

Schweizerische Stiftung für die Erforschung der Muskelkrankheiten  
Fondation suisse de recherche sur les maladies musculaires  
Fondazione svizzera per la ricerca sulle malattie muscolari

**7<sup>th</sup> Swiss Meeting on Muscle Research**  
**Macolin / Magglingen**  
**7<sup>th</sup> – 9<sup>th</sup> December 2008**



Organizer: Denis Monard  
Friedrich Miescher Institute  
Maulbeerstrasse 66  
CH-4058 Basel

## **TIMETABLE OF ORAL PRESENTATION**

## PROGRAMME

### Day 1 - Sunday, 7<sup>th</sup> December

- 16:00 - 17:30                      Check-in rooms
- 17:30 -                                Arrival and Welcome Drink
- 18:15 - 19:45                      DINNER (Swiss Olympic Haus)
- 20:00 - 20:35                      Pico Caroni  
Friedrich Miescher Institute for Biomedical Research, Basel  
**Vulnerable motoneurons as “Trojan horses” in ALS**
- 20:35 - 21:10                      Kathrin Meyer  
Institute of Cell Biology, University of Bern, Bern  
**U7-snRNA mediated splicing modulation as a potential therapy for Spinal Muscular Atrophy**
- 21:10 - 21:45                      Beat Trueb  
Department of Clinical Research, University of Bern, Bern  
**Role of the novel receptor FGFR1 in muscle differentiation**
- 21:45 - 22.20                      Basile Darbellay  
Faculty of Medicine, University of Geneva, Geneva  
**STIM1 and Orai1-dependent store-operated calcium entry controls early post-natal human myoblast differentiation**

### Day 2 - Monday, 8<sup>th</sup> December

- 07:30 - 08:15                      *BREAKFAST*
- 08:15 - 08:50                      Hans-Rudolf Brenner  
Dept. of Biomedicine/Physiology, University of Basel  
**New roles for Agrin and Neuregulin at the neuromuscular junction**
- 08:50 - 09:25                      Urs Ruegg  
University of Geneva, Laboratory of Pharmacology, Geneva  
**Our pharmacological strategy to treat Duchenne Muscular Dystrophy**

- 09:25 - 10:00 Christoph Handschin  
Institute of Physiology and Zurich Center of Integrative Human  
Physiology, University of Zürich  
**PGC-1alpha controls skeletal muscle plasticity and  
ameliorates muscle wasting**
- 10:00 - 10:30 *COFFEE BREAK*
- 10:30 - 11:05 Markus A. Rüegg  
Biozentrum, University Basel, Basel  
**Molecular mechanisms involved in the maintenance and  
the wasting of skeletal muscle**
- 11:05 - 11:40 Jachen Denoth  
ETH Zürich, Institute for Biomechanics, Zürich  
**Effect of intermyofibril proteins desmin and obscurin on  
muscle performance: theoretical considerations and  
simulations**
- 11:40 - 12:15 Nuria García Dépraz  
Division de Pédiatrie Moléculaire, Centre Hospitalier  
Universitaire Vaudois (CHUV), Lausanne  
**A novel form of nemaline myopathy: a new locus found**
- 12:15 - 13:30 *LUNCH*
- 13:30 - 14:05 Susan Treves  
Department of Anesthesia and Biomedicine, Lab 408 ZLF,  
Basel  
**Insights into the JP45 KO mouse**
- 14:05 - 14.40 Ernst Niggli  
Department of Physiology, University of Bern, Bern  
**Hypersensitive EC-coupling and Ca<sup>2+</sup> signaling in MDX  
cardiomyocytes**
- 14:40 – 15:00 Stefania Puttini  
EPFL, Lausanne  
**Evaluation of a muscle gene therapy approach by atomic  
force microscopy**
- 15:00 - 16:30 POSTER SESSION
- 16:30 - 17:05 Julia Steuber  
Department of Biochemistry, University of Zürich, Zürich  
**Function of the mitochondrially encoded ND5 subunit from  
complex I (NADH dehydrogenase): implications for  
mitochondrial disorders**

17:05 - 17:40 Bertrand Favre, Isabella Schepens, and Luca Borradori  
Labor für molekulare Zellbiologie, Klinik für Dermatologie,  
Universitätsspital Insel, Bern  
**BPAG1-b: complex distribution pattern in striated and heart  
muscle and association with plectin and  $\alpha$ -actinin**

17:40 - 18:15 Harald Herrmann  
German Cancer Research Center, Heidelberg, Germany  
**Biophysical and mechanical properties of mutant desmin  
filaments**

18:30 - 20.00 *DINNER*

20:00 - POSTER SESSION

**Day 3 - Tuesday, 9<sup>th</sup> December**

08:15 - 08:50 Irina Agarkova  
University Hospital Zürich, Department of Research, Zürich  
**Sarcomere alterations during cardiomyopathy: adaptation  
or complication?**

08:50 - 09:25 Fabian Dettwiler  
ETH Zürich, Institute for Biomechanics, Zürich  
**Branchiostoma Lanceolatum – a one myofibril cell system:  
a new model to investigate sarcomere dynamics**

09:25 - 10:00 Oliver Baum  
Institute for Anatomy, University of Bern, Bern  
**The impact of nNOS on muscular dystrophy**

10:00 - 10:30 *COFFEE BREAK*

10:30 - 11:05 Pierre-Yves Jeannot  
Unité de Neuropédiatrie, CHUV, Lausanne  
**Functional ability monitoring in DMD using a kinematic  
sensor**

End of the meeting

## **SCHEDULE OF POSTER PRESENTATION**

## Schedule of Poster Presentations

1. **C. Bloetzer**, A. Klein, P.Y. Jeannet  
Building of a National Swiss Registry for DMD and SMA. An update
2. F. Huber-Abel, H. Hoppeler and **O. Baum**  
nNOS and ROS metabolism in skeletal muscle
3. A. Martins, V.M. Shkyl, N.D. Ullrich, M. Nowycky, **E. Niggli**, N. Shirokova  
Reciprocal amplification of ROS and Ca<sup>2+</sup> signals in stressed MDX dystrophic skeletal muscle fibres
4. **M. Albesa**, B. Gavillet, J.-S. Rougier and H. Abriel  
Regulation of the voltage-gated sodium channel Nav1.5 by the ubiquitin proteasome system (UPS) in dystrophin-deficient mdx5cv mice
5. **M. Fachaouy**, C. Jung, J. Ogrodnik, E. Polakova, N. Shirokova  
Abnormal stress-induced Ca<sup>2+</sup> influx into dystrophic MDX cardiomyocytes: involved pathways
6. **N.D. Ullrich**, M. Fanchaouy, K. Gusev, E. Polakova, N. Shirokova, E. Niggli  
Disruption of the cytoskeletal dystrophin complex alters excitation-contraction coupling mechanisms in cardiomyocytes of the MDX mouse
7. **M. Vukcevic**, F. Zorzato, T. Girard, A. Urwyler S. Levano and S. Treves  
Functional impact of endogenous RYR1 mutations on intracellular calcium homeostasis
8. C. Beluven, S. Treves, J. Xia and **F. Zorzato**  
SRP-27 is a novel component of the RYR supramolecular signaling complex
9. **B. Darbellay**, S. Arnaudeau, S. Konig, H. Jousset, C. Bader, N. Demaurex and L. Bernheim  
STIM1 and Orai1-dependent store-operated calcium entry controls early post-natal human myoblast differentiation
10. **T. Laumonier**, S. Konig, C. Bader, L. Bernheim, P. Hoffmeyer and J. Menetrey  
In vivo bioluminescence imaging of transplanted human myoblasts using renilla-luciferase transgene expression
11. **S. Konig**, C.R. Bader and L. Bernheim  
Kir2.1 linked hyperpolarization specifically controls MEF2A and MEF2C expression during human primary myoblast differentiation
12. V. Hinard, **M. Leroy**, C.R. Bader and L. Bernheim  
Molecular mechanisms of Kir2.1. activation at the onset of human myoblast differentiation

13. A. De Buys Roessingh, **N. Hirt-Burri**, L.A. Applegate, C. Scaletta, and J. Hohlfeld  
Human fetal skeletal muscle cells for tissue engineering
14. **S. Sharma**, N. Mücke, H. Herrmann, H. Bär  
Analysing the interaction of desmin with  $\alpha$ B-crystallin in desminopathy
15. **W. Steffen**, P-C Lin, J. Steuber  
Expression and cellular localization of the antiporter-related DN5 subunit from human complex I (NADH: quinone oxidoreductase) in *Saccharomyces cerevisiae*
16. **C. Gallo**, O. Dorchies, U. Ruegg and E. Roulet  
Role of the cationic channel TRPC1 in Duchenne Muscular Dystrophy: analysis of double knock-out TRPC1 *-/-* /*mdx* skeletal muscles
17. **R. Schönauer**, S. Lange, J.-C. Perriard, S.P. Hoerstrup, I. Agarkova  
The myomesin family: sarcomeric m-band components with interactions
18. **E. Arnaud**, J. Zenker, A.-S. De Preux, C. Stendel, J.-J. Médard, N. Tricaud, J. Senderek, U. Suter and **R. Chrast**  
Development and characterization of a mouse model of Charcot-Marie-Tooth disease 4C
19. **N. Hardel**, S. Wakefield, H.R. Brenner  
ERBB receptors stabilize acetylcholine receptors at TI-neuromuscular junction
20. **S. Lin**, G. Bittcher, J. Magyar, M.A. Rüegg  
Is the induction of ectopic postsynaptic structure a means to ameliorate disease progression in *mdx* mice?
21. **K. Meyer**, J. Trüb, R. NlendNlend, J. Marquis and D. Schümerli  
*In vivo* splicing correction rescues a severe mouse model for Spinal Muscular Atrophy
22. **O.M. Dorchies**, S.A. Comyn, and U.T. Ruegg  
Green tea polyphenols display potent anti-fibrotic activity on primary culture of dystrophic muscle cells
23. **O.M. Dorchies**, J. Reutenauer, O. Vuadens, S.A. Comyn, and U.T. Ruegg  
Tamoxifen improves the structure and the function of skeletal muscle in *mdx* mice
24. **J. Reutenauer**, O. Dorchies, E. Roulet and U. Ruegg  
Urocortins improve skeletal muscle structure and function of dystrophic *mdx* mouse via a cyclic AMP/PKA-dependent pathway
25. **C. Florian Bentzinger**, K. Romanino, S. Lin, M.A. Rüegg  
mTOR signaling controls the metabolic coupling of skeletal muscle and adipose tissue



26. **R. van Zwieten**, N. Niederlander and N. Mermod  
Efficient transgene expression in differentiated stem cells
27. **S. Meinen**, M. Erb, P. Barzaghi, T. Meier, M.A. Rüegg  
Treatment approaches in laminin- $\alpha$ 2 deficient congenital muscular dystrophy

**ADDRESS LIST OF PARTICIPANTS**

## ATTENDEES

**Abriel** Hugues  
UNIL, Pharmacology  
Bugnon 27  
1005 Lausanne  
hugues.abriel@unil.ch

**Aebi** Uli  
M.E. Müller Institute for Structural  
Biology  
Biozentrum, Uni Basel  
Klingelbergstrasse 70  
4056 Basel  
ueli.aebi@unibas.ch

**Agarkova** Irina  
Universitätsspital Zürich  
Abteilung Forschung, Department  
Chirurgie  
Rämistrasse 100  
8091 Zürich  
irina.agarkova@usz.ch

**Albesa** Maxime  
University of Lausanne  
Pharmacology  
Bugnon 27  
1005 Lausanne  
maxime.albesa@unil.ch

**Arnaudeau** Serge  
Dept. de Neurosciences Fondamentales  
Centre Médical Universitaire  
Faculté de Médecine  
1, Michel Servet  
1211 Genève 4  
serge.arnaudeau@medecine.unige.ch

**Bader** Charles  
Département de Neurosciences  
Fondamentales, Uni Genève  
1 rue Michel Servet  
1211 Genève 4  
charles.bader@medecine.unige.ch

**Baum** Oliver  
Institute for Anatomy  
University of Bern  
Baltzerstrasse 2  
3012 Bern  
baum@ana.unibe.ch

**Bentzinger** Conrad F.  
Biozentrum, University of Basel  
Klingelbergstrasse 70  
4055 Basel  
cf.bentzinger@unibas.ch

**Bernheim** Laurent  
Département de Neurosciences  
Fondamentales, Uni Genève  
1 rue Michel Servet  
1211 Genève 4  
laurent.bernheim@medecine.unige.ch

**Bloetzer** Clemens  
Médecin associé  
Unité de Neuropédiatrie  
DMCP-CHUV  
1011 Lausanne  
clemens.bloetzer@chuv.ch

**Bonafé** Luisa  
Service de Pédiatrie Moléculaire  
CHUV  
Av. Pierre Decker 2, CI 02/33  
1011 Lausanne  
luisa.bonafe@chuv.ch

**Borradori** Luca  
Klinik und Poliklinik für Dermatologie  
Universitätsspital - Inselspital  
Freiburgstrasse  
3010 Bern  
luca.borradori@insel.ch

**Brenner** Hans-Rudolf  
Institute for Physiology  
University of Basel  
Klingelbergstrasse 50  
4056 Basel  
hans-rudolf.brenner@unibas.ch

**Caroni** Pico  
Friedrich Miescher Institute  
for Biomedical Research  
Maulbeerstrasse 66  
4058 Basel  
pico.caroni@fmi.ch

**Chrast** Roman  
Department of Medical Genetics  
University of Lausanne  
Rue du Bugnon 27  
1005 Lausanne  
roman.chrast@unil.ch

**Darbellay** Basile  
Département de Neurosciences  
Fondamentales, Uni Genève  
1 rue Michel Servet  
1211 Genève 4  
basile.darbellay@medecine.unige.ch

**De Buys Rossingh** Anthony  
University Hospital CHUV  
BH-10  
1011 Lausanne  
anthony.debuys-roessingh@chuv.ch

**Denoth** Jachen  
ETH Zürich  
Institute for Biomechanics, HCI E357.1.  
Wolfgang-Pauli-Str. 10  
8093 Zürich  
jdenoth@ethz.ch

**Dettwiler** Fabian  
ETH Zürich  
Institute for Biomechanics, HCI E357.1.  
Wolfgang-Pauli-Str. 10  
8093 Zürich  
fdettwiler@ethz.ch

**Dorchies** Olivier  
Laboratory of Pharmacology  
Geneva-Lausanne School of  
Pharmaceutical Sciences  
University of Geneva  
1211 Geneva  
olivier.dorchies@pharm.unige.ch

**Fanchaouy** Mohammed  
Department of Physiology  
University of Bern  
Bühlplatz 5  
3012 Bern  
fanchaouy@pyl.unibe.ch

**Favre** Bertrand  
Dermatologie  
Inselspital  
3010 Bern  
bertrand.favre@insel.ch

**Fritz-Steuber** Julia  
Department of Biochemistry  
University of Zurich  
8057 Zürich  
steuber@bioc.uzh.ch

**Fischer** Dirk  
Universitätsspital Basel  
Neurologische Poliklinik  
Petersgraben 4  
4031 Basel  
fischerdi@uhbs.ch

**Gallo** Chiara  
University of Geneva  
Laboratoire de Pharmacologie  
30, quai E. Ansermet  
1211 Geneva 4  
chiara.gallo@pharm.unige.ch

**Garcia Dépraz** Nuria  
Service de Pédiatrie Moléculaire  
CHUV  
Av. Pierre Decker 2, CI 02/33  
1011 Lausanne  
nuria.garcia-segarra@chuv.ch

**Girard** Thierry  
Department of Anaesthesia  
University Hospital Basel  
4031 Basel  
thierry.girard@unibas.ch

**Handschin** Christoph  
Institute of Physiology  
University of Zürich  
Winterthurerstrasse 190  
8057 Zürich  
christoph.handschin@access.uzh.ch

**Hardel** Nadine  
Institute of Physiology  
Department of Biomedicine  
University of Basel  
Klingelbergstrasse 50  
4056 Basel  
nadine.hardel@unibas.ch

**Herrmann** Harald  
B065: Functional Architecture of the Cell  
German Cancer Researcher Center  
Im Neuenheimer Feld 280  
D-69120 Heidelberg  
h.herrmann@dkfz.de

**Hirt-Burri** Nathalie  
University Hospital CHUV  
CI/02/60  
1011 Lausanne  
nathalie.burri@chuv.ch

**Hoppeler** Hans  
Institute of Anatomy  
University of Berne  
Baltzerstrasse 2  
3000 Bern 9  
hans.hoppeler@ana.unibe.ch

**Jeannet** Pierre-Yves  
Médecin associé  
Unité de Neuropédiatrie  
DMCP-CHUV  
1011 Lausanne  
pierre-yves.jeannet@chuv.ch

**Johansson** Karin  
University of Geneva  
Laboratoire de Pharmacologie  
30, quai E. Ansermet  
1211 Geneva 4  
karin.johansson@pharm.unige.ch

**Konig** Stephane  
Département de Neurosciences  
Fondamentales, Uni Genève  
1 rue Michel Servet  
1211 Genève 4  
stephane.konig@medecine.unige.ch

**Laumonier** Thomas  
Département de Neurosciences  
Fondamentales, Uni Genève  
1 rue Michel Servet  
1211 Genève 4  
thomas.laumonier@medecine.unige.ch

**Leroy** Marina  
CMU - Neuroscience Fondamentales  
Rue Michel Servet 1  
1211 Genève 4  
marina.leroy@medecine.unige.ch

**Lin** Shuo  
Biozentrum, University of Basel  
Klingelbergstrasse 70  
4055 Basel  
shuo.lin@unibas.ch

**Maj** Marc  
Basel University Hospital  
Department of Research  
Hebelstrasse 20  
4031 Basel  
marcin.maj@unibas.ch

**Mermod** Nicolas  
EPFL Lab Molecular Biotechnology  
Station 6  
1015 Lausanne  
nicolas.mermod@unil.ch

**Meyer Kathrin**  
Institute of Cell Biology  
University of Bern  
Baltzerstrasse 4  
3012 Bern  
kathrin.meyer@izb.unibe.ch

**Meinen Sarina**  
Biozentrum, University of Basel  
Klingelbergstrasse 70  
4055 Basel  
sarina.meinen@unibas.ch

**Mittaz-Crettol Lauréane**  
Service de Pédiatrie Moléculaire  
CHUV  
Av. Pierre Decker 2, CI 02/33  
1011 Lausanne  
laureane.mittaz-crettol@chuv.ch

**Monard Denis**  
Friedrich Miescher Institute  
Maulbeerstrasse 66  
4058 Basel  
denis.monard@fmi.ch

**Nicolet Stefan**  
M.E. Müller Institute for Structural  
Biology  
Biozentrum, Uni Basel  
Klingelbergstrasse 70  
4056 Basel  
nicoleet\_stefan@gmx.ch

**Niederländer Nicolas J.**  
Centre de Biotechnologie - UNIL-EPFL  
EPFL FSB-LBTM  
CH B1-391 (Bâtiment CH)  
Station 6  
1015 Lausanne  
nicolas.niederlander@unil.ch

**Niggli Ernst**  
Department of Physiology  
University of Bern  
Bühlplatz 5  
3012 Bern  
niggli@pyl.unibe.ch

**Puttini Stefania**  
EPFL SB LBTM  
CH A1 398  
Station 6  
1015 Lausanne  
stefania.puttini@epfl.ch

**Reutenauer Julie**  
Laboratory of Pharmacology  
Geneva-Lausanne School of  
Pharmaceutical Sciences  
University of Geneva  
Quai Ernest Ansermet 30  
1211 Geneva  
julie.reutenauer@pharm.unige.ch

**Rognon Jacques**  
Schweiz. Stiftung für die Erforschung  
der Muskelkrankheiten  
Chemin des Jordils 4  
2016 Cortaillod  
jacques.rognon@fsrmm.ch

**Rösler Kai**  
Inselspital  
Universitätsklinik für Neurologie  
Bern  
kai-michael.roesler@insel.ch

**Roulet Emmanuelle**  
University of Geneva  
Laboratory of Pharmacology  
30 Quai E. Ansermet  
1211 Geneva 4  
emmanuelle.roulet@pharm.unige.ch

**Rüegg Markus A.**  
Biozentrum, University of Basel  
Klingelbergstrasse 70  
4055 Basel  
markus-a.ruegg@unibas.ch

**Ruegg Urs**  
University of Geneva  
Laboratoire de Pharmacologie  
30 Quai E. Ansermet  
1211 Geneva 4  
urs.ruegg@pharm.unige.ch

**Schepens** Isabella  
Klinik und Poliklinik für Dermatologie  
Universitätsspital - Inselspital  
Freiburgstrasse  
3010 Bern  
isaschepens@hotmail.com

**Schönauer** Roman  
University Hospital Zürich  
Cardiovascular Surgery Research  
Rämistrasse 100  
8091 Zürich  
roman.schoenauer@usz.ch

**Schümperli** Daniel  
Institut für Zellbiologie  
Universität Bern  
Baltzerstrasse 4  
3012 Bern  
daniel.schuemperli@izb.unibe.ch

**Sharma** Sarika  
B065: Functional Architecture of the Cell  
German Cancer Researcher Center  
Im Neuenheimer Feld 280  
D-69120 Heidelberg  
s.sharma@dkfz.de

**Steffen** Wojtek  
Department of Biochemistry  
University of Zurich  
8057 Zürich  
w.steffen@bioc.uzh.ch

**Strelkov** Sergei  
Laboratory of Biocrystallography  
Department of Pharmaceutical Sciences  
Katholieke Universiteit Leuven  
O&N2, Campus Gasthuisberg  
Herestraat 49 bus 822  
B-3000 Leuven  
sergei.strelkov@pharm.kuleuven.be

**Treves** Susan  
Departments of Anesthesia and  
Research  
ZLF Lab 408, Universitätsspital  
Hebelstrasse 20  
4031 Basel  
susan.treves@unibas.ch

**Trueb** Beat  
University of Bern  
Dept. of Clinical Research  
Murtenstrasse 35  
3010 Bern  
beat.trueb@dkf.unibe.ch

**Ullrich** Nina D.  
Department of Physiology  
University of Bern  
Bühlplatz 5  
3012 Bern  
ullrich@pyl.unibe.ch

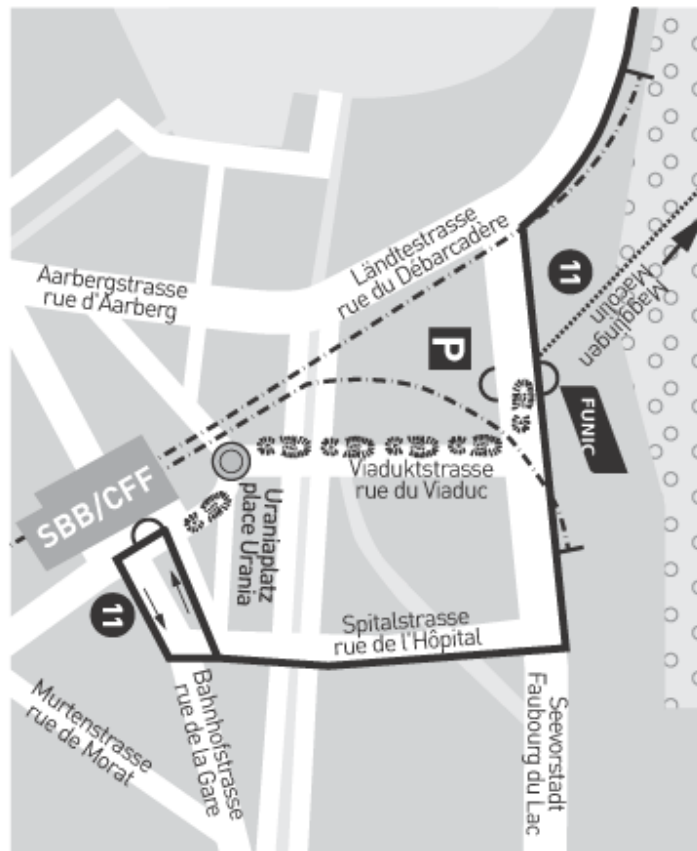
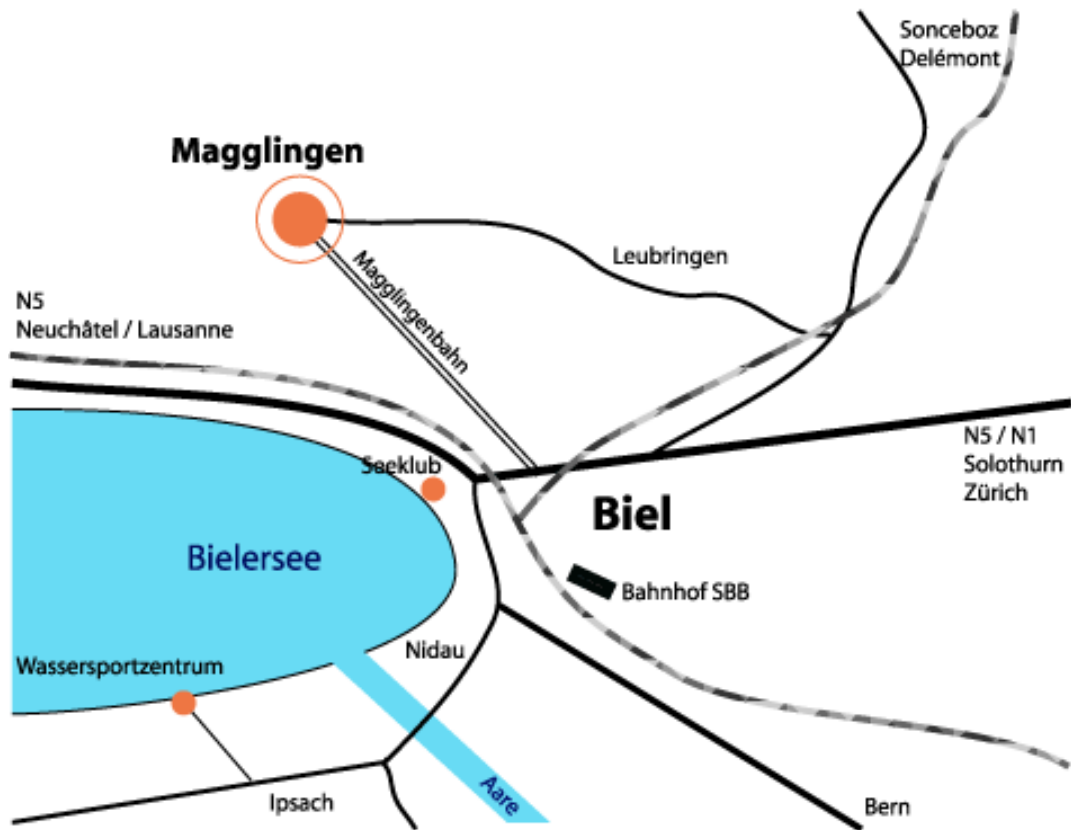
**van Zwieten** Ruthger Willem  
EPFL SB LBTM  
CH B1 392  
Station 6  
1015 Lausanne  
ruthger.vanzwieten@unil.ch

**Vukcevic** Mirko  
Departments of Anesthesia and  
Research  
ZLF Lkab 408, Universitätsspital  
Hebelstrasse 20  
4031 Basel  
mirko.vukcevic@unibas.ch

**Wakefield** Sarah  
Institute of Physiology  
Department of Biomedicine  
University of Basel  
Klingelbergstrasse 50  
4056 Basel  
sarah.wakefield@unibas.ch

**LOCATION - FUNICULAR TIMETABLE - PARKING**





- ligne 11 / Linie 11
- chemin de fer / Eisenbahn
- ..... funiculaire / Standseilbahn
- arrêt bus / Bushaltestelle
- ☀ à pied / zu Fuss
- 11 bus 11 Tpb / Bus 11 VB



