

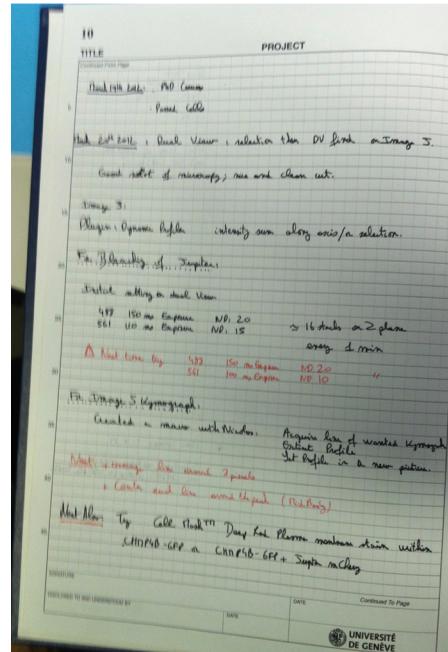
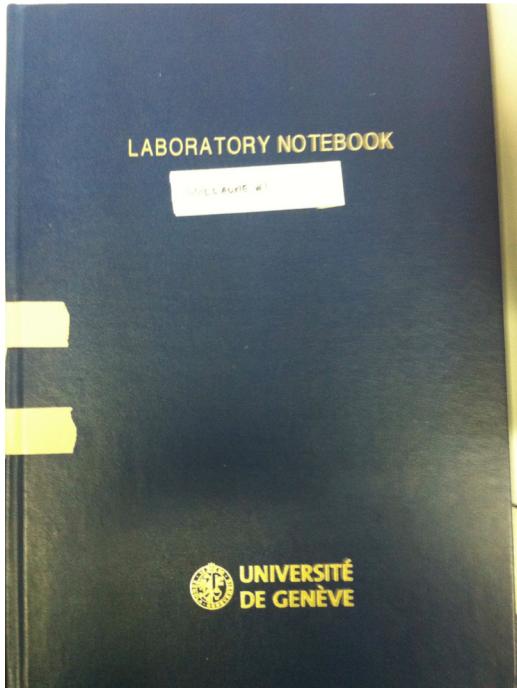
# ELECTRONIC LAB BOOK ELN BIOCHEMISTRY

Faculté des Sciences Mars 13 2019

# Current status

- Laboratory Notebook only
- Lab book Word / Excel / Powerpoint
- OS file system + Word / Excel / Powerpoint
- Lab Wiki
- Public Electronic Lab Book
- .....

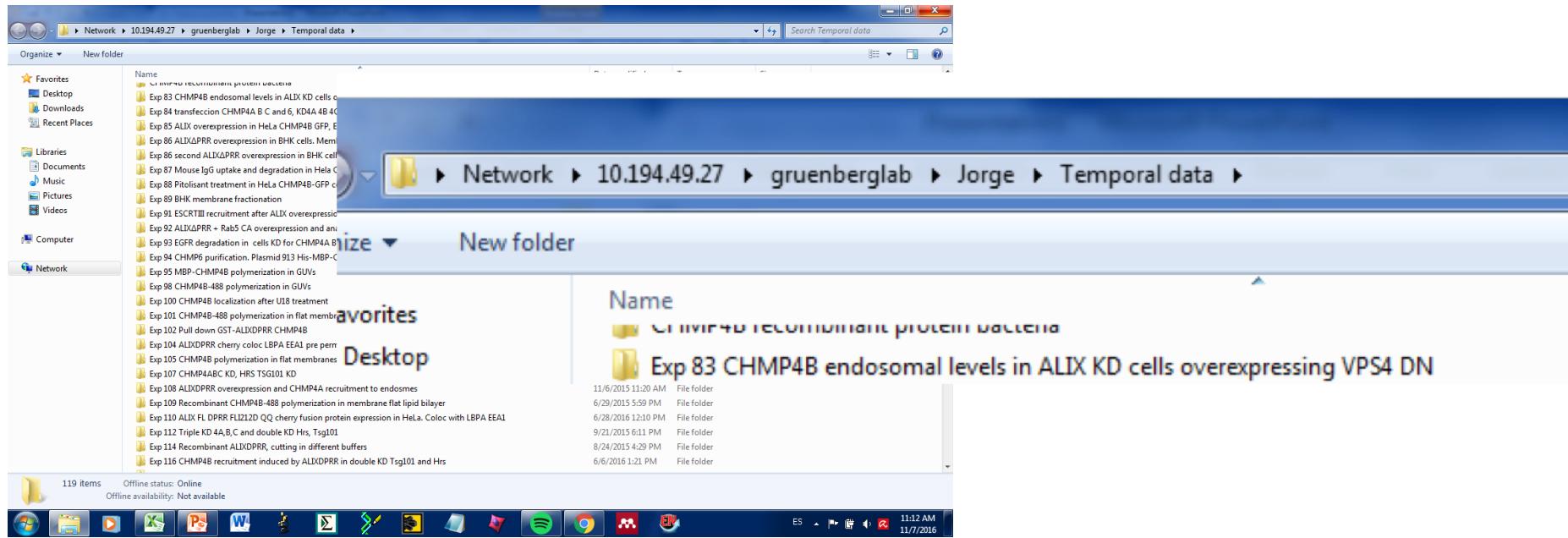
# Laboratory Notebook



# Notebook and Excel

1	Lab Book N°	Experiment N°	Page N°	Title
10	1	10		
11	1	11		
12	1	12		
13	1	13		
14	1	14		
15	1	15		
16	1	16		
17	1	17		
18	1	18		
19	1	19		
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26	1	26		
27	1	27		
28	1	28		
29	1	29		
30	1	30		
31	1	31		
32	1	32		
33	1	33		
34	1	34		
35	1	35		
36	2	36		
				1 EGFR degradation in ALIX MEF KO cells

# References on a File Server



# Images Stored in Powerpoint

Exp 100 [Protected View] - Microsoft PowerPoint

File Home Insert Design Transitions Animations Slide Show Review View Add-Ins EndNote X7

Protected View This file originated from an Internet location and might be unsafe. Click for more details. Enable Editing

Slides Outline x

1

Exp 100  
CHMP4B localization after U18 treatment

2

CHMP4B localization after U18 treatment

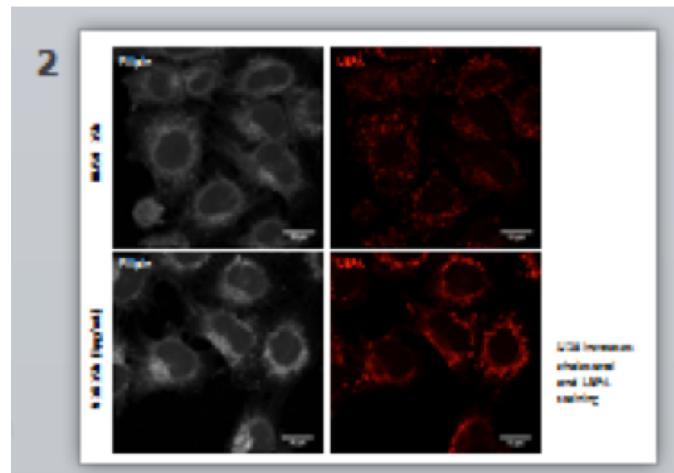
3

CHMP4B localization after U18 treatment

1 2 3 4 5 6 7 8 9 10 11 12

Slide 1 of 3 | "Office Theme" English (U.S.)

11:17 AM 11/7/2016



Published online: May 15, 2014

*Science & Society*



EMBO  
*reports*

# The laboratory notebook in the 21<sup>st</sup> century

*The electronic laboratory notebook would enhance good scientific practice and increase research productivity*

Sara Y Nussbeck<sup>1</sup>, Philipp Weil<sup>1,2</sup>, Julia Menzel<sup>1,2</sup>, Bartlomiej Marzec<sup>1</sup>, Kai Lorberg<sup>1</sup> & Blanche Schwappach<sup>2</sup>

# Electronic Lab Book

- Single repository for protocol
- Template for experiments
- Inclusion of digital data easier, single place
- Link of raw data
- Easy access
- Easy search

# Electronic Lab Book requirements

- Mac OS, Windows compatible
- Pure Web. HTML 4
- Data in Switzerland
- Easy to learn
- Easy search
- Easy to load data, link to Dropbox, File server

# Electronic Lab Book

- In 2015 the Marcos Gonzalez group decided to try a Electronic Lab book
- We did not want to develop and maintain our own ELN
- We looked for a commercial solution, open to academic sharing

# Where is RSpace in use?



UNIVERSITÉ  
DE GENÈVE



HARVARD  
MEDICAL SCHOOL



JÜLICH



GEORG-AUGUST-UNIVERSITÄT  
GÖTTINGEN



University  
of Glasgow

in  
Europe  
and US

MANCHESTER  
1824  
The University of Manchester

BCM  
Baylor College of Medicine



Mass Innovation Labs  
Leading biotech incubator  
In Cambridge/Boston

# Rspace in Geneva

- Linux virtual server Vmware UniDufour



# Rspace in Geneva

- Linux virtual server Vmware UniDufour
- Files are stores in Sciences II
- Backups are stored in Sciences II
- All the files are located in Geneva, Switzerland

# System -> Users

 RSpace  
ENTERPRISE

Workspace   Gallery   Messaging   Apps   My RSpace   Help   **System**   Account ▾

Users   Groups   Communities   Create Account   Operate As   Monitoring   Maintenance   Configuration

[Show All](#)

**Users**      **Go**

Options	Name	Role	Username	Usage (Mb)	Documents	Last Login
<input type="checkbox"/>	SysAdmin, Rspace	SYSADMIN	sysadmin1	9.1	98	Today at 09:40
<input type="checkbox"/>	Lacour, Jerome	USER, PI	Jerome.Lacour	0.7	41	Today at 08:44
<input type="checkbox"/>	Castanon, Irinka	USER	Irinka.Castanon	976.4	980	Today at 08:40
<input type="checkbox"/>	Tomba, Caterina	USER	Caterina.Tomba	992	1742	Yesterday at 21:05
<input type="checkbox"/>	Aumeier, Charlotte	USER, PI	Charlotte.Aumeier	19.2	134	Yesterday at 17:18
<input type="checkbox"/>	Barthelemy, Marine	USER	Marine.Barthelemy	864.7	3870	Yesterday at 15:54
<input type="checkbox"/>	Richard, Clément	USER	Clement	166.6	546	Yesterday at 15:46
<input type="checkbox"/>	Couton, Louise	USER	Louise.Couton	30.5	196	Yesterday at 15:17
<input type="checkbox"/>	Di Meglio, Ilaria	USER	Ilaria.DiMeglio	855.7	1147	Yesterday at 14:17
<input type="checkbox"/>	Velluz, Marie-Claire	USER	MarieClaire.Velluz	23	197	Yesterday at 11:43
<input type="checkbox"/>	Guillamat Bassedas, Pau	USER	Pau.Guillamat	71	125	Yesterday at 11:26
<input type="checkbox"/>	Seum, Carole	USER	Carole.Seum	486.1	1760	Yesterday at 10:44
<input type="checkbox"/>	Afonso, Olga	USER	Olga.Afonso	66.8	318	Yesterday at 10:17
<input type="checkbox"/>	Mateus, Rita	USER	Rita.Mateus	125.5	327	1 day ago at 16:24

# System -> Create Users

Create a new individual account



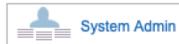
User



PI



Community Admin



System Admin



Batch User Registration

## User

First name

Last name

Username

E-mail

Enter or [Generate](#) password

If typing, confirm password

Show / hide passwords



Please copy or manually note this password, as it must be delivered to the new user outside RSpace.

Select the new user's Community



Choose a LabGroup



Check to repeat

Create

# Group, PI



Workspace Gallery Messaging Apps My RSpace Help System

Users Groups Communities Create Account Operate As Monitoring Maintenance Configuration

New LabGroup Show All

## Groups

Search...

Options	Name	Size	Community	Principal Investigator	File Usage (Mb)	Create
<input type="checkbox"/>	ACCESS Geneva	2	All Groups	Moreau, Dimitri	120.7	2018-0
<input type="checkbox"/>	Aurelien Roux's Lab	22	All Groups	Roux, Aurelien	3,873.8	2015-0
<input type="checkbox"/>	Charlotte Aumeier	5	All Groups	Aumeier, Charlotte	87.4	2018-0
<input type="checkbox"/>	Dominique.Soldati	21	All Groups	Soldati-Favre, Dominique	523.6	2015-1
<input type="checkbox"/>	Gonzalez-GaitanGroup	19	All Groups	Gonzalez-Gaitan, Marcos	3,833.7	2015-0
<input type="checkbox"/>	Jerome Lacour	1	All Groups	Lacour, Jerome	0.7	2019-0
<input type="checkbox"/>	Marko Kaksonen	4	All Groups	Kaksonen, Marko	385.4	2016-0
<input type="checkbox"/>	SchaadGroup	1	All Groups	Schaad, Olivier	36.6	2015-10-15 08:49

Profile - Username: Aurelien.Roux

First Name: Aurelien

Last Name: Roux

Optionally, add any information about you or your research.

E-Mail: Aurelien.Roux@unige.ch

LabGroups:

Aurelien Roux's Lab

Role: PI

# Group, PI

Group: Aurelien Roux's Lab

[Change PI](#) [Rename](#)

**Profile**  
There is no profile information for this group.

[Edit](#)

**Members**

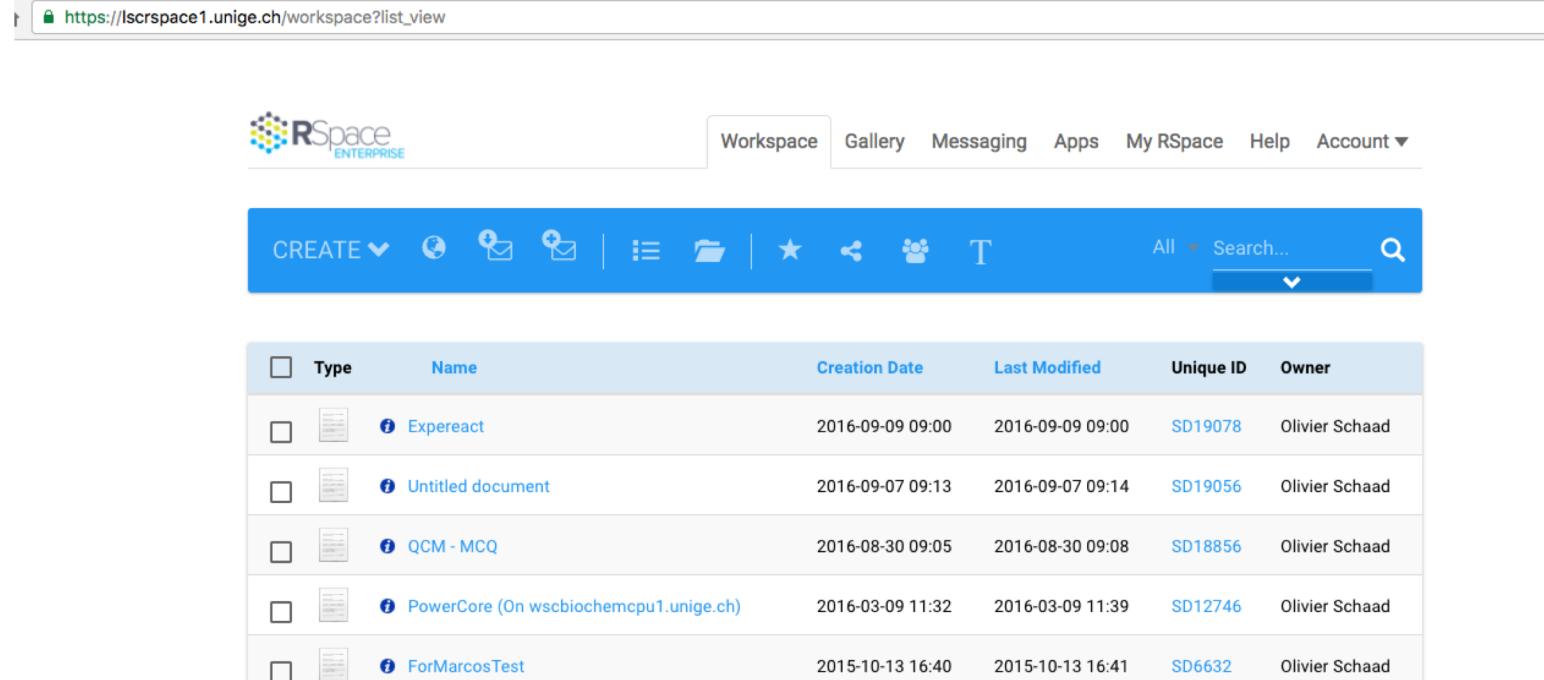
Full Name	Username	Role	Manage Roles	Remove User
Chloe Roffay	Chloe.Roffay	User	<a href="#">Change Role</a>	<a href="#">Remove</a>
Anna-Katharina Pfitzner	AnnaKatharina.Pfitzner	User	<a href="#">Change Role</a>	<a href="#">Remove</a>
Aurelien Roux	Aurelien.Roux	PI		
Tarek Nassour	Tarek.Nassour	User	<a href="#">Change Role</a>	<a href="#">Remove</a>
Vincent Mercier	Vincent.Mercier	User	<a href="#">Change Role</a>	<a href="#">Remove</a>
Nicolas Chiaruttini	Nicolas.Chiaruttini	User	<a href="#">Change Role</a>	<a href="#">Remove</a>
Paulina Nowak	Paulina.Nowak	User	<a href="#">Change Role</a>	<a href="#">Remove</a>
Caterina Tomba	Caterina.Tomba	User	<a href="#">Change Role</a>	<a href="#">Remove</a>
Adai Colom	Adai.Colom	User	<a href="#">Change Role</a>	<a href="#">Remove</a>

**Add New Members**

[ADD](#)

 © 2019 ResearchSpace

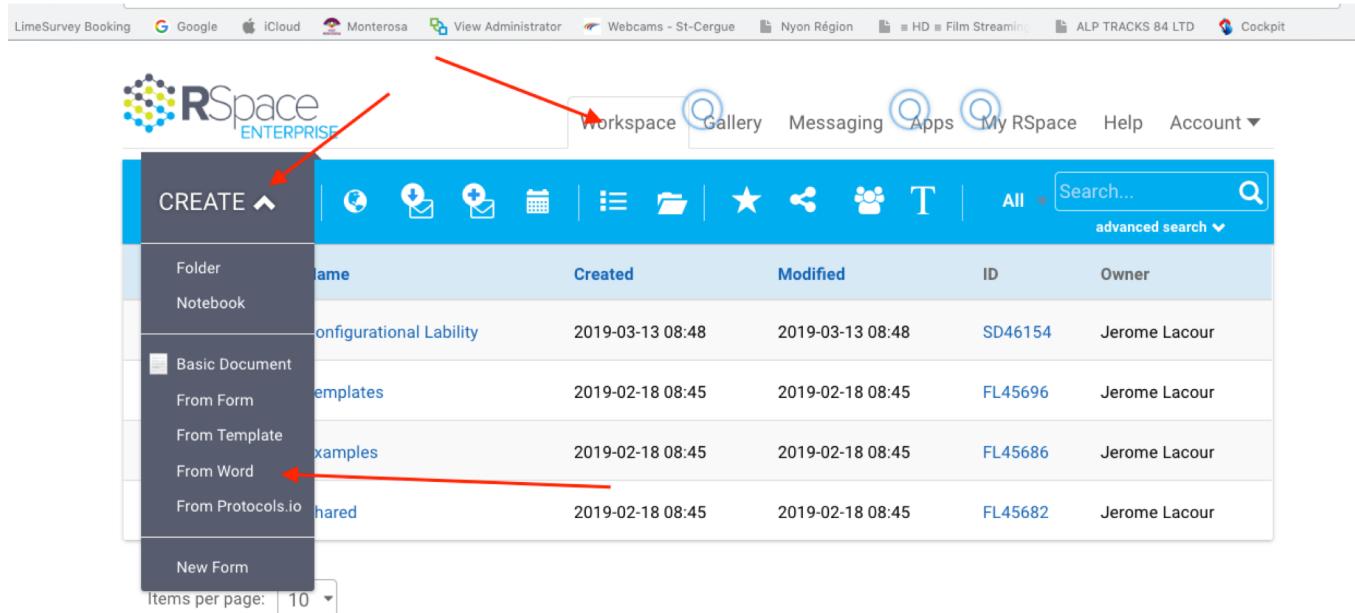
# Rspace in Geneva



The screenshot shows the RSpace Enterprise web interface. At the top, there is a red header bar. Below it, a blue navigation bar contains the URL [https://lscrspacel.unige.ch/workspace?list\\_view](https://lscrspacel.unige.ch/workspace?list_view). The main content area features the RSpace logo and a navigation menu with links for Workspace, Gallery, Messaging, Apps, My RSpace, Help, and Account. Below the menu is a blue toolbar with a 'CREATE' dropdown, icons for file types (document, image, audio, video), a file list icon, a search icon, and a search bar. The main table lists workspace contents:

Type	Name	Creation Date	Last Modified	Unique ID	Owner
document	Expereact	2016-09-09 09:00	2016-09-09 09:00	SD19078	Olivier Schaad
document	Untitled document	2016-09-07 09:13	2016-09-07 09:14	SD19056	Olivier Schaad
document	QCM - MCQ	2016-08-30 09:05	2016-08-30 09:08	SD18856	Olivier Schaad
document	PowerCore (On wscbiochemcpu1.unige.ch)	2016-03-09 11:32	2016-03-09 11:39	SD12746	Olivier Schaad
document	ForMarcosTest	2015-10-13 16:40	2015-10-13 16:41	SD6632	Olivier Schaad

# Rspace in Geneva



The screenshot shows the RSpace Enterprise web interface. At the top, there is a navigation bar with links to LimeSurvey Booking, Google, iCloud, Monterosa, View Administrator, Webcams - St-Cergue, Nyon Région, HD Film Streaming, ALP TRACKS 84 LTD, and Cockpit. Below the navigation bar is the RSpace logo and the word "ENTERPRISE". The main menu includes Workspace, Gallery, Messaging, Apps, My RSpace, Help, and Account. A red arrow points from the "Workspace" link to the "CREATE" button in the top-left corner of the main content area. The "CREATE" button is part of a dropdown menu that lists various options: Folder, Notebook, Basic Document, From Form, From Template, From Word, From Protocols.io, and New Form. Another red arrow points from the "From Word" option in the dropdown to the "From Word" link in the table below. The main content area displays a table of documents with columns for Name, Created, Modified, ID, and Owner. The table lists four documents: "Configurational Liability", "Templates", "Examples", and "Shared". Each document entry includes a small thumbnail icon, a download link, and sharing options. The "From Word" link in the table corresponds to the "From Word" option in the "CREATE" dropdown.

Name	Created	Modified	ID	Owner
Configurational Liability	2019-03-13 08:48	2019-03-13 08:48	SD46154	Jerome Lacour
Templates	2019-02-18 08:45	2019-02-18 08:45	FL45696	Jerome Lacour
Examples	2019-02-18 08:45	2019-02-18 08:45	FL45686	Jerome Lacour
Shared	2019-02-18 08:45	2019-02-18 08:45	FL45682	Jerome Lacour

Items per page: 10

# Rspace in Geneva

HELVETICA

## Configurational Lability of Imino-Substituted Ethano Tröger Bases. Insight on the Racemization Mechanism.

Alessandro Bosmani,<sup>a</sup> Alejandro Guarnieri-Ibáñez,<sup>a</sup> Jérôme Lacour <sup>a,\*</sup>

<sup>a</sup> Département de Chimie Organique, Université de Genève, quai Ernest Ansermet 30, 1211 Geneva 4 (Switzerland); [jerome.lacour@unige.ch](mailto:jerome.lacour@unige.ch)

Dedicated to François Diederich on the occasion of his retirement celebrations

Polycyclic indoline-benzodiazepines are afforded in one step by the reaction of Tröger bases with *N*-sulfonyl-1,2,3-triazoles under Rh(II) catalysis. After  $\square$ -imino carbene formation, the process involves a cascade of (1,2)-Stevens rearrangement, Friedel-Crafts, Grob fragmentation and aminal formation reactions. It is highly diastereoselective ( $d.r.$ :49:1, four stereocenters incl. two bridgehead N atoms). However and in contrast with other reported carbene additions to these moieties, full racemization occurs when enantiopure Tröger Bases are used as substrates. To pinpoint the origin of this unexpected behavior, key elemental steps of the mechanism were evaluated and tested. Interestingly, it is not only the initial ring-opening but also the latter reversible Mannich reaction of the imino-substituted ethano Tröger base intermediate that is responsible for the loss of enantiospecificity.

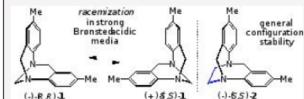
**Keywords:** Chirality transfer ·  $\square$ -imino carbene · Racemization · Retro-Mannich · Tröger base

### Introduction

Tertiary amines comprise of three different substituents are chiral motifs, usually isolated in racemic form by virtue of the configurational instability of the N atom; the barrier for the nitrogen inversion (enantiomerization) is typically in the range of 6–7 kcal/mol.<sup>[1,2]</sup> Only few mono or polycyclic derivatives present configurationally stable stereogenic nitrogen atoms. One particularly important class of such compounds is that of Tröger Bases (TBs, 1).<sup>[3–5]</sup> These [3.3.1] bicyclic tertiary amines present a rigid molecular framework that forbids a pyramidal inversion of the bridgehead nitrogen atoms.

Enantiopure TB-1 was obtained for the first time in single enantiomeric form by Prelog in 1946.<sup>[6]</sup> Thanks in particular to the original V-shape geometry of the aromatic subunits,<sup>[11]</sup> TBs are common building blocks used extensively in the fields of supramolecular chemistry<sup>[7–10]</sup> or material science.<sup>[19–21]</sup> Enantioenriched TBs are however rarely used as organocatalysts or as chiral ligands in organometallic catalysis.<sup>[24,27]</sup> One possible reason is their configurational instability in presence of Brønsted or Lewis acids (Scheme 1, left).<sup>[21,23]</sup> In fact, upon quaternization of one of the two nitrogen atoms, transient aminal ring opening occurs; the resulting monocyclic iminium intermediate is conformationally labile and racemization happens.<sup>[21,28,31]</sup>

To overcome this issue, several strategies have been considered using conformational constraints,<sup>[12]</sup> intramolecular proton scavengers,<sup>[13]</sup> or bridge modifications between the N atoms.<sup>[24]</sup> In the latter case, for instance, introduction of an ethano bridge (instead of methano) precludes the ring-opening upon protonation of N atoms and compounds 2 are configurational stable (Scheme 1, right). Capitalizing on this observation, our group has previously reported the enantiospecific synthesis of ethano-TB of type 3 by treatment of enantiopure TB-1 with aryl  $\square$ -ester carbenes derived from the corresponding diazo reagents under dirhodium catalysis at 100 °C (Scheme 2).<sup>[10]</sup> Mechanistically, upon addition of carbene intermediate A and ylide formation (step 1 → B), aminal bridge opening occurs (B → C). In this particular instance, racemization does not happen as a rapid intramolecular trapping of the iminium moiety by the neighboring enolate ensures an effective retention of configuration and hence an efficient chirality transfer during the [3.3.2] ring expansion (es up to 99%). With acceptor-acceptor carbenes, typically diazo malonates or  $\square$ -ketoesters, high enantiospecificity (es up to 95%) is achieved under copper catalysis only.<sup>[38]</sup>



# Edit the document

looking   Google   iCloud   Mommeresa   view Administrator   wecams - St-Cergue   Nyon Region   HD Film Stream   ALP TRACKS 64 L1U   cockpit

## File Insert Format Table View Science Tools Online Tools

### HELVETICA

#### Configurational Liability of Imino-Substituted Ethano Tröger Bases. Insight on the Racemization Mechanism.

Alessandro Bosman<sup>‡</sup> Alejandro Guarnieri-Ibáñez<sup>§</sup> Jérôme Lacour <sup>\*,a</sup>

<sup>a</sup> Département de Chimie Organique, Université de Genève, quai Ernest Ansermet 30, 1211 Geneva 4 (Switzerland), [jerome.lacour@unige.ch](mailto:jerome.lacour@unige.ch)

Dedicated to François Diederich on the occasion of his retirement celebrations

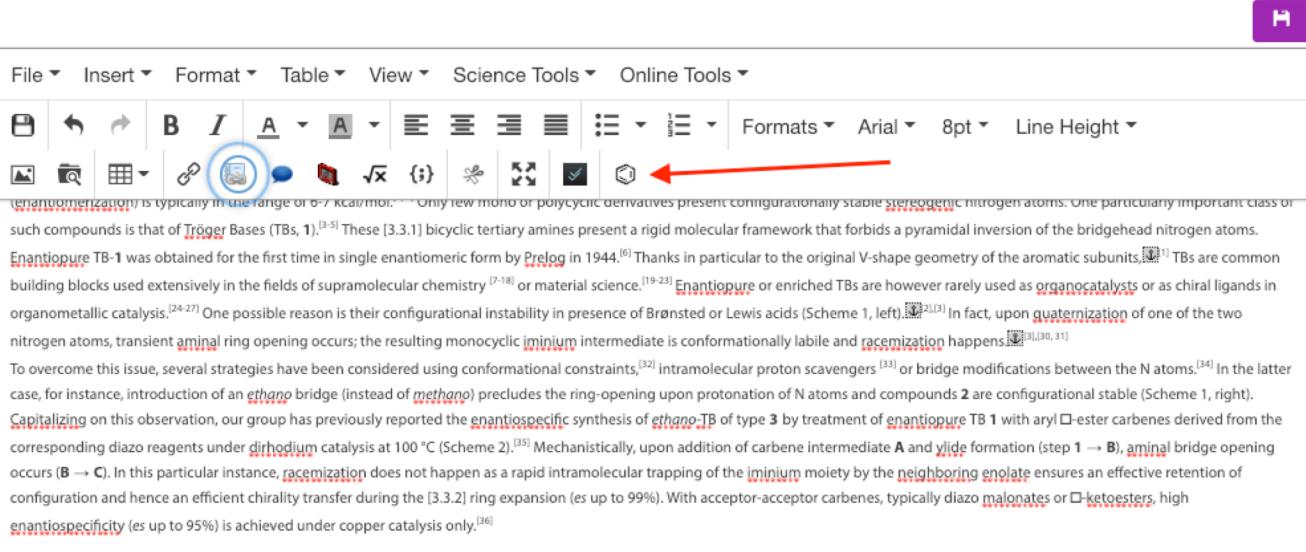
Polycyclic [odine-benzodiazepines are afforded in one step by the reaction of Tröger bases with *N*-sulfonyl-1,2,3-triazoles under Rh(II) catalysis. After  $\square$  imine carbene formation, the process involves a cascade of [1,2]-Stevens rearrangement, Friedel-Crafts, Grob fragmentation and aminal formation reactions. It is highly diastereoselective ( $d.r. > 49:1$ , four stereocenters incl. two bridgehead N atoms). However and in contrast with other reported carbene additions to these moieties, full **racemization** occurs when **enantiopure Tröger Bases** are used as substrates. To pinpoint the origin of this unexpected behavior, key elemental steps of the mechanism were evaluated and tested. Interestingly, it is not only the initial ring-opening but also the latter reversible Mannich reaction of the **imino-substituted ethano Tröger base intermediate** that is responsible for the loss of enantioselectivity.

**Keywords:** Chirality transfer    $\square$  imine Carbene   Racemization   Retro-Mannich   Tröger base

#### Introduction

Tertiary amines comprise of three different substituents are chiral motifs, usually isolated in racemic form by virtue of the configurational instability of the N atom; the barrier for the nitrogen inversion (**enantiomerization**) is typically in the range of 6-7 kcal/mol.<sup>[1-3]</sup> Only few mono or polycyclic derivatives present configurationally stable **heterogeneous** nitrogen atoms. One particularly important class of such compounds is that of **Tröger Bases** (TBs,<sup>[1,2]</sup> These [3.3.1] bicyclic tertiary amines present a rigid molecular framework that forbids a pyramidal inversion of the bridgehead nitrogen atoms. Enantipure TB-1 was obtained for the first time in single enantiomeric form by Prelog in 1944.<sup>[6]</sup> Thanks in particular to the original V-shape geometry of the aromatic subunits,<sup>[7]</sup> TBs are common building blocks used extensively in the fields of supramolecular chemistry<sup>[7-18]</sup> or material science.<sup>[19-21]</sup> Enantiopure or enriched TBs are however rarely used as **organocatalysts** or as chiral ligands in organometallic catalysis.<sup>[24-27]</sup> One possible reason is their configurational instability in presence of Brønsted or Lewis acids (Scheme 1, left).<sup>[28-31]</sup> In fact, upon **guanidination** of one of the two nitrogen atoms, transient **aminal** ring opening occurs; the resulting monocyclic **iminium** intermediate is conformationally labile and **racemization** happens.<sup>[32,33,34]</sup> To overcome this issue, several strategies have been considered using conformational constraints,<sup>[32]</sup> intramolecular proton scavengers<sup>[35]</sup> or bridge modifications between the N atoms.<sup>[34]</sup> In the latter,<sup>[36]</sup>

# Import ChemDraw drawing



File ▾ Insert ▾ Format ▾ Table ▾ View ▾ Science Tools ▾ Online Tools ▾

B I A A Formats Arial 8pt Line Height

ChemDraw icon (circled in blue) →

enantiorientation is typically in the range of 6–7 kcal/mol.<sup>5</sup> Only few mono- or polycyclic derivatives present configurationaly stable stereogenic nitrogen atoms. One particularly important class of such compounds is that of Tröger Bases (TBs, 1).<sup>[3–5]</sup> These [3.3.1] bicyclic tertiary amines present a rigid molecular framework that forbids a pyramidal inversion of the bridgehead nitrogen atoms. Enantiopure TB-1 was obtained for the first time in single enantiomeric form by Prelog in 1944.<sup>[6]</sup> Thanks in particular to the original V-shape geometry of the aromatic subunits,<sup>[3,7]</sup> TBs are common building blocks used extensively in the fields of supramolecular chemistry<sup>[7–18]</sup> or material science.<sup>[19–23]</sup> Enantiopure or enriched TBs are however rarely used as organocatalysts or as chiral ligands in organometallic catalysis.<sup>[24–27]</sup> One possible reason is their configurational instability in presence of Brønsted or Lewis acids (Scheme 1, left).<sup>[28,29]</sup> In fact, upon quaternization of one of the two nitrogen atoms, transient aminal ring opening occurs; the resulting monocyclic iminium intermediate is conformationally labile and racemization happens.<sup>[28,30,31]</sup> To overcome this issue, several strategies have been considered using conformational constraints,<sup>[32]</sup> intramolecular proton scavengers<sup>[33]</sup> or bridge modifications between the N atoms.<sup>[34]</sup> In the latter case, for instance, introduction of an *ethano* bridge (instead of *methano*) precludes the ring-opening upon protonation of N atoms and compounds **2** are configurational stable (Scheme 1, right). Capitalizing on this observation, our group has previously reported the enantioselective synthesis of *ethano*-TB of type **3** by treatment of enantiopure TB **1** with aryl  $\square$ -ester carbenes derived from the corresponding diazo reagents under dirhodium catalysis at 100 °C (Scheme 2).<sup>[35]</sup> Mechanistically, upon addition of carbene intermediate **A** and ylide formation (step **1** → **B**), aminal bridge opening occurs (**B** → **C**). In this particular instance, racemization does not happen as a rapid intramolecular trapping of the iminium moiety by the neighboring enolate ensures an effective retention of configuration and hence an efficient chirality transfer during the [3.3.2] ring expansion (es up to 99%). With acceptor-acceptor carbenes, typically diazo malonates or  $\square$ -ketoesters, high enantioselectivity (es up to 95%) is achieved under copper catalysis only.<sup>[36]</sup>

# Import ChemDraw drawing

Import

Open file

Choose file No file chosen

Paste source

<auto recognize>

Paste here...

Chemical reaction diagram showing the import of a ChemDraw drawing:

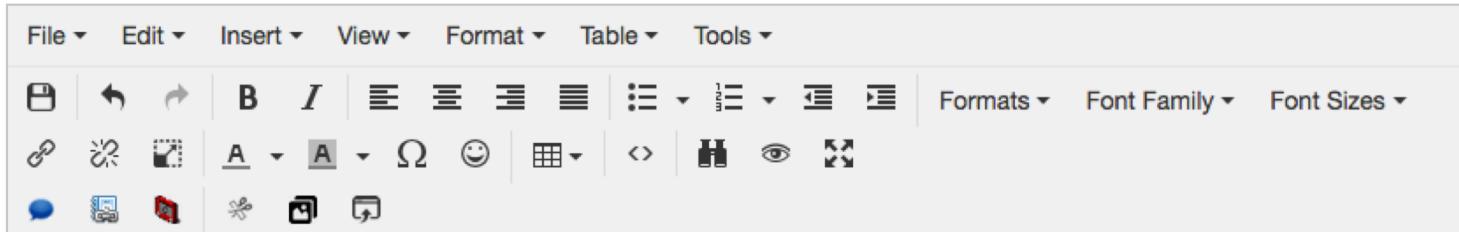
Reaction 1: A diazo compound (MeO<sub>2</sub>C-C(=O)-N<sub>2</sub>) reacts with a piperazine derivative (N<sub>2</sub>C<sub>4</sub>H<sub>8</sub>N<sub>2</sub>) in the presence of 0.1 mol % Rh<sub>2</sub>(S-PTTL)<sub>4</sub> and (0.5 M) to form a macrocyclic product. The macrocycle is labeled with "PG" and "GP".

Reaction 2: The same diazo compound reacts with a piperazine derivative (N<sub>2</sub>C<sub>4</sub>H<sub>8</sub>N<sub>2</sub>) in the presence of 0.1 mol % Rh<sub>2</sub>(S-PTTL)<sub>4</sub> and (0.5 M) to form a macrocyclic product. The macrocycle is labeled with "PG" and "GP".

Reaction 3: A diazo compound (MeO<sub>2</sub>C-C(=O)-N<sub>2</sub>) reacts with a piperazine derivative (N<sub>2</sub>C<sub>4</sub>H<sub>8</sub>N<sub>2</sub>) in the presence of 0.1 mol % Rh<sub>2</sub>(S-PTTL)<sub>4</sub> and (0.5 M) to form a macrocyclic product. The macrocycle is labeled with "PG" and "GP".

No file chosen

# Rspace in Geneva



Seqman pro shows that the signal sequence is present there

A screenshot of the Seqman pro software interface showing a sequence alignment. The top menu bar includes Translate, Consensus, and a dropdown for "smc1\_RF with..ignal(1>1480)". The main workspace displays a sequence with a red arrow pointing to the text "Signal peptide". The sequence is as follows:  
C66000GCCAT0RACTGTCACARTCTGGCTCTT0T0TATTCATGTTGATG00CCTGCCAGCAGCCTCAGCAGAATCCACTGG  
misc\_feature: signal SMC1 up  
misc\_feature: different from genomic  
Signal peptide  
C66000GCCAT0RACTGTCACARTCTGGCTCTT0T0TATTCATGTTGATG00CCTGCCAGCAGCCTCAGCAGAATCCACTGG  
C66000GCCAT0RACTGTCACARTCTGGCTCTT0T0TATTCATGTTGATG00CCTGCCAGCAGCCTCAGCAGAATCCACTGG  
C66000GCCAT0RACTGTCACARTCTGGCTCTT0T0TATTCATGTTGATG00CCTGCCAGCAGCCTCAGCAGAATCCACTGG

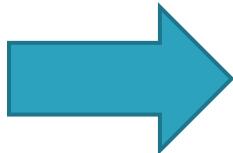
# Sciences Tools

## Science Tools

# Sciences Tools

PCR Master Mix

Composition of PCR reaction		PCR MasterMix Formulation for 5 PCR reactions		
Template DNA	1 <input type="text"/>	Template DNA	5 <input type="text"/>	
PCR Buffer	1 <input type="text"/>	PCR Buffer	5 <input type="text"/>	
Forward Primer	2 <input type="text"/>	Forward Primer	10 <input type="text"/>	
Reverse Primer	2 <input type="text"/>	Reverse Primer	10 <input type="text"/>	
dNTP mix	5 <input type="text"/>	dNTP mix	25 <input type="text"/>	
DNA Polymerase	1 <input type="text"/>	DNA Polymerase	5 <input type="text"/>	
PCR grade Water	10 <input type="text"/>	PCR grade Water	50 <input type="text"/>	
Total Number of Reactions	5 <input type="text"/>			
Total PCR Reaction Volume:		22 <input type="text"/>	TOTAL VOLUME:	110 <input type="text"/>



File Insert Format Table View Science Tools Online Tools

Composition of PCR reaction		PCR MasterMix Formulation for 5 PCR reactions		
Template DNA	1 <input type="text"/>	Template DNA	5 <input type="text"/>	
PCR Buffer	1 <input type="text"/>	PCR Buffer	5 <input type="text"/>	
Forward Primer	2 <input type="text"/>	Forward Primer	10 <input type="text"/>	
Reverse Primer	2 <input type="text"/>	Reverse Primer	10 <input type="text"/>	
dNTP mix	5 <input type="text"/>	dNTP mix	25 <input type="text"/>	
DNA Polymerase	1 <input type="text"/>	DNA Polymerase	5 <input type="text"/>	
PCR grade Water	10 <input type="text"/>	PCR grade Water	50 <input type="text"/>	
Total Number of Reactions	5 <input type="text"/>			
Total PCR Reaction Volume		22 <input type="text"/>	TOTAL VOLUME	110 <input type="text"/>

# Rspace in Geneva PCR

The image shows the toolbar of LibreOffice Writer. It includes a file menu with 'File', 'Edit', 'Insert', 'View', 'Format', 'Table', and 'Tools'. Below the menu are several text and table formatting icons: a text box icon, a left arrow, a right arrow, a bold 'B', an italic 'I', a list icon, a table icon, a text orientation icon, a text alignment icon, a text size icon, a key icon, a sun icon, a text box icon, a font size 'A' with a down arrow, a font size 'A' with an up arrow, a font icon, a smiley face icon, a grid icon, a left arrow, a right arrow, a magnifying glass icon, an eye icon, a double arrow icon, a blue circle icon, a blue square icon, a red square icon, a flower icon, a camera icon, and a document icon.

### Search for the signal sequence of Smoc1:

FseSMOC1 r	Type	DNA	Oligo ID #	2727414	Date	25.10.20
Purification	Desalted	Length	35	Scale	Genomics	Molecular weight
5' Modification	NONE	3' Modification	NONE	No internal modifications		
Melting Point*	80.1	NNM-Method	68.6	*based on $\epsilon$ [N+] of 30 mM		
Amount	11.32 OD	Amount	391.7 $\mu$ g	Amount	37.0 nmol	Millimolar ext. coeff.
					Volume for 100 $\mu$ M:	369.7 $\mu$ l

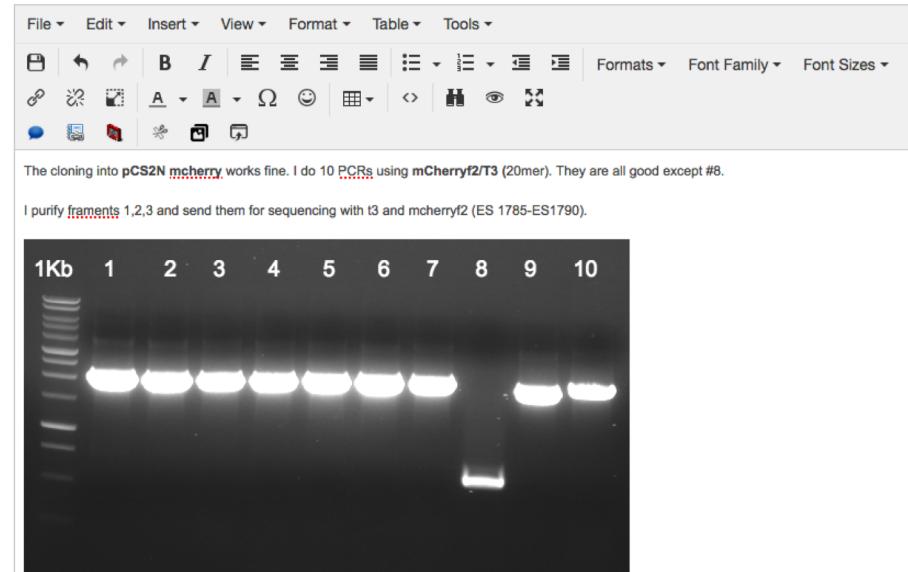
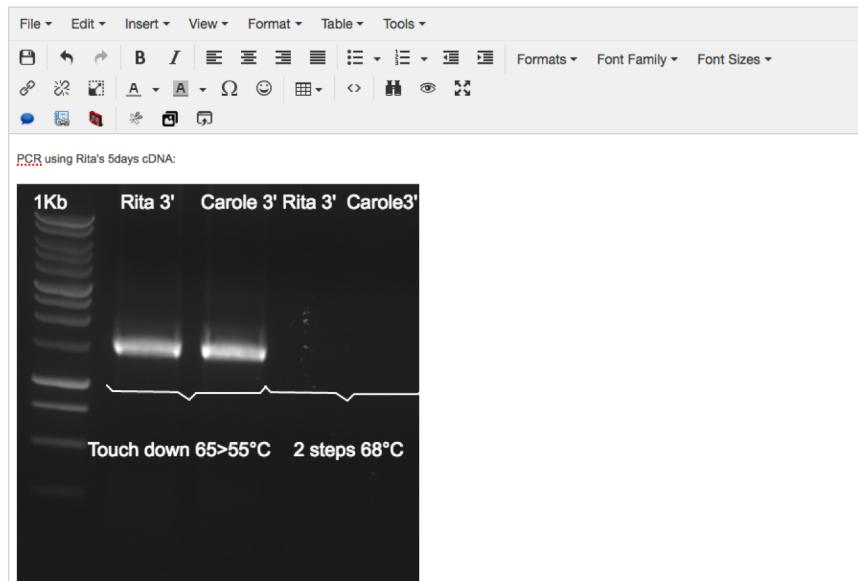
The image shows the top toolbar of LibreOffice Writer. It includes a 'File' dropdown, 'Edit', 'Insert', 'View', 'Format', 'Table', and 'Tools' menus. Below the menus are several groups of icons: document, page, text, and table. To the right of these are 'Formats', 'Font Family', and 'Font Sizes' dropdowns. The bottom row contains icons for document, page, text, and table, as well as a set of small icons for various document operations.

So I clone it into pCS\_mCherry\_AF (mcherry 5') (name = pCS2+8\_NmCherry\_corrected) and also in an old pMT FA that I had already.

	<b>3 <math>\mu</math>l Insert</b>	<b>Control Negativ 1 (pUAST and pGEX)</b>
<b>2X Ligase Buffer</b>	5 $\mu$ l	5 $\mu$ l
<b>H2O</b>	1 $\mu$ l	4.0 $\mu$ l
<b>Insert DNA (I)</b>	3 $\mu$ l	0
<b>vector</b>	0.5 $\mu$ l	0.5 $\mu$ l
<b>T4 DNA Ligase</b>	0.5 $\mu$ l	0.5 $\mu$ l
<b>10 <math>\mu</math>l REACTION</b>	<b>10 <math>\mu</math>l</b>	<b>10 <math>\mu</math>l</b>

1. Set up the following reaction in a microcentrifuge tube on ice (T4 DNA Ligase should be added last).
2. Gently mix the reaction by pipetting up and down and microfuge briefly.
3. Wait **15 minutes at RT**.
4. Put then the transformation tubes **2 minutes on ice** (0°C).
5. Add **100 μl** of DH5<sup>+</sup> competent bacteria per transformation tube.
6. Wait **30 minutes on ice** (0°C).
7. Heat Shock the bacteria **2 minutes at 37°C**.
8. Put again the transformation tubes **2 minutes on ice** (0°C - for Amp).
9. Spread each transformation tube on specific antibiotic plates.

# Rspace in Geneva PCR



# Ideally

- “ ELN would enable efficient use of data by successive generations of students and postdocs, would maintain technical knowledge in the laboratory, and allow detailed reconstruction of individual experiments. ”

Blanche Schwappach EMBO reports 2015



# With RSpace you control your data

## 1: Export options

- Export data
  - In a variety of formats: MS Word, pdf, html, xml
  - At any level of granularity: document, multiple selected documents, project, notebook, an entire lab's work, all documents in the system
  - By individual users, PIs, and admins
  - At any time or at scheduled times
  - In html to provide a searchable copy that maintains the RSpace folder structure
  - In xml to provide a searchable machine readable version that maintains the RSpace folder structure
  - To repositories and archives
  - To other tools and systems



## Academic pricing

- US\$100 / user / year
- Volume discounts for purchases over 100 users
  - 200 users: \$ 70 / user
  - 500 users \$ 60 / user
- “Site License” : \$40,000 annually

# Emmanuel Derivery, Cambridge University

- “When I moved to the MRC Laboratory for Molecular Biology, RSpace was a core component of the infrastructure I put in place for my new lab here. Lab members found it easy to get started with RSpace, and it conveniently helps us to record, share and track our research data. I can’t imagine running a lab without it!”

# Conclusions

- ELN was well accepted
- Unify the lab work
- Protocols are easy to find
- ELN centralizes the information
- 100 USD / active users / year
- It is possible to setup a trial account
  - See <https://www.researchspace.com>

# Serveur Rspace “unige”



- <https://bio-rspace.unige.ch/>
- <https://facmed-rspace.unige.ch/>

# Rspace “information”

- <https://www.researchspace.com>
- <http://lab-ally.com/products/rspace-eln/>



## With RSpace you control your data

### 2: When license expires

- On expiry of license you have a six month free license extension to complete data export
- Options include:
  - Export to the free Community version of RSpace, maintaining full folder structure
  - Export to html for a searchable offline copy maintaining folder structure
  - Export to xml for a machine readable version maintaining folder structure
  - Export to a repository or archive
  - Export to another tool or system (API coming Q1 2017)
- If RSpace goes out of business or is acquired by another company that does not want to continue support, we a six months free to complete data export, or perpetual license file that will keep RSpace running without support or updates. Data export options are listed above.