



Monika und Thomas Zimmermann
Vorstand der MTZ[®]-stiftung

Erkrath bei Düsseldorf
Sitz der MTZ[®]-stiftung

Netta Or • James Rizzi
MTZ[®]-BotschafterInnen

Systematic Endowment

The Classical Approach to Research, Systems Biology

and

Bioethics

The idea

“For a better future...” is the basic idea behind the objectives that we set when establishing the MTZ[®] Foundation. But why would two individuals take an interest in cell and gene research in their leisure time when their professional lives revolve around the wording of the law and its implementation? For us, that’s an easy question to answer. Aside from art and culture, we are also fascinated by the uniqueness of nature, and yet we are aware that it’s not always flawless. The human body as well may be flawed; cell functions may get out of control and be at risk. Because of this, both of us lost one of our parents very early on and we were harshly confronted with the finiteness of life. Consequently the main objective of our commitment is to support young scientists doing research on the causes and coherencies of diseases who are making a significant contribution towards the prevention and overcoming of such diseases – true to our motto “For a better future...”.

The MTZ[®] Foundation based in Erkrath-Trills, Germany, was founded in September 2006 by Monika and Thomas Zimmermann.



UNTER DER SCHIRMHERRSCHAFT VON
PROF. DR. ANNETTE SCHAVAN

Bundesministerium
für Bildung
und Forschung





Encouraging young researchers

The MTZ[®] Foundation (**M**onika and **T**homas **Z**immermann) supports science and research in the domain of human medicine. It promotes path-breaking research results from top class junior scientists in medically orientated cell and genetic research, holding up to high bioethical standards. Focusing on the future, it encourages interdisciplinary operations, that is, specifically connecting traditional scientific approaches to the emergent discipline of Systems Biology. Doing so the MTZ foundation advances into new dimensions in pathogenic research and drug development.

The MTZ[®] Foundation closely collaborates with the Federal Ministry of Education and Research (BMBF).

„Systematic Endowment“

The MTZ[®] Foundation – also with the help of the “Stifterverband für die Deutsche Wissenschaft” – supports prestigious universities and institutes by placing a MTZ[®] award in each institution. The ensemble of the MTZ[®] awards consciously traces the interdisciplinary collaboration in top level cell and gene research. The individual special prizes are organized logically: “**in vivo**, **in vitro** and **in silico**”. The awarded research approaches are mutually dependent and are thus part of a system.

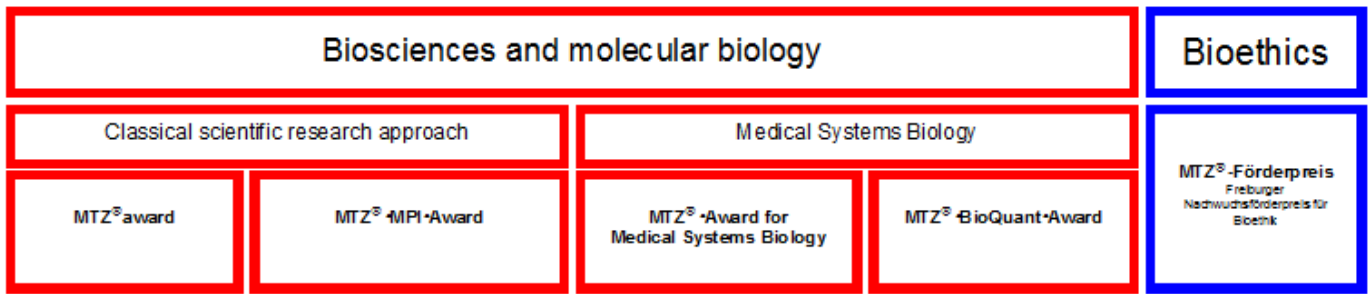
Scientists at the Max-Planck-Institute for Molecular Biomedicine in Münster are re-programming cells to behave like embryonic stem-cells, developing the ability to form each of the more than 200 different cell types found in the human body. Generating these so-called Induced Pluripotent Stem cells (iPS) does not require the use of ova or embryos.

The cutting-edge research approach of **Systems Biology** especially opens new dimensions in the fight against cancer, when it comes to pathogenic research, drug development and new therapies. The abundant data on individual cell components and functions, generated on different levels of life processes by means of the classical scientific research approach (“**in vivo**” and “**in vitro**”; genome, proteome, metabolome) is brought into a broader, more practical, and to some extent new coherence by Systems Biology’s use of computer-based modelling (“**in silico**”). The question to be answered is how complex biologic systems can operate by cross-linking their sub-processes. Only by this means can complex system characteristics, such as the regulation and control of biological systems and their system behavior, be understood and deciphered.

Medical practitioners, biologists, computer scientists working in bioinformatics and natural scientists from other fields collaborate across their disciplines. The function of the models obtained through their work is to facilitate the testing of hypotheses either experimentally or at the computer and thus to generate faster and more efficient research results. These simulations increasingly replace time-consuming laboratory experiments involving cell tissue and also enable predictions for further research activities.

Particularly in regard to preserving the quality of life of an increasingly aging society, **problems of bioethics will play an important role in the foundation’s work**. It is of special concern to the MTZ[®] Foundation to determine to what extent modern cell and/or gene research already satisfies bioethical concerns and where possible limits to that research may be found. In this way, the foundation significantly contributes to the societal discussion of “a better future”. The MTZ[®] Foundation greatly appreciates the decision by the Albert-Ludwigs-University in Freiburg to declare ethics a mandatory subject in medical school, with a final examination on that topic (it is the only university in Germany that has done so). With the MTZ[®] Förderpreis 2007, a prize has been awarded in the field of applied bioethics for the first time in the 550 year history of the University of Freiburg. The MTZ[®]stiftung chose to make the award to a scientist at the University of Freiburg medical faculty in the hope that it will promote bioethical research in the field of molecular medicine.

Promotion of cell and gene research significant to human medicine including bioethical aspects



MTZ[®]-BIOPRO Schülerpreis BIO PRO Baden-Württemberg GmbH Systembio_logisch - MTZ-Wiley Schülerworkshop 2010 WILEY MTZ[®]-OlympionikenPraktikum IAG RWTH MTZ@online für SchülerInnen

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Internationally recognized research personalities from all over Germany support us in awarding these prizes for high-level European research projects. The outstanding works of the individual award recipients are announced to the public in a formal conferment. One function of the prize money is to enable the award recipients to continue their research work through postgraduate studies and complementary studies as well as internships abroad. The same principle applies to the allocation of travel grants.

The MTZ[®] Awards collectively as a focal point of the foundation work

The MTZ[®] award

The MTZ[®] award is granted to young scientific talents of the medical school at the Heinrich-Heine-University in Düsseldorf for outstanding publications in the field of classical cell and gene research relevant to human medicine. Young scientists of institutions affiliated with the Heinrich-Heine-University, namely the Helmholtz Research Center Jülich, the German Diabetes Center, the Science Community Leibniz, and the Institute for Environmental Medicine Research, are also eligible to apply for this award.

The MTZ[®]-MPI-Award

The MTZ[®]-MPI-Award is granted to young scientists of the Max-Planck-Institute for Molecular Biomedicine Münster for outstanding publications in the field of molecular biomedicine.

The MTZ[®]-Award for Medical Systems Biology

The MTZ[®]-Award for Medical Systems Biology is the national advancement award for outstanding dissertations of young scientific talents in the field of Medical Systems Biology. It is granted by the MTZ[®] Foundation in cooperation with the Federal Ministry of Education and Research (BMBF) and awarded every other

year during the Conference on Systems Biology of Mammalian Cells (SBMC). The three best dissertations will be assigned. The three young scientists present the dissertations for the final placement at the conference site. The award was offered for the first time during the 2nd Conference for Systems Biology of Mammalian Cells on May 23rd, 2008 in the Kulturpalast in Dresden. It was the first ceremony of a National Award for young scientific talents in the field of Medical Systems Biology in Europe.

"...Das Forschungsfeld der Systembiologie wird die Zukunft der Lebenswissenschaften ganz entscheidend beeinflussen. Wesentliche Anwendungen der Systembiologie heraus werden sich vor allem auch in der Medizin ergeben. Mit dem von Ihnen formulierten Gesamtkonzept der MTZ-Stiftung verfolgen Sie dieses Anliegen in gezielter Weise. ..."

Auszug aus dem persönlichen Grußwort der **Bundesministerin für Bildung und Forschung Frau Dr. Annette Schavan** Berlin, 16. August 2007

Foto: BMBF



UNIVERSITÄT
HEIDELBERG
Zukunft. Seit 1386.



dkfz. DEUTSCHES
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IN DER HELMHOLTZ-GEMEINSCHAFT

The MTZ[®]-BioQuant Award for Systems Biology

The MTZ[®]-BIOQUANT-Award for Systems Biology is granted to outstanding young researchers in the Ruprecht - Karls-University Heidelberg research network BIOQUANT to recognize outstanding publications in the field of Medical Systems Biology. The MTZ[®] Foundation welcomes the connection of research network BIOQUANT and network SBcancer at the German Cancer Research Center (dkfz.). This defines the uniqueness of Heidelberg as site scientific research.

The MTZ[®]-Förderpreis



The MTZ[®]-Förderpreis is awarded for an outstanding paper or dissertation in the field of Bioethics at the medical school of the Albert-Ludwigs-University of Freiburg. With the MTZ[®] Förderpreis 2007, a prize has been awarded in the field of applied bioethics for the first time in the 550 year history of the University of Freiburg.

"Lab on a chip" - The MTZ[®] - Reisestipendium



Die MTZ[®] Foundation has awarded the MTZ[®]-Travel Grant 2008 to doctoral candidate Joachim Wiest (graduate engineer) of the Central Institute for Medical Engineering at the Technical University Munich (IMETUM) to support his participation in the international conference ESOF 2008 in Barcelona, Spain.

Academic Advisory Boards of individual MTZ[®] - Awards

The Academic Advisory Boards were provided by the BMBF/PTJ Jülich, and respectively by each institution to curate the individual MTZ[®]-Awards:



Members of the national selection panel of the MTZ[®]-Award for Medical Systems Biology:

Prof. Dr. med. Michel Eichelbaum	Dr. Margarete Fischer-Bosch Institute of Clinical Pharmacology Stuttgart
Prof. Dr. Roland Eils -	German Cancer Research Center (dkfz.) Heidelberg
PD Dr. Ursula Klingmüller	German Cancer Research Center (dkfz.) Heidelberg
Prof. Dr. Ursula Kummer	Department of "Modeling of Biological Processes" BioQuant Universität Heidelberg
Prof. Dr. Wolfgang Marwan	Max Planck Institute for Dynamics of Complex Technical Systems Magdeburg
Prof. Dr. Jens Reich	Max Delbrück Center Berlin
Prof. Dr. Jens Timmer	Institute of Physics at the University of Freiburg
Prof. Dr. Olaf Wolkenhauer	Institute of Informatics and Electrical Engineering at the University of Rostock

Members of the MTZ jury during the Conference on Systems Biology of Mammalian Cells (SBMC):

Prof. Dr. Edda Klipp	Max Planck Institute for Molecular Genetics Berlin
Prof. Dr. Siegfried Neumann	Senior Consultant R+D Merck KGaA

Board of Trustees for the MTZ[®]-BIOQUANT-Award for Systems Biology:

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Prof. Dr. Giovanni Maio (chairman) and two other professors

The MTZ[®] - Award winners in the past

MTZ[®] award at the Heinrich-Heine-University of Düsseldorf

2009	Doktorand mit verteidigter Promotion Dipl. Biol. Andre Heinen	Publication: „The cyclin-dependent kinase inhibitor p57kip2 is a negative regulator of Schwann cell differentiation and in vitro myelination“
2010	Frau Dr. med. Kirsten Huck	Publication: „Identifikation eines neuen primären Immundefektes mit EBV-assoziierter Lymphoproliferation“
2011	Dr. rer.nat. Sara Tucci	„Fasting-induced oxidative stress in very long chain acyl-CoA dehydrogenase (VLCAD) deficient mice“



MTZ®-MPI-Award at the Max-Planck-Institute for Molecular Biomedicine Münster

2009	Doktorand Mister Jeong Beom Kim	Publication: "Pluripotent stem cells induced from adult neural stem cells by reprogramming with two factors"
2010	Dr. rer.nat. Markus Andre Winderlich	„Phosphatase VE-PTP für die Regulation der Größe von Blutgefäßen verantwortlich (Tumorbekämpfung)“

MTZ®-Award for Medical Systems Biology during the Conference for Systems Biology of Mammalian Cells

2008	Dr. rer. nat. Nils Blüthgen 1.Platz	Dissertation: "Systems-biological Approach to RAS-mediated Signal Transduction"
2008	Dr.-Ing. Julio Saez-Rodriguez 1.Platz	Dissertation: "Modular Analysis of Signal Transduction Networks"
2008	Dr.-Ing. Thomas Eißing 2.Platz	Dissertation: "A Systems Science View on Cell Death Signalling"
2010	Dr. rer.nat. Thomas Maiwald	Dissertation: „Dynamische Modellierung biologischer Systeme“
2010	Dr. rer.nat. Stefan Legewie	Dissertation: „Systems Biological Analysis of Intracellular Signal Transduction“
2010	Dr. rer.nat. Edda G. Schulz	Dissertation: „Mathematische und Experimentelle Analyse regulatorischer Netzwerke in T-Helfer-Zellen“

MTZ®-BioQuant-Award for Systems Biology in the building of BIOQUANT at the Ruprecht-Karls-University of Heidelberg

2007	Dr. -Ing. Niels Grabe	Research Approach: „Development of an approach for medical Systems Biology through the analysis and modellation of epithelial tissue homeostasis“
2008	Dr. rer.nat. Carlos Salazar	Research Approach: "Phosphorylation cycles and the regulation of cellular processes"
2009	Dr. rer.nat. Lars Kaderali	Research Approach: „Mathematische Modellierung von Virus-Wirtszell-Interaktionen“
2010	Dr. rer.nat. Verena Becker	"Understanding Information Processing through Cell Surface Receptors"

MTZ®-Förderpreis für Bioethik at the beginning of the academic year at the Albert-Ludwigs-University of Freiburg

2007	Dr. phil. Oliver Müller	Publication: „Man and his position in regard to his own nature – About the state of anthropological arguments in the bioethics debate“
2008	Doktorand Dipl. Theol. Dominik Baltes	Publication: „Vom Wert der Fragilität – Überlegungen zum Stellenwert von Kontingenzargumenten im Rahmen der Enhancementdebatte“
2009	Dr. phil. Joachim Boldt	Publication: „Synthetische Biologie – eine ethische und philosophische Analyse“
2010	M.A. Tobias Eichinger	„Anti-Aging als Medizin? Altersvermeidung zwischen Therapie, Prävention und Wunscherfüllung“

The MTZ[®]-BIOPRO Student Prize

BIOPRO Baden Württemberg Ltd. and the MTZ[®] Foundation have signed a contract for a MTZ[®]-BIOPRO student prize.

A motivating step on the way to studying Life Sciences



The MTZ[®]-BIOPRO Student Prize makes it possible to honour student performance in the field of biotechnology and thus upgrades the image of the specialized 'secondary biotechnology school', especially in regard to its significance for medically-oriented cell and gene research. The prize will be awarded each year to the best graduate in the subject of biotechnology at each secondary biotechnology school. The prize will consist of a book prize and a certificate. The presentation of the prize will take place at the time of the presentation of the 'Abitur' certificates at each school. The MTZ[®] Foundation regards this prize as a major motivating step toward a corresponding university education. Thus, the prize plays an important role within the overall plan of the MTZ[®] Foundation and the ensemble of the individual special MTZ[®]-Awards. The aim is to create an incentive for obtaining one of the coveted MTZ[®]-Awards after a successful university education in this subject area.

Within the scope of their activities BIOPRO also actively engage in promoting young people through its school and biotechnology projects. "We are very glad that we can set an example for secondary biotechnology schools in Baden-Württemberg. We sincerely hope that some of the award recipients will also make their professional future in the life sciences sector. With the MTZ[®] Foundation we have found an excellent partner, for their statement of explanatory statement contains this same objective" explains Dr. Barbara Jonischkeit, project manager in charge at BIOPRO Baden-Württemberg Ltd.



The Web Portal MTZ[®] online

Research connects the world. We are proud that so many researchers from all over the world visit the web portal MTZ[®] online at www.mtzstiftung.de. Maybe one day some of them will be among the recipients of the MTZ[®]-Awards.



United Nations – European Union – Australia – New Zealand – USA – Canada – Mexico – Brazil – Argentina – Ecuador – Peru – Colombia – Chile – Russia – Latvia – Estonia – Lithuania – Ukraine – Georgia – China – Hong Kong – Japan – India – Pakistan – South Korea – Vietnam – Thailand – Indonesia – Singapore – Saudi Arabia – United Arab Emirates – Qatar – Antigua and Barbuda – Egypt – Morocco – Tunesien – Benin – Ivory Coast – Ghana – Namibia – Syria – Israel – Germany – Great Britain – Ireland – Belgium – Netherlands – Luxembourg – France – Sweden – Finland – Denmark – Norway – Austria – Switzerland – Liechtenstein – Spain – Italy – Portugal – Poland – Hungary – Rumania – Moldawia – Bulgaria – Czech Republic – Slovak Republic – Slovenia – Croatia – Bosnia and Herzegovina – Macedonia – Malta – Greece – Turkey

Your involvement

You can make a valuable financial contribution toward the development of the individual MTZ[®]-Awards. Beyond that, you can also support us in the allocation of travel grants to support research projects. The latter are not available through external funding but are of crucial importance to the international networking of junior scientists. We welcome contributions and donations. The concept of appropriated allotment is important to us. Please state which area of the foundation work you would like to support. We will do our best to take your wishes into account.

"...für Ihr Engagement als Stifter der MTZ-Stiftung danke ich Ihnen sehr herzlich.. Denn Wissenschaftspreise helfen, herausragende Forschungsleistungen zu würdigen und das Interesse der Öffentlichkeit an der Wissenschaft anzuregen. Es freut mich besonders, dass die MTZ-Stiftung sich maßgeblich der Förderung der Systembiologie verschrieben hat. ..."

Grüßwort des **Ministers für Wissenschaft und Forschung Baden-Württemberg Herr Prof. Dr. Peter Frankenberg**
Stuttgart, 20. November 2008
Foto: MWK Baden-Württemberg



" I have a great respect of the achievement of the young scientists. By way of Systems Biology they take the research in the cellular and



Netta Or
The young soprano
"Star of opera of the New generation"

MTZ[®]-SBambassadress

"...Im globalen Wettbewerb zählt, wie schnell und wie gut wir neue Erkenntnisse gewinnen und diese dann in marktfähige Produkte umsetzen. Wir in Nordrhein-Westfalen setzen deshalb unsere Priorität auf die Investition in die besten Köpfe. Ich begrüße deshalb das Engagement der MTZ-Stiftung, die mit der Verleihung der verschiedenen MTZ@-Awards an junge Wissenschaftler/Innen deren herausragende Leistungen im Bereich der medizinisch orientierten Zell- und Genforschung anerkennt und unterstützt..."

Grüßwort des **Ministers für Innovation, Wissenschaft, Forschung und Technologie des Landes Nordrhein-Westfalen Herrn Prof. Dr. Andreas Pinkwart** Düsseldorf, 21. November 2008
Foto: MIWFT Nordrhein-Westfalen



„Höher als die Gegenwart steht die Möglichkeit.“ Dieser Satz des Philosophen Martin Heidegger schließt alles ein, was Wissenschaft ausmacht. Exzellente Forschung bleibt nicht im Heute stecken, sondern denkt weiter in die Zukunft. Ebenso wie ihre Förderer.

Der MTZ-Award gehört zu den bedeutenden Preisen eines wissenschaftlichen Lebenslaufes. Er würdigt innovative Forschungsansätze und schafft Anreize für andere, es auch zu versuchen. ...

In der Gegenwart die Voraussetzungen für eine bessere Zukunft schaffen, gelingt dann, wenn junge Wissenschaftlerinnen und Wissenschaftler frühzeitig durch gezielte Förderung weiter motiviert werden. Die Gründer der MTZ-Stiftung, Monika und Thomas Zimmermann haben es erkannt...

An dieser Stelle ermutige ich ausdrücklich zu weiterer Forschungsarbeit. Wissenschaft und Lehre stellen ein großes Potenzial in der Landeshauptstadt dar und bilden ein stabiles Rückgrat zum Nutzen der Allgemeinheit. ..."

Grüßwort des **Oberbürgermeisters der Stadt Düsseldorf Herrn Dirk Elbers**
Düsseldorf, 17. Juni 2011
Foto: Stadt Düsseldorf



Imprint:

Board of Directors

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Die MTZ[®] foundation has been legally recognized by the district government Düsseldorf in a document dated October 16th, 2006.

With friendly support of



Natasha Young
Jazz / Klassik Oper und Gesang.

We thank for the translation.



JAMES RIZZI

