

Curriculum Vitae

Stefan Maas, Ph.D.
Assistant Professor
Department of Biological Sciences
Lehigh University
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Bethlehem, PA 18015

Education/Training:

INSTITUTION AND LOCATION	DEGREE	YEAR	FIELD OF STUDY
Free University of Berlin, Germany	BS	1991	Biochemistry
Free University of Berlin, Germany	MS	1993	Biochemistry
University of Heidelberg, Germany	Ph.D.	1996	Mol. & Cell. Neurobiology
Max-Planck-Inst. for Medical Res., Heidelberg	Postdoc. Associate	96-97	RNA processing
Massachusetts Institute of Technology, Cambridge	Postdoc. Fellow/Associate	97-00	RNA editing
MIT, Department of Biology, Cambridge	Research Scientist	00-03	RNA editing

Positions and Employment:

Aug 2003- **Assistant Professor**
Department of Biological Sciences, Lehigh University, Bethlehem, PA

2000 – 2003 **Research Scientist**
Department of Biology, Massachusetts Institute of Technology, Cambridge, MA

1997 – 2000 **Postdoctoral Fellow/Postdoctoral Associate** with Dr. Alexander Rich
Department of Biology, Massachusetts Institute of Technology, Cambridge, MA

1996 – 1997 **Postdoctoral Associate** with Dr. Peter H. Seeburg
Department of Molecular Neurobiology, MPI for Medical Research, Heidelberg, Germany

1993 – 1996 **Research Assistant** with Dr. Peter H. Seeburg
Center for Molecular Biology, University of Heidelberg, Germany

1992 – 1993 **Research Assistant** with Dr. Claus Scheidereit
Max-Planck Institute for Molecular Genetics, Berlin, Germany

Honors/Fellowships:

1999 – 2000 Anna Fuller Postdoctoral Fellowship in Molecular Oncology

1997 – 1999 Postdoctoral Fellowship of the European Molecular Biology Organization (EMBO)

1993 – 1996 Fellowship of the Graduate Program in Molecular and Cellular Neurobiology,

Publications:

- Maas, S. and Gommans, W.M., 2009: Novel exon of mammalian ADAR2 extends open reading frame. **PLoS ONE**, 4(1): e4225
- Gommans, W.M., and Maas, S. 2008: Characterization of ADAR1-mediated modulation of gene expression. **Biochemical and Biophysical Research Communications**, 377(1):170-5
- Gommans, W.M., Tatalias, N.E., Sie, C., Dupuis, D.E., Vendetti, N.J., Smith, L., Kaushal, R., and Maas, S. 2008: Screening of human SNP database identifies recoding sites of A-to-I RNA editing. **RNA**, 14 (10), 2074-85
- Orłowski, R.J., O'Rourke, K.S., Olorenshaw, I., Hawkins, G.A., Maas, S., and Laxminarayana, D., 2008: Altered Editing in Cyclic Nucleotide Phosphodiesterase 8A1 (PDE8A1) Gene Transcripts of Systemic Lupus Erythematosus (SLE) T Lymphocytes. **Immunology**, 125(3):408-19
- Wynne, R.D., Maas, S., and Saldanha, C.J., 2008: Molecular characterization of the injury-induced aromatase transcript in the adult zebra finch brain. **J Neurochem.**, 105(5):1613-24
- Gommans, W.M., Dupuis, D.E., McCane, J.E., Tatalias, N.E., and Maas, S., 2008: Diversifying Exon Code through A-to-I RNA Editing. **In: DNA and RNA Editing: Mechanisms and Functions**; Wiley publishers; edited by: Harold Smith, pp3-30
- Laxminarayana, D., O'Rourke, K.S., Maas, S., and Olorenshaw, I., 2007: Altered Editing in RNA editing Adenosine Deaminase ADAR2 Gene Transcripts of Systemic Lupus Erythematosus (SLE) T Lymphocytes. **Immunology**, 121(3):359-69
- Maas, S., Kawahara, Y., Tamburro, K., and Nishikura, K 2006: A-to-I RNA Editing and Human Disease. **RNA Biology**, 3(1), e1-9., Review article
- Koeris, M., Funke, L., Shrestha, J., Rich, A., and Maas, S. 2005: Modulation of ADAR1 editing activity by Z-RNA in vitro. **Nucleic Acids Res.**, 33 (16): 5362-70. **Cover issue**
- Athanasiadis, A., Placido, D., Maas, S., Brown, B.A.2nd, Lowenhaupt, K., and Rich, A., 2005: The crystal structure of the Zbeta domain of the RNA-editing enzyme ADAR1 reveals distinct conserved surfaces among Z-domains . **J Mol Biol** , 351 (3): 496-507.
- Athanasiadis, A., Rich, A., and Maas, S. 2004: Widespread A-to-I RNA editing of Alu-containing mRNAs in the human transcriptome. **PLoS Biology**, 2 (12), e391, 1-15
- Luciano, D.J., Mirsky, H., Vendetti, N.J., and Maas, S. 2004: RNA editing of a miRNA precursor. **RNA**, 10, 1174-77.
- Maas, S., Rich, A., and Nishikura, K., 2003: A-to-I RNA editing: recent news and residual mysteries. **J.Biol.Chem.** 278, 1391-1394, Review article
- Tsibris, J.C.M., Maas, S., Segars, J.H., Nicosia, S.V., Enkemann, S.A., O'Brien, W.F., and Spellacy, W.N. 2003: New potential regulators of uterine leiomyomata from DNA arrays: The ionotropic glutamate receptor GluR2. **Biochem Biophys Res Commun**, 312, 249-254
- Kim, Y.G., Maas, S., and Rich, A. 2001: Comparative mutational analysis of cis-acting RNA signals for translational frameshifting in HIV-1 and HTLV-2. **Nucleic Acids Res.** 29 (5), 1125-1131
- Maas, S., Kim, Y.G., and Rich, A. 2001: Genomic clustering of tRNA^{Ala}-specific adenosine deaminase ADAT1 and two tRNA-synthetases within a susceptibility locus for autoimmune diseases. **Mamm Genome** 12 (5), 387-393

- Kim, Y.G., and Maas, S., 2001: Efficient multiple site mutagenesis in vitro. In: **Methods in Molecular Biology**, vol. 182: In Vitro Mutagenesis, 2nd ed., pp 29-36
- Maas, S., Patt, S., Schrey, M., and Rich, A., 2001: Underediting of GluR-B mRNA in malignant gliomas. **Proc. Natl. Acad. Sci. USA** 98 (25), 14687-14692
- Kim, Y.G., and Maas, S., 2000: Efficient multiple site mutagenesis with high targeting efficiency in one cloning step. **BioTechniques** 28, 196-198
- Kim, Y.G., Maas, S., Wang, S., and Rich, A. 2000: Mutational study reveals that tertiary interactions are conserved in ribosomal frameshifting pseudoknots of two luteoviruses. **RNA** 6, 1157-1165
- Maas, S., and Rich, A. 2000: Changing genetic information through RNA editing. **BioEssays** 22, 790-802, Review article
- Kim, Y.-G., Lowenhaupt, K., Maas, S., Herbert, A., Schwartz, T., and Rich, A. 2000: The Z-DNA binding domain of ADAR1 induces formation of Z-DNA in a B-DNA environment. **J.Biol.Chem.** 275, 26828-26833
- Maas, S., Kim, Y.G., and Rich, A. 2000: Sequence, genomic organization and functional expression of the murine tRNA-specific adenosine deaminase ADAT1. **Gene** 243, 59-66
- Higuchi, M., Maas, S., Single, F.N., Hartner, J., Rozov, A., Burnashev, N., Feldmeyer, D., Sprengel, R., and Seeburg, P.H., 2000: Point mutation in an AMPA receptor gene rescues lethality in mice deficient in the RNA-editing enzyme ADAR2. **Nature** 406, 78-81
- Kim, Y.G., Su, L., Maas, S., O'Neill, A., and Rich, A. 1999: Specific mutations in a viral RNA pseudoknot drastically change ribosomal frameshifting efficiency. **Proc. Natl. Acad. Sci. USA** 96 (25), 14234-14239
- Maas, S., 1999: Efficient and rapid procedure for blue-white screening of recombinant bacterial clones. **BioTechniques** 27, 1126-1128
- Maas, S., Gerber, A.P., and Rich, A. 1999: Identification and characterization of a human tRNA-specific adenosine deaminase related to the ADAR family of pre-mRNA editing enzymes. **Proc. Natl. Acad. Sci. USA** 96, 8895-8900
- Maas, S., Melcher, T., and Seeburg, P.H. 1997: Mammalian RNA-dependent deaminases and edited mRNAs. **Curr. Opin. Cell Biol.** 9, 343-349, Review article
- Melcher, T., Maas, S., Herb, A., Sprengel, R., Higuchi, M., and Seeburg, P.H. 1996: Red2, a brain specific member of the RNA-specific adenosine deaminase family. **J.Biol.Chem.** 271, 31795-31798
- Maas, S., Melcher, T., Herb, A., Seeburg, P.H., Keller, W., Krause, S., Higuchi, M., and O'Connell, M. 1996: Structural requirements for RNA editing in glutamate receptor pre-mRNAs by recombinant double-stranded RNA adenosine deaminase. **J.Biol.Chem.** 271, 12221-12226
- Melcher, T.*, Maas, S.*, Herb, A., Sprengel, R., Seeburg, P.H., and Higuchi, M. 1996: A mammalian RNA editing enzyme. **Nature** 379, 460-464 * *equally contributing first authors*
- Melcher, T., Maas, S., Higuchi, M., Keller, W., and Seeburg, P.H. 1995: Editing of AMPA receptor GluR-B pre-mRNA *in vitro* reveals site-selective adenosine to inosine conversion **J.Biol.Chem.** 270, 8566-8570
- Patt, S., Thiel, G., Maas, S., Lozanova, T., Prosenc, N., Cervos-Navarro, J., Witkowski, R., and Blumenstock, M., 1993: Chromosomal changes and correspondingly altered protooncogene expression in human gliomas. **Anticancer Res.** 13, 113-118

Peer-reviewed conference papers

- “A Bioinformatics Approach to Identify Recoding Events of A-to-I RNA Editing” (with D.Lopresti, D. Drake, R. Kaushal, S. Hookway, W. Scheirer, M. Strohmaier, and C. Wojciechowski), *Proceedings of the Computational Systems Bioinformatics Conference*, August 2006, Palo Alto, CA, 5 pages (CD-ROM).