational medicine with a digital application
- Employees from spin-offs, start-ups and SMEs, who intend to bring a digital health product to the market
- Employees from companies interested in getting an overview on regulatory affairs related to digital health
- Investors in medical devices who would like to understand risks and opportunities regarding the evolving regulatory framework

Prerequisites

- Affinity to or involvement in MedTech or Life Sciences
- Basic understanding of good practices in product development and innovation
- Technical / scientific background or commercial background linked to Life Sciences products

Registration via <http://zh.ch/ra-digitalhealth>

- The workshop is free of charge
- You will receive the login information for the webinar by email a few days prior to the workshop
- A certificate of attendance will be issued for participants that participated on all three days and completed the quiz

PROGRAM

1st of February

10.00 Welcome

Danielle Spichiger, President Life Science Zurich Business Network, Director Cluster Life Sciences, Business and Economic Development (AWA), Canton of Zurich

Dr. Urs Zuber, Head Industry Relations, ETH Zurich

10.10 – 12.00 General introduction to Digital Health

Kim Rochat, Senior Partner, Medidee Services

- Digital health regulatory context
- Guidance and standards to comply with related requirements
- Key requirements and importance of IEC 62304

2nd of February

10.00 – 12.00 Cybersecurity assessment of medical devices

Dr. Gustavo Hernandez, Project Associate, Medidee Services

- Link between cybersecurity and regulatory requirements
- Key steps to ensure compliance with cybersecurity requirements
- Risk domains to cover in a cybersecurity assessment

3rd of February

10.00 – 12.00 Artificial intelligence and machine learning

Dr. Stamatia Pagoulatou, Project Associate, Medidee Services

- Artificial intelligence (AI) and machine learning (ML) in medical devices
- Regulatory framework of AI/ML medical devices
- Validation framework and key expectations