

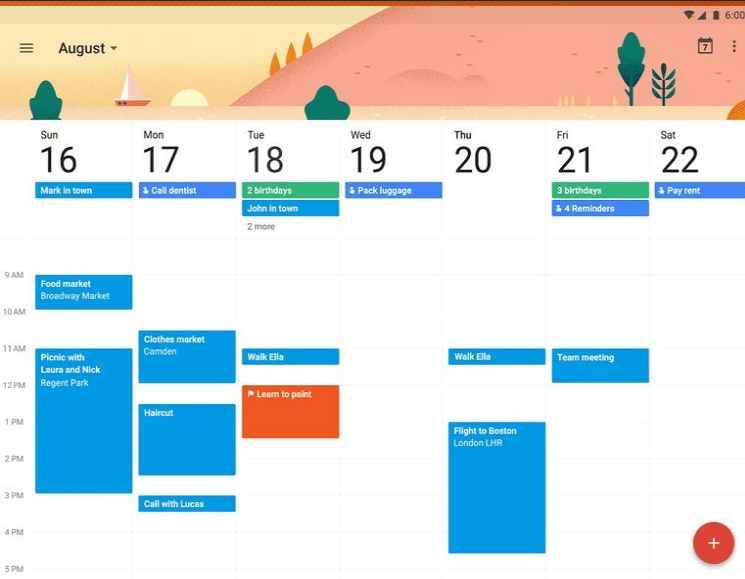
Das Studium mit Handy

Elizaveta Norkulova

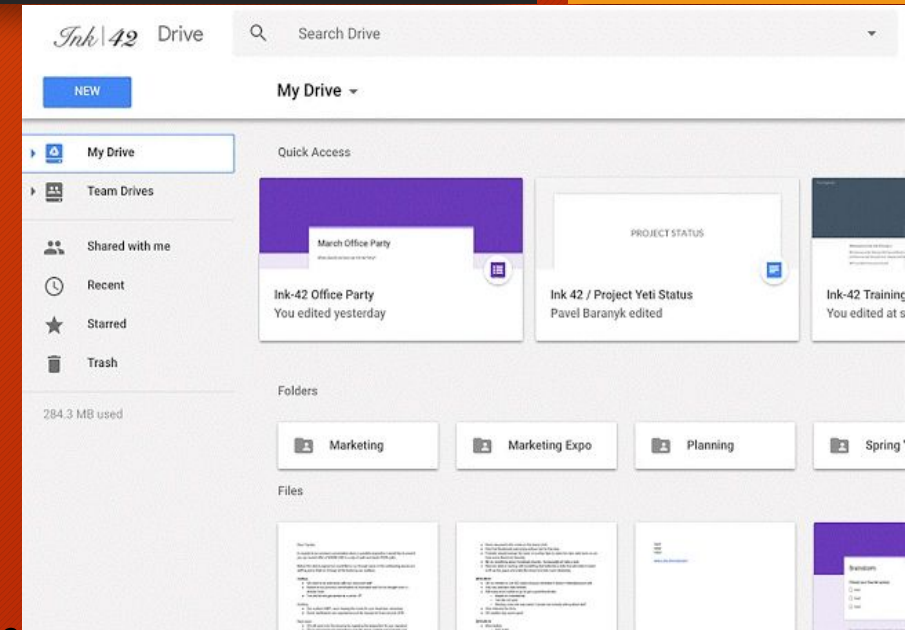
Julia Sidorova

EG-3-1

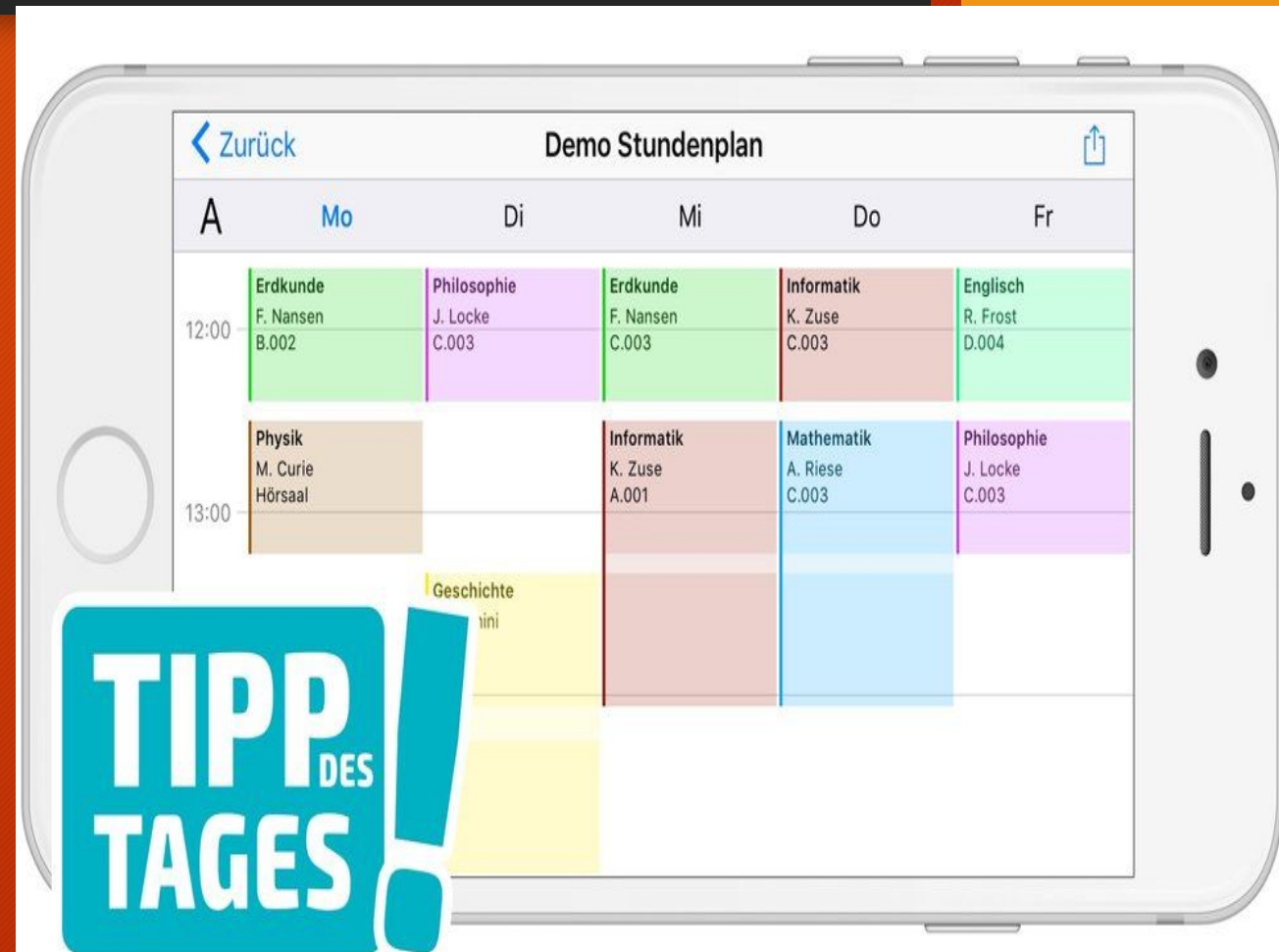
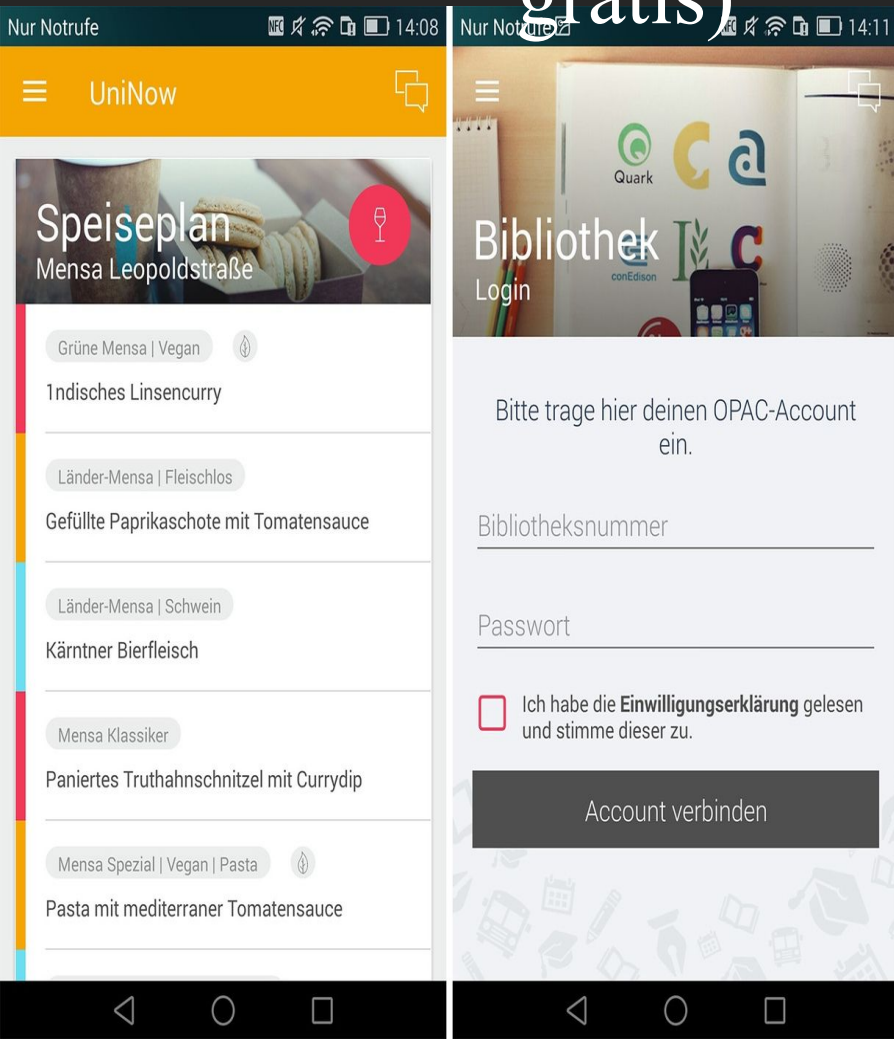
Google Kalender & Cloud-Speicher Drive (Android/iOS, gratis)



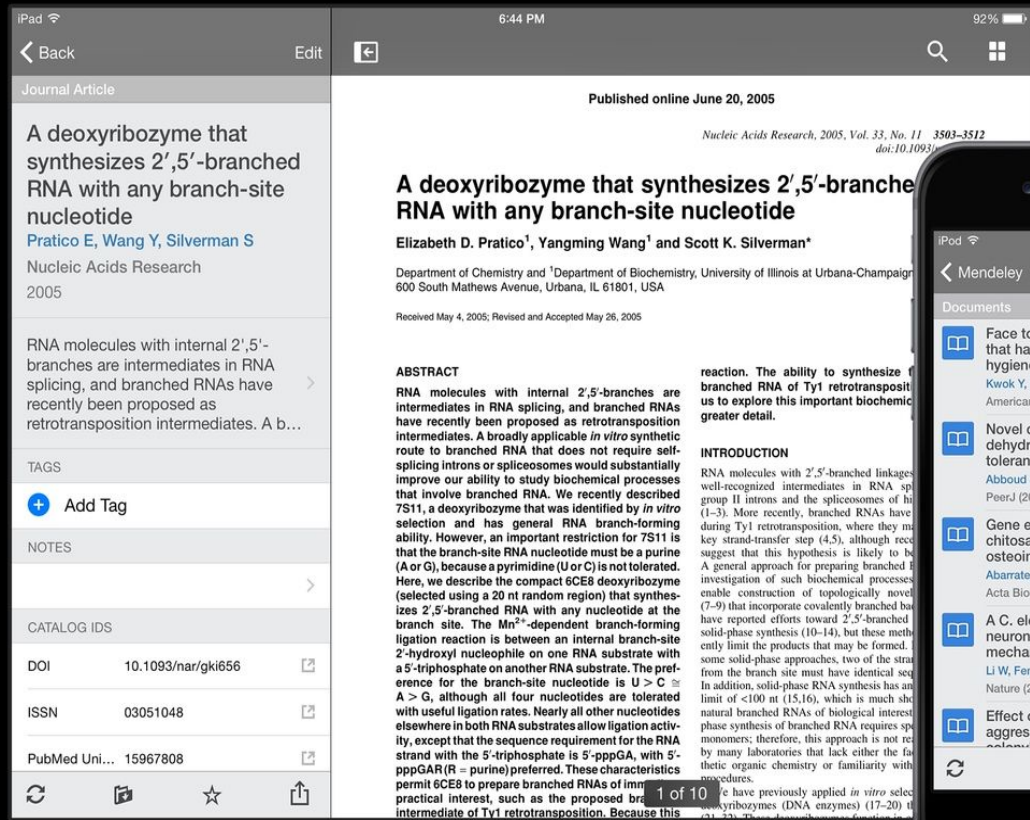
Die Anwendung ist an deine Google-Mail-Adresse gekoppelt, sodass du auch von jedem beliebigen Desktop PC alle wichtigen Termine einsehen und aktualisieren kannst.



UniNow App – Stundenplan, Uni-Mails & Co. (Android/iOS, gratis)



Mendeley – Literaturverwaltungs-App (Android/iOS, gratis)



A deoxyribozyme that synthesizes 2',5'-branched RNA with any branch-site nucleotide

Elizabeth D. Pratico¹, Yangming Wang¹ and Scott K. Silverman*

Department of Chemistry and ¹Department of Biochemistry, University of Illinois at Urbana-Champaign, 600 South Mathews Avenue, Urbana, IL 61801, USA

Received May 4, 2005; Revised and Accepted May 26, 2005

ABSTRACT

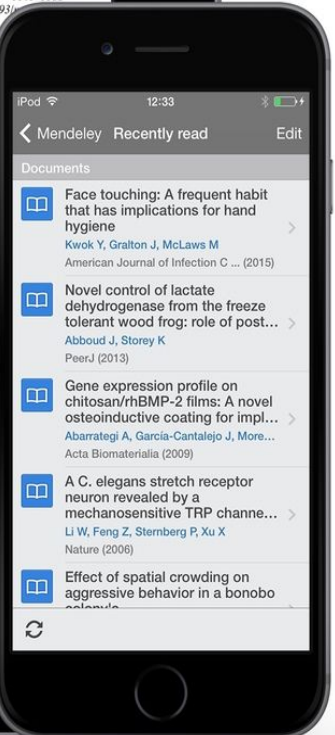
RNA molecules with internal 2',5'-branches are intermediates in RNA splicing, and branched RNAs have recently been proposed as retrotransposition intermediates. A broadly applicable *in vitro* synthetic route to branched RNA that does not require self-splicing introns or spliceosomes would substantially improve our ability to study biochemical processes that involve branched RNA. We recently described 7S11, a deoxyribozyme that was identified by *in vitro* selection and has general RNA branch-forming ability. However, an important restriction for 7S11 is that the branch-site RNA nucleotide must be a purine (A or G), because a pyrimidine (U or C) is not tolerated. Here, we describe the compact 6CE8 deoxyribozyme (selected using a 20 nt random region) that synthesizes 2',5'-branched RNA with any nucleotide at the branch site. The Mn²⁺-dependent branch-forming ligation reaction is between an internal branch-site 2'-hydroxyl nucleophile on one RNA substrate with a 5'-triphosphate on another RNA substrate. The preference for the branch-site nucleotide is U > C ≅ A > G, although all four nucleotides are tolerated with useful ligation rates. Nearly all other nucleotides elsewhere in both RNA substrates allow ligation activity, except that the sequence requirement for the RNA strand with the 5'-triphosphate is 5'-pppGAR, with 5'-pppGAR (R = purine) preferred. These characteristics permit 6CE8 to prepare branched RNAs of immediate practical interest, such as the proposed branched intermediate of Ty1 retrotransposition. Because this

reaction. The ability to synthesize branched RNA of Ty1 retrotransposition to explore this important biochemical greater detail.

INTRODUCTION

RNA molecules with 2',5'-branched linkages well-recognized intermediates in RNA splicing group II introns and the spliceosomes of histone (1–3). More recently, branched RNAs have been proposed as intermediates in Ty1 retrotransposition, where they may play a key strand-transfer step (4,5), although recent work suggests that this hypothesis is likely to be incorrect (6). A general approach for preparing branched RNAs *in vitro* that incorporates covalently branched RNA has been reported (7–9) that incorporates covalently branched RNA into solid-phase synthesis (10–14), but these methods are limited by the products that may be formed. In some solid-phase approaches, two of the strands from the branch site must have identical sequences. In addition, solid-phase RNA synthesis has an inherent limit of <100 nt (15,16), which is much shorter than the natural branched RNAs of biological interest. Phase synthesis of branched RNA requires splicing; therefore, this approach is not generally applicable to many laboratories that lack either the synthetic organic chemistry or familiarity with splicing procedures.

We have previously applied *in vitro* selection to identify deoxyribozymes (DNA enzymes) (17–20) that



Die App verfügt über 7.000 Zitierstile, die sich blitzschnell ändern lassen. Perfekt für Literaturverzeichnisse von Hausarbeiten oder Abschlussarbeiten.

Buffl – mit der Karteikarten App unterwegs lernen (Android, iOS, gratis)

FROM



TO



FluentU



Elisabeth
tz-Wiesn-Madl 2013

Der Abend , der war
wie ein Traum eigentlich
. Ich konnt 's gar nicht
glauben .

The evening, that was like a
dream actually. I couldn't
believe it.

The screenshot shows the FluentU mobile app interface. At the top, there's a blue navigation bar with options: 'Browse', 'Level', 'Quit', 'Fill in the blank', and 'Know It'. Below this is a category bar with 'All', 'Video', and 'Audio'. A list of video lessons is displayed, each with a thumbnail, title, and difficulty level/word count. The selected lesson is 'Email Security In Ge...' (Upper intermediate, 37 Words). To the right, a 'Fill in the blank' exercise is shown with an image of a young boy flexing his arm. The text reads: 'Wir teilen diese [redacted] .'. Below the text are three dots, with the middle one highlighted in blue. A hint says 'Hint: power; strength'. A dropdown menu is open, showing options: 'Zustiftung' (marked with a red 'X'), 'Kraft' (marked with a green checkmark), 'Spielen', and 'Crew'. At the bottom, there is a blue 'Next' button.

Video Title	Level	Words
Email Security In Ge...	Upper intermediate	37 Words
A Serious Talk	Upper intermediate	99 Words
Missiles On the High...	Advanced	193 Words
Popcorn In Slow Mo...	Upper intermediate	159 Words
Making Dates And A...	Elementary	130 Words
Planes 2 - Trailer	Intermediate	155 Words
"Schwarz zu Blau" -...		

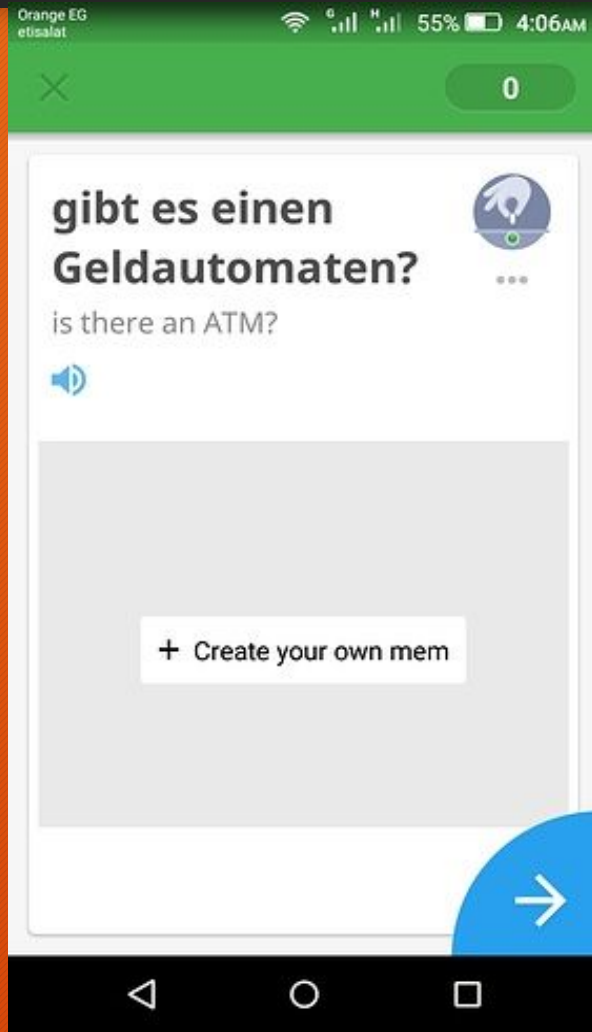
Die Themen decken viele Bereiche ab, von Fußball über TV-Shows und Filme bis hin zu Werbespots und viralen Videos. Dies stellt auch sicher, dass die Lernenden mit Deutsch konfrontiert werden, wie es tatsächlich gesprochen wird und gleichzeitig Einblicke in die deutsche Populärkultur erhalten.

Rosetta Stone



In der mobilen App lernen Sie neue Wörter und Ausdrücke durch Bilder und hören diese von Muttersprachlern ausgesprochen werden.

Memrise



Cancel



German 2

*Danke schön für Ihre
Aufmerksamkeit*

Aber es ist nicht so einfach...

- Beantwortet die Problemfragen. Schreibt eine Antwort auf Papier.
- 1. Lenkt das Handy vom Lernen ab oder hilft es dabei?
- 2. Denken Sie, dass Deutschlernen Apps genauso effektiv sind wie das Unterrichten mit einem Lehrer? Warum?