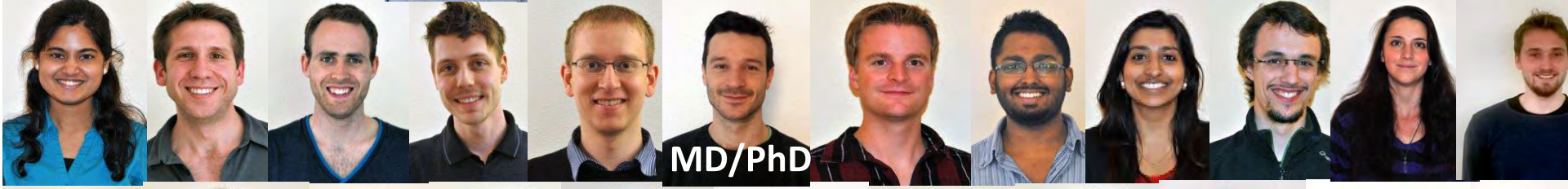


Spemann Graduate School of Biology and Medicine (SGBM)



65 PhD students
 48% international, 52% female,
 39 SGBM funded (60%), 3 MD/PhDs



Track-1, SGBM finanziert, 1 x Jahr

*Track-2,
Drittmittel finanziert
mehrere Male pro Jahr
auch MD/PhDs*

Online Bewerbungen
Master in Biologie, Chemie, etc
MD/PhDs (Staatsexamen + exp. MD)

2

1

*Auswahl
komitee
(10)*

3

INTERVIEWS
25 Kandidaten

*10' Flipchart
Präsentation
und Diskussion
über Masterarbeit*

*Auswahl
komitee*

*Auswahl
komitee*

*Individuelle Interviews
Tandem Interviews*

*Basisgrundwissen
Interesse an
Interdisziplinarität*

Entscheidung

*ca. 10 Zugänge Track-1
ca. 10 Zugänge Track-2*

Molecular
Medicine

Developmental
Biology

Molecular Plant
Sciences

Gelebte

Immunology
& Virology

Interdisziplinarität

Neurosciences

Protein Structure
& Function

Signaling &
Synthetic Biology

Betreuung und Qualitätssicherung von Anfang an



SGBM bezahlt die Doktoranden für 3 Jahre mit 10.000 € Verbrauchskosten pro Jahr für ein 4. Jahr muss der entsprechende PI aufkommen

Curriculum

(max. 10% der Zeit des Doktorats)

Obligatorisch

Reunions (1 x pro Monat)

Retreats (1 x Jahr)

Multidisziplinäre Module (1 x Jahr)

Gastredner Vorträge und Literatur/Oberseminar

2011: Transducing signals in Biology

2012: Quality control in Biology

2013: Recent highlights in Biology

2014: Genomic Revolution

2015: Bacteria – the paradox of beneficial and harmful

Seminare

(SFB, BIOSS, CCI, literature, SGBM guest speaker, also outside the field)

Gute wissenschaftliche Praxis

Promotionsfeier (alle 1.5 Jahre)

Mind. 1 Methodenkurs

Mind. 1 Soft skill kurs (mit IGA)

Massgeschneidert

Vorlesungen

Weitere Retreats (GRKs, IRTGs)

Institute, Graduate schools Zürich, Konstanz, Strasbourg

Methodenkurse

Soft skill kurse

Konferenz Organization

2010: BIOSS conference

2011: Bernstein/Neurex conference

2012: European Bioenergetic conference

2013: SFB confererence, signaling and sorting

2014: own conference on animals models of diseases (with IGBMC PhD fellows of University of Strasbourg)

Konferenzteilnahmen (nat. & int.)

Winter/Summer Schulen

Kollaborationsbasierte

Forschungsaufenthalte im Ausland

STUDENT PASS, wo alle Kurse notiert werden

Sicherung eines erfolgreichen Abschlusses und einer Karriere

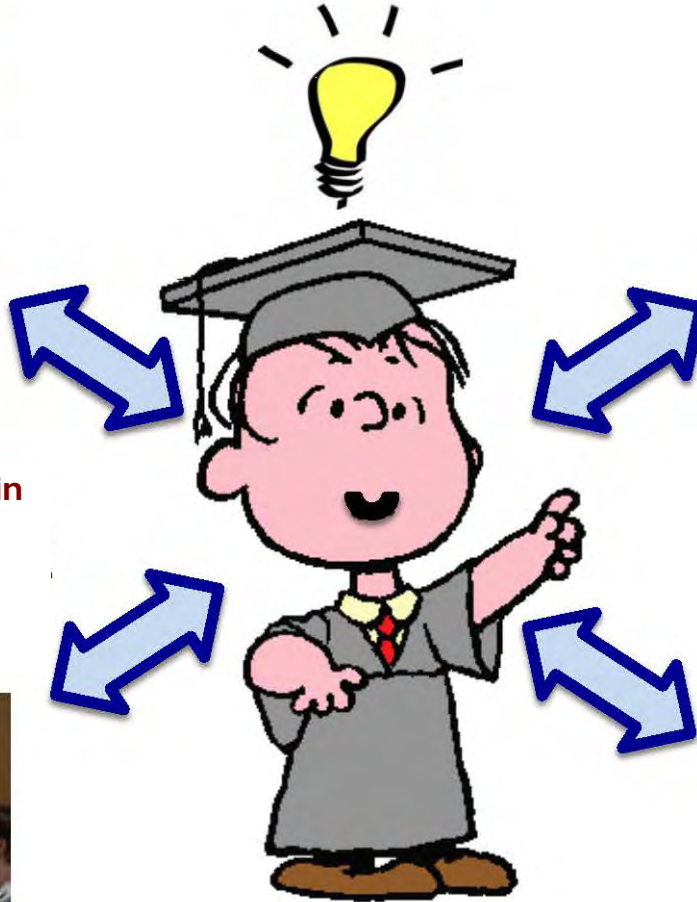


Thesis Komitee Meetings

- Teilnahme Studienkoordinatorin
- Doktorand redet mit externen PIs ohne Betreuer
- Komitee redet mit PI ohne Doktorand



Karriere Abende (mit MPI)
Emmy Nöther Treffen
Karriere Mentoring individuell
Industrie Mentoring



Studienkoordinator Update Meeting (2 x 30 min pro Jahr)



Female Mentoring Kooperation mit KITE

*Wie wecken wir bei den
Medizinstudierenden
das Interesse an einem
MD/PhD Programm?*

Max. 3 Jahre, mit mindestens
1 Erstautorpublikation
Letztes Jahr:
Beginn Facharztausbildung

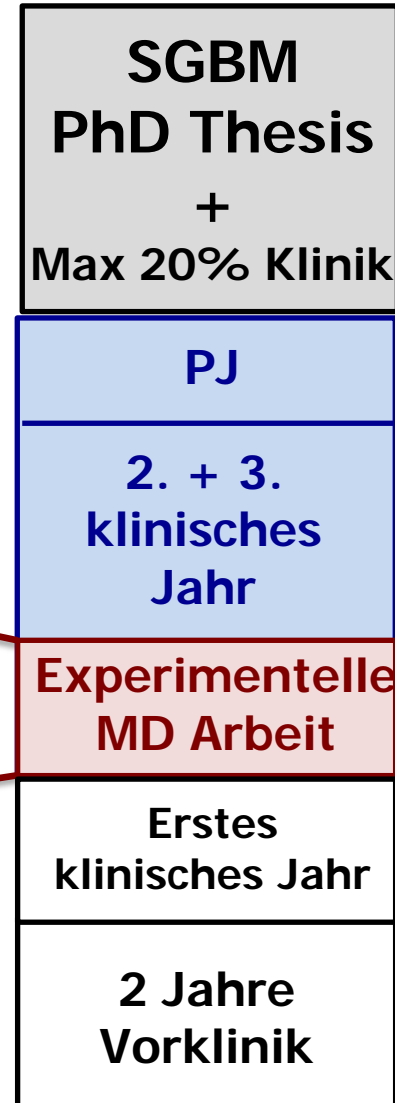
*Zertifikat und DIPLOM
in Experimenteller
Medizin*

Approbation 

- Literatur Seminar
- Propädeutikum Mol Cel
- Mol Zell Bio Praktikum (1Wo)
- Statistikkurs
- Methodenkurs
- Gute wissensch. Praxis
- Thesis committee
- Mentors

1 Jahr
Science Training
max. 15 MOTI-VATEs +
SGBM

MOTI-VATE:
Else-Kröner Fresenius Foundation
LECTURER: Andreas Eizinger



Auswahl durch
SGBM

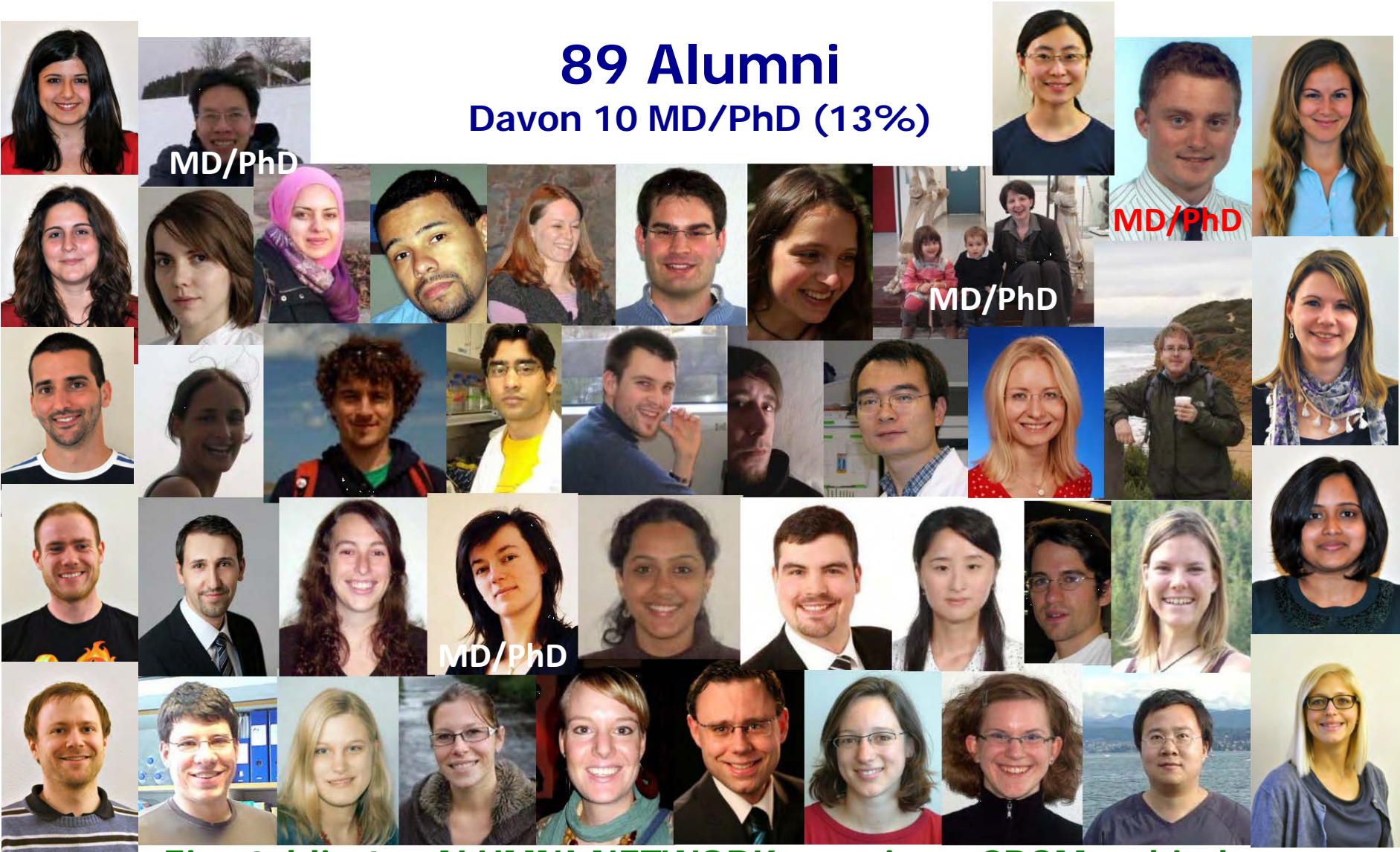
Information
Auswahl für MOTI-VATE

Physikum
(2.0 oder besser)

Erfolgsgeschichten

89 Alumni

Davon 10 MD/PhD (13%)



Ein etabliertes ALUMNI NETWORK, um sie an SBGM zu binden
Newsletter, Einladungen zur Promotionsfeier, eigene Alumnitagung
Sie sollen international für neue Doktoranden werben, bestehende in der
Karriereplanung anleiten und uns später finanziell unterstützen



Effiziente Promotionsdauer *Niedrige Ausfallquote*

Durchschnittliche Promotionsdauer

4.0 Jahre (inkl. 3 Monate Laborpraktikum)

MD/PhD (Dr. rer. nat), max. 3.0 Jahre

Niedrige Ausfallquote

9 von 161 zugelassenen Doktoranden (5.6 %)

80% der Doktoranden publizieren in ausgezeichneten Zeitschriften

Jeder hat durchschnittlich 2-3 Publikationen,
77% haben mindestens 1 Erstautorpublikation

Regulation of Mitochondrial Protein Import by Cytosolic Kinases

Olivier Schindler,^{1,2,3,4} Bernard Dubaut,¹ Albert Schirrmacher,^{1,2} Nikolas Pflanz,^{1,2} and Chris Messinger^{1,4}
¹Institut für Biochemie und Mikrobiologie, 2800, Universität Freiburg, 79104 Freiburg, Germany
²Heinrich Heine Center for Molecular Signaling Studies
³Unit for Biologie
⁴Spemann Graduate School of Biology and Medicine
Universitäts Freiburg, 79104 Freiburg, Germany
Laboratoire für Analytische Wissenschaften (LAZAR), 44119 Dortmund, Germany
⁵Department of Biochemistry, La Trobe University, 3086 Melbourne, Australia
⁶Centre de Génétique Moléculaire, CNRS, 91190 Orsay cedex, France
⁷Molecular Protein Science, Ruhr-Universität Bochum, 44801 Bochum, Germany
⁸Department of Chemistry and Biochemistry, University of Bari, 70126 Bari, Italy
⁹These authors contributed equally to this work
¹⁰Correspondence: olivier.schindler@spemann.uni-freiburg.de (O.S.), chris.messinger@biochemie.uni-freiburg.de (C.M.)
DOI:10.1075/mbio.2010.12.015

SUMMARY

Mitochondria import a large number of nuclear-encoded proteins via membrane-bound transport machineries; however, little is known about regulation of the preproteins translocases. We report that the main protein entry gate of mitochondria, the translocase of the outer membrane (TOM complex), is phosphorylated by cytosolic kinases—particularly, casein kinase 2 (CK2) and protein kinase A (PKA). CK2 promotes biogenesis of the TOM complex by phosphorylation of two key components, the receptor Tom22 and the import protein Tim23, which in turn are required for import of further Tom proteins. Inactivation of CK2 decreases the levels of the TOM complex and thus mitochondrial protein import. PKA phosphorylates Tom22 and the corresponding cytosolic proteins, thereby inhibiting its receptor activity and the import of mitochondrial metabolite carriers. We conclude that cytosolic kinases exert stimulatory and inhibitory effects on biogenesis and function of the TOM complex and thus regulate protein import into mitochondria.

INTRODUCTION

Mitochondria play crucial roles in cellular energy conversion, numerous metabolic pathways, maintenance of ion concentrations, and regulation of apoptosis. Mitotic studies indicate that mitochondria contain ~1000 (up to 1000) different proteins, 99% of which are being encoded by nuclear genes and synthesized as precursors on cytosolic ribosomes (Moccia et al., 2005; Neupert and Herrmann, 2007; Pagliani et al., 2008; Chauhan et al., 2009). The central entry gate for

Cell 144, 2229–2239, January 21, 2011 ©2011 Elsevier Inc. 2

Cell
Immunology
Article
Regulated Expression of Nuclear Receptor RORγ Confers Distinct Functional Fates to NK Cell Effector-Expressing RORγ⁺ Innae Lymphocytes

Coric Vojtech,^{1,2,3,4} Anuradha Morha,^{1,2,3,4} Vlad L. Bulic,¹ Pedro P. Hernandez,¹ Elena A. Kiss,^{1,2} Thomas Seyfarth,⁵ Martina Flork,¹ Britmar Bergthaler,¹ Robert Pfeiffer,¹ Christian Hölscher,¹ Marlene Högler,¹ Ulrich Paschke,¹ Klaus Schöler,¹ Carl F. Ware,¹ Daniela Fink,¹ and Andreas Diefenbach^{1,4,6,7,8,9,10}

¹Heinrich Heine Universität Bonn, Institut für Immunologie, 53105 Bonn, Germany
²German Cancer Research Center (DKFZ), 53105 Bonn, Germany
³Department of Microbiology and Immunology, University of Colorado Denver, Denver, Colorado, USA
⁴Department of Immunology, University of Bonn, Bonn, Germany
⁵Department of Immunology, University of Bonn, Bonn, Germany
⁶Department of Immunology, University of Bonn, Bonn, Germany
⁷Department of Immunology, University of Bonn, Bonn, Germany
⁸Department of Immunology, University of Bonn, Bonn, Germany
⁹Department of Immunology, University of Bonn, Bonn, Germany
¹⁰These authors contributed equally to this work
Correspondence: andreas.diefenbach@uk.uni-bonn.de (A.D.), address.diefenbach@uk.uni-bonn.de (A.D.)
DOI:10.1016/j.immuni.2010.12.017

SUMMARY

Whether the recently identified innate lymphocyte population comprising natural killer cell receptors (NKR) and the nuclear receptor RORγ is part of the NK or lymphoid tissue inducer (LTI) cell lineage remains unclear. By using adoptive transfer of genetically tagged LTI cells, we demonstrate that NKR-RORγ⁺ innate lymphocytes but not NKC cells are direct progenitors to NKR⁺RORγ⁺ cells in vivo. Genetic lineage tracing revealed that the differentiation of LTI-like cells was characterized by the stable upregulation of NKR2 and a progressive loss of RORγ1 expression. Whereas interferon-γ (IFN-γ) and interleukin-22 (IL-22) and intestinal microbially stabilized RORγ1 expression within such NKR-LTI cells, IL-12 and interferon-β (IFN-β) were present inducers of costs. Thus, the RORγ1 gradient in NKR-LTI cells serves as a tunable rheostat for their functional program. Our data also define a previously unrecognized role of RORγ1 in NK-LTI cells for the onset or maintenance of inflammatory bowel diseases.

INTRODUCTION

The evolutionarily ancient innate immune system is the first barrier against infections and tumors. It is equipped with two

Cell
Immunology
Article
N-linked glycosylation selectively regulates autonomic precursor ECR function

Rubel Heather P., Mair Marlene D., Coffin Barbara C., Thomson Warren P., Michael Fisher P., Herson James P.

Development of autonomic nervous system (ANS) requires the expression of specific transcription factors (TFs). Although the ANS is formed in early stages, it is not fully mature until late embryonic stages. To investigate the role of N-linked glycosylation in ANS development, we used a mouse model in which the expression of N-linked glycosyltransferase 3 (GlcNAc transferase 3) was selectively regulated in autonomic precursor cells. We found that selective upregulation of N-linked glycosylation in autonomic precursor cells resulted in a significant increase in the number of autonomic precursor cells and a corresponding increase in the number of autonomic neurons in the gut. Our results suggest that N-linked glycosylation selectively regulates autonomic precursor cell function.

The development, survival and activation of T cells are critically dependent on the expression of functional costimulatory receptors. Cell surface costimulatory receptors are expressed on both T cells and antigen-presenting cells (APCs). The expression of these receptors is regulated by a variety of factors, including cytokines and co-stimulatory molecules. N-linked glycosylation is a post-translational modification that is essential for the function of many proteins, including cell surface receptors. In this study, we investigated the role of N-linked glycosylation in the development and function of costimulatory receptors. We found that selective upregulation of N-linked glycosylation in costimulatory receptors resulted in a significant increase in their expression and function. Our results suggest that N-linked glycosylation selectively regulates costimulatory receptor function.

Circulation
JOURNAL OF THE AMERICAN HEART ASSOCIATION
American Heart Association
Learn and Live.

I named Myocardial Receptor—Associated Factor 1 (MRAF) a Dehydration Adhesion Factor since it binds by binding to integrin αIIb^{β3} and promotes Myocardial Receptor—Associated Factor 1 (MRAF) expression in the heart.
Arata Mitsuoka, Natsuo Kunitani, Nerea Yano, Philipp Kückel, Peter Altschul, Sandra Krawinkel, Christian Mihalik, Carlos Walker, Peter Starikov, Benjamin Schwaner, Dierk Heitkamp, Enayeh Zohabi, Jochen M. Beer, Dennis Wolf, Kiyoko Taniuchi, Christoph Bode, Peter Libby and Arata Mitsuoka
Circulation 2011; 123:2973–2984. originally published online April 26, 2011
DOI: 10.1161/CIRCULATIONAHA.110.207507
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The online version of this article, along with updated information and services, is located on the World Wide Web at:
<http://dx.doi.org/10.1161/CIRCULATIONAHA.110.207507>

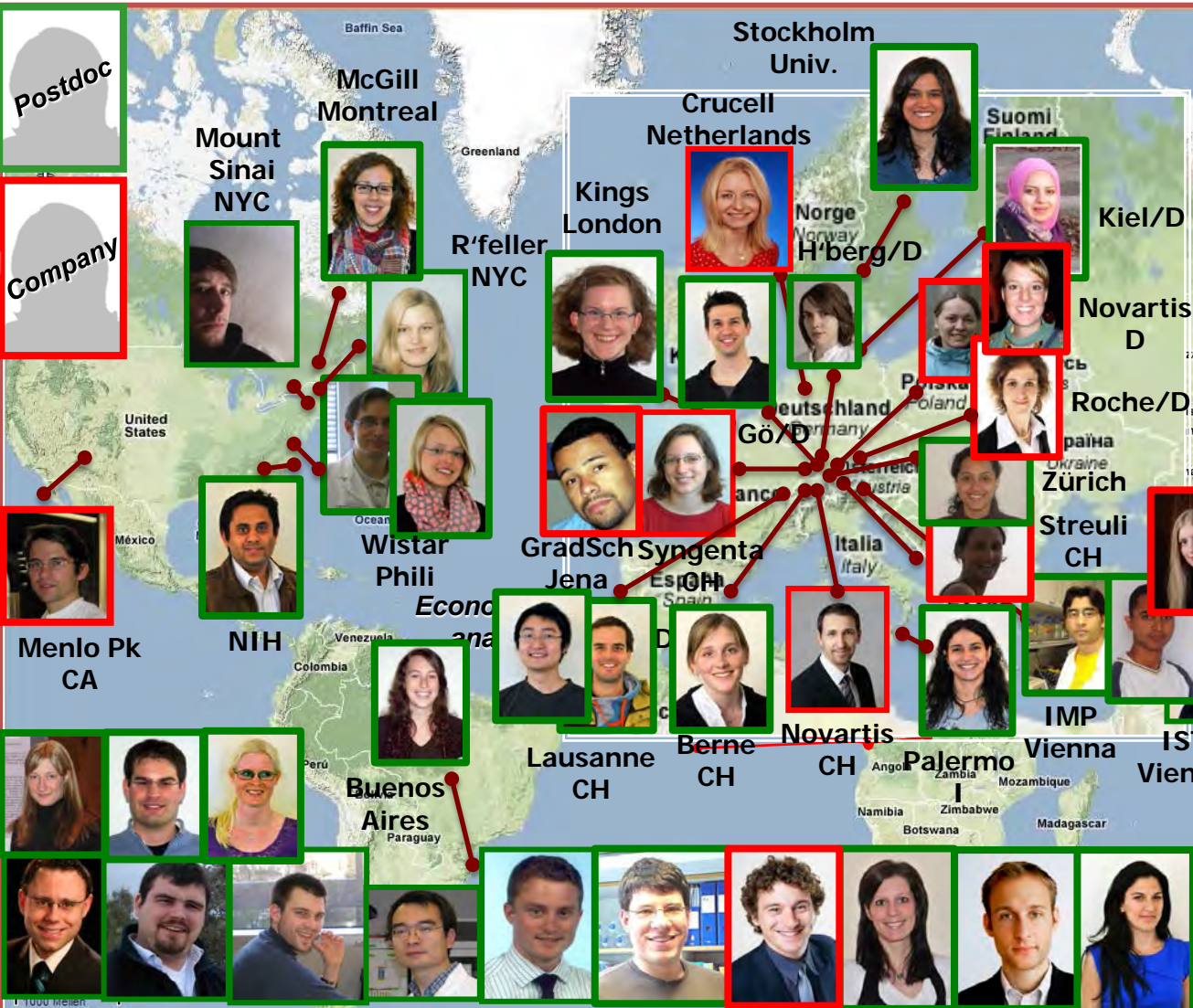
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349 Publikationen seit 2007 (ca. 40 pro Jahr)
51% in journals mit mpak Faktor > 5 davon 16% über IF 10)



Alumni finden exzellente Jobs



Universität:
54%
(32% Deutschland, 22% Ausland)

Industrie:
21%
(15% Deutschland, 6% Ausland)

Rest
25%
Freelancer, Science Manager, etc.